

Pollution Prevention In The Community

Volunteer Monitoring

Concerned citizens in South Dakota can and do monitor the quality of their local lakes and streams. Monitoring can consist of taking a few simple readings less than a dozen times per year to get a general picture of the overall health of a water body or it can be an intensive sampling program designed to yield data to answer specific questions. The scope and breadth of monitoring really depends on the citizen's interest and concern.



Admittedly, monitoring at first glance does not seem to be a pollution prevention activity. However, water quality monitoring by concerned citizens is an important part of the strategy to prevent nonpoint source water pollution for the following reasons:

1. Monitoring provides data to help direct, evaluate and refine watershed management policies. Watershed management is at the heart of nonpoint source pollution prevention. By understanding the condition of the rivers, lakes and streams within the watershed, decisions can be made about how to manage the watershed to protect or restore the water.
2. Monitoring builds community awareness about water quality. The very act of monitoring involves citizens in their watershed. Most adult monitors and many student monitors want to go beyond performing the mechanical functions of sampling to understanding what information is being collected and why it is significant.



Water quality monitoring is not difficult but does require some preparation. Addressing the following questions at the beginning of your monitoring program will make the program more effective and yield information rather than just data.

Questions and Answers

1. **Why are you monitoring?** Most likely you are monitoring because you either have a specific question you want answered about a local water body or you want to help protect it. Some school based groups monitor because monitoring provides hands-on “real world” science. Teachers use monitoring to teach ecology, biology, chemistry and nature of science skills.

Whether you are a part of a school group, a local lake association or just a concerned citizen, the question of why you monitor does not have to be addressed first, but it must be addressed eventually or your program will fizzle out.

2. **Which water body should be monitored and where?** Sites should be legally accessible and most of all safe, not posing an undue hazard to volunteers. Additionally, your site should be representative of the water and not obviously impacted by some outside influence such as a discharge pipe. If you want to measure the impact of the discharge pipe, pick a second site upstream or far away from the impacted site to serve as your control site.
3. **What do you want to know about this water body?** This is where you may need technical assistance if you are not part of a volunteer monitoring program. The EPA, the Rocky Mountain Watershed Network, and River Network have good resources to help you select which parameters to monitor to give you the information you want.



4. **What methods will you use to collect your information?** Monitoring methods can be “high-tech” and “low-tech.” The method you use will depend on cost, experience and degree of accuracy you need. In general, high-tech methods offer greater accuracy but are also more expensive. Low-tech methods can provide good information for not much money or training.
5. **What sorts of quality controls and assurances will you use?** You may know your data is “right,” but there should be procedures in place to assure others of that as well. Standard quality assurance/quality control (QA/QC) practices should be implemented if you want your data to have credibility.

The South Dakota Information and Education project sponsors a water quality monitoring program for all South Dakotans. The JAMES program out of the University of South Dakota is another program specifically for school-based monitors. An established program may be exactly what you are looking for or you may decide to develop a monitoring program that is entirely your own. A third option is to start with an established program and then modify it to meet your needs.

One final note: monitoring should not be a static process. Regular evaluation to refine, redirect, or redesign the monitoring project is a necessary and important part of a strong monitoring program.

Resources

South Dakota Information and Education Project
805 West Sioux Avenue
Pierre, SD 57501
605-224-8295
www.sd-discovery.com/DCPages/Watershed

JAMES Project
605-677-5805
www.use.edu/ttdjames
Marie.Steckelberg@usd.edu

EPA
Lake Monitoring:
www.epa.gov/owow/monitoring/lakevm

Stream Monitoring: www.epa.gov/owow/monitoring/volunteer/stream

Rocky Mountain Watershed Network
www.rmwn.org

