Maryland's Targeted Watershed Project: Integrated Watershed Management

Stuart Lehman, Larry Lubbers, John McCoy[1], Jeffrey Opel[2], Daniel Bard[3], and Robert Ryan[4]

Md. Department of Natural Resources, Md. Department of the Environment[1], Queen Anne's Co. Soil Conservation District[2], Md. Department of the Agriculture[3], Baltimore Co. Department of Environmental Protection and Resource Management[4], Maryland, U.S.A.

Confronted with the problem of multiple, diverse sources of pollution to the Chesapeake Bay, the Governor's Office challenged environmental managers to demonstrate more effective pollution control by forming teams and integrating all relevant agencies efforts in a few key watersheds. The state agencies responded by choosing two urban watersheds and two agricultural watersheds to serve as test cases for this new coordinated approach. Senior managers from four state departments selected a management team and project leader for each watershed. The teams meet routinely to set goals and objectives, find sources of funding for restoration projects, and exchange information on monitoring. In the urban watersheds, the state and county agencies work primarily on stormwater management projects, water quality contaminant problems, and habitat creation plans. In agricultural areas, extension agents and agricultural water quality specialists target conservation practices based on information passed on by natural resource biologists. Biologists and trained citizens monitor the water and biota to establish trends in water quality and habitat. Together, management and monitoring team members represent more than 45 state, federal, and local agencies. The project contains several unique features, among them:

Coordinated Watershed Management - The project brings together a diverse group of agencies, which frequently have conflicting management goals, to manage entire watersheds. The result is cross-training in the perspectives of various agencies on the complexities of nonpoint source pollution control which leads to better decision-making. Local government support and federal assistance are important to the project.

Volunteer Assistance - Groups of citizen water quality monitors were recruited in each watershed and trained in basic water quality and aquatic insect assessment methods. Some of these individuals now assist with fish sampling, participate in management team meetings, and organize streamside trash pick-ups and citizen advisory committees.

Innovative Monitoring - The state developed a comprehensive monitoring program, now supported by EPA, to chart the progress of the clean ups. It includes innovative "bioassessment" techniques, habitat monitoring, automated storm water monitoring, bi-weekly grab samples from the streams, and the use of computerized mapping to track changes in land use and implementation of management practices.