

The role of local watershed groups in TMDL development

Two states are looking at the overlap between community focused watershed planning and the completion of government mandated TMDL's. Indiana and Ohio environmental agencies have been working with the Green Mountain Institute for Environmental Democracy (GMI) to find opportunities for tapping the strength of local participation to accomplish the daunting task of drafting and implementing necessary pollution reduction strategies. Supported by state and federal funds, GMI has worked with local watershed groups and state agency staff to build stronger links between their efforts. As a result, there's a clearer understanding that both TMDL's and local watershed management planning have water quality improvements as the critical point of overlap.

TMDL's are required in the Clean Water Act as one step to clean up lakes and rivers that do not meet water quality standards. A typical approach for watershed organizations to participate in the Clean Water Act implementation is only to consider the whole process as a basis for advocating improved water quality. Getting a water body "listed" - or designated as needing TMDL pollutant reduction strategies - is an important role but when local watershed organizations stop there, they miss opportunities to support program implementation and intensified monitoring.

The consistency between the required elements of TMDL and local watershed planning is the key for improving water quality to a measurable standard. For both government agencies and local watershed groups there is a need to set clear goals and objectives in watershed planning preferably linked to water quality parameters. Similarly, the identification of sources of water quality degradation are important in both processes.

The similarity of greatest importance is the value of collaborative efforts to characterize the pollutant loads and to consider strategies for reducing impacts. Nonpoint sources of pollution are commonly recognized as both a primary cause of water quality impairment and difficult to address through regulatory means. Some alternatives to command and control regulations may be required. Local involvement by working with landowners and municipal governments can lead to voluntary and cooperative action that will help reduce the pollutants transported to lakes and rivers from storm water runoff. In many cases, the agricultural community needs to change its practices to reduce their contribution to sediment and nutrient loading. In most states, there are few if any processes that yield sufficient levels of change in maintaining buffer strips, closely monitoring pesticide and fertilizer applications and monitoring off-site transport of pollutants. Local watershed groups can contribute volunteer and labor and do not carry the same stigma as do most government agencies programs. Only with a concerted effort of local network development and evidence of success from neighboring home-grown watershed projects are the prospects for success in addressing nonpoint sources practical.

While there are similarities between TMDL and local watershed management, there are also challenges in merging the two processes. State agencies have the responsibility to balance interests of water quality and demands by landowners and the regulated community to reduce the burden of required action. Watershed groups are not as constrained and strive

for any actions will lead to improve water quality. In some cases where GMI has worked, watershed groups have a natural skepticism toward state agencies. In other cases, the state is not as willing to provide increased responsibility to watershed groups that don't have the same accountability to landowners in the regulated community.

The future of TMDL may require a collaborative approach represented by local watershed participation. Tens of thousands of watersheds require a TMDL. More than a bureaucratic requirement, these impaired watersheds are in need of strategies to allow for improved conditions and the resulting increased benefits for ecological health and human use. Unfortunately, and recently exacerbated by budgetary situations, state agencies don't have the staff resources to carry out all of the TMDL's in an effective manner. Local watershed group efforts can fill the gap.

GMI has identified a few steps to ease the connection. State agencies can take early steps to identify and include local stakeholders that are either involved in or will affect any recommended water quality improvement strategies. The design and use of an analytic model, while technically challenging, benefits from local input on the end points of interest and can benefit by including local knowledge with respect to locations of small outfall pipes and areas of notable degradation that infrequent state monitoring may not identify. These early steps help the state make determinations of total loads a river or lake may accommodate but also begins the necessary trust building to ensure implementation of pollutant reduction strategies.

The potential outcomes are promising. More than 10,000 watershed associations exist in United States. Many of these carry out monitoring that can supplement state data collection efforts. TMDL implementation is underway in only a few cases and local watershed participation is still rare. But, there are many ways to consider success. Direct, short-term improvements in water quality are not the only metrics to consider. Gradual change will be important, too. Continuing improvements in water quality in the United States is going to require decades of effort. In some cases, additional regulations may be necessary. In other cases, public investment will be key to reversing environmental damage. In many more cases, the action of local landowners is going to lead to reduced pollutant loads. The only constant in all of these approaches is a need for increasing public support for action. The TMDL process can identify particular goals, and when stakeholders arrive at similar water quality goals, the prospects for locally supported action increases. Therefore an important measure of success will be the frequency that TMDL projects incorporate more local participation.

For more information on the integration of local watershed planning with TMDL development, please contact GMI at gmied@gmied.org.