Examples of Improvements in Water Quality due to the TMDL Process without Yielding a TMDL (Yet)

Illinois River Watershed Project

Region 6, Oklahoma, Arkansas and the Cherokee Nation have been working to address nutrient impairments in the Illinois River Watershed of northwest Arkansas and northeast Oklahoma for several years, and efforts have yielded preliminary models covering both rivers/streams and Lake Tenkiller. During the timeframe spent developing the modeling tools for use in evaluating loadings to the watershed, the States and stakeholders have been proactively engaging in other tangible improvements to the watershed. Some examples include:

- The Illinois River Watershed Regional Conservation Partnership Program Project with USDA which is a voluntary program that provides financial and technical assistance to agricultural producers for addressing water quality concerns in the Illinois River Watershed in portions of Benton and Washington counties. The project area covers 484,947 acres.
- In 2005, the five primary poultry integrator companies in Northwest Arkansas committed to the Oklahoma Scenic Rivers Commission (OSRC) to export 202,500 tons of poultry litter out of the IRW over a 3 year period.
    - This commitment was the catalyst for the creation of the coordinated litter export program, which now transports over 100,000 tons annually from the IRW.
- The application of poultry litter to pastures is now regulated by the States of Arkansas and Oklahoma and requires that litter be applied by a state certified applicator and according to a P-based nutrient management plan.

The implications of developing a TMDL as well as legal and political interest have helped spur on improvements in water quality well ahead of TMDL establishment.

Aquilla Lake

Aquilla Lake is a lake (reservoir) in Hill County, Texas. The lake is located approximately 23 miles (37 km) north of Waco, Texas. Aquilla Lake near Hillsboro has been the focus of concerns over drinking water. High levels of atrazine detected in 1997 and 1998 triggered projects to address agricultural sources of the herbicide by the TCEQ, the Texas State Soil and Water Conservation Board (TSSWCB), and other agencies.

The atrazine levels found in 1997 and 1998 led the TCEQ to list the lake as "impaired" and in need of cleanup. The agency initiated a total maximum daily load (TMDL) project to determine the amount (or load) of pollutant the lake could receive and still support its designated uses. During the development of the TMDL, the State and stakeholders were proactively engaging in other tangible improvements to the watershed. Some examples include:

- TCEQ's Source Water Assessment and Protection team conducted assessments and inventories to determine the origin of atrazine within the watershed. The team discovered more than 600 potential contamination sources, such as fertilizer and pesticide application sites. All this information was forwarded to the Aquilla Water Supply District to help residents protect water quality.

- The TSSWCB led a coordinated effort to change agricultural practices that contribute to atrazine pollution in the lake. The agency worked with area producers and other stakeholders to implement "best management practices" for atrazine reduction.
    - The TSSWCB also worked with other agricultural agencies to provide training on safe pesticide application. These meetings reached hundreds of agricultural producers and led to an increased awareness of water quality in general.
- Stakeholder members developed educational materials on preferred herbicide and pesticide practices and invited speakers to forums on water quality topics. They also met with pesticide dealers to raise their awareness of the problem.
- Area farmers took the initiative to re-examine their own growing practices--deciding, for example, to till herbicides into the soil rather than applying on the surface. After a year, about one-third of area farmers had adopted this strategy, which reduces runoff into waterways; two years later, participation neared 100 percent.

These efforts which were initiated with the impairment designation and during the TMDL development, ultimately led to water quality attainment before the TMDL was completed.