



Title: The Role of Extension and Research in Implementing TMDLs in Kansas

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Organization: Kansas State University

State: KS **Region:** Heartland

Year of Funding:

Theme: Watershed Management

Situation: In 1999, Kansas started setting TMDLs for impaired surface water bodies. By June 30, 2004, TMDLs will have been set for all 11 major river basins. Many of the TMDLs are related to nonpoint source contaminants that originate from nonregulated agricultural sources. Much of the TMDL implementation will require voluntary participation of agricultural producers. Research and education was identified as crucial components for successful TMDL implementation. Kansas State University was given that responsibility and developed a TMDL research and extension plan/project.

Objectives: The objectives of the plan/project were to: 1) increase awareness of TMDLs by citizens in affected watersheds; 2) increase adoption of best management practices by agricultural producers; 3) develop and document the effectiveness of recommended best management practices; and 4) develop and deliver tools to assist watershed planners in decision-making.

Methods: Methods used included: 1) a statewide and county-based TMDLs communication plan was developed and delivered. This included news releases, publications, videos, and public meetings; 2) six research and demonstration sites located on farmer fields were developed and used to demonstrate and evaluate best management practices; 3) seven new watershed extension specialists were hired to deliver educational programs in high priority TMDL watershed; 4) BMP recommendation publications were developed for cropland and livestock operations in Kansas. Watershed modeling was done to assist local decision-makers; and 5) Enhanced water quality monitoring systems were developed and implemented.

Partnerships: A statewide advisory group, consisting of agricultural groups, termed, the Ag. Working Group was utilized to advise the project. Major funding for the watershed specialists was receiving from the Kansas Department of Health and Environment (EPA 319), Kansas Department of Agriculture, and the State Conservation Commission. Other funding sources for the project included various crop commodity commissions and USDA-CSREES. There were also partnerships developed with local watershed groups, NRCS, and county conservation districts.

Research: Research results generated from the research and demonstration sites are being used to assist farmers and ranchers implement best management practices. The research results are also being used assist by state agency personnel in determining best management practice implementation needs. The sites are also being used for demonstration tours. Researchers and extension faculty have met and jointly developed best management practices publications.

Resources: Kansas State University provided faculty time and financial program support in this project. The EPA 319 required matching funds.

Results: A number of outcomes resulted from this project. Citizens became aware of TMDLs and TMDL issues. Approximately 10,000 citizens were directly reached and educated using meetings, fairs, and other educational events. Many other citizens were reached through news releases, videos, radio programs, and publications. Eight recommended best management practices publications were developed and distributed. Watershed specialists met one-on-one with 300 farmers to help them develop water quality plans and implement best management practices. Best management practices evaluation results have been delivered to state agencies that are using the data to develop load reduction estimates. Watershed modeling results have been delivered to local watershed planning groups.



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