CSREES National Water Quality Program

Title: The North Fork "A Model Watershed Project"

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Organization: West Virginia University

State: WV **Region:** Mid-Atlantic **Year of Funding:**

Theme: Watershed Management

Situation: A USGS reconnaissance -level water quality study was conducted during 1994-1995 in the Headwaters of the South Branch Potomac River Basin, West Virginia. Water samples showed fecal coliform as a problem within the North Fork of the South Branch of the Potomac. A TMDL was developed which called for a 35% reduction in Fecal Coliform from agricultural sources.

Objectives: The objectives of this project were to reduce agricultural water quality impacts to the North fork Watershed using a non-regulatory approach.

Methods: To insure the success of this watershed project a combination of educational events, demonstrations and research projects, nutrient management planning, litter and manure storage structures, livestock feeding area relocation, installation of streamside buffers, and the distribution and marketing of litter occurred. A cost share program and an innovative low interest loan program for landowners insured the quick adoption of these BMPs.

Partnerships: This watershed project was a success due to the collaboration and partnership between local landowners, the North Fork Watershed Association, the Potomac Valley Soil Conservation District, USDA NRCS, WV Dept. of Environmental Protection, WV Conservation Agency, WV Dept. of Agriculture, WVU Extension Service, US EPA and other groups.

Research: Integration of research, education and outreach was essential to convince farmers to adopt practices that would improve water quality in this watershed. The water quality monitoring research showed a clear impact from agricultural sources. Continued surface stream monitoring has now started to show improvements in water quality. This research showing impacts to water quality was used to convince farmers to change their farming practices. Other research showed a novel way of managing water-soluble phosphorus. To implement the nutrient management planning a one on one educational process occurred between certified nutrient management planners and landowners. Other outreach activities included farmer field days and BMP demonstrations.

Resources: This project was an EPA 319 incremental water quality project. USDA funded the initial surface stream-monitoring program that showed agricultural impacts to the watershed. WV Department of Agriculture has continued to fund the ongoing stream-monitoring program.

Results: Within the watershed 24 cooperators have committed to the installation of BMP's and improved water quality. These practices include completed nutrient management plans, construction of fences to manage the access of animals to sensitive areas, establishment of watering systems to eliminate the need for livestock to have access to surface streams, and the construction of winter feeding areas for livestock. The effects of this adoption of practices can be seen in the North Fork's water quality over the last five years.