

## ***An Exciting New Initiative To Make Watersheds Healthy***

On page 4 of this issue, you'll find an article detailing how Agricultural Research Service scientists are using a 2-mile-long stretch of Little Topashaw Creek as an on-site watershed-restoration laboratory. This work, representative of water quality research that has been an ARS staple throughout its first 50 years, is part of a larger project involving much of Mississippi's Yalobusha Watershed.

The Yalobusha Watershed studies—themselves a unit of a larger assessment effort begun by ARS on 12 watersheds in 9 states—are part of something even grander. They're a component of a large, years-long effort by the U.S. Department of Agriculture (USDA), in cooperation with other federal agencies, to conserve the nation's watersheds, soil, and water resources. This effort is called the Conservation Effects Assessment Project (CEAP), and it's geared toward two important objectives: The first is optimal selection and placement of conservation practices to achieve specific water quality goals and other environmental aims. The other is to provide information important to assessing the economic benefit from implementing conservation practices.

Run collaboratively by ARS and the Natural Resources Conservation Service (NRCS), the project will assess benefits of conservation practices on both a national scale and a watershed scale. The watershed research will provide more detailed assessments of environmental benefits than is possible at a national scale. It will also form a framework for evaluating and improving the national assessment.

NRCS is leading the national assessment effort. ARS and NRCS are co-leading the watershed assessment studies, with assistance and input from USDA's Farm Service Agency; Cooperative State Research, Education, and Extension Service; Economic Research Service; and the Office of Risk Assessment and Cost-Benefit Analysis, and other federal agencies.

The Farm Security and Rural Investment Act of 2002 (the 2002 Farm Bill) substantially increased funding for conservation programs that protect millions of acres from soil erosion, enhance water and air quality, conserve agricultural water use, promote the preservation and restoration of wetlands, and enhance wildlife habitat. It authorized federal expenditures for conservation practices on farms and ranches at a level about 80 percent above that set by the 1996 Farm Bill.

But whether the conservation practices supported through this bill benefit the environment is, for the most part, unknown. That's because their impact has not been previously measured and reported at the national and watershed level.

This is where CEAP will help. Determining environmental effects and benefits of these conservation practices will allow the farming community, program managers, and policymakers to implement and modify existing programs and better select and prioritize conservation practices for watersheds and larger river basins. This will help government agencies meet goals set by Congress and satisfy the expectations of the public.

CEAP's watershed-assessment component, which includes the 12 ARS watersheds, will complement and validate this national appraisal. It will accomplish this by focusing on conservation buffers, irrigation, and management of nutrients, pests, tillage, and drainage. It will also focus on wildlife establishment and wetland protection and restoration.

Through CEAP, USDA will develop databases on the more prominent conservation practices as well as on budgetary concerns, risks, and uncertainties of achieving water quality-improvement goals and other environmental benefits. ARS also wants to develop regionalized models, databases, and modeling scenarios for future assessments and expand watershed-scale research on conservation practices for different soils, climates, topographies, and land uses.

Initially, ARS's focus in CEAP will be on developing scientifically valid data about conservation practices' potential to benefit water and soil quality. ARS and NRCS then plan to address the effects of land uses such as irrigated crop production, concentrated animal-feeding operations, grazing, and agroforestry. Long-term goals will extend beyond 5 years and will include a preliminary examination of how these conservation efforts affect air quality and wildlife habitat.

ARS's involvement in CEAP represents just part of a larger push within the agency to ensure productive watersheds that will suffer fewer problems from soil erosion and poor water quality and to ensure that future generations will enjoy the benefits of sound watershed management practices.

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