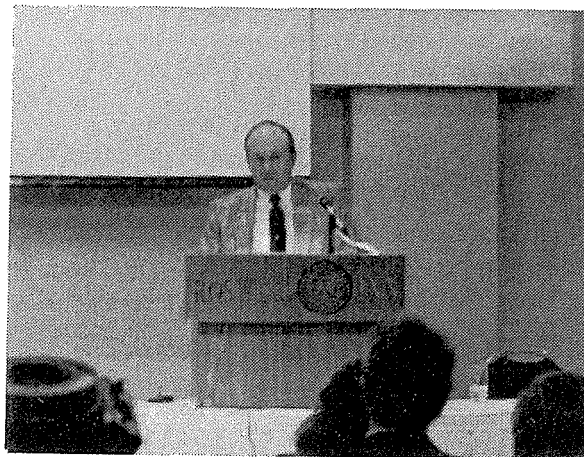


*Bob McQueen is the state resource conservationist with the U.S. Department of Agriculture Soil Conservation Service. McQueen has worked for the SCS since 1966 in Texas and Colorado before coming to New Mexico in 1984. His present responsibilities include managing the Resource Technology Staff for New Mexico SCS, which includes activities in range, agronomy, forestry, biology, plant materials, water resources, and watershed planning throughout the state. He is an officer in the Society for Range Management and an active member of the Soil and Water Conservation Society, National Association of Conservation Districts, and the New Mexico Association of Conservation Districts. McQueen is a new member of the Water Resource Research Institute's Water Conference Advisory Committee.*



## SOIL CONSERVATION SERVICE GROUND WATER QUALITY PROGRAMS

*Bob McQueen  
State Resource Conservationist  
Soil Conservation Service  
517 Gold Ave., SW Room 3301  
Albuquerque, NM 87102-3157*

President Bush's 1989 Water Quality Initiative made the U.S. Department of Agriculture (USDA) responsible for addressing agriculture-related water quality concerns in our ongoing and new programs. In response to the President's Initiative, USDA has developed an integrated water quality plan that includes three components:

- Education
- Technical Assistance
- Research and Data Bases

The Soil Conservation Service (SCS), Cooperative Extension Service, Agricultural Stabilization and Conservation Service, and a host of other agencies will be involved in implementing the water quality plan.

This plan sets the direction for USDA activities for the next five years. The plan primarily focuses on the effects of nonpoint source pollution on ground water. Under this water quality initiative, SCS will:

- Let state and local governments call the shots when it comes to defining water uses, establishing water quality standards, and setting priorities for action.

- Continue to emphasize voluntary action by landowners and land users. We will go out of our way to help people figure out how to prevent water pollution. We hope there will be no need for regulatory restrictions on the use of chemicals essential to agricultural production.
- Give water quality more attention in our technical assistance programs.
- Support research that helps us figure out where pollutants originate and what off-site effects they have.
- Make sure we are trained to identify and help solve water quality problems.

In helping the public improve and protect water resources, we are facing some new challenges. However, SCS in New Mexico is committed to improving water quality and quantity and is preparing to meet this challenge.

It appears the final 1990 USDA budget will include \$13 million requested by the President for SCS water quality activities. The budget supports the following:

- regional demonstration projects

Bob McQueen

- treatment by hydrologic unit - a new concept for SCS
- regional technical assistance
- technology development
- data base development

Work plans for the regional demonstration projects, which are a cooperative effort of SCS and the Extension Service, have been received and are being reviewed.

Regarding the treatment by hydrologic unit, we submitted five projects for funding of nonpoint source treatment areas. As a result, a project located in Dona Ana and Sierra counties was one of 37 projects selected for funding nationwide. This hydrologic unit includes all the irrigated land below Caballo reservoir to the Texas state line.

Funds will be used to increase staffing to accelerate technical assistance to the farmers in the area. The farmers will be taught proper management of irrigation water, salinity, nutrients, and pesticides. The project is supported by the local Soil and Water Conservation Districts and by the Environmental Improvement Division of the New Mexico Health and Environment Department.

Another project is the Cooperative River Basin Study on the Pecos River. The SCS and Forest Service have received authorization for a study focusing on two questions. Have historic upland vegetation changes affected water quality and quantity in the Pecos River? Can improvement in upland vegetation, such as replacing invading brush with grass, increase water quantity or improve water quality in the river?

In January, representatives of the Forest Service and SCS will meet with the sponsors of the Pecos study. The representatives will become familiar with the sponsors' concerns and objectives. Anyone interested in sponsoring or providing input to the study should contact me or your local SCS office for details.

We are finishing the Hidalgo Y Luna Cooperative River Basin Study, which focused on irrigated cropland in Hidalgo and Luna counties. The primary objective was to evaluate the effect of irrigation practices on economics and conservation. Preliminary results show that the greatest opportunity for saving water, reducing production costs, and increasing yield is by monitoring soil moisture and scheduling irrigations based on crop needs and soil-water holding capacity. The Water Resources Research Institute and Black Range Resource, Conservation & Development Corporation joined forces to develop demonstration projects showing cost and

savings associated with improving the efficiency of pumping plants.

Another SCS initiative, a Floodplain Management Study, started this past year. The project assists rural communities in identifying floodplains, wetlands and other important natural areas. The project also assists in developing management options the community can use to improve its quality of life and reduce environmental impacts from flooding. We currently have eight requests for this assistance and are starting on our first study with the city of Gallup. We expect to complete one study per year.

The Water Quality Act of 1987 requires states to assess their waters and prepare an assessment report for EPA. The act also mandates that states develop a management program for nonpoint source pollution control and that the program be implemented quickly. Both the assessment report and the management plan are prepared by the state's Environmental Improvement Division.

#### **IMPROVE WATER QUALITY IN RURAL AMERICA**

In New Mexico, our second priority is water quality, just behind our first nationwide priority, erosion control. In our state, erosion significantly affects water quality. Our agency's policy states that all USDA programs will be implemented in a manner that avoids harmful levels of contamination to ground and surface waters. This also means SCS field personnel need to be aware of how water quality may be affected by the conservation practices they recommend.

We are neither anti-chemical nor pro-chemical. We do support the prudent and wise use of chemicals. SCS is preparing a Water Quality Handbook, our initial effort at compiling the data needed by SCS personnel to incorporate the principles of water quality protection into conservation planning.

We will continually update this document as new information becomes available and as we make it specific to the field office level. Eventually, we will be incorporating the information into a Geographic Information System and our Field Office Resources Data Base. This new technology will improve our nonpoint source pollution control efforts.

We have been conducting training sessions throughout New Mexico for our field personnel. Our first round of training is complete, but due to interest from other federal and state agencies, we have been asked to conduct another session specifi-

## Soil Conservation Service Ground Water Quality Programs

cally for other agencies. The session will be held in Albuquerque on December 12-14, 1989. The Cooperative Extension Service and Environmental Improvement Division have been helping us present these workshops and we appreciate their involvement. The training is providing our field office planners with information that will enable them to identify water resources concerns and offer practical land-use alternatives to the landowner. For example, if a producer's land lies within an area that has water quality problems, this information will be available to the local SCS planner.

The SCS is serious about water quality and believes it is a very important issue to the nation and particularly to New Mexico. We recognize that agriculture is, or has the potential of being, a major contributor to the nonpoint source problem, if only because of the large areas involved and the amount of irrigated land.

Hopefully, agriculture is not as bad as some of the public perceives it to be. In my opinion, we must take action to correct any problems we do have--not only to prevent pollution, but also to try to change the public's perception of agriculture as being "all bad."

The SCS charge is to integrate water quality and quantity concerns into all our conservation planning and application activities. I do not foresee any drastic changes in our conservation planning process, but we certainly are going to place much more emphasis on water quality. We are not changing planning procedures but simply adding new tools to evaluate the impacts of our activities on water quality and quantity.

If a problem exists, we try to address it during the planning process in a logical and systematic way. This ensures an accurate diagnosis and that the right treatments or alternatives to correct the problem are prescribed.

By now, most of us have accepted the fact that water quality and quantity have become a permanent fixture in our planning process. Our responsibilities have changed in this respect but we plan to adapt and aggressively carry out our new role. As a final comment, I would like to emphasize that SCS is a strong supporter of voluntary action by landowners on water quality concerns.