



United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-247791.2

July 9, 1992

The Honorable Patrick J. Leahy
Chairman, Committee on Agriculture,
Nutrition, and Forestry
United States Senate

Dear Mr. Chairman:

Although pesticides and fertilizers have increased the productivity of U.S. farms and ranches, their effects on human health and the environment have raised concerns. The agricultural sector is the nation's largest user of pesticides and fertilizers, and studies have shown that these pesticides and fertilizers are increasingly being found in our nation's surface water and groundwater supplies. Because of the close link between agricultural production and water quality, the U.S. Department of Agriculture (USDA) and other federal agencies have increased their efforts to address agriculture-related water quality problems. One approach USDA uses to address these problems is to provide financial assistance in the form of cost-share payments¹ to farmers and ranchers who adopt USDA-approved water quality protection or improvement activities on their land.

In response to your July 1991 request, we agreed to provide you with information on USDA's water quality cost-share programs. Because of your immediate need for certain information, we provided you with a fact sheet that identified USDA's water quality cost-share programs,

¹In this letter, the term "cost-share payments" refers to moneys provided to producers--generally, eligible farmers and ranchers--to implement USDA-approved water quality activities on their land.

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the activities eligible for cost-sharing under these programs, and the funding of these programs.²

As you also requested, this letter provides you with information concerning

- the coordination of USDA's water quality cost-share programs,
- the results of USDA's water quality cost-share programs, and
- selected states' involvement in USDA water quality cost-share programs.

In summary,

- major portions of USDA's water quality programs and activities, including those involving cost-share funding, are not formally coordinated at the Department level but are planned and implemented at the Under or Assistant Secretary level and on an agency-by-agency basis;
- the Department has collected limited data on the results of its water quality programs and activities, including those involving cost-share payments to farmers and ranchers; and
- agricultural producers in California, Maryland, and Iowa receive cost-share payments for water quality activities under various USDA programs and also participate in state-operated water quality cost-share programs.

COORDINATION OF USDA'S WATER
QUALITY COST-SHARE PROGRAMS

As noted in our July 1990 report,³ to assist USDA in coordinating its various water quality programs and

²Water Quality: Information on USDA's Water Quality Cost-Share Programs (GAO/RCED-92-139FS, Mar. 16, 1992).

³Agriculture: USDA Needs to Better Focus Its Water Quality Responsibilities (GAO/RCED-90-162, July 23, 1990).

activities, the Department has established or participates in a variety of formal and informal arrangements among its many agencies and with others outside of the Department. However, major portions of USDA's water quality programs and activities, including those involving cost-share funding, are planned and implemented at the Under or Assistant Secretary level and on an agency-by-agency basis, not through a single focal point.

In our July 1990 report, we recommended that the Secretary of Agriculture establish a Department-wide focal point or coordinating body with responsibility and accountability for all of USDA's water quality activities. In commenting on our report, the Department agreed with our recommendation but referred to its Working Group on Water Quality, established in November 1989. However, as discussed below, the working group does not coordinate all of the Department's water quality activities.

The primary mechanism for coordinating USDA's water quality programs and activities is the Department's Working Group on Water Quality.⁴ However, the working group, chaired by the Deputy Assistant Secretary for Science and Education, oversees only the activities of USDA's Water Quality Initiative. That initiative began in fiscal year 1990 as part of a federal water quality initiative aimed at protecting ground and surface water from contamination by fertilizers and pesticides. According to the Executive Secretary of the working group, the only water quality cost-share activities that are a part of USDA's Water Quality Initiative, and therefore overseen by the working group, are the Hydrologic Unit Areas, the Water Quality Demonstration Projects, and the Water Quality Special Projects funded under USDA's Agricultural Conservation Program. Management and coordination of the other nine USDA water quality cost-share programs remain the responsibility of the individual Under or Assistant Secretaries and their respective

⁴Eleven USDA agencies are represented on the working group. In addition to the various USDA agencies, the Environmental Protection Agency (EPA), the U.S. Geological Survey (USGS), and other federal, state, and local public and private institutions concerned with water resource, agricultural, and environmental issues are represented on the various committees and subcommittees of the working group.

agencies. As a result, these remaining water quality cost-share programs are not formally coordinated at the Department level.

In addition to the Department's existing Working Group on Water Quality, the Food, Agriculture, Conservation, and Trade Act of 1990 (P.L. 101-624, enacted Nov. 28, 1990) required the Secretary of Agriculture to establish an Agricultural Council on Environmental Quality and an Office of Agricultural Environmental Quality to coordinate the Department's environmental quality activities, including those relating to water quality. In February 1991 the Secretary issued a departmental regulation establishing the Department's Agricultural Council on Environmental Quality. The council, as defined in the departmental regulation, is to provide policy-level coordination of agricultural environmental quality programs and issues that involve more than one Under or Assistant Secretary. The council had not held any meetings as of May 1, 1992.

The Department has not established the Office of Agricultural Environmental Quality called for in the 1990 act. USDA had not requested and the Congress had not appropriated funds for the office as of April 30, 1992.

RESULTS OF USDA'S WATER QUALITY COST-SHARE PROGRAMS

According to USDA program officials, measuring the results of water quality programs and activities can be a difficult, expensive, and time-consuming process. Because of these obstacles, the Department's primary goal regarding water quality activities has generally been to provide the technical assistance and cost-share funds to producers rather than to spend the Department's limited resources monitoring and evaluating the results of these activities. As a result, the Department has collected limited data on the results of its water quality programs and activities, including those involving cost-share payments to farmers and ranchers.

USDA program officials told us they are attempting to identify ways to get better measurements of the results of water quality programs and are trying to build monitoring and evaluation components into the Department's programs. However, they noted that the present departmental system for identifying program results is, for the most part, informal and ad hoc. The officials did cite several

examples of cost-share programs that have formal monitoring and evaluation components built into them:

- The Rural Clean Water Program, initiated in 1980 as an experimental program administered by USDA in consultation with EPA, funds 21 projects. As an experimental program, monitoring and evaluation were important elements of the program. Monitoring and evaluation components were built into all of the projects, and five of the projects received special federal funding for comprehensive monitoring and evaluation. A final evaluation of the program is to be completed by September 1992.
- The Colorado River Salinity Control Program is, by law, required to have a monitoring and evaluation component, and specific funding is provided for that purpose. The Department in August 1991 issued monitoring and evaluation strategy guidelines for the program.
- Activities under the Department's Water Quality Initiative are receiving increased monitoring and evaluation attention. In December 1990 several USDA agencies issued a joint strategy for monitoring and evaluating activities under the Hydrologic Unit Areas, the Water Quality Demonstration Projects, and the Water Quality Special Projects. Although only small amounts of funding are made available under the USDA budget for the monitoring and evaluation of these activities, EPA and USGS, as participants under the federal water quality initiative, are also providing funds for their monitoring and evaluation.

According to USDA program officials, the Department relies on other federal agencies, such as EPA and USGS, as well as the individual states, to monitor and evaluate some of the Department's water quality activities, including cost-share programs. However, discussions with EPA and USGS officials, as well as with USDA officials in the field, indicate that neither these other federal agencies nor the states are monitoring and evaluating USDA water quality activities on a regular, consistent basis. Because these agencies and the states generally lack the funds needed to conduct extensive monitoring and evaluation activities, monitoring and evaluation by these entities appears to take place when funding allows.

USDA program officials noted that, lacking clear cause-and-effect relationships between activities and results, they use various data as surrogate measurements to determine the results of the Department's water quality activities, including cost-share activities. For example, they pointed to the amount of program expenditures, the number of program participants, the reduced levels of soil erosion, and the reduced use of agriculture-related chemicals and nutrients as indicators of USDA activities' success. The officials also said that USDA uses other information, such as photographs of farm streams before and after implementation of water quality practices, to indicate successes. Program officials also pointed out that they rely on common sense to implement water quality activities by funding water quality practices that have been effective in the past. They believe that notwithstanding the lack of hard, scientific data supporting their effectiveness, the activities the Department has funded have resulted in improved water quality.

SELECTED STATES' INVOLVEMENT IN USDA
WATER QUALITY COST-SHARE PROGRAMS

We obtained information on water quality cost-share programs in three states--California, Maryland, and Iowa--where there is substantial agricultural activity and where studies have identified significant agriculture-related water quality problems. Farmers and ranchers in all three states received cost-share payments for water quality activities under USDA's Agricultural Conservation Program and Conservation Reserve Program. Maryland and Iowa producers also received cost-share payments for water quality activities under USDA's Rural Abandoned Mine Program and Rural Clean Water Program. In addition, Maryland producers received cost-share payments for water quality activities under USDA's Small Watershed Program, and producers in California received cost-share payments for water quality activities under the Department's Water Bank Program. Participants in these water quality cost-share programs received cost-share payments from USDA for fiscal years 1988-92 of \$4.6 million (California); \$4.2 million (Maryland); and \$2.7 million (Iowa).⁵

⁵According to officials from USDA's Agricultural Stabilization and Conservation Service, participation and funding estimates for the Water Quality Incentive Projects
(continued...)

In addition to their producers participating in USDA cost-share programs, the states also provide additional funds to supplement those provided by USDA and operate their own water quality cost-share programs. For example, the Maryland Agricultural Water Quality Cost-Share Program supplements USDA's Agricultural Conservation Program cost-share payments to Maryland farmers. While a participant can receive up to 75 percent of an activity's cost from USDA, with an annual maximum payment of \$3,500 per participant, the state can provide additional funds to bring the total assistance to 87.5 percent of the activity's total cost. The Iowa Water Protection Fund also provides technical and cost-share assistance to Iowa farmers for multiyear projects. The goal of the projects is to manage farm chemicals so as to protect the environment, conserve energy, and maintain farm profitability. In California, the state Cooperative Extension Service, in cooperation with the agricultural chemical manufacturers, funds the monitoring of some of the state's water quality cost-share projects. For example, the Cooperative Extension Service collects water samples from bodies of water in the Sacramento Valley. These samples are then sent to the chemical manufacturers, who analyze the amount of pesticides and determine compliance with locally set pollutant levels.

AGENCY VIEWS

We discussed the information in this letter with the Director, Conservation and Environmental Protection Division, Agricultural Stabilization and Conservation Service, USDA; the Assistant Director, Land Treatment Division, Soil Conservation Service, USDA; and the Executive Secretary, Working Group on Water Quality, USDA. These officials generally agreed with the information presented, and we have included their comments where appropriate.

SCOPE AND METHODOLOGY

We interviewed officials and gathered documentary information at USDA headquarters in Washington, D.C., and at USDA field offices in Maryland, Iowa, and California.

⁵(...continued)
and the Stewardship Incentive Program, which are beginning in fiscal year 1992, were not available.

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We also discussed water quality cost-share activities with EPA and USGS officials in Washington, D.C., and with selected EPA, USGS, and state officials in the three states that we visited. Our work was conducted between July 1991 and February 1992 in accordance with generally accepted government auditing standards.

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As agreed with your office, the submission of this information completes our work in response to your July 1991 request. As always, we are available to further brief you, your staff, or your Committee on our work.

If you have any questions concerning the information we have provided to you, please contact me at (202) 275-5138.

Sincerely yours,



John W. Harman
Director, Food and
Agriculture Issues

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