

level to examine this problem and opportunity. These agencies expect to take about one year to analyze the situation and make a report. Interior has the leadership responsibility. However, SCS will chair an interagency study group which will be located in Denver, Colorado, and do the field work.

This interest at the Federal level has stimulated a similar interest among several of the Western States. Active state participation is essential if any program of this type is to be fully effective and long-lasting. Only in this way can the objectives of this Act be fully realized.

Interagency Study on Irrigation Efficiencies

In accordance with General Accounting Office recommendations, an Interagency Task Force on Irrigation Efficiencies has been established at the Washington level. The Task Force membership consists of:

Eugene Hinds, U. S. Department of the Interior - Chairman.

Joseph W. Haas, U. S. Department of Agriculture.

Joseph A. Krivak, U. S. Environmental Protection Agency. (452)

The objective of the Interagency Task Force is to examine the problem of inefficient irrigation in the United States and develop recommendations regarding appropriate Federal objectives, policies, agency roles, and action programs. The Task Force's study will include: requirements for increasing irrigation efficiencies, the costs, economic benefits, water conservation, effects on water quality, and environmental and social impacts. The study will involve both Federal and non-Federal irrigation development. (453)

The Task Force established a Technical Work Group to make investigations, evaluations, and recommendations on ways to improve irrigation efficiencies. The Technical Work Group operates out of the Engineering and Research Center, Bureau of Reclamation, Denver, Colorado. Sheldon G. Boone, SCS, has been designated as Chairman of the Technical Work Group and primary USDA representative. Paul K. Koluvek, SCS, Portland, Oregon, and E. Gordon Kruse, ARS, Fort Collins, Colorado, are also members of the work group. Other USDA agencies will need to participate in some of the work activities. (454) The Departments of the Interior and the Environmental Protection Agency also have a minimum of three representatives serving on the Technical Work Group. (455)

The Technical Work Group is charged with the following tasks:

1. Document the efficiencies of irrigation water conveyance and on-farm irrigation systems using existing data and accuracies as defined by the Technical Work Group.
2. Identify the structural and non-structural measures required to increase farm irrigation efficiencies and the efficiencies of

irrigation water delivery systems.

3. Make realistic appraisals of the feasibility of substantially increasing Western irrigation efficiencies within 5 years and the attainable measure of improvement.

4. Determine the costs, associated water savings, water quality and fish and wildlife impacts and associated mitigation measures required, and social and economic effects of irrigation efficiency improvements.

5. Determine the potential disposition of the water saved and the benefits and environmental impacts associated therewith.

6. Review the current objectives, policies, and ongoing action programs of Federal agencies and other organizations as directly or indirectly concerned with increasing irrigation efficiencies.

7. Identify adjustments needed in Federal objectives and policies and specific actions which should be taken to increase water use efficiencies, achieve water conservation, enhance water quality, and achieve environmental goals.

8. Orient the study to document conclusions and recommendations, keeping the recommendations of the General Accounting Office's reports of June 22, 1977, and September 2, 1977, firmly in mind.

9. The investigations should emphasize agricultural water use in the Western States.

10. Prepare a draft report from the Interagency Task Force to the Secretaries of Agriculture and the Interior and the Administrator of the Environmental Protection Agency presenting the study's findings, conclusions, and recommendations.

11. Prepare the final report from the Interagency Task Force. This report is due September 1, 1978. (456)

Rural Clean Water Program

The Rural Clean Water Program was authorized by Sec. 35, P.L. 95-217 (91 Stat. 1579), December 27, 1977. This legislation amends Section 208, P.L. 92-500, the Federal Water Pollution Control Act. Sec. 35 authorizes and directs the Secretary of Agriculture, with the concurrence of the Administrator, Environmental Protection Agency (EPA), and acting through the Soil Conservation Service and such other USDA agencies as the Secretary may designate, to establish and administer a program for the purpose of installing and maintaining measures incorporating best management practices to control nonpoint source pollution for improved water quality. The program will be carried out through contracts with the owners and

operators of rural land. These contracts, which provide for Federal cost-sharing, will have a duration of not less than five nor more than ten years.
(457)

On February 8, 1978, Secretary of Agriculture, Bob Bergland, approved a proposed Organization for Implementing the Rural Clean Water Program. The program organization provides:

1. The Soil Conservation Service has program leadership.
2. There will be a Rural Clean Water Coordinating Committee, chaired by the Administrator, SCS.
3. SCS will develop rules and procedures and manage budgeting, accounting, and reporting. Also, it will provide technical support leadership to states, evaluate program operations, and approve agreements.
4. The Agricultural Stabilization and Conservation Service will provide guidance to State and County ASC Committees and coordinate Agricultural Conservation Programs with Rural Clean Water Programs.
5. The EPA will approve 208 plans and provide concurrence in USDA rules, regulations, and project proposals.
6. Other USDA agencies will be represented on the Committee and will provide support as appropriate.
7. The Administrator, SCS, will enter into agreements with soil conservation districts, state soil and water conservation agencies, and state water quality agencies, where practicable, for administration of the program. These agencies of State Government will be required to submit records of cost-share disbursements to the State ASC Committee and to the State Conservationist, SCS.
8. Where the administrator of contracts is retained by USDA, SCS will enter into cooperative agreements for the transfer of funds to ASCS for allocation to ASC county committees which will make cost-share payments to individuals and provide the associated records and reports. Payments will be made upon certification by the designated SCS technician.
9. The State ASCS will consolidate the annual cost-share disbursements made by the state and local agencies as well as those disbursed by the State ASC Committee.
10. SCS will enter into cooperative agreements with other USDA agencies (Extension, FS, FmHA, ERS, ARS) as appropriate for support which they will provide.
11. There will be a committee to coordinate project determination among the 208 management agencies, soil conservation districts, and other USDA and State-support agencies.
12. SCS will provide technical assistance and prepare and transmit budget requests, progress and other needed reports.
13. ASCS will furnish data on land use, crop history and cost-shared conservation measures for the program; and review plans and contracts to assure coordination with other farm programs.

14. ASC county committees, in those counties selected for participation in the Rural Clean Water Program, will represent the Secretary of Agriculture in determining priority of assistance among individual land owners and operators, together with the local soil conservation district, based on technical information provided by SCS. (458)

A formal agreement on the program design for the Rural Clean Water Program was signed on April 25, 1978, by Assistant Secretary M. Rupert Cutler of USDA and Assistant Administrator Thomas C. Jorling of EPA. This agreement will serve as the basis for the development of National program regulations. Draft regulations are scheduled to be published around May 15, 1978, with a period for public review and comment before final publication prior to September 30, 1978. (459)

CHAPTER 12

S U M M A R Y

The Department of Agriculture was established on May 15, 1862. Its general design and duties were "to acquire and diffuse among the people of the United States useful information on subjects connected with agriculture...., and to procure, propagate, and distribute among the people new and valuable seeds and plants". In the early 1880's it established experimental farms and laboratories in various parts of the country to work on specific agricultural problems. In 1889 the Department began issuing farmer's bulletins as a means of diffusing among the people information about scientific developments in the field of agriculture.

In 1889 the Weather Bureau was transferred to the USDA and, in 1892, it initiated USDA's work on soils by publishing a report on the "Relation of Soil to Climate" and a bulletin on "Some Physical Properties of Soils in Their Relation to Moisture and Crop Distribution". This, apparently, was the first published recognition of soil-moisture relationships.

Engineering studies dealing with irrigation of agricultural crops were authorized by Congress in 1898 and research on drainage was authorized in 1902. This work was transferred from USDA's Office of Experiment Stations to its Office of Public Roads and Rural Engineering in 1915. Eventually, it was transferred to the SCS in 1938.

In 1905 control over the forest reserves was transferred from the Department of the Interior to the USDA. In 1911 the Weeks Act authorized the Secretary of Agriculture to purchase lands necessary to the regulation of flow of navigable streams. In 1920 the Federal Power Commission was formed with USDA as a member. The Federal Water Power Act of 1920 authorized the FPC to license non-Federal development of water power on navigable waters and public lands. In 1925 Congress directed the Corps of Engineers and the FPC to prepare jointly a list of navigable streams and their tributaries on which power development appeared practicable. The list was printed in 1927 in H.D. 308 and reports prepared by the Corps of Engineers on these streams became known as the "308 reports". These reports had a significant influence on the scope of studies made later by USDA.

USDA's early research work also included the hydrology of agricultural watersheds. This research provided the basic concepts and data for use in developing the Rational Formula for estimating maximum run-off from a small agricultural watershed. Its use was essential to the design of water management measures on agricultural lands.

During the period 1862-1929 USDA experienced a major expansion in its areas of responsibility, including research in various fields of water management. The reason for this expansion into the field of water

resources has been appropriately expressed by D. A. Williams, former Administrator, SCS. He stated: "Water, like soil, is a basic resource of the nation's life and economy. And, like soil, its use and care are first in the hands of farmers, ranchers, and other land users." (460) USDA is the Federal Agency charged with the responsibility of assisting the people of the United States with subjects and problems connected with agriculture.

USDA's involvement in the field of water resources accelerated during the next half-century. Its activities in soil and water conservation and erosion control research expanded rapidly in the early 1930's. In April 1935, the Soil Conservation Service was established and all USDA erosion control activities were centered in that agency. After July 1, 1937, all its erosion control work was undertaken through legally constituted Soil Conservation Associations.

USDA was involved in the activities of four successive national planning organizations at the national level between 1933 and 1943. The Flood Control Act of 1936 directed the Secretary of Agriculture to make Federal investigations of watersheds and measures for run-off and water flow retardation on the watersheds of the nation. An amendment to this Act in 1937 extended this authority to cover all watersheds authorized to be surveyed by the Corps of Engineers. This included all the "308" watersheds. As of January 1, 1946, USDA had authorizations to make preliminary examinations on 913 watersheds. During the period 1937-1943 it initiated studies on 212 watersheds and completed 160. Eleven of these were authorized for construction by the Flood Control Act of 1944.

USDA prepared an Agricultural Plan for development of the Missouri River Basin to supplement and complement the Pick-Sloan Plan of the Corps and the Bureau of Reclamation. It was not authorized for construction but influenced subsequent watershed planning efforts. Other USDA water programs of the late 1930's and early 1940's were the Water Facilities Program, the Land Utilization and Retirement of Submarginal Land Program and the Case-Wheeler Program.

The 1953 House Agricultural Appropriations Bill included \$5 million for a pilot watershed program. This was authorized and 62 watersheds were designated by December 8, 1953. Planned works of improvement were installed on 54 of these by 1972.

The Flood Prevention Watersheds authorized by the Flood Control Act of 1944 and the Pilot Watersheds Program were the forerunners of the Watershed Protection and Flood Prevention Program authorized by P.L. 83-566. This has been a very popular program because it is locally initiated, locally controlled, and reflects the objectives and desires of the local people. As of April 1, 1977, 2,860 applications for assistance had been received, and 1,752 watersheds approved for planning, 1,185 plans authorized for operations and 434 projects had been completed.

This program has encountered a number of problems which have delayed installation and slowed down the rate of planning during the last 10 years: (1) The Administration placed a moratorium on the processing

of Watershed Work Plans in 1966. This was not lifted until April 1, 1969, by the new Administration. About 96 watershed projects were held in abeyance during this period. (2) The National Environmental Policy Act was passed in 1969. It required environmental impact statements to be prepared for each project. At the time the Act was passed, SCS had 621 watershed projects in operation. Since the Act was ruled to be retroactive, each of these had to be brought into compliance. This required much of the available planning resources. (3) The Uniform Relocation Assistance and Real Property Policies Act also required additional planning inputs into projects already in operation. (4) New emphasis on the protection of archeological and historical properties added a new dimension and additional time requirements to the planning process. (5) The Water Resource Council issued its Principles and Standards in 1973. These replaced the planning and evaluation procedure established by Senate Document 97 and required a multiple-objective planning approach with equal emphasis on national economic development and environmental quality. This not only increased investigation and evaluation time in order to service its four accounts, but also made plan formulation more difficult because of involvement of added interests.

The impact of these changes and added requirements to the planning process are: planning is a more involved and longer process than formerly; a wider range of interests is involved; and the decisions and desires of the watershed sponsors and residents no longer are over riding. This has changed the watershed program from a local program with Federal assistance to one which approaches a Federal program with local assistance and obligations. The result has been some loss of popularity of the program with the agricultural interests of the watersheds.

The watersheds operations program has moved forward about as fast as available funding would permit. During the 20-year period, 1956-1976, USDA obligated over \$1,221 million on 1,185 projects, 434 of which have been completed.

Through fiscal year 1977, USDA had completed 59 Type 4 cooperative River Basin Studies and had 50 under way. It had participated in 12 Type 1 Interagency Studies, 16 Type 2 studies and 15 Level B studies, 12 of which are still underway.

SCS also makes Flood Hazard Analyses and Flood Insurance Studies. Its field delivery system is especially important to these study efforts. It has an active recreation program which cuts across all SCS programs, and it carries out emergency watershed protection activities following major natural disasters.

Several USDA agencies have water resource programs over and above the Watershed Protection, Flood Prevention, and River Basin Programs. These are ARS, ASCS, ERS, FmHA, FS, and SCS. These programs are discussed briefly in Chapter 8.

USDA has been active in and affected by the interagency coordination activities of the Federal government. Its greatest involvement

has been with the Water Resources Council established by the Water Resources Planning Act of 1965. USDA is an active member of the Council of Members and its alternates, the Council of Representatives, all committees, and the River Basin Commissions. It participates on various task forces including those for the National Assessment, the Principles and Standards, and the Section 80(c) Study.

Because of its field delivery system and its close tie with the farmer, USDA is participating with Interior and EPA in the Colorado River Basin Salinity Control Program. USDA's primary involvement is with the on-farm application of needed corrective measures to improve irrigation efficiencies.

In accordance with recommendations of the GAO, an Interagency Task Force on Irrigation Efficiencies has been established at the Washington level. It is composed of representatives of the USDI, USDA, and EPA. Its objective is to examine the problem of inefficient irrigation in the U.S. and develop recommendations regarding appropriate Federal objectives, policies, agency roles, and action programs.

The Task Force established a Technical Work Group to make investigations, evaluations and recommendations on ways to improve irrigation efficiencies. It operates out of Denver, Colorado, and is chaired by SCS.

The overall objective of this total effort is water conservation through improved irrigation efficiencies.

The Rural Clean Water Program was authorized by Sec. 35, P.L. 95-217, December 27, 1977. This legislation amends Section 208, P.L. 92-500, the Federal Water Pollution Control Act. The Secretary of Agriculture is authorized and directed to establish and administer a program for the purpose of installing and maintaining measures incorporating best management practices on rural lands to control nonpoint source pollution for improved water quality. The program will be carried out through contracts with the owners and operators of rural lands. These contracts, which provide for Federal cost-sharing, will have a duration of not less than five nor more than ten years.

The SCS has been given program leadership. The ASCS will provide guidance to State and county ASC Committees, coordinate the ACP with the Rural Clean Water Program, and consolidate the annual cost-share disbursements made by State and local agencies as well as those disbursed by the State ASC Committee.

Other USDA agencies, such as Extension, FS, FmHA, ERS and ARS, will provide appropriate support.

SCS will develop rules and procedures; manage budgeting, accounting, and reporting; and provide technical support leadership to states, evaluate program operations, and approve agreements.

The EPA will approve 208 plans and provide concurrence in USDA rules, regulations, and project proposals.

Final publication of the national program regulations are expected prior to September 30, 1978.

As the Water Resource Programs of the nation have developed, USDA has had to be directly involved. It is the Federal agency most closely associated with the farmers, ranchers, and private timber growers who control most of the privately owned lands of the nation. These non-Federal rural lands, together with the National Forests, constitute about 85 percent of the area of the 48 contiguous states. (461) Most of the manageable renewable water resources of the nation originate on these lands.

The evolution of the USDA from essentially an agency concerned only with crop and livestock production to one of the four major water and related land resource planning and construction agencies of the Federal government didn't "just happen". Conditions and resource interrelationships required it. The continued active participation of USDA in water resource programs appears to be essential if a productive, efficient, permanent agricultural economy is to be maintained on many of the most potentially productive areas of the nation.

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