The National Agricultural Law Center

University of Arkansas
NatAgLaw@uark.edu | (479) 575-7646

An Agricultural Law Research Article

Soil Conservation Programs Amidst Faltering Environmental Commitments and the "New Federalism"

by

John B. Braden and Donald L. Uchtmann

Originally published in BOSTON COLLEGE ENVIRONMENTAL AFFAIRS LAW REVIEW
10 B.C. ENVTL. AFF. L. REV. 639 (1983)

www.NationalAgLawCenter.org

SOIL CONSERVATION PROGRAMS AMIDST FALTERING ENVIRONMENTAL COMMITMENTS AND THE "NEW FEDERALISM"

*John B. Braden and Donald L. Uchtmann**

I. INTRODUCTION

Despite decades of public work and billions of tax dollars spent, soil erosion remains a serious problem affecting land and water in all parts of the United States. Widespread recognition of shortcomings in existing soil conservation programs generated a thoroughgoing reconsideration of conservation policies between 1977 and 1982. The studies were controlled by conservation agencies and the resulting recommendations made some changes in agency procedures and goals, but left the program philosophies, administrative structures, and incentives to landowners essentially intact. Questions abound as to whether recent changes in conservation programs are enough to stem losses of soil which squander natural agricultural productivity, pollute water, and clog streams and reservoirs. Furthermore, with the Reagan Administration's rethinking of environmental goals and

* Assistant Professor of Natural Resource Economics and Professor of Agricultural Law, respectively, Department of Agricultural Economics, University of Illinois at Urbana-Champaign.

This study was part of Project No. 00-65-03-300-85 of the Illinois Water Resources Center and Project No. 1-6-53491 of the Agricultural Experiment Station, College of Agriculture, University of Illinois at Urbana-Champaign. Many individuals generously provided information in the course of this research. Special thanks are due to D. Brady, G. Dornbush, M. Garner, J. Henry, J. Lake, E. Lamb, M. MacMullen, J. Meek, R. Walker, and G. Wood. H. Gunn, P. Pokorski, D. Prutton, and P. Zigterman assisted with the research. The authors retain all responsibility for the paper's contents.

relationships between states and the federal government, conservation programs are in danger of drifting back to past policies dictated by traditional agricultural production constituencies. Advances heretofore made in program efficiency and in pollution control may thus be lost.

This article identifies and evaluates recent policy and administrative changes in public soil conservation programs. The article is organized as follows. The two most important soil conservation programs are reviewed in Part II and recent proposals for change are described. Impacts of pollution control mandates on these soil conservation programs are discussed in Parts III and IV. Part V contains an evaluation of changes in soil conservation program implementation. Conclusions follow.

II. Public Soil Conservation Programs

For many years various divisions of the United States Department of Agriculture have conducted programs for soil erosion control and watershed management.[1] The two most important programs are the Conservation Operations Program administered by the Soil Conservation Service (SCS), and the Agricultural Conservation Program conducted by the Agricultural Stabilization and Conservation Service (ASCS). The SCS primarily provides technical conservation assistance to land occupiers, while the ASCS provides financial assistance for costly conservation practices. The following sections discuss the structure and operations of these programs.

A. The Conservation Operations Program

The Soil Erosion Act of 1935[2] authorizes the Secretary of Agriculture to undertake a wide variety of measures to prevent soil erosion, including engineering operations, new methods of cultivation, revegetation and changes in land use. In addition, the Secretary may enter into agreements with or furnish aid to any agency or person in

1. Thirty-four U.S. Department of Agriculture programs relate to soil erosion control. *See* U.S. Dep't of Agriculture, Soil and Water Resources Conservation Act Summary of Appraisal Parts I and II and Program Report: Review Draft (1980) [hereinafter RCA Program Report Review Draft]. *See also* Williams, *Soil Conservation and Water Pollution Control: The Muddy Record of the United States Department of Agriculture*, 7 B.C. Envt'l. Aff. L. Rev. 365 (1979); R. Morgan, Governing Soil Conservation (1965); R. Held & M. Clawsen, Soil Conservation in Perspective (1965); R. Dallavalle & L. Mayer, Soil Conservation in the United States: The Federal Role (Cong. Res. Ser., QE 80, 1980).

2. Pub. L. No. 74-46, 49 Stat. 163 (1935) (current version at 16 U.S.C. § 590(a-f) (1976 & Supp. IV 1980)). This Act empowered the Secretary of Agriculture to control erosion in various manners.

order to further the purposes of the Act.[3] Assistance provided pursuant to the Act may be conditioned upon the enactment of state and local laws that impose suitable permanent restrictions on land use and otherwise provide for erosion prevention.[4] The Secretary of Agriculture formed the Conservation Operations Program (COP), administered by the SCS,[5] to implement the Act.

1. Soil Conservation Districts

Soon after the Conservation Operations Program was begun, it was determined that "successful operation of the COP would require some kind of local organization"[6] to study local needs, develop plans for SCS local activities and provide support for local, state, and na-

3. 16 U.S.C. § 590a (1976) provides that:
It is recognized that the wastage of soil and moisture resources on farm, grazing, and forest lands of the Nation, resulting from soil erosion, is a menace to the national welfare and that it is declared to be the policy of Congress to provide permanently for the control and prevention of soil erosion and thereby to preserve natural resources, control floods, prevent impairment of reservoirs, and maintain the navigability of rivers and harbors, protect public health, public lands and relieve unemployment, and the Secretary of Agriculture, from now on, shall coordinate and direct all activities with relation to soil erosion and in order to effectuate this policy is authorized, from time to time—
(1) To conduct surveys, investigations, and research relating to the character of soil erosion and the preventive measures needed, to publish the results of any such surveys, investigations, or research, to disseminate information concerning such methods, and to conduct demonstrational projects in areas subject to erosion by wind or water;
(2) To carry out preventive measures, including, but not limited to, engineering operations, methods of cultivation, the growing of vegetation, and changes in use of land;
(3) To cooperate or enter into agreements with, or to furnish financial or other aid to, any agency, governmental or otherwise, or any person, subject to such conditions as he may deem necessary, for the purposes of this chapter; and
(4) To acquire lands, or rights or interests therein, by purchase, gift, condemnation, or otherwise, whenever necessary for the purposes of this chapter.

4. 16 U.S.C. § 590c (1976) provides that:
As a condition to the extending of any benefits under this chapter to any lands not owned or controlled by the United States or any of its agencies, the Secretary of Agriculture may, insofar as he may deem necessary for the purposes of this chapter, require—
(1) The enactment and reasonable safeguards for the enforcement of State and local laws imposing suitable permanent restrictions on the use of such lands and otherwise providing for the prevention of soil erosion;
(2) Agreements or covenants as to the permanent use of such lands; and
(3) Contributions in money, services, materials, or otherwise, to any operations conferring such benefits.

5. *See generally* 7 C.F.R. §§ 610.1-.5 (1982).

6. D. SIMMS, THE SOIL CONSERVATION SERVICE 74 (1970). *See also* R. MORGAN, *supra* note 1, at 37.

tional conservation programs. In 1936, the USDA released a Model Standard State Soil Conservation Districts Law.[7] The model districts were special governmental units designated to oversee SCS assistance to landowners, carry on projects for soil erosion control, and administer land use regulations relating to soil conservation.[8] By 1947, all states and the territories of Alaska and Hawaii had authorized soil conservation districts.[9]

In general, soil conservation districts are independent units of local government.[10] Their boundaries generally conform to county lines.[11] Funds are generated through local and state appropriations

---

7. SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, A STANDARD STATE SOIL CONSERVATION DISTRICT LAW (1936).

8. The "soil conservation district" concept was not universally favored within the USDA. The Extension Service and the Land Grant Universities viewed it as a competing channel for federal relations with farmers and, hence, took particular issue with it. D. SIMMS, *supra* note 6, at 74; R. MORGAN, *supra* note 1, at 37, 58-64.

9. D. SIMMS, *supra* note 6, at 77-79.

> The State laws varied somewhat but generally included . . . five provisions:
>
> 1. Creation of a state soil conservation committee as an agency of the state, whose job is to assist in the formation of conservation districts and to coordinate the affairs of districts as local subdivisions of state government . . .
> 2. A petition-and-referendum procedure for the formation of districts. . . . All occupiers of lands within the boundaries outlined by the [state] committee are eligible to vote . . .
> 3. Appointment by the [state] committee of two supervisors (in some states called directors or commissioners) and the subsequent election of additional supervisors—usually three—from within the district to form a governing body for the district.
> 4. Authority for the district to conduct surveys, investigations, and research relating to soil erosion and its prevention; to develop comprehensive plans for conservation within the district; to conduct demonstrations and disseminate information; to enter into contracts or agreements with landowners and operators to carry out conservation programs; to enter into agreements with government agencies; to purchase, lease, or otherwise acquire or dispose of land and equipment.
> 5. Procedures for taking in additional land and . . . for dissolving the district.

Id.

Most state laws diverge from the model law in defining districts to coincide with counties instead of watersheds and in failing to grant regulatory powers or encumbering those powers with onerous procedural requirements. *See* Williams, *supra* note 1, at 378; W. PARKS, SOIL CONSERVATION DISTRICTS IN ACTION 148-51 (1952). For a survey of provisions of state conservation district laws as of January 1, 1975, see U.S. DEP'T OF AGRICULTURE, SOIL AND WATER RESOURCES CONSERVATION ACT 1980 APPRAISAL, PART II 244-53 (1981) [hereinafter cited as RCA STUDY PART II].

10. *See* RCA STUDY PART II, *supra* note 9, at 244-53. Districts should function with "aid but no 'dictation' " from a state soil conservation committee. R. MORGAN, *supra* note 1, at 253.

11. D. SIMMS, *supra* note 6, at 79. "County line organization resulted in the creation of substantially more districts than would have resulted from watershed boundary organization, and, consequently, increased administrative costs and bureaucracy." Williams, *supra* note 1, at 378. There are 3,209 counties and 2,935 conservation districts. U.S. DEP'T OF AGRICULTURE,

and service fees.[12] Many districts cannot tax or incur indebtedness.[13] District board members[14] typically have close ties to agriculture, though procedures for their selection vary by state.[15] Power to regulate land use has been used infrequently and is not granted to districts in many states.[16]

To receive technical assistance from the SCS, a conservation district must enter into a memorandum of understanding with the United States Secretary of Agriculture.[17] The memorandum should contain a description of the district's soil erosion problem, its long-range objectives in responding to those problems, and its proposed procedures for achieving those objectives. The memorandum must be supplemented with annual district work plans.[18] The SCS provides technical assistance through the district to local governments, land occupiers, and others.[19] This assistance includes classification

---

SOIL AND WATER RESOURCES CONSERVATION ACT 1980 APPRAISAL REVIEW DRAFT PART II, ch. 7 at 26 (1980) [hereinafter cited as RCA REVIEW DRAFT PART II]; *Status Report of Conservation District Employees*, NACD RCA NOTES 1, 2 (No. 24, February 26, 1982) (Nat'l Ass'n of Conservation Districts) [hereinafter cited as NACD RCA NOTES]. By contrast, the U.S. is subdivided into 246 major hydrologic basins. Cutler, *Taking it to the Farms*, WATER QUALITY MGMT. BULL. 18 (March 1980) (U.S. EPA).

12. Conservation districts received about $39.3 million from state and local appropriations in 1979. This is an average of less than $14,000 per district nationwide. There is considerable variation among states. Nebraska, for instance, averaged $197,830 for each of its 24 multipurpose Natural Resource Districts in 1979. Wisconsin's 72 districts each received over $55,000 on average in 1979. In New Hampshire, New Mexico, and Washington, districts received less than $1,000 apiece on average in 1979. RCA STUDY PART II, *supra* note 9, at 284. *See also infra* text and notes at notes 216-18; Marlette & Williams, *Nebraska Multi-Purpose Resources Districts*, in LEGAL, INSTITUTIONAL AND SOCIAL ASPECTS OF IRRIGATION AND DRAINAGE AND WATER RESOURCES PLANNING AND MANAGEMENT 266 (1979).

13. Thirty-three states do not extend to districts powers to tax or levy assessments. Eighteen states do not allow districts to borrow money. Districts are prevented from issuing bonds in 32 states. RCA STUDY PART II, *supra* note 9, at 248-49; Letter from M. Garner, Nat'l Ass'n of Conservation Districts, to John Braden (June 29, 1982).

14. Board members are called supervisors in 36 states, directors in 13 states, and commissioners in 3 states. (States, here, encompass Puerto Rico and the Virgin Islands). RCA STUDY PART II, *supra* note 9, at 250-51. The term "supervisor" is used inclusively in this paper.

15. R. MORGAN, *supra* note 1, at 214-24. Only seven states required representation of urban or non-farm interests on district boards at the beginning of 1977. Twenty-three states required that some or all supervisors own or occupy land in the district while four states reserved positions for representatives of specially designated areas. RCA STUDY PART II, *supra* note 9, at 250-51. Appointed supervisors are usually selected by state soil conservation committees or other state officials with close ties to agriculture.

16. W. PARKS, *supra* note 9, at 148-51. Twenty-seven states permitted districts to regulate land as of January 1, 1975. Some states required as much as a 90 percent majority to approve land use regulations. RCA STUDY PART II, *supra* note 9, at 248-49.

17. 7 C.F.R. § 660.3 (1977).

18. *Id.* The SCS often assists and guides district supervisors in the formation of their general programs and annual plans. W. PARKS, *supra* note 9, at 32-33.

19. 7 C.F.R. § 610.4 (1982).

and mapping of soils, development of farm conservation plans, and execution of those plans.[20]

2. Policy Orientations of SCS and Conservation Districts

The SCS maintains a high degree of technical competence in soil conservation and watershed protection. Its policies have followed its technical strengths. First, the engineering merits of projects and conservation measures have often outweighed economic considerations.[21] As a result, the SCS has been criticized for devising elaborate conservation plans that quickly become outdated.[22] Second, the SCS traditionally has offered its services on a first come first served basis.[23] There has been little effort to establish priorities among regions, problems, or conservation practices and to allocate services accordingly.[24] This reflects, in part, a lack of direction from conservation districts and state conservation agencies, but also reflects reluctance on the part of the SCS as an agency to give the appearance of regional favoritism.[25]

Consistent with its lack of focus on priorities, the SCS has historically measured its productivity by the number of individuals served and the number of acres covered by the program.[26] Such an assessment fails to consider the quality, cost, or necessity of the services rendered by the program. Furthermore, this approach has led the agency to deemphasize monitoring of erosion and maintenance of previously designed conservation plans, since only

---

20. *Id.*

21. U.S. GENERAL ACCOUNTING OFFICE, TO PROTECT TOMORROW'S FOOD SUPPLY, SOIL CONSERVATION NEEDS PRIORITY ATTENTION (Report to the Congress by the Comptroller General of the United States, February 14, 1977) [hereinafter cited as 1977 GAO REPORT]. *See also* C. HARDIN, THE POLITICS OF AGRICULTURE 61-62 (1952).

22. 1977 GAO REPORT, *supra* note 21, at ii. Other problems noted in the GAO study included: (1) a passive approach to soil conservation: merely responding to the initiatives of farmers rather than aggressively seeking out severe erosion problems; (2) failure to followup the implementation of conservation plans, and (3) advice given to farmers which conflicts with that given by other USDA agencies. *Id.*

23. *Id.* at 10-11.

24. *Id.*

25. This has been noted with regard to the Great Plains Conservation Program conducted by the SCS, 16 U.S.C. § 590(p) (1976 & Supp. IV 1980). *See also infra* note 29. A 1974 SCS evaluation concluded that better distribution of funds among states could greatly increase program performance. SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, A PROGRAM EVALUATION OF THE GREAT PLAINS CONSERVATION PROGRAM (1974). But the Great Plains funds were never reallocated. Cook, *Problems and Prospects for the Agricultural Conservation Program*, 36 J. SOIL & WATER CONSERV. 24, 27 (1981).

26. *See infra* text and notes at notes 56, 57.

new contacts—new individuals and new acres served—affect increases in the performance measures.[27]

Third, the SCS has largely been proscribed by Congress from providing financial assistance to landowners. Cost sharing funds are allocated by the Agricultural Stabilization and Conservation Service.[28] The SCS has long sought to disburse financial assistance, an arrangement which would strengthen its relationships with landowners. Nonetheless, the agency's only cost sharing functions to date are those authorized by the Great Plains Conservation Program[29] and the Small Watershed Program,[30] in which the SCS may share the costs of erosion control practices with landowners. The inability to assist landowners financially makes the SCS less able to follow-up on conservation plans. It also divorces conservation planning from practical cost considerations.

In most states, conservation districts have been "so intimately connected with the Soil Conservation Service that their activities tend to be indistinguishable, except in a very formal way. This fact minimizes their effectiveness as multiple-purpose units capable of coordinating the work of all relevant agencies."[31] Because they are chronically short of funds and staff support, many districts have been ineffective in establishing local conservation sentiments or priorities.[32] Overall, district supervision of SCS activities has been minimal and often ineffective. Thus, in many cases, SCS officials have been forced to assume both administrative and leadership functions of district boards.[33]

---

27. *See also supra* note 22.

28. *See infra* text and notes at notes 34, 37.

29. 16 U.S.C. § 590(p) (1976 & Supp. IV 1980). This program provides technical and financial assistance for wind erosion control measures in 10 Great Plains states. Cost sharing of up to 75 percent is tied to "long-term agreements" (LTAs) to maintain conservation measures. The LTAs stipulate 3 to 10 year terms. 7 C.F.R. §§ 701.13(c), 701.16(a). *See generally* SOIL CONSERVATION SERVICE, *supra* note 13; PROGRESS IN MEETING IMPORTANT OBJECTIVES OF THE GREAT PLAINS CONSERVATION PROGRAM COULD BE IMPROVED (Report to the Congress by the Comp. Gen. of the U.S., 1973); 1977 GAO REPORT, *supra* note 21.

30. 16 U.S.C. §§ 1001-1009 (1976 & Supp. IV 1980). Under the Small Watershed Program, the SCS is responsible for flood control in watersheds or sub-watersheds not exceeding 250,000 acres and not containing any one control structure with storage capacity in excess of 5,000 acre feet. The costs of private flood control structures in such cases may be shared by the SCS. *See generally* LEA & MATTSON, EVOLUTION OF THE SMALL WATERSHED PROGRAM (Agricultural Economics Report 262, U.S. Dep't of Agriculture, Econ. Res. Serv., 1975).

31. R. MORGAN, *supra* note 1, at viii.

32. *Id.* at 232-38; Interview with J.E. Lake, Water Quality Specialist, Nat'l Ass'n of Conservation Districts in Fort Wayne, Indiana (April 15, 1981).

33. R. MORGAN, *supra* note 1, at 232-38; Interview with J.E. Lake, *supra* note 32.

B. The Agricultural Conservation Program

In 1936, Congress enacted the Soil Conservation and Domestic Allotment Act.[34] The Act primarily provides for cost sharing assistance to farmers for growing crops or using land in ways which promote conservation.[35] The Agricultural Conservation Program (ACP) was formed to implement the Act.[36] ACP funds can pay up to 90 percent of the costs of conservation measures, although agency agreements usually require the government to shoulder only 50 to 75 percent of the conservation costs.[37] No landowner may receive more than $3,500 in ACP funds in a single year.[38]

---

34. Pub. L. No. 74-461, 49 Stat. 1148 (1936) (current version at 16 U.S.C. § 590(g-q) (1976 & Supp. IV 1980)). The Act's original purposes included: (1) preservation and improvement of soil fertility; (2) promotion of economic use and conservation of land; (3) diminution of exploitation and wasteful and unscientific use of national soil resources; (4) the protection of rivers and harbors against the results of soil erosion in aid of maintaining navigability and in aid of flood control; and (5) reestablishment of parity between per capita incomes on farms and elsewhere in the economy as existed between 1909 and 1914. 16 U.S.C. § 590g(a) (1976). In 1972 Congress added prevention and abatement of agricultural-related pollution as a sixth purpose. 16 U.S.C. § 590g(a)(6) (1976). This change followed by a year a major overhaul of the ACP, during which it was renamed the Rural Environmental Assistance Program. Pub. L. No. 92-73, 85 Stat. 196 (1971). The program was redirected to emphasize abating agricultural pollution, improving environmental quality, and obtaining lasting conservation benefits. AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, 1971 RURAL ENVIRONMENTAL ASSISTANCE PROGRAM, foreword (1972). The original name was restored in 1974. Pub. L. No. 93-563, 88 Stat. 1838 (1974).

35. 16 U.S.C. § 590h(b) (1976 & Supp. IV 1980). The Act originally provided for grants to states to effectuate state plans for conservation payments. Pub. L. No. 74-461 § 7(b)-(g), 49 Stat. 1148-49 (1936). This arrangement never developed and the provisions establishing it were repealed in 1962. Pub. L. No. 87-703 § 101(1), 76 Stat. 605 (1962).

36. 7 C.F.R. §§ 701.3-701.26 (1982).

37. 7 C.F.R. § 701.13 (1982). The USDA publishes each year a list of specific practices approved for cost sharing under the ACP. The practices should accomplish one or more of the following: "(a) Establish long-lasting protective cover. (b) Improve or sustain existing protective cover. (c) Conserve or safely dispose of water. (d) Benefit wildlife. (e) Establish or improve stands of forest trees. (f) Give protection against soil erosion. (g) Prevent or abate agricultural-related pollution of water, land, and air. (h) Meet special state or county conservation needs." 7 C.F.R. § 701.9 (1982). Two types of cost-sharing agreements with farmers are available: (1) annual agreements; and (2) long-term agreements. The annual agreements usually involve the initial implementation of a conservation measure for which long-term expenses or adjustments in the farm operation are not necessary. Up to 90 percent of the cost of such measures may be paid with ACP funds, up to a maximum of $3,500 per participant. However, "the maximum level of cost-sharing for each practice shall be the percentage of the average cost . . . considered necessary to obtain the needed performance." 7 C.F.R. § 701.13(a) (1982). Usual cost share rates are around 50 percent. Low income farmers may receive up to 90 percent. Long-term agreements may be appropriate where costs or adjustments over several years will be required. Fifty to 75 percent of such costs may be shared for three to ten years. 7 C.F.R. §§ 701.13(c), 701.16(a) (1982). Up to $3,500 per year may be paid to a single participant under the long-term agreement. 7 C.F.R. § 701.23 (1982). Planning and technical services for long-term measures must be provided by the SCS and soil conservation districts. 7 C.F.R. § 701.15(b) (1982).

38. Pub. L. No. 97-103, 95 Stat. 1482 (1981). Exceptions are granted in cases of joint proj-

1. ACP Administration

The Agricultural Conservation Program is administered by the Agricultural Stabilization and Conservation Service (ASCS) of the USDA.[39] The ASCS has offices in all states and most counties. These Agricultural Stabilization and Conservation (ASC) committees as well as other program development groups direct the program at the state and local levels.[40] The county ASC committee develops a county conservation program to guide the county level ASCS office in expending funds.[41] The program lists practices that will be eligible for cost sharing, and sets priorities for expending funds in a given year.[42] The county programs must be in accord with policies and guidelines set by the state program development group and they must be approved by both the state ASC committee and the Secretary of Agriculture.[43]

---

ects. *Id.* The spending limitations are set annually in appropriations bills.

39. ACP administrative arrangements are described briefly in AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, NAT'L SUMMARY EVALUATION OF THE AGRICULTURAL CONSERVATION PROGRAM, PHASE 1, at 11-2 (1980) [hereinafter cited as PHASE 1 EVALUATION].

40. States are divided into local administrative areas no larger than one county in size. Farmers within each area who participate in ASCS programs are eligible to participate in electing a three-member local ASC committee each year. The local committee members, in turn, join in an annual county convention to select a county committee composed of three farmers residing in that county. County committee members hold three-year, staggered terms. The county extension agency may serve as the secretary to local and county committees, in which case the agent becomes a non-voting member. The state committee is composed of three to five farmers who reside in the specific state and who are appointed by the Secretary of Agriculture. The State Extension Director is an ex officio member of the state committee.

The "program development groups" set guidelines and policies for certain ASCS programs, including the ACP. 7 C.F.R. § 701.10-.11 (1982). The county program development group includes members of the county ASC committee, and representatives of the SCS, the Forest Service, the Farmers Home Administration, and the state forest agency. 7 C.F.R. § 701.2(a) (1982). The state program development group includes the members of the State ASC committee, the State Director of Extension, the Conservationist of the SCS, and representatives of the Forest Service, the Farmers Home Administration, the state forestry agency, the state water quality agency, and the State Soil Conservation Committee. 7 C.F.R. § 701.2(f) (1982). The National program development group includes representatives of the ASCS, the SCS, the U.S. Forest Service, the Science and Education Administration (Extension), the Economics, Statistics and Cooperative Service, the Farmers Home Administration, the Office of the General Counsel (USDA), the Office of Budget Planning and Evaluation (USDA), the EPA, and the Office of Management and Budget. 7 C.F.R. § 701.2(c) (1982).

41. 7 C.F.R. § 701.10 (1982).

42. 7 C.F.R. §§ 701.10, .12, .15 (1982).

43. *Id.* The requirement that county policies and procedures must be approved by the state ASC Committee and the Secretary of Agriculture resulted from a legislative change in 1978. Pub. L. No. 95-448, 92 Stat. 1088 (1978).

2. Links to Other Conservation Agencies

The ASCS has several formal links to the Soil Conservation Service (SCS) and to soil conservation districts.[44] The SCS is represented in the program development groups where policy and administrative guidelines for the Agricultural Conservation Program are set.[45] Most measures eligible for cost sharing must be based on SCS approved conservation plans.[46] Participants in the Agricultural Conservation Program, however, need not be soil conservation district cooperators to receive SCS assistance.[47] Further, state and local ASC committees may transfer up to 5 percent of their annual program funds to reimburse SCS offices for technical assistance on approved Agricultural Conservation Program projects.[48]

3. Policy Orientations of the Agricultural Conservation Program

Like the Conservation Operations Program (COP), the Agricultural Conservation Program is voluntary. The ASCS has made cost sharing aid broadly available, often without regard to conservation needs.[49]

Under the Agricultural Conservation Program, conservation originally served as a vehicle for farm production and income subsidies.[50] As a result, many measures only tenuously connected to con-

---

44. *See generally* R. MORGAN, *supra* note 1, at 286-319.

45. *See supra* note 40.

46. 7 C.F.R. § 701.16(b) (1982).

47. D. SIMMS, *supra* note 6, at 98.

> Most district cooperators take advantage of ACP payments. Some ACP participants, however, are interested in getting help on just one practice and see no advantage in becoming district cooperators.
>
> Through the years, ACP referrals have made up a growing part of the SCS work load. In recent years, an average of 1 million farmers and ranchers annually have taken advantage of ACP cost-sharing help. About one-fourth of these involved some technical assistance from the SCS.

Id.

48. The transfers are made at the discretion of ASC committees. The SCS has complained that the transfers "fail, by a wide margin, to cover the actual cost of servicing the cost-sharing program." D. SIMMS, *supra* note 6, at 99.

49. *See infra* text and notes at notes 53-56.

50. M. BENEDICT, FARM POLICIES OF THE UNITED STATES 1790-1950, at 396 (1953); H. HALCROW, AGRICULTURAL POLICY OF THE UNITED STATES 397-98 (1953). A predecessor of the Soil Conservation and Domestic Allotment Act of 1936, the Agricultural Adjustment Act of 1933, Pub. L. No. 73-10, 48 Stat. 31 (1933), provided for direct federal payments to farmers who reduced acreages planted to specific surplus crops. The goal was to support crop prices and farm incomes by reducing supplies. This scheme was declared unconstitutional in United States v. Butler, 297 U.S. 1 (1936). Generally, soil depleting crops were also the row crops which were in oversupply, so the ACP accomplished the same aims as the 1933 legislation.

servation were funded under the program.[51] This practice has been difficult to alter. "Beginning with Harry Truman, every President has sought to cut back or abolish ACP, but most of these efforts have been successfully resisted in Congress."[52] In 1979, Congress finally put explicit limits on the types of activities that are eligible for cost sharing under the Agricultural Conservation Program, disallowing assistance for "measures and practices that are primarily production oriented or that have little or no conservation or pollution abatement benefits."[53] State and national controls over county cost sharing decisions were considerably tightened at the same time.[54] These developments have helped to focus resources and administrative efforts on the conservation goals which have always been the primary justification of the Program.[55]

C. Accomplishments of the Conservation Operations and Agricultural Conservation Programs

1. Control of Soil Erosion and Water Pollution

The United States Department of Agriculture has amassed some seemingly impressive statistics in its battle against soil erosion.[56]

---

51. R. HELD & M. CLAWSON, *supra* note 1, at 179-81. *See also* 1977 GAO REPORT, *supra* note 21; PHASE 1 EVALUATION, *supra* note 39.

52. Leman, *Political Dilemmas in Evaluating and Budgeting Soil Conservation Programs: The RCA Process* in SOIL CONSERVATION POLICIES, INSTITUTIONS, AND INCENTIVES 47, 55 (1981).

53. Pub. L. No. 95-448, 92 Stat. 1088 (1978).

54. *Id. See supra* note 43. *See also* 7 C.F.R. § 701.10(b) (1980).

55. Another recent development appears counter to the stronger emphasis on conservation. This is the inclusion by Congress in 1980 of energy conserving practices. 16 U.S.C. § 590h (Supp. IV 1980). The Secretary of Agriculture is authorized to provide technical and financial assistance for "installation of minimum tillage systems, energy-efficient irrigation systems, integrated pest management system, shelter belts, storage facilities for manure and other wastes, and other practices." PHASE 1 EVALUATION, *supra* note 39, at 212-3. It should be noted, however, that reduced tillage is among the most cost-effective erosion control strategies; that irrigation efficiency is important in conserving water in arid regions; and that pesticide and livestock waste management techniques have important water quality benefits.

56. Accomplishments of the Conservation Operations Program are reported in: SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, CONSERVATION HIGHLIGHTS (annual) *reported in* SOIL AND WATER CONSERVATION NEWS; SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, STATUS OF PROGRESS ITEMS FOR FISCAL YEAR 1980 AND CUMULATIVE AS OF SEPTEMBER 30, 1980 (1981) [hereinafter cited as 1980 PROGRESS ITEMS]; LAND AND WATER CONSERVATION TASK FORCE, U.S. DEP'T OF AGRICULTURE, IMPACT AND CAPABILITY OF SOIL AND WATER CONSERVATION PRACTICES (3 vols. 1979). Summaries of activities under the Agricultural Conservation Program are in: AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, AGRICULTURAL CONSERVATION PROGRAM, 1979 FISCAL YEAR STATISTICAL SUMMARY (1980) (annual) [hereinafter cited as ANNUAL ACP SUMMARY]; AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, AGRICUL-

For example, through September 1980, the Soil Conservation Service had provided conservation plans covering 621,850,000 acres of land.[57] In fiscal year 1980, almost 46 million acres of land were "adequately protected by conservation practices" with SCS assistance.[58] In 1979, 339,558 participants on 365,016 farms received cost sharing assistance totalling $232.8 million through the Agricultural Conservation Program.[59]

TURAL CONSERVATION PROGRAM PRACTICE ACCOMPLISHMENTS BY STATES: 40 YEAR SUMMARY (1936-1975) (1976) [hereinafter cited as ACP 40 YEAR SUMMARY]; PHASE 1 EVALUATION, *supra* note 39. General statistics on soil and water problems and trends are available in RCA STUDY PART II, *supra* note 9; U.S. DEP'T OF AGRICULTURE, SOIL AND WATER RESOURCES CONSERVATION ACT 1980 APPRAISAL PART I (1981) [hereinafter cited as RCA STUDY PART I]. The most recent comprehensive surveys of U.S. land and water resources are contained in SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, 1977 NAT'L RESOURCE INVENTORIES (1978) [hereinafter cited as 1977 NRI]; U.S. WATER RESOURCE COUNCIL, SECOND NAT'L WATER ASSESSMENT (1978). A new national resource inventory is due in 1983. Criticisms of the USDA's conservation programs are contained in the 1977 GAO REPORT, *supra* note 21. *See also* Williams, *supra* note 1; R. HELD & M. CLAWSEN, *supra* note 1.

57. 1980 PROGRESS ITEMS, *supra* note 56, at 1. About 1.5 billion acres of the U.S. (excluding territories) is privately owned. Ninety percent (1.36 billion acres) of the non-federal land is available for agriculture. In 1977, 413 million acres were used for crops, 133 million acres were used for pasture, 414 million acres were used for grazing, 376 million acres were forested, and 22 million acres were used for farmsteads and other uses. *See* NAT'L AGRICULTURAL LANDS STUDY, AGRICULTURAL LAND DATA SHEET (1980). Cumulative SCS statistics to 1980 suggest that somewhat less than 46 percent of non-federal land has been subject to conservation planning; the exact percentage is indeterminant due to the inclusion of Puerto Rico and the Virgin Islands in SCS reports. Many plans have never been fully implemented. SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, CONSERVATION HIGHLIGHTS 1980, 2 SOIL AND WATER CONSERVATION NEWS, *supra* note 56, at 14.

58. This total included 10,783,285 acres of cropland, 5,307,587 acres of pasture and hayland, 23,837,684 acres of range and native pasture, 2,014,604 acres of forest land, 2,840,096 acres of wildlife land, 152,438 acres of recreation land, and 684,684 acres of land in other uses.

"Adequate protection," for purposes of erosion from rainfall ("sheet and rill" erosion) is defined in terms of "soil tolerance levels" or "T-values." This is the average annual loss of soil per acre which will not seriously impair the long-term productivity of land for agricultural uses. For crop, pasture, and forest lands, the accepted "T-value" is five tons/acre/year. For more fragile rangeland, two tons/acre/year is the accepted limit. For example, a 1979 study estimated that soil losses averaging 16 to 19 tons/acre/year over 50 years in two areas of the Corn Belt could reduce corn and soybean yields by about 15 percent in the year 2030. If soil losses continued at 1977 levels for the next half-century, erosion would cause yield losses by 2030 equivalent to taking eight percent of the cropland base out of agriculture. The problem is somewhat worse than average in the Corn Belt, where 43 percent of land used for row crops is highly erodible. If 1977 losses there are allowed to persist, corn and soybean yields could decline by 15 to 30 percent by the year 2030. NAT'L AGRICULTURAL LANDS STUDY, SOIL DEGRADATION: EFFECTS ON AGRICULTURAL PRODUCTIVITY 26-28 (1981) [hereinafter cited as NALS INTERIM STUDY 4]. *See also* Shrader & Langdale, *Effects of Soil Erosion on Soil Productivity*, in DETERMINANTS OF SOIL LOSS TOLERANCE (1981).

59. ANNUAL ACP SUMMARY, *supra* note 56, at 2. Sixty-seven different conservation practices were supported with ACP funds in fiscal 1979. The annual report lists the frequency with which each was undertaken and the acres affected by each type of practice.

Unfortunately, these figures provide little basis for evaluating the Department of Agriculture's erosion control program.[60] According to USDA figures as of 1977, soil erosion exceeded levels that threaten long-term productivity on 23 percent of United States cropland; 11 percent of pastureland and native pasture; 12 percent of

---

60. The building blocks of program evaluation are the program's objectives, the criteria for comparing performance to those objectives, and performance indicators. Conservation programs have a long history of competing objectives. *See, e.g., supra* notes 3 and 34. For purposes here, protecting soil productivity and water quality are assumed to be the most important goals.

A key evaluation criterion is economic efficiency, that is, the allocation of funds and efforts to purposes which yield the highest return per unit of cost. According to that criterion, soil conservation programs should be evaluated on the basis of cost per unit of accomplishment—productivity losses avoided or pollution abated. Efforts should focus on practices and areas yielding the greatest returns to society. *See infra* text and notes at notes 69-72.

Efficiency and other performance dimensions are evaluated using selected performance indicators. Soil movement or "loss," expressed in tons per acre per year, is the most common indicator of soil depletion. (Others are pH, nutrient content, depth, etc.) Each soil context is assigned a tolerance-value (T-value) which represents the rate at which soil losses are offset by formative processes such that overall productivity is unaffected. The average annual rate of loss is derived from the Universal Soil Loss Equation or the Wind Erosion Equation based on physical and management characteristics of the given land area. *See generally* W. WISCHMEIER & D. SMITH, PREDICTING RAINFALL EROSION LOSSES: A GUIDE TO CONSERVATION PLANNING (U.S. Dep't of Agriculture, Agriculture Handbook No. 537, 1978); Wischmeier, *Use and Misuse of the Universal Soil Loss Equation*, 31 J. SOIL & WATER CONSERV. 5 (1976); NALS INTERIM STUDY 4, *supra* note 58; E. SKIDMORE & N. WOODRUFF, WIND EROSION FORCES IN THE UNITED STATES AND THEIR USE IN PREDICTING SOIL LOSS (U.S. Dep't of Agriculture, Agriculture Handbook No. 346, 1968). *See also* Cook, *Soil Loss: A Question of Values*, 37 J. SOIL & WATER CONSERV. 89 (1982). Loss rates can be changed through management practices or by altering the physical context, for example, with terraces or grassed waterways. Efficiency would dictate the allocation of funds to practices and areas where the benefits are highest per dollar of program costs. *See, e.g.*, R.G. Dumsday & W.D. Seitz, A System for Improving the Efficiency of Soil Conservation Incentive Programs (1982) (University of Illinois, Dep't of Agricultural Economics, unpublished manuscript no. AE-4533).

Use of soil loss as an indicator of resource depletion neglects qualitative differences between sites. In some areas, chemical changes may be more important than movement. This is true for salt build-ups associated with irrigation. Furthermore, erosion slightly above T-values on shallow soils may threaten productivity more than erosion of a much greater magnitude on deep soils. Additionally, soil loss relates only indirectly to pollutant deposition in watercourses. On the last point, generalizable insight into the process by which nonpoint source pollutants enter water courses is limited. *See, e.g.*, SOIL CONSERVATION SOCIETY OF AMERICA, SOIL EROSION: PREDICTION AND CONTROL (Proceedings of a National Conference on Soil Erosion, Special Publication No. 21, 1977); W. SONZOGNI, T. MANTEITH, T. HEIDTKE, & R. SULLIVAN, A MANAGEMENT TECHNIQUE FOR CHOOSING AMONG POINT AND NONPOINT CONTROL STRATEGIES (1980) (Great Lakes Basin Comm'n); ENVT'L RESEARCH LABORATORY, U.S. EPA USER'S MANUAL FOR AGRICULTURAL RUNOFF MANAGEMENT (ARM) MODEL (EPA-600/3-78-080, 1978); J. LAKE & J. MORRISON, ENVIRONMENTAL IMPACT OF LAND USE ON WATER QUALITY (EPA-905/9-77-007, 1977); A. DONIGIAN & N. CRAWFORD, MODELING NONPOINT POLLUTION FROM THE LAND SURFACE (EPA-600/3-76-083, 1976); L. GIANESSI & H. PESKIN, A FRAMEWORK FOR ANALYZING NAT'L WATER POLLUTION CONTROL POLICY: WATER QUALITY IMPACTS AND COSTS OF CROPLAND SEDIMENT CONTROL (1980) (U.S. EPA). *See also* Walter, Steenhuis & Haith, *Nonpoint Source*

rangeland; and 4 percent of forest land.[61] "Excess sheet and rill erosion tends to be concentrated on lands eroding at rates in excess of 14 tons per acre annually. Over 82 percent of the excess sheet and rill erosion is concentrated on the four percent of agricultural land suffering erosion at this level."[62]

A 1977 random survey of farms by the General Accounting Office (GAO) revealed that about 84 percent were losing soil at rates that would reduce the productivity of the land involved if allowed to persist.[63] The GAO investigators also found that "soil losses of cooperators [in the Conservation Operations Program] were not consistently better than those of noncooperators in the same areas."[64] Significantly, only 45 percent of the conservation district cooperators interviewed by the GAO were actually implementing the plans prepared for them by the SCS.[65]

A recent in-house study of the Agricultural Conservation Program cost sharing operation found that 52 percent of the soil conservation practices installed through that program were undertaken on lands

---

Pollution Control by Soil and Water Conservation Practices, 22 TRANSACTIONS ASAE 834 (1979). Thus, conservation programs are difficult to evaluate due to the shortcomings of key performance indicators as well as the existence of multiple objectives.

Efficiency is not the only relevant evaluation criterion; distributional equity is another. In focusing on numbers of recipients and practices introduced, the traditional conservation program reporting systems have been oriented to distributional concerns of two major clientele groups, farmers and the agronomic or engineering firms that sell conservation practices or expertise. The result has been to protect regional (state or county) conservation budgets and to maintain cost sharing eligibility for a wide range of practices. The distribution of funds has not been tied to indicators of recipient need or practice effectiveness, as economically meaningful distributional criteria would require.

61. U.S. DEP'T OF AGRICULTURE, SOIL AND WATER RESOURCES CONSERVATION ACT 1980 APPRAISAL REVIEW DRAFT PART I, ch. 2 at 30-33 (1980) [hereinafter cited as RCA REVIEW DRAFT PART I]. Overall, 13 percent of farmland was subject to excessive erosion. Average annual erosion above 2 tons/acre/year is usually considered excessive on rangeland. Twenty-five percent of all U.S. grazing land (101,000,000 acres) sustained such losses in 1977. *See also* 1977 NRI, *supra* note 56; RCA STUDY PART I, *supra* note 56, at 82-101.

62. PHASE 1 EVALUATION, *supra* note 39, at 18. Furthermore: "Approximately 19 percent (455 million tons) of all excess sheet and rill erosion on agricultural land occurs at rates in excess of 100 tons per acre per year. Erosion takes place at these rates on about 4.8 million acres" (about 0.3 percent of the agricultural land base). *Id.* at 16.

63. 1977 GAO REPORT, *supra* note 21, at 5.

64. *Id.* at 16.

65. *Id.* at 14. Many of the plans quickly became outdated as farming patterns or ownership changed. There is no mechanism in SCS or district procedures to update or periodically review conservation plans. Exceptions to the rule of no periodic review of conservation plans exist in the Great Plains Conservation, 16 U.S.C. § 590p (1976 & Supp. IV 1980), and Small Watershed, 16 U.S.C. §§ 1001-1009 (1976 & Supp. IV 1980), programs of the SCS, and the long-term agreements under the Agricultural Conservation Program, 7 C.F.R. 701.16 (1980), in which practices must be maintained for periods specified in contracts signed by cooperators or cost share recipients.

not threatened by long-term losses in productivity.[66] Twenty-seven percent of the funded conservation practices examined were applied to land threatened by moderate losses in productivity, and only 21 percent were applied to severely eroding land.[67] Nonetheless, land in the latter category—the category to which only 21 percent of the funded practices were applied—is responsible for over 80 percent of all excess erosion from agricultural land in the United States.[68]

The ASCS study also evaluated nine key erosion control practices.[69] The practices varied widely in cost per ton of erosion reduced.[70] In general, the investigation revealed that costs per ton of erosion reduced were substantially higher on land with low pre-practice rates of erosion than on land with high pre-practice rates.[71] Therefore, erosion can be reduced most cheaply by focusing on high-loss, "critical" areas[72] and low-cost practices.[73]

---

66. PHASE 1 EVALUATION, *supra* note 39, at viii. These measures were installed on some of the 87 percent of U.S. land which erodes at average rates less than five tons per acre annually.

67. *Id.* Moderate losses would arise from sustained soil losses averaging five to 14 tons per acre per year. Severe losses are those in excess of 14 tons per acre annually.

68. *See also* text and note at note 62.

69. PHASE 1 EVALUATION, *supra* note 39, at 18-34.

70. *Id.* at 28. The following average costs per ton of erosion reduction were found for the nearly 24,000 practices studied:

Practices	Number of Cases	Average Cost Per Ton of Erosion Reduction
	Cases	Dollars
Critical area treatment	217	0.37
Diversions	429	.69
Conservation tillage	119	.98
Terraces	1,754	1.17
Stripcropping	172	1.52
Competitive shrub control	1,011	1.88
Establishing permanent cover	10,315	1.91
Improving permanent cover	6,978	2.90
Interim cover	2,916	8.07
Average total	23,911	2.22

71. Average cost per ton of erosion reduction over the nine practices studied ranged from $45.40 at pre-practice erosion rates of one ton/acre/year or less, to under $0.25 per ton at pre-practice rates of erosion exceeding 50 tons/acre/year. *Id.* at 30.

72. "Critical areas" are those areas in which soil erosion rates threaten the long-term productive capacity of resources. *See infra* note 86.

73. *See supra* text and notes at notes 60, 61, 62, 65; *infra* at note 86.

2. Policy Review and Evaluation

In 1977, Congress passed the Soil and Water Resource Conservation Act, known widely as the RCA.[74] This Act required the USDA: (1) to appraise, on a continuing basis, the soil, water, and related resources on the nonfederal land of the nation; (2) to develop a program for furthering the conservation, protection, and enhancement of these resources; and (3) to evaluate conservation achievements annually.[75] The Act instructed the USDA to recommend program changes to Congress by the end of 1980 and to repeat the appraisal and policy development process at five year intervals.[76]

The RCA reflected the increasing public awareness of erosion and agricultural pollution problems as well as the growing criticism of conservation programs. At the same time, it was hoped that the RCA process might "fortify the support base of conservation programs and funding by offering things to different kinds of people"[77] than had traditionally identified with them. Thus, it might reinvigorate USDA conservation efforts as well as redirect them towards projects with greater conservation value.

In 1978, more than 164,000 persons participated in 9,000 local, state, and multistate meetings to discuss the RCA.[78] The initial RCA mandates yielded copious appraisal documents,[79] considerable controversy over some of the seven policy strategies subjected to analysis,[80] and, in the end, a dearth of major programmatic changes.

---

74. Pub. L. No. 95-192, 91 Stat. 1407 (1977), 16 U.S.C. §§ 2001-9 (Supp. IV 1980). *See also* Libby & Okay, *National Soil and Water Conservation Policy: An Economic Perspective*, 8 J. NORTHEAST AGR. ECON. COUNCIL 313 (1979). The RCA responded in part to congressional inquiries into conservation program effectiveness and was modelled after the Forest and Rangeland Renewable Resource Planning Act of 1974, Pub. L. No. 93-378, 88 Stat. 476 (1974), 16 U.S.C. §§ 1601-10 (1976), which performed a similar function for the U.S. Forest Service and was credited with improving the image and budgetary position of that agency. *See* Leman, *supra* note 52, at 54-60.

75. 16 U.S.C. § 2003(c) (Supp. IV 1980).

76. 16 U.S.C. § 2006(a) (Supp. IV 1980).

77. Libby, *Interaction of RCA with State and Local Conservation Programs*, in SOIL CONSERVATION POLICIES, INSTITUTIONS, AND INCENTIVES 112, 115 (1982).

78. RCA STUDY PART I, *supra* note 56, at 313. SCS representatives were asked to complete worksheets summarizing the resource concerns expressed. Twenty-one categories of issues were viewed as of "major" concern. These were ranked by the number of meetings in which they arose. Soil erosion, food and fiber production, land use, water supply, and water quality were the five concerns voiced most often. Wildlife and general environmental concerns ranked lowest. *Id.* at 314.

79. RCA REVIEW DRAFT PART I, *supra* note 61; RCA REVIEW DRAFT PART II, *supra* note 11; RCA PROGRAM REPORT REVIEW DRAFT, *supra* note 1.

80. The seven strategies were: (1) to redirect present programs; (2) to purchase conservation practices using "natural resource contracts"; (3) to offer "conservation bonuses" along

Ultimately, the November 1981 "Revised Draft" Program Report[81] described a "preferred program" that would set specific priorities among traditional conservation goals;[82] channel part of the current USDA conservation budget to states in the form of matching block grants;[83] establish conservation coordinating boards at local, state, and national levels;[84] and improve coordination among USDA conservation agencies.[85] The proposal also included: concentration of

---

with payments from conventional commodity support programs; (4) to force participants in USDA farm income programs to comply with conservation standards ("cross compliance"); (5) to concentrate federal efforts on urgent and chronic conservation problems; (6) to set standards with which state conservation programs must comply; and (7) to use regulatory authority to supplement assistance. RCA PROGRAM REPORT REVIEW DRAFT, *supra* note 1, at 31-35. *See also* RCA REVIEW DRAFT PART II, *supra* note 11, at 6-1 to 6-16; Benbrook, *Integrating Soil Conservation and Commodity Programs: A Policy Proposal*, 34 J. SOIL & WATER CONSERV. 160 (1979).

81. SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, SOIL AND WATER RESOURCES CONSERVATION ACT PROGRAM REPORT AND ENVIRONMENTAL IMPACT STATEMENT: REVISED DRAFT (1981) [hereinafter cited as RCA DRAFT FINAL REPORT].

82. *Id.* ch. 1 at 2, ch. 7 at 1-4.

> The highest priority is reduction of soil erosion to maintain the long-term productivity of agricultural land. The next highest priority is reduction of flood damages in upstream areas. Water conservation and supply management, water quality improvement, and community related conservation problems have next priority. Fish and wildlife habitat improvement and organic waste management are an integral part of solutions to these problems.

Id. These priorities are viewed as guiding conservation programs over the next five years until the second RCA review is conducted.

83. *Id.* ch. 7 at 2.

84. *Id.* ch. 7 at 2. The preferred program:

- provides for a Local Conservation Coordinating Board made up of representatives of the conservation district, county ASC committee, extension advisory committee, and other interested parties. This board will appraise local conditions and needs, develop programs, and work through existing local, state, and federal institutions. The local board will concentrate on solving problems and achieving program objectives.
- provides for a State Conservation Coordinating Board, with members appointed by the Governor, to appraise overall state conditions and needs. The state board will use programs adopted at the local level to develop and implement state soil and water conservation programs.
- establishes a USDA National Conservation Board to advise the Secretary of Agriculture on conservation matters.

Id.

This framework resembles the "program development group" organization already in place for the Agricultural Conservation Program. *See supra* note 40. Furthermore, the state-federal agreement process used to authorize SCS services under conservation district direction would be expanded to encompass federal financial assistance. *See supra* text and notes at notes 17, 18. Thus, the SCS and ASCS, as well as other federal and state conservation agencies, ostensibly would work from a unified set of objectives and instructions.

85. In addition to coordinating boards, the proposals would require conservation plans as a precondition for receiving loans from the Farmers Home Administration and would reduce

funds in critical areas and on cost-efficient conservation practices;[86] increased program supervision and evaluation;[87] utilization of pilot programs to test and evaluate potential solutions for persistent resource problems;[88] and expanded use of long-term agreements for conservation assistance.[89]

D. Outlines of "New" Conservation Strategies

The Reagan Administration has already endeavored to implement portions of the USDA's "preferred program." In the Agricultural and Food Act of 1981,[90] the Administration proposed, and Congress authorized, matching block grants to states.[91] Ten million dollars were requested for this purpose in fiscal 1983 under SCS administration.[92] Under the program an applicant unit must certify that it has an approved long-range conservation program, a current annual work plan that is consistent with the long-range program, and assured matching funds or in-kind services.[93] Local governments must marshall at least 25 percent of project costs to receive a federal

---

conflicts among existing USDA programs "that limit achievement of conservation objectives." RCA DRAFT FINAL REPORT, *supra* note 81, ch. 7 at 3.

86. "Critical areas" are defined in the Revised Program Report in terms of resource problems that "threaten the long-term productive capacity of soil and water resources." *Id.* As noted, however:

> Knowing where and with whom to work and to whom to provide assistance are just as critical as knowing what objectives are paramount. The RCA Appraisal shows that conservation problems are not uniformly distributed. Some regions are more critical from a national perspective, and within regions some localities and farms have more critical resource problems than others.

Id. at 5-12.

87. According to the Report, supervision and evaluation would be improved because "the program . . . strengthens collection and analysis of data on resource conditions and trends and conservation needs and provides data useful at the state and local levels" and "provides for systematic evaluations and analyses of conservation programs to determine their effectiveness and progress in achieving conservation objectives." *Id.* ch. 7 at 3.

88. *Id.*

89. *Id.* For other uses of long-term agreements, see *supra* notes 29 and 37; *infra* note 104.

90. Pub. L. No. 97-98, 95 Stat. 1213 (1981).

91. Pub. L. No. 97-98 §§ 1514-19, 95 Stat. 1333-35. *See also* OFFICE OF MGT. AND BUDGET, EXEC. OFFICE OF THE PRESIDENT, THE BUDGET OF THE UNITED STATES GOV'T, FISCAL YEAR 1983 (APPENDIX) I-E70 (1982) [hereinafter cited as 1983 BUDGET APPENDIX]. Congress instructed that "such grants shall be made to augment rather than to replace other technical and financial assistance programs of the Department of Agriculture." Pub. L. No. 97-98 § 1514(b), 95 Stat. 1333 (1981). Of course, reductions in other conservation program budgets are not precluded. *See infra* text and note at note 98. The Secretary must report on the progress of the matching grant program at five year intervals through 1991, after which the program authorization expires. Pub. L. No. 97-98 § 1519(b)-(c), 95 Stat. 1335 (1981).

92. 1983 BUDGET APPENDIX, *supra* note 91, at I-E70.

93. *Id. See also* Pub. L. No. 97-98 § 1514(c), 95 Stat. 1333-4 (1981).

grant for the remainder.[94] The grants are to "be used to supplement and increase technical assistance activities for carrying out conservation work on non-federal lands with critical soil erosion or upstream flooding."[95] Eligible critical areas are to be designated by the Secretary of Agriculture.[96]

The matching grant program is one part of the Reagan Administration's goal of restructuring USDA conservation programs, specifically the Agricultural Conservation Program (ACP), the Conservation Operations Program (COP), and the Small Watershed Program, to "achieve soil and water conservation benefits at lower cost."[97] Also included in the restructuring are: the maintenance of fund levels for SCS technical assistance; concentration on high priority soil and water resource problem areas; cuts in appropriations for ACP cost sharing programs by almost 70 percent from fiscal 1982 levels; and significant reductions in funds for small watershed improvements.[98] State and local governments are expected to

---

94. 1983 BUDGET APPENDIX, *supra* note 91, at I-E70. *See also* Pub. L. No. 97-98 § 1514(d), 95 Stat. 1334 (1981).

95. 1983 BUDGET APPENDIX, *supra* note 91, at I-E70. The Agriculture and Food Act of 1981 permitted the long-range programs and annual work plans to include any of the following objectives:

> (1) soil erosion prevention and control; (2) cropland, forest, woodland, pasture, or rangeland improvement; (3) water conservation, development, and management, and water quality improvement; (4) agricultural land retention or preservation; (5) demonstration projects to test and publicize the effectiveness of natural resource management systems adapted to local conditions; (6) fish and wildlife habitat improvement; (7) animal waste management; (8) watershed protection and flood prevention; (9) sediment control and stormwater management in urbanizing areas; (10) environmentally sound energy conservation and production; (11) leadership in natural resources aspects of rural community planning and development; or (12) any other purpose authorized or required by local or State conservation laws.

Pub. L. No. 97-98 § 1516(a), 95 Stat. 1334 (1981).

The 1983 budget request represents a considerable narrowing of focus both in stressing soil erosion and upstream flooding and in emphasizing technical assistance. The 1981 legislation permits use of matching grant funds for increased technical assistance under intergovernmental grant agreements, but does not limit them to such applications. Pub. L. No. 97-98 § 1517, 95 Stat. 1334-5 (1981).

96. Pub. L. No. 97-98 § 1504(a), 95 Stat. 1331 (1981). This stipulation does not appear in the 1981 Agriculture and Food Act in connection with Matching Grants for Conservation Activities. Pub. L. No. 97-98 §§ 1514-19, 95 Stat. 1333-5 (1981). It incorporates features of the Special Areas Conservation Program provided for in the same Act to deal with areas designated by the Secretary of Agriculture as having severe and chronic erosion- or water management-related problems. Pub. L. No. 97-98 §§ 1502-11, 95 Stat. 1328-32 (1981).

97. OFFICE OF MGT. AND BUDGET, EXEC. OFF. OF THE PRESIDENT, MAJOR THEMES AND ADDITIONAL BUDGET DETAILS, FISCAL YEAR 1983, 139 (1982) [hereinafter cited as 1983 MAJOR THEMES].

98. *Id.* The ACP would be cut from its fiscal 1982 budget level of $190 million to $56 million in fiscal 1983. Funding for technical assistance under the Conservation Operations Program

bear increasing responsibilities for conservation.[99]

The RCA appraisal also focused attention on the need for greater "targeting" of conservation expenditures.[100] Two types of targeting were proposed in the final RCA report: first, the soil conservation share of the USDA budget should be increased from 29 to 36 percent; second, the SCS and ASCS each should allocate an additional five percent of its budget to critical areas each year from 1981 to 1986, until a cumulative reallocation of 25 percent is achieved.[101]

In response to the perceived need for targeting, in 1981, the USDA began a program of accelerated conservation assistance in specific regions with severe erosion, water conservation, and water quality problems. These regions were: the Palouse area of the Northwest; Corn Belt portions of Missouri and Iowa; the southern Piedmont in Alabama and Georgia; West Tennessee; and irrigated areas in the West.[102] Technical assistance in the amount of $6.6 million (about 2.9 percent of all technical assistance proposed under the COP) was to be allocated for this purpose in fiscal 1982, and a similar

---

would increase from $227.3 million to $243.8 million. Funding for watershed and flood prevention operations, mainly the Small Watershed Program (*see supra* note 30), would be cut from $192 million in fiscal 1982 to $118 million in fiscal 1983. 1983 BUDGET APPENDIX, *supra* note 91, at I-E30, I-E68, I-E73-74.

99. State governments would exercise a significantly greater role in management of, and allocation of funds for, conservation programs. The relative benefits of land treatment measures and water impoundments can be compared, and State and local priorities more accurately reflected in funding decisions under this approach.

Increased local funding should lead to heightened awareness of the importance of achieving cost-effective solutions to soil and water conservation programs.

1983 MAJOR THEMES, *supra* note 97, at 140.

100. RCA DRAFT FINAL REPORT, *supra* note 81, ch. 5 at 12.

101. *Id.* ch. 6 at 11. Greater "targeting" of USDA funds is not uniformly welcomed by conservation administrators, especially insofar as the existing funding base is shifted. Secretary of Agriculture Block, in an address before the National Ass'n of Conservation Districts, noted:

> Your leaders also have expressed concern about the proposal to target a greater share of our existing USDA funds and personnel to critical resource problem areas. They would prefer to see targeting done with new funding only.
>
> I certainly would, too! But given the current economic situation, this is not a very practical idea . . .
>
> We do not, however, see targeting as our only mission. Remember, in our program, only up to 25 percent of existing program funds and people will be targeted, and that will be done gradually, over a period of five years.

Remarks prepared for delivery by J. R. Block, Sec'y of Agriculture, at the 36th Annual Convention of the Nat'l Ass'n of Conservation Districts, Phoenix, Arizona (February 10, 1982).

Increased targeting is also difficult to measure from budget data. Much of it will involve reallocations within SCS and ASCS local offices and will be difficult to identify except from internal agency reporting systems.

102. OFFICE OF MG'T AND BUDGET, EXEC. OFFICE OF THE PRESIDENT, BUDGET OF THE U.S. GOV'T, FISCAL YEAR 1982 (APPENDIX) I-E72 (1981).

amount was proposed in the 1983 budget.[103] To complement the SCS program, the ASCS earmarked $9 million (4.7 percent) of its 1982 appropriations for accelerated financial assistance in these areas.[104] The ASCS also set aside $6 million in fiscal 1982 for use in special projects to promote low-cost reduced tillage measures as conservation practices.[105] The funds were allocated to 198 counties in 44 states.[106]

In October 1981, the ASCS announced a "Variable Cost-Share Program" that would base cost sharing rates on "objective erosion criteria" that take into account pre-practice soil loss rates and percentage erosion reductions.[107] Nearly 80 counties in 24 states volunteered to use formulae specified by the national ASCS administra-

---

103. 1983 BUDGET APPENDIX, *supra* note 91, at I-E69.

104. Office of Govt'l and Public Affairs, U.S. Dep't of Agriculture, USDA Announces Conservation Program Targeted to Problem Areas (March 10, 1982) (USDA Press Release). Of the $9 million, $6.5 million is for erosion control in 126 counties and $2.5 million is for water conservation in 73 counties. The funds are allocated to the fifteen states involved. State ASCS offices determine the allocations by county. The program is to "emphasize long term agreements covering a period of from 3 to 5 years." *Id.* Note that these long-term agreements are shorter than those in their other major application, the Great Plains Conservation Program where the agreements last from 3 to 10 years. *See supra* note 29. The shorter term is in line with the Administration's statement that "Short term practices may be more attractive to farmers. Individual producers will be encouraged to apply conservation management type practices which are readily applicable and more cost-effective than many structural type conservation practices." 1983 MAJOR THEMES, *supra* note 97, at 140. Examples are conservation tillage and conservation management systems. Such practices require more in the way of annual performance apposite to the maintenance of measures stipulated in the agreement.

105. Office of Gov't and Public Affairs, U.S. Dep't of Agriculture, USDA Announces 1982 National Agricultural Conservation Program Special Projects (June 8, 1982) (USDA Press Release). "The special projects promote cost-effective practices such as no-till and related conservation efforts. In addition, county agricultural stabilization and conservation committees have recently been authorized to share with farmers the cost for reduced tillage and no-tillage systems under long-term agreements." *Id.*

106. *Id.*

107. AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, ACP VARIABLE COST-SHARE LEVELS FOR COUNTY PROGRAMS (Notice ACP-29, 1981). "There have been proposals for some time to base C/S on the amount of soil loss. The ACP evaluation [Phase 1] gives a basis for doing this. The National Development Group recommended establishing a trial project . . . to test acceptance and feasibility of variable C/S levels based on soil loss." *Id.* at 1. *See also* Cook, *Ah for the Simple Life!*, 37 J. SOIL & WATER CONSERV. 154 (1982). The program actually got underway in January 1982. It is intended to move away from the notion of a usual and customary cost share rate for all practices in all areas. Rates determined under the program must not exceed 75 percent, nor can the $3,500 annual limit per farm be exceeded. Some have argued that variable cost share rates are key elements of a soil conservation and nonpoint pollution control strategy. *See, e.g.*, Sharp & Bromley, *Agricultural Pollution: The Economics of Coordination*, 61 AM. J. AGRIC. ECON. 591 (1979).

tion to determine cost share rates for their annual ACP programs.[108] No additional funds accompanied the variable rate initiative.

Other targeting initiatives appeared in the Food and Agriculture Act of 1981.[109] Congress authorized a Special Areas Conservation Program recognizing that nearly one-half of United States cropland is susceptible to erosion damage from water, that erosion-related problems vary considerably from place to place, and that some of the most productive agricultural areas are those with the most serious erosion problem.[110] Pursuant to this program, the Secretary is to designate eligible special areas and enter into contracts for conservation practices on private farm or ranch land.[111] Technical and financial assistance will be offered as required by specific contract terms. Congress also authorized a new Reservoir Sediment Reduction Program to test "the feasibility of reducing excessive sedimentation in existing reservoirs."[112] No more than five projects on publicly owned reservoirs were authorized under this program.[113]

In the same Act, Congress provided for Commodity Credit Corporation loans for conservation purposes.[114] In addition, Congress authorized a conservation volunteer program.[115] The program invites individuals to aid conservation efforts through activities such as field surveys and laying out conservation practices, education

---

108. Telephone interview with J. Henry, Agricultural Stabilization and Conservation Service (July 12, 1982). Two formulae are available. Under the first, the cost sharing rate is determined using "severity factors" prescribed by the ASCS national office for specific combinations of pre- and post-practice erosion rates. The severity factor ranges from 0.7 to 1.3 and is multiplied times the percentage reduction in soil loss to determine the cost share fraction. The second formula is based on the capability class of the land to be treated. Practices on slightly erosive land (classes Ie and IIe) can qualify for up to 45 percent sharing. The rate increases to up to 75 percent for highly erosive (classes VIe and VIIe) land. Cost sharing for land in the highly erosive categories may be conditioned on adoption of permanent plant cover or no-till. AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, ANNOUNCEMENT OF VARIABLE COST-SHARE LEVEL (VC/SL) PROGRAM (Notice ACP-32, 1982). The capability classifications are used in the National Resource Inventories, 1977 NRI, *supra* note 56, and described in RCA STUDY PART II, *supra* note 9, at 293-94.

109. Pub. L. No. 97-98, 95 Stat. 1213 (1981).

110. *Id.* §§ 1502-11, 95 Stat. 1328. *See also supra* note 96.

111. Pub. L. No. 97-98 § 1503(b), 95 Stat. 1329 (1981).

> Contracts may be entered into with respect to land in a designated special area which is not farm or ranch land only if the erosion-related problems of such land are so severe as to make such contracts with respect to such land necessary for the effective protection of farm or ranch land in that designated special area.

Id.

112. *Id.* §§ 1521-25, 95 Stat. 1336-37.

113. *Id.* § 1521, 95 Stat. 1336.

114. *Id.* § 1520, 95 Stat. 1335-36.

115. *Id.* § 1526, 95 Stat. 1337.

and training programs, and building outdoor learning areas.[116] Though unpaid, volunteers receive disability insurance and protection against tort liability.[117]

Volunteers are highly unlikely to narrow the gap between conservation needs and actual performance, as the paid Civilian Conservation Corps[118] did in the 1930's, and it is not at all clear that shifting responsibilities to states will contribute much more. Of all administrative changes advocated in recent years, greater recognition of and attention to severe localized problems and cost effective solutions are the major advances. As regards program philosophies, perhaps the most important developments stem from environmental concerns and laws. As a result of the growing awareness of environmental concerns generally, soil conservation has been reinforced as a public goal, but conservation programs have been subjected to new pressures and added scrutiny as a consequence. The following sections discuss various efforts to implement pollution controls through the soil conservation agencies.

III. Nonpoint Pollution Control and Soil Conservation Programs

The political base for conservation programs has traditionally consisted of agricultural interests who stress farm production and profitability. Water quality emerged as an important goal for conservation agencies mainly as a result of external pressures from the United States Environmental Protection Agency (EPA) and the environmental movement. The next two sections outline the pollution control functions of soil conservation agencies and describe some of the resulting impacts on the implementation of conservation programs. First, the nature of nonpoint source pollution is described. Then, the discussion turns to the implementation of nonpoint pollution controls by the federal government and by states. The consequences for conservation programs are evaluated in section V.

A. Nonpoint Source Pollution[119]

Nonpoint source pollution is pollution from dispersed sources, as opposed to pollution from point sources such as pipelines or smoke-

116. Office of Gov't and Public Affairs, U.S. Dep't of Agriculture, Soil Conservation Service Calls for Volunteers (May 11, 1982) (USDA Press Release).

117. Pub. L. No. 97-98 § 1526(c), 95 Stat. 1337.

118. *See* J. Guthrie, Saga of the CCC (1942). The Civilian Conservation Corps predated the formation of the Soil Erosion Service (later the Soil Conservation Service). It employed people in a variety of conservation projects associated mainly with forestry.

119. Nonpoint sources are not defined in the Federal Water Pollution Control Act as

stacks. Agriculture accounts for a large percentage of nonpoint pol-

---

amended, presently called the Clean Water Act, 33 U.S.C. § 1251-1376 (1976 & Supp. IV 1980). The concept was discussed with reference to agriculture by Senator Dole in supplemental views on S. 2770, 92d Cong., 2nd Sess., which became P.L. 92-500:

> Agricultural pollution control is concerned primarily with the following:
>
> Sedimentation
> Animal Wastes
> Fertilizers
> Pesticides, Fungicides and Herbicides
> Forest and Crop Residues
> Agricultural Processing Wastes
> Inorganic Salts and Minerals . . .
>
> Most of the problems of agricultural pollution deal with non-point sources. Very simply, a non-point source of pollution is one that does not confine its polluting discharge to one fairly specific outlet, such as a sewer pipe, a drainage ditch, or a conduit; thus, a feedlot would be considered to be a non-point source as would pesticides and fertilizers.

Supplemental views of Senator Bob Dole, S. REP. NO. 92-414, 92nd Cong., 2nd Sess., *reprinted in* [1972] U.S. CODE CONG. & AD. NEWS 3759-60.

Guidelines put forth by the EPA in 1976 state:

> Nonpoint sources, while not defined in the Act, are, by inference, the accumulated pollutants in the stream, diffuse runoff, seepage, and percolation contributing to the degradation of the quality of surface and ground waters. They include the natural sources (seeps, springs, etc.) and millions of small point sources that presently are not covered by effluent permits under the National Pollution Discharge Elimination System.

U.S. EPA, GUIDELINES FOR STATE AND AREAWIDE WATER QUALITY MANAGEMENT PROGRAM DEVELOPMENT 7-1 (1976) [hereinafter cited as EPA 1976 GUIDELINES].

The definition used in the Soil and Water Resource Conservation Act Appraisal read:

> Pollution (runoff from urban, agricultural, forested, and mining areas) which is usually not controllable through existing technology for meeting effluent guidelines. It is generally best controlled through land use practices or best management practices (BMP's). For the most part, nonpoint source pollution is manmade. Natural or background sources of pollution are not covered under this definition.

RCA STUDY PART II, *supra* note 9, at 294.

Natural sources were excluded, relative to the earlier EPA definition. Of course, the distinction between natural and unnatural sources is not clear. "Best management practices" are practices or combinations thereof that a state or areawide pollution management agency considers the most effective and practicable means of controlling nonpoint source pollution to meet water quality goals. RCA STUDY PART II, *supra* note 9, at 291. Nonpoint pollutants have been put into six classes: sediment; nutrients (chiefly phosphorus and nitrogen); mineral pollutants; pesticides; oxygen-demanding wastes; and pathogens. Sediments from soil erosion represent by far the greatest volume of wastes entering surface waters. Nutrients promote aquatic plant growth, thus accelerating lake eutrophication. Mine drainage carries acids, salinity, and trace amounts of such toxic elements as lead, arsenic, and mercury. Pesticides can kill aquatic organisms directly or build up in the food chain, eventually harming humans. Oxygen-demanding wastes are organic materials that decompose in water, reducing oxygen availability for organisms and for normal decomposition processes. Pathogens are sources of infectious bacterial diseases usually associated with animal or human fecal wastes. B. HOLMES, INSTITUTIONAL BASES FOR CONTROL OF NONPOINT SOURCE POLLUTION UNDER THE CLEAN WATER ACT—WITH EMPHASIS ON AGRICULTURAL NONPOINT SOURCES 6-11 (U.S. EPA WH-554, 1979).

lution.[120] Modern farming practices rely heavily upon synthetic fertilizers and pesticides, row crops, large machinery, fence-row to fence-row cultivation, and highly concentrated animal agriculture. These practices can add greatly to sediments, nutrients, organic materials, and toxic chemicals in waterbodies.[121] Accordingly, nonpoint source pollution control efforts in most areas have placed high priority on controlling agricultural sources.[122]

Nonpoint source pollution sources are difficult to monitor.[123] The physical and biological processes that connect land activities to water quality are complex and poorly understood.[124] This poor understanding makes it difficult to establish cause and effect relationships that are essential to enforcement. By contrast, the connection between point sources of pollution and water quality is relatively easy to establish, for instance, where dead fish gather at the mouth of an industrial waste pipe. The connection is more difficult to establish, however, where sediment or pesticide run-off from thousands of acres of farmland accumulates in a waterbody to produce the same result. The bulk of agricultural nonpoint pollution enters surface waterbodies along with or attached to eroded soil (sediment).[125] For

---

120. Agricultural nonpoint source pollutants affect more river basins (68 percent) than any other single nonpoint source. Urban runoff is next, affecting 52 percent of all basins. North central and south central states are most affected. COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY – 1979, at 148-49 (1979). A 1980 study for the EPA found that nonpoint pollutants from agricultural land (cropland, woodland, pastureland, and rangeland) accounted for 52 percent of the oxygen demand loadings, 68 percent of suspended solids, 56 percent of dissolved solids, 74 percent of phosphorus, 8 percent of dissolved heavy metals, and 72 percent of nitrogen discharged to U.S. waterways. L. GIANESSI & H. PESKIN, *supra* note 60 *cited in* RCA STUDY PART II, *supra* note 9, at 84). *See also* Hines, *Agriculture: The Unseen Foe in the War on Pollution*, 55 CORNELL L. REV. 740 (1970); Castrili & Dines, *Great Lakes Water Pollution Control: The Land Use Connection*, 6 ENVT'L POL. & L. 9 (1980); TASK FORCE ON AGRICULTURE NON-POINT SOURCES OF POLLUTION (1978); SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, EROSION, SEDIMENT, AND RELATED SALT PROBLEMS AND TREATMENT OPPORTUNITIES (1975); NATIONAL WATER GOALS CANNOT BE ATTAINED WITHOUT MORE ATTENTION TO POLLUTION FROM DIFFUSE OR NONPOINT SOURCES (Report to Congress by the Comptroller General of the United States, December 20, 1977); ENVT'L AND NATURAL RESOURCES POLICY DIV., CONG. RESEARCH SERVICE, AGRICULTURAL AND ENVIRONMENTAL RELATIONSHIPS: ISSUES AND PRIORITIES (1979); Beck *Agricultural Water Pollution Control Law*, 2 AGR. L. 141-235 (1981) (J. Davidson, ed.).

121. *See supra* note 56 (studies relating agricultural land use practices to water quality).

122. "Thirty states regard agricultural nonpoint pollution to be the primary or major source of nonpoint pollution. Twelve states regard it as a significant problem, three as a potential problem and eleven as a relatively small problem." OFFICE OF WATER AND WASTE MG'T, U.S. EPA, IMPLEMENTATION STATUS OF STATE 208 AGRICULTURAL PROGRAMS, DRAFT 2 (1980) [hereinafter cited as IMPLEMENTATION STATUS, DRAFT].

123. *See supra* note 56.

124. *See supra* note 60.

125. Walter, Steenhuis, & Haith, *supra* note 60, at 834.

this reason, controlling soil movement is roughly tantamount to controlling agricultural nonpoint source pollutants.

"Best management practices" (BMPs) are particular land treatments that are especially effective in limiting soil movement into waterbodies.[126] The chief alternatives to land treatments for controlling agricultural nonpoint source pollutants are "in-stream" measures such as settling ponds or stream bank stabilization.[127] Because of the difficulty and expenses involved, such measures are rarely undertaken by individual landowners. Best management practices, undertaken by individual landowners with government assistance, are the focus of most current efforts to control nonpoint pollutants from agriculture.

B. Nonpoint Pollution under the Federal Water Pollution Control Act Amendments of 1972: P.L. 92-500[128]

In the 1972 Amendments to the Federal Water Pollution Control Act (FWPCA),[129] Congress recognized that there had been serious delays[130] in state efforts to reduce water pollution.[131] P.L. 92-500 aimed to eliminate all water pollutant discharges by 1985.[132] Its primary focus was on point source pollution, i.e., concentrated discharges, but nonpoint source pollutants were also to be controlled.[133] In 1977 the FWPCA and its amendments were codified in their current version, as the Clean Water Act, in which section 208[134] com-

126. *See* R. LOEHR, D. HAITH, M. WALTER, & C. MARTIN, BEST MANAGEMENT PRACTICES FOR AGRICULTURE AND SILVICULTURE (1979). *See also supra* note 118; WATER QUALITY MANAGEMENT BULL. at 14 (March 1980) (U.S. EPA).

127. C. OSTEEN, W. SEITZ, J. STALL, TOWARD INSTREAM WATER-QUALITY MANAGEMENT (EPA Contract No. 68-03-2597, 1980) (U.S. EPA).

128. Pub. L. No. 92-500, 86 Stat. 816 (1972).

129. Pub. L. No. 80-845, 62 Stat. 1155 (1948).

130. S. REP. NO. 414, 92nd Cong., 2nd Sess. 2, *reprinted in* 1972 U.S. CODE CONG. & AD. NEWS 3668-3675.

131. States' responsibilities and rights to control water pollution were recognized in the original Federal Water Pollution Control Act, Pub. L. No. 80-845 § 1, 62 Stat. 1155 (1948). Amendments enacted in 1965 directed states to determine desired uses of water, the kinds and amounts of pollutants to be allowed, and the amount and timing of abatement to be required. Pub. L. No. 89-234, 79 Stat. 903 (1965). While respecting basic state authority in this area, the 1972 amendments established emissions limitations and a discharge permit system to which states must conform. Pub. L. No. 92-500 §§ 301-405, 86 Stat. 844-885 (1972), 33 U.S.C. §§ 1311-1345 (1976). The current version is in the Clean Water Act, 33 U.S.C. §§ 1311-1345 (1976 & Supp. IV 1980).

132. 33 U.S.C. § 1251(a)(1) (1976).

133. S. REP. NO. 414, 92nd Cong., 2nd Sess. 2, *reprinted in* 1972 U.S. CODE CONG. & AD. NEWS 3705. *See also* Pub. L. No. 92-500 § 104(p), 86 Stat. 824 (1972), 33 U.S.C. § 1254(p) (1976).

134. 33 U.S.C. § 1288 (1976 & Supp. IV 1980).

prises the pivotal statutory provision for controlling nonpoint source pollutants.[135] Under section 208, state police powers over land use and water pollution are envisioned as the principal legal bases of nonpoint source pollution controls.[136] Section 208 essentially provides for areawide planning and management for waste treatment with the aim of coordinating the various control programs envisioned in the legislation.[137]

Not until 1975 was section 208 construed by the courts to require areawide planning for all rural areas of the country.[138] States were then compelled to identify problems and devise control strategies for the 95 percent of the country not included in then-existing manage-

---

135. S. REP. NO. 414, 92nd Cong., 2nd Sess. 2, *reprinted in* 1972 U.S. CODE CONG. & AD. NEWS 3706; S. CONF. REP. 1236, 92nd Cong., 2nd Sess., *reprinted in* 1972 U.S. CODE CONG. & AD. NEWS 3793-5.

136. B. HOLMES, *supra* note 119, at 27-32. Federalism aspects of the 1972 FWPCA Amendments with particular relevance to agriculture are discussed in: COUNCIL OF STATE GOV'TS, DIFFUSE SOURCE POLLUTION: POLICY CONSIDERATIONS FOR THE STATES (1977); Hines, *Farmers, Feedlots, and Federalism: The Impact of the 1972 Federal Water Pollution and Control Act Amendments on Agriculture*, 19 S.D. L. REV. 540 (1974); Jungman, *Areawide Planning Under the Federal Water Pollution Control Act Amendments of 1972: Intergovernmental and Land Use Implications*, 54 TEX. L. REV. 1047 (1976); Montgomery, *Control of Agricultural Water Pollution: A Continuing Regulatory Dilemma*, 1976 U. ILL. L.F. 533; Uchtmann & Seitz, *Options for Controlling Non-Point Source Water Pollution: A Legal Perspective*, 19 NAT. RESOURCES J. 587 (1979).

137. S. REP. NO. 414, 92nd Cong., 2nd Sess. 2, *reprinted in* 1972 U.S. CODE CONG. & AD. NEWS 3703. Section 208 of the Clean Water Act requires each state to divide itself into planning areas, to designate a planning agency for each area, to develop a water pollution management plan for each area, and to designate an area pollution management agency. The State must act as the planning agency for all non-designatged areas. 33 U.S.C. § 1288(a)-(b) (1976 & Supp. IV 1980). The management plans are to encompass all waste materials and contain treatment alternatives. Agencies and procedures to implement the plans to be identified. Also, plans must outline processes for identification and control (to the extent feasible) of agriculture-related nonpoint source pollutants. 33 U.S.C. § 1288(b) (Supp. IV 1980).

138. The initial program guidelines under the 1972 Amendments concentrated on issuance of permits for point source discharges, construction grants for waste treatment facilities, and river basin plans. In addition, only areas with flagrant water quality problems, usually urban-industrial areas, were required to have plans. 40 C.F.R., Part 125 (1973). Thus, 95 percent of the country was not covered by plans. EPA administrators:

> felt that neither the agency nor State and local governments responsible for 208 planning had sufficient expertise relating land use to water quality and that substantial study should precede the requirement that this planning be done . . . EPA began, in the spring of 1973, to let numerous contract and grants . . . to develop information concerning nonpoint source pollution control.

B. HOLMES, *supra* note 119, at 19. *See also* EPA 1976 GUIDELINES, *supra* note 119, at 16-20. Natural Resources Defense Council v. Train, 396 F. Supp. 1386 (D.D.C. 1975), *aff'd*, 564 F.2d 573 (D.C. Cir. 1977), upheld the plaintiffs' contention that waste treatment planning was required by section 208 in all areas with pollution problems and that a State must act as the planning and management agency in otherwise undesignated areas. *See generally* Donley & Hall, *Section 208 and Section 303 Water Quality Planning and Management: Where Is It Now?*, 6

ment plans.[139] By early 1982, 209 of 222 possible areawide management plans had gained conditional or final approval.[140]

IV. Implementation of Agricultural Nonpoint Source Pollution Controls

A. Management Strategies

States may control agricultural nonpoint source pollutants through either voluntary inducements to land users or through policies which mandate certain actions.[141] Obvious policies of the first type include education and extension services, technical assistance, tax incentives, and cost sharing.[142] Such programs are likely to be effective only insofar as farm incomes and production are not impaired.[143] Furthermore, they can be difficult to direct to the most pressing problems.[144]

Mandatory programs could be directed toward controlling either land use procedures or the water quality consequences of land uses regardless of procedures employed.[145] The first approach would either prohibit land use methods that promote water pollution or would require preventive practices, such as the implementation of an approved conservation plan.[146] To the extent that this approach restricts inputs (the agricultural practices) rather than the pollution outputs (the generated pollutants) which are its real aims, it is an inefficient method of attaining water quality goals and may impose higher costs on land users than are necessary. The second approach would require that pollutant discharge limits be met without specifying methods of doing so. Though it would allow efficient selection of

---

Envt'l L. Rev. 50115 (1976); Goldfarb, *Water Quality Management Planning: The Fate of 208*, 8 U. Tol. L. Rev. 105 (1976).

139. 40 C.F.R. § 130 (1977). *See also supra* note 138.

140. Telephone interview with R. Thronson, Water Planning Division, U.S. EPA (April 14, 1972). *See also* Beck, *supra* note 98, § 8.28 at 222.

141. *See generally* Uchtmann & Seitz, *supra* note 112. *See also*, W. Seitz, D. Gardner, S. Gove, K. Guntermann, J. Karr, R. Spitze, E. Swanson, R. Taylor, D. Uchtmann, J. van Es, Alternative Policies for Controlling Nonpoint Agricultural Sources of Water Pollution (EPA-600/5-78-005, 1978) (U.S. EPA).

142. Uchtmann & Seitz, *supra* note 136, at 588.

143. *Id.* at 591-94.

144. The most pressing problems may occur on land already marginal for commercial agriculture, for example, on steeply sloped land with thin soils. In such instances conservation measures may make farm enterprises submarginal because of yield or acreage losses. Farmers are unlikely to adopt conservation measures voluntarily under such circumstances.

145. Uchtmann & Seitz, *supra* note 136, at 589-90.

146. *See infra* text and notes at notes 255-69.

inputs, this approach would be exceedingly difficult to monitor in instances of diffuse, nonpoint pollution sources such as agricultural wastes from soil runoff. In either case, monitoring[147] and enforcement measures would be needed and such measures would raise questions of regulatory "takings" requiring compensation to landowners.[148]

In 1977, in its final guidance memorandum (SAM-31),[149] the EPA established criteria for the approval of nonpoint source portions of state water quality management plans. To be fully approved, a plan must contain adequate authority to control activities and pollutants on a regional level; authority to require the application of best management practices; monitoring provisions; authority to undertake control measures; enforcement authority; and a designated management agency with necessary staff, funds, and authority.[150] Furthermore, SAM-31 states that a mandatory program will be required if and when the management agency determines that it is "the only practicable method" to assure the implementation of nonpoint source control.[151] Thus, SAM-31 requires that states possess regulatory authority over agricultural nonpoint source pollutants but that it not be exercised unless other approaches are not practicable.[152] In contrast to these regulatory programs, nonregulatory programs must show promise of being effective to gain approval.[153] Standards

147. In order for a mandatory system to be effective, compliance would have to be monitored. Stream water quality sampling is conducted by most states, but is not sufficiently intensive or precise to locate exact sources of nonpoint pollutants. Land use monitoring is more feasible, but annual surveys of all acreages would be unduly expensive. Thus, some states rely on indirect indicators of land use such as possession of an approved conservation plan. *See infra* note 231. Other states, including Illinois and Iowa, allow for investigations following formal complaints of erosion that is above levels set by the State. *See infra* text and notes at notes 235-54.

148. *See* F. BOSSELMAN, D. CALLIES, & J. BANTA, THE TAKING ISSUE (1973). The 5th and 14th amendments to the U.S. Constitution protects private property from being "taken" for public use without just compensation. In general, "land use regulation is considered a taking if it results in extreme reduction of the economic value of the land." B. HOLMES, *supra* note 119, at 29. Cost-sharing for mandatory conservation measures could be viewed as compensation for related economic losses. Braden, *Some Emerging Rights in Agricultural Land*, 64 AM. J. AGRIC. ECON. 19, 25 (1982).

149. A. J. ERICKSON, REGULATORY PROGRAMS FOR NONPOINT SOURCE CONTROLS (U.S. EPA, Program Guidance Memorandum SAM-31, 1977). Issued pursuant to 40 C.F.R. § 131.11(n) (1977). *See also* EPA 1976 GUIDELINES, *supra* note 119.

150. A. ERICKSON, *supra* note 149, at 3.

151. *Id.* at 2.

152. B. HOLMES, *supra* note 119, at 52-53.

153. A. ERICKSON, *supra* note 149 at 6. Nonregulatory programs must include: identification of BMPs; effective educational programs; adequate technical and financial assistance, milestones for resource commitment, implementation, monitoring, and progress evaluation; and annual or more frequent progress reports. *Id.* at 7-8.

for measuring progress and effectiveness are required in all EPA working agreements with states.[154]

In general, the EPA's initial approach to nonpoint source pollution control programs allows states to use existing laws and programs as much as possible and to "avoid the difficult task of designing and establishing new ones."[155] Current state plans for controlling nonpoint source pollution expire between 1983 and 1986, at which time each state's strategy and abatement progress will be reviewed by the EPA.[156] The timing of such review roughly coincides with the 1985 date set in P.L. 92-500 for the complete elimination of discharges.[157]

B. Federal Implementation Actions

1. Delegation by the Environmental Protection Agency

As codified in the Clean Water Act, section 304(j) of P.L. 92-500 provides for an agreement between the EPA Administrator and the Secretaries of Agriculture, the Army, and Commerce to utilize these agencies as much as possible in section 208 planning and implementation.[158] The resulting agreement[159] provides for areawide planning advisory committees on which the signatory agencies can participate. Furthermore, the EPA is to oversee coordination of section 208 plans with programs in the other participating agencies.[160] Those agencies may enter into further agreements with areawide waste management agencies to implement provisions of the areawide plans.[161] In such cases, the original interagency agreement provided for transfers of EPA funds to the implementing agencies.[162]

---

154. *Id.* at 10. Among the milestones suggested were: identification of nonpoint source problems; proposal and enactment of legislation; proposal and promulgation of upgraded rules and regulations; establishment of enforcement procedures; and provision of funds and personnel.

155. B. HOLMES, *supra* note 119, at 56.

156. Telephone interview with D. Luecht, U.S. EPA (July 30, 1982). EPA regulations for water quality management planning and implementation call for a five-year strategy for controlling pollution from point and nonpoint sources. 40 C.F.R. § 35.1511-2(a). Annual work plans are required and reviewed to assure compatibility with the five-year strategy. 40 C.F.R. § 35.1513-7(a). It is not clear how EPA will respond when current five-year strategies expire between 1983 and 1986.

157. Pub. L. No. 92-500 § 101(a), 86 Stat. 781, 33 U.S.C. § 1251(a) (1976).

158. Pub. L. No. 92-500 § 304(j), 86 Stat. 853 (1972) *as amended by* Pub. L. No. 95-217, 91 Stat. 1588 (1977) (current version at 33 U.S.C. § 1314(k) (Supp. IV 1980)). *See also* B. HOLMES, *supra* note 119, at 33; Train, *EPA and Agriculture: Establishing a Partnership*, 30 J. SOIL & WATER CONSERV. 33 (1975).

159. 38 Fed. Reg. 32,288 (1973).

160. *Id.*

161. *Id.*

162. *Id.*

The EPA's 1976 guidelines and regulations for areawide planning[163] expanded upon aspects of the earlier interagency agreement. Attention was drawn to the land assessment capabilities of the SCS and other USDA divisions.[164] ASCS cost sharing and potential conservation district contributions to water quality were also discussed.[165] Various agreements were made by the EPA and USDA divisions to implement portions of the overall section 208 planning effort.[166]

Other sections of P.L. 92-500 authorized funds for planning and implementation of agricultural nonpoint source pollution controls. Section 106 authorized annual grants for state planning, administration, monitoring, and research needs.[167] Section 108 authorized pollution control demonstration projects in watersheds of the Great Lakes.[168] Areawide planning in general and nonpoint source controls

---

163. EPA 1976 GUIDELINES, *supra* note 119.

164. *Id.* ch. 2 at 21-22.

165. *Id.*

166. As noted in B. HOLMES, *supra* note 119, at 36-52, these included: 1) a 1976 "Memorandum of Guidance" with the ASCS providing for local and State coordination of ASCS farmer assistance programs with areawide pollution control planning and implementation and for sharing of ASCS information on land treatment measures, costs, and problems. U.S. Dep't of Agriculture, Agricultural Stabilization and Conservation Service, Memorandum of Guidance Between ASCS and EPA, Notice EQ 41 (1976); 2) a 1976 joint policy statement with the Forest Service providing for its participation in section 208 planning and coordination of land use measures on Forest Service land with pollution control efforts. U.S. EPA and U.S. Dep't of Agriculture, Forest Service, Coordination Between the U.S. Forest Service and State and Regional Water Quality Management Programs (1976); and 3) a memorandum to establish working relationships for a model implementation program. Memorandum of Working Relationship Between the Environmental Protection Agency and the Department of Agriculture for Development and Implementation of a Model Implementation Program for Water Quality Management, signed by D. Costle, U.S. EPA (July 21, 1977) and B. Bergland, Sec'y, U.S. Dep't of Agriculture (Sept. 16, 1977). *See also infra* text and notes at notes 182-87. In addition, various divisions of the USDA have received grants of EPA funds to conduct special research, monitoring, education, or training programs related to section 208 planning and implementation.

167. 33 U.S.C. § 1256 (1976 & Supp. IV 1980). About $65 million were allocated to activities under this section from fiscal 1973 to fiscal 1982. Beginning in fiscal 1982, a small portion (about $1 million annually) is being allocated to implementation of nonpoint source control programs. Telephone interview with D. Brady, U.S. EPA (July 9, 1982).

168. 33 U.S.C. § 1258 (1976). Portions of this section originated in the Water Quality Improvement Act 1970, Pub. L. No. 91-224, 84 Stat. 91, 104 (1970), 33 U.S.C. § 466 (1976). From 1971 to 1981, $16.7 million were obligated under this authority. Projects involving agricultural nonpoint pollution control research, monitoring, demonstration, and implementation received $10.7 million in these funds. Three major efforts, the Black Creek Project in northeast Indiana, the Red Clay Project in northwest Wisconsin, and the Washington County Project in southeast Wisconsin absorbed nearly $9 million of the total for agricultural projects. The remainder is being used for reduced tillage demonstration and implementation projects in Indiana, Michigan, and Ohio. Interview with R. Christensen, U.S. EPA, Great Lakes Nat'l Program Office (July 23, 1982).

in particular were funded under section 208.[169] Section 208(j) was added in 1977 to fund cost sharing for agricultural nonpoint source pollution control.[170] Lake pollution, and the land management practices that are its major cause, were the targets of matching grants authorized under section 314.[171]

In the President's 1983 Budget,[172] no additional funds were requested under sections 108, 208, or 314.[173] Only section 106 activities[174] and some planning and administrative activities funded in connection with construction grants[175] continued to receive support. As a result, pollution control funding requests (with the exception of some grants available under sections 106 and 208) had to be justified by states and other governmental units. Only critical resource problems could be funded. This approach presented state agencies and conservation districts in particular with opportunities to be entrepreneurial, to act aggressively in seeking new funds which could be used to maintain or expand their capabilities and programs.

---

169. 33 U.S.C. § 1288 (1976 & Supp. IV 1980). About $539 million were appropriated for use under section 208 from fiscal 1973 to fiscal 1981. Of these funds, only a small part actually involved implementation of agricultural nonpoint source programs. For instance, $10.7 million of $70.9 million appropriated for section 208 projects in fiscal years 1980 and 1981 were so used. No new funds have been approved since 1981. Telephone interview with D. Brady, U.S. EPA (July 9, 1982).

170. 33 U.S.C. § 1288(j) (Supp. IV 1980). Appropriations for fiscal years 1980 and 1981 totalled $70 million. These were the only two years of program funding to date. OFFICE OF MG'T AND BUDGET, EXEC. OFF. OF THE PRESIDENT, BUDGET OF THE UNITED STATES GOV'T, FISCAL YEAR 1982 (APPENDIX I-E30) (1981); 1983 BUDGET APPENDIX, *supra* note 91, at I-E29. *See also infra* text and notes at notes 211-20.

171. 33 U.S.C. § 1324 (1976 & Supp. IV 1980). Appropriations for activities under this section totalled about $100 million for fiscal years 1975 through 1982. The program was undertaken in two phases. The first emphasized problem diagnosis and planning work while the latter emphasized actual lake restoration. Phase I activities were eligible for 70 percent federal funding. Phase II activities received only 50 percent federal funding. Agricultural nonpoint source pollution control was a large part of Phase I activities but only a small part of the remedial work conducted in Phase II. Telephone interview with J. Meek, U.S. EPA (July 21, 1982). *See also* Fletcher, *The Role of Conservation Districts and the Agricultural Community in Cleaning Up America's Lakes*, NONPOINT NOTES ON 208 IMPLEMENTATION (No. 46, July 15, 1981) (Nat'l Ass'n of Conservation Districts).

172. OFFICE OF MG'T AND BUDGET, EXEC. OFF. OF THE PRESIDENT, BUDGET OF THE UNITED STATES GOV'T, FISCAL YEAR 1983 (1982).

173. Telephone interview with D. Brady, U.S. EPA (July 9, 1982).

174. *Id.* Of the $51.2 million allocated in fiscal 1982 for planning, administration, monitoring, and research needs under section 106, 33 U.S.C. § 1256 (1976 & Supp. IV 1980), about $0.8 million were used for nonpoint source implementation. About $1.1 million of the $48 million requested under section 106 for fiscal 1983 would be used for nonpoint source implementation.

175. Pub. L. No. 97-117 §§ 14, 15, 95 Stat. 1629 (1981) provided that at least $100,000 or up to 1 percent of federal pollution control construction grants to each state may be used for area-

2. Responses of the Department of Agriculture

The USDA involved itself vigorously in efforts to control agricultural pollution.[176] In 1971, even before P.L. 92-500, Congress overhauled the Agricultural Conservation Program to emphasize agricultural pollution abatement, thereby improving environmental quality and obtaining lasting conservation benefits.[177] In 1976, the USDA mobilized national and state working groups to coordinate the USDA agencies involved in the section 208 planning effort.[178] The SCS was to provide leadership for the groups. Subsequently, in 1977, an Office of Water Quality was formed within the SCS.[179] In addition, the SCS provided staff to nearly 100 state and areawide section 208 agencies and to all EPA regional offices to assist with the planning process.[180] SCS technical guides provided the basis for formulating best management practices.[181]

Additionally, in 1977, the EPA and USDA agreed to conduct a Model Implementation Program (MIP).[182] The program's main

---

wide waste control planning and up to 4 percent may be used for program administration needs.

176. *See generally* B. HOLMES, *supra* note 119, at 32-56.

177. Pub. L. No. 92-73, 85 Stat. 196 (1971). *See supra* note 34.

178. In early 1976, the Assistant Secretary for Conservation, Research and Education directed USDA to organize on the national and State levels under SCS leadership to advise and coordinate USDA agency input in the 208 planning effort. The Washington level 208 work group is chaired by SCS and includes representatives of the Forest Service (FS); ASCS; SEA-Extension; Agricultural Research; Cooperative Research (CR); and Farmers Home Administration (FmHA); Economics, Statistics, and Cooperative Service (ESCS); Cooperative Research; and Rural Electrification Administration (REA). There is also a USDA 208 group in every State, all but two of them chaired by SCS, with membership including at least, FS, ASCS, and SEA-Extension (through the Cooperative Extension Service) in every State, and other agencies represented on the national work group in many of them.

B. HOLMES, *supra* note 119, at 35.

The SCS brought considerable prior experience to bear on agricultural nonpoint pollution control. *See, e.g.*, SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, POLLUTION ABATEMENT THROUGH SOIL AND WATER MANAGEMENT (1971); EROSION, SEDIMENT, AND RELATED SALT PROBLEMS AND TREATMENT OPPORTUNITIES (1975).

179. Written communication from G. Dornbush, Soil Conservation Service to J. Braden (received June 25, 1982). This office was reconstituted as the Water Quality Project Implementation Staff in early 1980. *Id.*

180. B. HOLMES, *supra* note 119, at 36.

181. *Id. See also* SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, SCS AND 208 WATER POLLUTION CONTROL (1976). The SCS also has provided detailed resource inventories, classifications, maps, and interpretive reports that have been essential to the section 208 planning process.

182. Memorandum of Working Relationship Between the EPA and the Dep't of Agriculture for Development and Implementation of a Model Implementation Program for Water Quality

objective was to accelerate the installation of agricultural nonpoint source pollution control measures in selected project areas.[183] These projects would demonstrate possible control strategies while also generating needed information on the effectiveness of various measures. Another important goal was the testing of cooperative arrangements between the various agencies responsible for working together to control nonpoint source pollution.[184] Seven watersheds were selected from more than 50 applications in 1978 and about $25.8 million had been spent by the 1981 expiration date.[185] Funds and personnel were taken from regular agency budgets and staff.[186] Farmer participation in the MIP projects was very strong and the program was considered a successful venture in agency cooperation.[187]

The Food and Agriculture Act of 1977[188] established criteria for the Secretary of Agriculture to consider in formulating national Agricultural Conservation Program guidelines. Environmental issues were emphasized; four of the seven criteria listed dealt exclusively with agricultural pollution.[189] The Act effectively made con-

---

Management, signed by D. Costle, Ad., U.S. EPA (July 21, 1977) and B. Bergland, Sec'y, U.S. Dep't of Agriculture (Sept. 16, 1977). Under the terms of the agreement, SCS, ASCS, and the Cooperative Extension Service were to collaborate with EPA providing cost-share funds, manpower, technical expertise, scientific research, public information, and education. WATER QUALITY MANAGEMENT BULL., 7 (March 1980) (U.S. EPA). ASCS invested $1.5 million in 1978 and $1.6 million in 1979 for cost-share funds. EPA provided over $1 million for monitoring. SCS contributed technical assistance for nearly the same amount. *208 Water Quality Management: Roles, Responsibilities, and Opportunities for Management Agencies in Rural Nonpoint Source Program Implementation*, NONPOINT NOTES ON 208 IMPLEMENTATION 1, 9 (No. 31, April 20, 1980) (Nat'l Ass'n of Conservation Districts) [hereinafter cited as *208 Water Quality Management*]. *See generally* D. MASSEY, THE MODEL IMPLEMENTATION PROGRAM—A COOPERATIVE EFFORT BY USDA AND EPA FOR WATER QUALITY MANAGEMENT (1980) (U.S. Dep't of Agriculture, Economics, Statistics, and Cooperatives Service Staff Report NRED 80-13).

183. WATER QUALITY MANAGEMENT BULL., 7 (March 1980) (U.S. EPA).

184. "The MIP effort is based on coordination and acceleration of the programs of 8 USDA organizations: ASCS, SCS, Extension, Agricultural Research, Cooperative Research, FS, FmHA, and ESCS." B. HOLMES, *supra* note 119, at 36. FS is the Forest Service, FmHA is the Farmers Home Administration and ESCS is the Economics, Statistics, and Cooperatives Service. "The MIP has demonstrated that . . . USDA agencies and EPA can cooperate among themselves and with State and local agencies in accelerated water quality management program. Problems exist in cost-sharing limitations." D. MASSEY, *supra* note 182, at ii.

185. The seven watersheds were located in South Carolina, South Dakota, Indiana, Nebraska, New York, Oklahoma, and Washington. WATER QUALITY MANAGEMENT BULL., 7 (March 1980) (U.S. EPA); *208 Water Quality Management*, *supra* note 182, at 9.

186. WATER QUALITY MANAGEMENT BULL., 7 (March 1980) (U.S. EPA).

187. *Id.*

188. Pub. L. No. 95-113, 91 Stat. 913 (1977).

189. Pub. L. No. 95-113 § 1501(a)(1), 91 Stat. 1020 (1977), 16 U.S.C. § 590h (1976), provides that:

servation questions and environmental benefits equally important in the determination of eligibility for ACP cost sharing benefits.[190]

The Clean Water Act of 1977[191] amended section 208 to provide for a special cost sharing program promoting best management practices on farmland.[192] The legislation authorized $200 million to fund this program in 1979 and $400 million in 1980.[193] The Secretary created the Rural Clean Water Program (RCWP) to provide special financial and technical assistance to farmers in selected areas that had agricultural nonpoint pollution problems, and were covered by

---

> The Secretary, in formulating the national program, shall take into consideration (A) the need to control erosion and sedimentation from agricultural land and to conserve the water resources on such land, (B) the need to control pollution from animal wastes, (C) the need to facilitate sound resources management systems through soil and water conservation, (D) the need to encourage voluntary compliance by agricultural producers with Federal and State requirements to solve point and nonpoint sources of pollution, (E) national priorities reflected in the National Environmental Policy Act of 1969 and other congressional and administrative actions, (F) the degree to which the measures contribute to the national objective of assuring a continuous supply of food and fiber necessary for the maintenance of a strong and healthy people and economy, and (G) the type of conservation measures needed to improve water quality in rural America.

These criteria appeared as ACP goals in the 1980 Presidential Budget in a decidedly different order and with one addition, the last goal:

> (1) to help assure a continued supply of food and fiber necessary for a strong and healthy economy and people, (2) to facilitate sound resource management systems through soil and water conservation, (3) to control erosion and sedimentation from agricultural land, (4) to control pollution from animal wastes, (5) to encourage voluntary compliance by agricultural producers with State and Federal requirements to solve point and nonpoint sources of pollution, (6) to improve water quality, (7) to help achieve national priorities in the National Environmental Policy Act and (8) to help achieve national priorities in the Federal Water Pollution Control Act.

OFFICE OF MG'T AND BUDGET, EXEC. OFF. OF THE PRESIDENT, BUDGET OF THE UNITED STATES GOV'T, FISCAL YEAR 1980 (APPENDIX) 139 (1979). The goals were further expanded recently "to encourage the energy conservation measures specified in the Energy Security Act of 1980." 1983 BUDGET APPENDIX, *supra* note 71, at I-E30; Pub. L. No. 96-294 § 259, 94 Stat. 709. *See also supra* note 55.

190. Pub. L. No. 95-113 § 1501(a), 91 Stat. 1019-20.

> The Secretary is authorized to carry out the policy and purposes specified in Section 7(a) of this Act by providing financial assistance to agricultural producers for carrying out enduring conservation and environmental enhancement measures. Eligibility for financial assistance shall be based upon the existence of a conservation or environmental problem which reduces the productive capacity of the Nation's land and water resources or causes degradation of environmental quality.

Id.

191. Pub. L. No. 95-217, 91 Stat. 1566 (1977).

192. Pub. L. No. 95-217 § 35, 91 Stat. 1579 (1977), 33 U.S.C. § 1288(j) (Supp. IV 1980). *See also* G. Protasel, Interorganizational Policy Making and Interagency Relations (paper prepared for delivery at the Western Political Science Association annual meeting on March 27, 1981).

193. 33 U.S.C. § 1288(j)(9) (Supp. IV 1980).

an approved agricultural water quality management plan.[194] Governors were to submit applications for assistance and the SCS and EPA would jointly determine which areas to fund.[195] The original RCWP was not implemented, however, primarily because of disputes between ASCS and SCS over control of the program.[196]

The RCWP resurfaced in the agricultural appropriation for 1980 as an experimental program to be carried under ASCS leadership with an initial appropriation of $50 million.[197] Pursuant to this program local and state coordinating committees may recommend projects for approval by the Secretary of Agriculture, with advice from the EPA.[198] Thirteen projects were selected from over 60 applications in the program's first year.[199] Eight additional projects were selected from about 30 applications for new funding in fiscal 1981,[200] drawing from an additional $20 million appropriation.[201]

In 1979, while competing with the SCS over the original Rural Clean Water Program, the ASCS initiated a Special Agricultural Conservation Program (Special ACP).[202] Twenty-one special water

194. 7 C.F.R. § 634.1(a)-(b) (1982).

195. 7 C.F.R. §§ 634.3, .13 (1982).

196. J. Risser, *Bureaucratic Wrangle Kills RCWP*, 33 J. SOIL & WATER CONSERV. 252 (September 1978). In late 1976, the Senate Committee on Agriculture, Nutrition, and Forestry asked SCS to define what type of legislation was needed in the way of soil and water conservation. Water Quality was singled out by the SCS as an appropriate area for new legislation.

"SCS drafted the legislation for nonpoint source pollution so that SCS would have the lead agency role. SCS wanted not only to provide technical assistance as it did under MIP, but also wanted to administer the cost-sharing component of the new program. This latter wish transgressed onto ASCS's organizational turf." G. Protasel, *supra* note 192, at 13.

197. Pub. L. No. 96-108, 93 Stat. 835 (1979). *See also* G. Protasel, *supra* note 192.

198. 7 C.F.R. §§ 700.13, 700.14 (1982). The national, state, and local RCWP coordinating committees are to assure coordination of agencies involved with the projects, among other duties. 7 C.F.R. § 700.5(i)(j)(k) (1982).

199. Telephone interview with J. Henry, Agricultural Stabilization and Conservation Service (June 10, 1982). The areas selected were: Lake Tholocco, Alabama; New Castle County, Delaware; Rock Creek, Idaho; Highland Silver Lake, Illinois; Prairies Rose Lake, Iowa; Upper Wakarusa, Kansas; Bonne Idee, Louisiana; Double Pipe Creek, Maryland; Saline Valley, Michigan; Reelfoot Lake, Tennessee; Snake Creek, Utah; St. Albans Bay, Vermont; and Lower Manitowoc, Wisconsin. The Idaho, Illinois, and Vermont projects have been subjected to comprehensive monitoring of physical and socio-economic consequences.

200. Telephone interview with J. Henry, Agricultural Stabilization and Conservation Service (July 23, 1982). The projects chosen were: Taylor Creek-Nubbin Slough, Florida; Westport River, Massachusetts; Garvin Brook, Minnesota; Long Pine Creek, Nebraska; Tillamook Bay, Oregon; Conestoga Headwaters, Pennsylvania; Oakwood-Lake Poinsett, South Dakota; and Namsemond-Chuckatuck Lake, Virginia.

201. Pub. L. No. 96-528, 94 Stat. 3111 (1980).

202. 9 ENV'T REP. (BNA) 2395 (April 27, 1979). *See also* WATER QUALITY MANAGEMENT BULL., 18 (March 1980) (U.S. EPA); G. Protasel, *supra* note 192, at 22. Though initiated by the ASCS, the SCS contributed technical assistance in support of Special ACP cost sharing and the EPA provided special monitoring.

quality projects were established by the national ASCS office under this program and another 259 projects were designated by state ASCS officials.[203] National and state funds reserved from annual appropriations were used to finance the projects.[204] The ASCS national Special ACP projects were modeled after the joint EPA/USDA Model Implementation Program projects begun in 1977; they were planned by state and county ASCS committees, and submitted for national approval.[205] Just over $10 million of Agricultural Conservation Program appropriations were expended on the 21 national Special ACP projects.[206] The Special ACP initiative helped to demonstrate ASCS involvement with water quality programs. This posturing contributed to the agency's eventual victory over the SCS on administration of the experimental Rural Clean Water Program.[207]

C. State Implementation

1. Management Agencies

Section 208 of the Clean Water Act requires the identification and designation of state agencies responsible for implementing areawide pollution management plans.[208] In most states, responsibilities for agricultural nonpoint pollution control have been assigned to agencies other than the state pollution control authority.[209] Currently, state soil conservation agencies or soil conservation districts, or both, are designated management agencies in thirty-four states.[210] All states with approved agricultural pollution control programs depend on conservation districts for local leadership, the SCS for technical assistance, and the ASCS for financial assistance in combatting nonpoint source water pollution.[211]

---

203. G. Protasel, *supra* note 192, at 22. The 21 national projects were selected from 43 applications. Telephone interview with R. Wright, Agricultural Stabilization and Conservation Service (May 1982).

204. G. Protasel, *supra* note 192, at 22.

205. *Id. See supra* text and note at note 182.

206. Telephone interview with R. Wright, Agricultural Stabilization and Conservation Service (May 1982).

207. G. Protasel, *supra* note 192, at 28.

208. 33 U.S.C. § 1288(b)(2)(D) (1976).

209. 208 IMPLEMENTATION STATUS, DRAFT, *supra* note 122, at Chart 1. For a listing of state authorities designating management agencies see Beck, *supra* note 120, § 8.28, at 223 n.362.

210. 208 IMPLEMENTATION STATUS, DRAFT, *supra* note 122, at Chart 1. Subsequent to the 1980 survey, in which 33 states declared soil conservation districts or agencies as designated management agencies, Oregon's agricultural pollution control program was approved by the EPA. Oregon's Division of Soil and Water Conservation is the designated management agency and districts are closely involved in implementing the program. Telephone interview with E. Moore, U.S. EPA (July 29, 1982).

211. IMPLEMENTATION STATUS, DRAFT, *supra* note 122, at 10.

One major concern of water quality management offices has been the lack of preparedness of conservation districts to fulfill their role in implementing section 208 management programs.[212] In an attempt to remedy this problem, district board members were the target of a major education effort launched in 1976 by the EPA and the National Association of Conservation Districts (NACD).[213] The campaign was designed to integrate districts into the overall section 208 water quality planning and management process.[214] During the

212. *Id.* at 3; Interview with J. E. Lake, Nat'l Ass'n of Conservation Districts, in Fort Wayne, Indiana (April 15, 1981).

213. This effort was carried out under several EPA grant contracts with the Nat'l Ass'n of Conservation Districts. Garner, *Regulatory Programs for Nonpoint Pollution Control: The Role of Conservation Districts*, 32 J. SOIL & WATER CONSERV. 199, 201 (1977). Two such grants funded series of occasional memoranda issued by the NACD to report proposals for and developments in state statutes dealing with soil conservation and nonpoint pollution, summarize EPA policies and programs, summarize district resources and needs, and suggest modes of district involvement in water quality programs. Thirteen "Information Letters" were issued in 1976 and 1977 under the name NACD-208. The second grant lasted from 1977 to 1981. Forty-seven issues appeared as Nonpoint Notes on 208 Implementation. Issues were circulated to federal, state, and local soil conservation agencies, SCS state offices and technical centers, EPA offices, state and areawide water quality agencies, and other concerned organizations. Another EPA grant supported the preparation of a 1977 NACD report which urged district participation in 208 planning and implementation with the following reasoning:

> Conservation districts have had nearly 40 years experience in planning and carrying out land, water, and related resource programs. They clearly are in a position to help with several key portions of the "208" task that relate to nonpoint sources of pollution.
>
> It was in this setting that EPA and NACD concluded that it would be timely and mutually beneficial to develop a document to aid state and areawide 208 planners, state soil conservation agencies, and conservation districts address a variety of nonpoint source pollution concerns.
>
> The establishment of effective 208/conservation district working relationships would aid materially in developing and implementing sound water quality management plans designed to reach the water quality goals of the Federal Water Pollution Control Act Amendments of 1972.

Unger & Beck, *Foreword* to W. DAVEY, CONSERVATION DISTRICTS AND 208 WATER QUALITY MANAGEMENT iii (1977) (Nat'l Ass'n of Conservation Districts).

> Conservation districts were found to be able to play a major role with respect to five planning elements: identifying and assessing nonpoint source pollution; specifying control needs for nonpoint source pollution (Best Management Practices); recommending target abatement dates; identifying alternative structures for programs designed to control nonpoint source pollution (voluntary, regulatory, or possible combinations); and recommending designation of the management agencies that would implement nonpoint source control plans. As a result, conservation districts or State soil conservation agencies in 40 states have entered into formal agreements with State planning agencies to develop certain elements of the 208 water quality plans.

Lake, *Conservation Districts: A Voice for the Farmer, An Ally for Clean Water*, WATER QUALITY MANAGEMENT BULL., 20 (March 1980) (U.S. EPA).

214. *See, e.g.*, W. DAVEY, CONSERVATION DISTRICTS AND 208 WATER QUALITY MANAGEMENT (1977) (Nat'l Ass'n of Conservation Districts).

same period, progress was made in better equipping districts with professional staff. Personnel supported with state and local funds increased significantly from 1978 to 1982.[215] Additional employees were hired with temporary federal funds for training and special projects.[216] Nevertheless, a 1980 EPA survey of 17 states revealed needs for 506 additional district technical employees to implement agricultural nonpoint source pollution control programs.[217]

Direct state and local appropriations for districts in all states totaled $51.2 million in fiscal 1981.[218] This compares to $24.4 million in 1976.[219] When adjusted for inflation, direct state and local assistance increased by 39 percent from 1976 to 1981. These gains have been partly offset by losses in support for state conservation boards, which received $9.1 million in 1981 versus $7.1 million in 1976. When adjusted for inflation this represents a 15% loss in real dollars.[220]

---

215. NACD RCA NOTES, *supra* note 15, at 2. Overall district employment supported with non-federal funds increased by 15 percent. The actual growth is larger due to increasing use of full-time employees. Almost half of all district employees are now full-time, compared to 43 percent in 1978. Furthermore, the most pronounced growth in full-time employment has been for managers and technicians, with a combined increase of 76 percent. These employees can contribute greatly to district planning and implementation programs, relative to clerical staff and equipment managers. *See also Status Report on Conservation District Employees*, NONPOINT NOTES ON 208 IMPLEMENTATION (No. 7, March 10, 1978) (Nat'l Ass'n of Conservation Districts).

216. One to two thousand workers were hired between 1978 and 1980 using grants under the Comprehensive Employment Training Act, Pub. L. No. 93-203, 87 Stat. 839 (1973) *as amended by* Pub. L. No. 95-524, 92 Stat. 1909 (1978) (current version at 29 U.S.C. §§ 801-999 (1976 & Supp. IV 1980)). By 1982, only 670 such positions remained due to a phase-out of the CETA program. NACD RCA NOTES, *supra* note 15, at 2. *See also Status Report on Conservation District Employees*, NONPOINT NOTES ON 208 IMPLEMENTATION (No. 28, January 25, 1980) (Nat'l Ass'n of Conservation Districts).

217. 208 IMPLEMENTATION STATUS, DRAFT, *supra* note 121, at Chart 3. Of 50 states surveyed, 17 responded, two of which declared no need for added district personnel. A separate inventory of additional district staffing needs conducted by the NACD in 1982 revealed needs for another 3,361 employees in 50 states. The largest proportionate deficiencies were believed to be among district executives and technicians. *Cf.* NACD RCA NOTES, *supra* note 15, at 2.

218. Telephone interview with E. Lamb, Nat'l Ass'n of Conservation Districts (August 6, 1982); SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, FUNDS APPROPRIATED BY STATE AND LOCAL GOVERNMENTS FOR CONSERVATION PROGRAMS FISCAL YEAR 1981 (n.d.).

219. SOIL CONSERVATION SERVICE, U.S. DEP'T OF AGRICULTURE, FUNDS APPROPRIATED BY STATE AND LOCAL GOVERNMENTS FOR CONSERVATION PROGRAMS FISCAL YEAR 1976 (n.d.).

220. U.S. DEP'T OF AGRICULTURE, FISCAL YEAR 1981, *supra* note 216; U.S. DEP'T OF AGRICULTURE, FISCAL YEAR 1976, *supra* note 217. The Implicit Price Deflator for Gross National Product (Government Purchases of Goods and Services—State and Local) was 138.3 in 1976 and 208.2 in 1981, both based on 1972 = 100. Thus, the general level of prices confronted by state and local conservation agencies rose by about 51% between 1976 and 1981. U.S. DEP'T OF COMMERCE, 62 SURV. CURRENT BUS. 109 (1982).

2. State Strategies

Despite the increase in some forms of federal financial assistance, pollution control efforts at the state level have been uneven. Findings of a 1980 survey[221] indicate strong reliance by states on voluntary measures to implement agricultural nonpoint source controls. Forty-seven states' agricultural nonpoint source water pollution control programs had been approved by the EPA at the time of the survey.[222] Of these, twenty-seven relied exclusively on education, technical assistance, and information measures.[223] While forty-six states had water pollution abatement authority encompassing agriculture,[224] only seventeen had exercised it against agricultural sources.[225] Twelve states had provided financial assistance for implementing control measures.[226] This number has since increased to sixteen.[227] The other states continue to depend on the federal government for conservation cost sharing funds.

The survey also revealed that only twelve states had provided for land management regulation as part of their control programs,[228] and that even these states "rely on voluntary action in the first instance, and informal resolution of agricultural nonpoint pollution problems."[229] The reluctance of state agencies to regulate agricul-

---

221. 208 IMPLEMENTATION STATUS, DRAFT, *supra* note 122. *See also* Beck, *supra* note 120, at 224.

222. 208 IMPLEMENTATION STATUS, DRAFT, *supra* note 122, at 2.

223. *Id.*

224. *Id.* at App. B. Alaska, Louisiana, New Mexico, and Rhode Island lacked such authority according to the survey.

225. *Id.* at 5.

226. These states are: Iowa, Illinois, Kansas, Minnesota, Missouri, Montana (interest free loans); Nebraska, North Dakota, Ohio, Utah (low interest loans); Virginia, and Wisconsin. RCA STUDY PART II, *supra* note 9, at 287-88.

227. Since 1980, Idaho, Maryland, New Jersey, and Oklahoma have enacted financial assistance programs for conservation. In addition, Mississippi, North Carolina, South Carolina, and Virginia allow cost sharing for commercial timber reforestation. South Carolina also provides tax credits for conservation tillage equipment, though energy conservation is the ostensible purpose. *See* NAT'L ASS'N OF CONSERVATION DISTRICTS, STATE AND LOCAL COST-SHARING HANDBOOK (January 1, 1980 & Supps. 1 (May 30, 1980), 2 (August 15, 1980), 3 (September 29, 1980), and 4 (June 30, 1982)) [hereinafter cited as HANDBOOK]. The Handbook and Supplements were originally issued in NONPOINT NOTES ON 208 IMPLEMENTATION and NACD RCA NOTES of the dates noted. *See also* RCA STUDY PART II, *supra* note 9, at 287-88. A regional cost sharing program has been adopted for use in Indiana's Kankakee River Basin. The regional program may later be expanded statewide. Iowa supplements its conservation cost sharing with property tax exemptions for wetlands. Telephone interview with E. Lamb, Nat'l Ass'n of Conservation Districts (August 10, 1982).

228. 208 IMPLEMENTATION STATUS, DRAFT, *supra* note 122, at Chart 1. The twelve states are: California, Hawaii, Illinois, Iowa, Maine, Massachusetts, Michigan, Montana, New York, Ohio, Pennsylvania, and South Dakota.

229. *Id.* at 4.

tural pollutants stems from the paucity of data sufficient to establish the culpability of particular polluters as well as the general unpopularity of enforcement actions.[230] Though some programs have mandatory provisions, those provisions usually are not directed toward water quality, but focus instead on soil losses.[231] Some programs require only that a conservation plan be established, not that it be implemented.[232] Time consuming enforcement procedures[233] and unclear penalties[234] also limit the effectiveness of mandatory control provisions.

The Illinois policy is fairly representative in that it combines voluntary and mandatory measures. Illinois program's emphasis is clearly on voluntary compliance. The Illinois Soil and Water Conservation District Act[235] was amended in 1977 to require district erosion and sediment control programs.[236] State guidelines issued in 1980 require adherence to soil loss tolerance values (T-values) on all agricul-

---

230. *Id.* at 5. "In numerous geographic areas, the plans indicated an insufficient data base for doing much of anything other than recognizing that a problem might exist and recommending further study and monitoring." Beck, *supra* note 120, § 8.28 at 224-25.

231. For example, Illinois' program requires that soil losses not exceed specified rates. Illinois Dep't of Agriculture, Rules and Regulations Relating to the Soil and Water Conservation Districts Act, Art. I, Regs. I-XIII at Rule 4.1 (April 18, 1980). *See also infra* text and notes at notes 235-46.

232. For example, New York requires that conservation plans be prepared for all agricultural and silvicultural acreages in the State and be reviewed at least every five years. There are no provisions, however, for inspection or enforcement. N.Y. SOIL & WATER CONSERV. DIST. LAW § 9, (7-a) (McKinney 1942 & Supp. 1981-82).

233. The 1980 [Iowa] act requires, for example, that a conservation folder be provided to each farm in the state by January 1, 1985, or as soon thereafter as funds permit. Conservation districts cannot take action to cite a farmer for excessive soil erosion unless conservation folders are complete and notice has been given of violations of soil loss limits for three or more consecutive years. Also, if a complaint is filed against a farmer and a farmer cannot be persuaded to participate in a voluntary, 50 percent cost-sharing program, then an administrative order can be issued to require the owner to install conservation practices. But this requirement is valid only if there are cost-sharing funds available for at least 75 percent of the cost of any permanent soil and water conservation practices.

Batie, *Policies, Institutions, and Incentives for Soil Conservation*, SOIL CONSERVATION POLICIES, INSTITUTIONS, AND INCENTIVES 25, 35 (1982).

234. For instance, Illinois' "mandatory" erosion control program contains only the threat of a formal administrative hearing on violations of soil loss limits set in conservation districts' soil erosion programs. Possible consequences of such a hearing are not defined. *See infra* text and notes at notes 212-23.

235. ILL. REV. STAT. ch. 5, §§ 106-138.9 (1981).

236. P. A. 80-159 § 1 (1977), ILL. REV. STAT. ch. 5, §§ 138.3-.10 (1979). Background on Illinois' agricultural nonpoint source pollution problems used in formulating the state control plan is in TASK FORCE ON AGRICULTURE NON-POINT SOURCES POLLUTION (1978). For a discussion of soil erosion and sediment control legislation, see *infra* text and notes at notes 255-69.

tural land in the state by January 1, 2000.[237] In the interim, erosion losses are limited to declining multiples of T-values, beginning with four times T-values from January 1, 1983, until January 1, 1988.[238] Districts may adopt standards more restrictive than the state minimum requirements.[239]

In support of district erosion control programs, Illinois has increased education[240] and has established a cost sharing program for "enduring erosion and sediment control devices, structures and practices."[241] These measures are aimed at encouraging voluntary compliance with conservation standards. In the event that these measures prove inadequate, Illinois law provides for enforcement actions based upon the state's pollution control authority.[242] A formal complaint is investigated by a district agency.[243] Upon verification of the complaint, a formal notice of violation is issued.[244] The Illinois Department of Agriculture is required to prescribe specific procedures for correcting the violations and must offer cost sharing assistance.[245] If compliance is not achieved within a year of the

237. Illinois Dep't of Agriculture, Rules and Regulations Relating to the Soil and Water Conservation Districts Act, Art. I, Regs. I-XIII, Rule 4.1 at 2-3 (April 18, 1980). For a general discussion of state soil erosion and sediment control statutes, see *infra* text and notes at notes 255-69.

238. Illinois Dep't of Agriculture, *supra* note 237.

239. *Id.* Rules 2.1 at 1, 4.1 at 2-3. Fourteen of 98 soil conservation districts in Illinois have adopted standards more stringent than the state program. Most of these districts have accelerated the timetable for meeting T-value benchmarks on all agricultural land. Ninety-six of 98 districts met the April 18, 1982 deadline for adopting sediment and erosion control programs. Telephone interview with G. Wood, Soil Conserv. Bur., Illinois Dep't of Agriculture (April 13, 1982).

240. DIV. OF NATURAL RESOURCES, ILLINOIS DEP'T OF AGRICULTURE, PROGRESS REPORT 10-11 (1981). In total, educational contacts were made with over 231,000 people and numerous newsletters, news articles, and presentations in other media were issued during the period covered by this report.

241. ILL. REV. STAT. ch. 5, § 138.6 (1981). For fiscal year (FY) 1981, $500,000 was appropriated for the cost sharing program. P. A. 81-1307 § 17. The funds were distributed among 48 of the 98 soil and water conservation districts based on needs and administrative capabilities. Payments were for reduced tillage cultivation practices and range from $10 to $25 per acre based on the percentage of residues remaining on the soil surface after planting. The FY 1981 funds were distributed to 863 recipients. No single contractor can receive cost-share payments for more than three years or more than 50 acres per year. DIV. OF NATURAL RESOURCES, *supra* note 240, at 12. The statutory cost-share program includes considerably more eligible best management practices (BMPs) and limits payments to 75 percent of the practice cost or lower limits set by the Department of Agriculture or a soil conservation district. No state funds were appropriated for cost-sharing for FY 1982 and none have been proposed by the Governor for FY 1983.

242. *See generally* ILL. REV. STAT. ch. 111½, §§ 1001-1051 (1981).

243. ILL. REV. STAT. ch. 5, § 138.8 (1981); Illinois Dep't of Agriculture, *supra* note 235, Regs. XII-XIII, at 15-17.

244. ILL. REV. STAT. ch. 5, § 138.8 (1981).

245. Illinois Dep't of Agriculture, *supra* note 237, Rule 12.5, at 16.

notice, the Department must conduct a formal administrative hearing to determine the reasons for noncompliance.[246] Nevertheless, the consequences of a finding adverse to the alleged violator are not specified in the law. Thus, while Illinois' law assumes a "carrot and stick" posture, the enforcement "stick" has not been unveiled.

Iowa's program[247] is unique because of its readiness to enforce soil loss limits for all agricultural tillage operations. "Farm unit soil conservation plans," specifying best management practices, must be developed for all agricultural land in the state.[248] Thereafter, all land must meet erosion standards adopted by conservation districts.[249] Non-complying land users may face administrative orders requiring use of best management practices to eliminate erosion problems, but they are also eligible for enhanced cost sharing assistance.[250] Such administrative orders are enforceable in state court.[251] In 1979, the Iowa Supreme Court upheld the program, reasoning that "the state

---

246. ILL. REV. STAT. ch. 5, § 138.8 (1981).

247. IOWA CODE ANN. §§ 467A.1-.66 (1971 & Supp. 1981-82). A discussion of early efforts to implement nonpoint source pollution controls in Iowa may be found in Note, *Procedural Framework for Implementing Nonpoint Source Water Pollution Controls in Iowa*, 63 IOWA L. REV. 184 (1977). Enforcement under Iowa's program can arise in several ways: (1) private citizens may complain about land management practices that give rise to offsite damages; (2) districts may issue notices of depletive management practices; and (3) landowners may fail to meet a six-year deadline (after being informed of their specific erosion problems) for entering into a conservation agreement with a district. The first two sources give rise to an administrative implementation plan and the state must provide cost sharing for 75 percent of related costs if requested (cost sharing is normally limited to 50 percent). The landowner must implement the plan. The third source can result in a landowner being declared ineligible to receive state cost sharing assistance. In all cases, repeated failure to act on notices of noncompliance with soil erosion limits set by soil conservation districts is cause for a court order mandating that measures necessary for compliance be implemented. *See also* Batie, *supra* note 233, at 34-6; B. HOLMES, *supra* note 119, at 85-92.

248. IOWA CODE ANN. § 467A.62 (1981-2 Supp.). This provision was added in 1980. Previously, enforcement actions could be generated only in response to complaints relating to offsite damages. "Conservation folders" serve to inform landowners of potential erosion problems on their farms. Such folders are to be prepared for all Iowa farms by 1985. Thereafter, farm unit soil conservation plans must be established for all farms. Once this has been accomplished, farmers are given a limited period to correct erosion problems. Districts can serve notices on landowners who fail to correct depletive practices. Failure to respond to annual notices for three years is cause for court enforcement proceedings. Administrative rules for the folder program will be completed in mid-1982 and a pilot program for preparing folders is planned for summer 1982. Telephone interview with D. Lindquist, Iowa Dep't of Soil Conservation (April 29, 1982).

249. IOWA CODE ANN. § 467A.44 (1971 & Supp. 1981-82).

250. IOWA CODE ANN. § 467A.47-.48 (1971 & Supp. 1981-82). *See also supra* note 247. Eligible practices are listed in 10 IOWA ADMIN. CODE SOIL CONSERV. DEP'T [780] § 5.82 (1981). Procedures for serving notice are in IOWA CODE ANN. § 467A.61 (1981-82 Supp.).

251. IOWA CODE ANN. § 467A.61(2) (1981-82 Supp.).

has a vital interest in protecting the soil . . . and it has the right to do so."[252]

Iowa's emphasis on soil losses as opposed to pollution problems could result in neglect of important water quality issues. "For example, Iowa's greater erosion losses occur in deep loessial soils [soils with deep sedimentary deposits of silt-sized particles] near the Missouri River. Erosion has little effect on soil productivity because of the soil's depth, but there is considerable impact on water quality."[253] To date, however, many complaints have been made by the Iowa Conservation Commission based on sediment damage to state owned lakes.[254] By recognizing such complaints, Iowa—and other states with programs predominantly concerned with erosion control—can accomplish nonpoint source water pollution abatement as well as advance conservation goals.

3. Erosion and Sediment Control Laws

A few states, including Illinois and Iowa, have found soil erosion and sediment control laws[255] to be useful bases for mandatory agricultural nonpoint source pollution control programs. In 1970, Maryland became the first state to adopt such a statutory program, though construction and agricultural practices were specifically exempted from its control.[256] A model soil erosion and sediment control act was issued by the Council of State Governments in 1972.[257] The model act provides for the creation of statewide guidelines and standards for soil losses[258] and delegates authority for enforcing those standards to conservation districts.[259] Under this model, conservation plans are required before any major land disturbances can be permitted.[260] Non-compliance could result in penalties, injunctions, or other enforcement actions.[261] The model act exempts agri-

---

252. Woodbury Cty. Soil Conserv. Dist. v. Ortner, 279 N.W.2d 276, 278 (Iowa 1979). *See also* Comment, *Regulatory Authority to Mandate Soil Conservation in Iowa After* Ortner, 65 IOWA L. REV. 1035 (1980).

253. Batie, *supra* note 233, at 36.

254. B. HOLMES, *supra* note 119, at 91.

255. *See generally* Beck, *supra* note 120, § 8.29 at 229-35.

256. MD. NAT. RES. CODE ANN. §§ 8-1101 to -1108 (1974).

257. Coun. of State Gov'ts, *Model State Act for Soil Erosion and Sediment Control*, SUGGESTED STATE LEGISLATION 11 (1973). *See also* B. HOLMES, *supra* note 119, at 92-101; RCA STUDY PART II, *supra* note 9, at 237-39, 252-53.

258. Coun. of State Gov'ts, Model State Act § 3(b) at 16.

259. *Id.* § 4(a) at 16.

260. *Id.* §§ 5, 6 at 16-17.

261. *Id.* § 11 at 19.

cultural activities by providing that penalties can be imposed if and only if half (or more) of the costs of implementing a farm conservation plan are provided by public funds.[262]

Additional provisions[263] to the model act were suggested in 1978 by the National Association of Conservation Districts to make the model act more applicable to agricultural nonpoint source problems as a means of satisfying EPA requirements for control.[264] Much of the suggested language simply added pollution control to the model act's purposes. State cost sharing assistance[265] and complaint procedures for violations were also proposed.[266]

Fifteen states, the Virgin Islands, and the District of Columbia currently have soil erosion and sediment control laws.[267] Only four states actually enforce regulations on agricultural land.[268] In practice, erosion and sediment control laws have been used more widely for construction-type disturbance than for routine agricultural practices. Nevertheless, in almost all states having erosion and sediment control laws, conservation districts perform some combination of the following functions: conservation plan review and approval, development of criteria or standards, regulation, and enforcement of such standards.[269]

4. Cost Sharing

Sixteen states[270] have authorized cost sharing programs to supplement aid available from the ASCS. Rates vary, but most cost sharing

---

262. *Id.* § 5(e) at 16.

263. *Alternative Provisions for Use With the Model State Act for Soil Erosion and Sediment Control*, NONPOINT NOTES ON 208 IMPLEMENTATION (No. 4, January 27, 1978) (Nat'l Ass'n of Conservation Districts) [hereinafter cited as *Alternative Provisions*].

264. B. HOLMES, *supra* note 119 at 93. For instance, the definition of an erosion and sediment control plan was altered to include the language italicized in the following passage: "a plan for the control of soil erosion, sediment, *and sediment related pollutants* resulting from a land-disturbing activity, *stormwater runoff, or accelerated erosion not related to a new land disturbing activity.*" *Alternative Provisions*, *supra* note 263, § 2(d) (emphasis added).

265. *Alternative Provisions*, *supra* note 263, § 9(b).

266. *Id.* § 10.

267. RCA STUDY PART II, *supra* note 9, at 237-39. The states are: Georgia, Hawaii, Illinois, Iowa, Maryland, Michigan, Montana, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, and Virginia. All states but Montana and Pennsylvania utilize soil and water conservation laws to establish controls on erosion and sediment. Pennsylvania uses its water pollution control authority and Montana relies on a streambed preservation statute to require controls.

268. *Id.* at 252-53. The four states are Iowa, Michigan, Pennsylvania, and South Dakota. *See also* Batie, *supra* note 233, at 34.

269. RCA STUDY PART II, *supra* note 9, at 252-53.

270. *See supra* notes 226, 227.

plans subsidize as much as 75 percent of program cost.[271] The type of soil conservation program covered varies considerably. Only conservation tillage is covered in Illinois, whereas programs including irrigation system improvements are eligible for cost sharing in some western states.[272] The actual dollar amounts appropriated for cost sharing are modest in most states.[273] Almost all states with conservation cost sharing depend on conservation districts to select program participants and determine the specific land use practices to be assisted.[274]

The state cost sharing programs indicate a positive direction in the implementation of voluntary pollution control programs. Such policies are vital to some mandatory programs,[275] and also reflect an awareness of the continuing threat of reduction in the amount of assistance available through the ACP.[276] The fact that cost sharing under the experimental Rural Clean Water Program[277] is a centerpiece of EPA agricultural pollution control efforts may indicate that state cost sharing in support of best management practices will be important to continued EPA approval of state voluntary agricultural pollution control programs.

D. Summary of Implementation Efforts

The SCS and the ASCS aggressively embraced nonpoint source pollution control mandates during the 1970s. Although some federal funding has increased, the resulting implementation efforts still depend heavily upon traditional soil conservation programs and practices. Voluntarism and reliance upon federal technical and cost sharing assistance characterize most state initiatives to reduce nonpoint source pollution from agricultural areas.

---

271. *See* RCA STUDY PART II, *supra* note 9, at 287-88. *See also* HANDBOOK, *supra* note 227. Some programs establish limits on dollar amounts as well. For example, a landowner in Illinois cannot receive more than $25.00 per acre or receive assistance for more than 50 acres per year per farm. ILL. REV. STAT. ch. 5, § 138.6 (1981). *See also supra* note 241.

272. RCA STUDY PART II, *supra* note 9, at 287-88. For example, Kansas and Nebraska allow cost sharing for water recovery and reuse pits. Utah allows loans to be used for developing wells, ponds, pipelines, and springs.

273. *Id.* Of the states with true cost sharing, Iowa has provided the most funds. Its 1980 appropriation was $5.0 million. Minnesota provided $3.3 million in 1980. Most other states have provided $1 million or less per year. In Illinois, after an initial $500,000 appropriation for 1981, no additional funds have been approved for cost sharing. Telephone interview with G. Wood, Illinois Dep't of Agriculture (June 1982).

274. *Id.*

275. *See, e.g., supra* text and notes at notes 250, 265.

276. *See supra* text at note 52. *See also supra* text and note at note 98.

277. *See supra* text and notes at notes 192-201.

Several important changes in the conduct of conservation programs have resulted from pollution control efforts. First, the federal soil conservation agencies, the SCS and the ASCS, began to use project funding as never before. Project funding has been incorporated in the matching grant program directed toward critical-loss areas, and this has become the centerpiece of current federal conservation policy. Second, conservation agencies were subjected to considerable scrutiny from nonagricultural groups, especially from those seeking to abate pollution as well as promote conservation. This signalled an enhanced image for traditional conservation agencies, and it also moved the agencies to recognize the need for increased internal program evaluation. Third, some states significantly increased financing of conservation districts, started conservation cost share programs, or passed erosion and sediment control laws, which had some salutary effect on pollution control efforts. States taking such actions remain in the minority, however, which suggests that progress in controlling nonpoint source pollutants will be quite uneven. Furthermore, most states are unprepared to compensate for the expected reductions in federal resources for conservation programs.

V. Evaluation of Administrative Changes in Soil Conservation Programs

The preceding sections described recent proposals for changing conservation programs and the impacts of pollution control mandates on those programs. In this section, recent changes in conservation programs are evaluated according to their impacts in six areas: interagency relations; conservation goals; targeting and equity; efficiency; program evaluation; and federalism. The overriding goal here is to evaluate how much the changes will enhance the fundamental resource conservation mission of these programs.

A. Competition and Cooperation Among Agencies

The EPA's authority over section 208 water quality management programs has threatened traditional soil conservation goals and constituencies which evolved through years of USDA operation. The threat of competition created powerful institutional incentives for the USDA to make water quality improvement a high priority goal in the implementation of its own programs. Thus, for example, agricultural pollution abatement was added to Agricultural Conservation Program's purposes in 1972, amidst the program's temporary metamorphosis into the Rural Environmental Assistance Program.[278]

278. *See supra* note 177.

The potential for bureaucratic competition and duplication was anticipated by Congress in its call for maximum use of existing federal programs to implement section 208 of the Clean Water Act.[279] By and large, the resulting agreement has led to constructive relations between the USDA and the EPA. Unfortunately, it has subjected the EPA to internal USDA politics and *vice versa*. Thus, for example, the Rural Clean Water Program was delayed for two years and appropriations were far below the amounts authorized in 1977 due to struggles between the SCS and the ASCS.[280] More disturbing is the deemphasis accorded water quality goals in the Reagan Administration's approach to the RCA process, which emphasizes conservation cost efficiency over pollution abatement.[281] The result of this approach could be an overall decline in USDA support—both financial and technical—to state and local pollution control agencies at precisely the time when these agencies are assuming the burden of implementing much needed nonpoint source pollution control efforts.[282]

The coordination of the SCS and ASCS remains problematic. Improvements have come with involvement of these services in section 208 areawide planning advisory committees, USDA task forces on section 208 implementation, and participation in the Model Implementation Program. The conservation coordinating boards proposed in the Resource Conservation Act "preferred program"[283] would also further institutionalize coordination. This proposal still reflects the reality of continuing competition between these services, as displayed in the RCA process itself[284] and the maneuvering over the Rural Clean Water Program.[285] Ultimately, as seen in the pattern of

279. 33 U.S.C. § 1314(k) (Supp. IV 1980); 38 Fed. Reg. 32,288. *See supra* text and notes at notes 158-60.

280. *See supra* text and notes at notes 166, 196.

281. *See supra* note 82. The restructured priorities contrast with earlier initiatives placing environmental benefits on par with conservation benefits in establishing criteria for allocating federal cost sharing. *See supra* text and notes at notes 177, 189-90. The reluctance of the SCS to incorporate environmental quality goals in its internal working procedures is described with regard to the Small Watershed Program by R. ANDREWS, ENVIRONMENTAL POLICY AND ADMINISTRATION CHANGE 93-130 (1976).

282. The EPA involvement with areawide pollution control planning and management was envisioned from the beginning as temporary, with states assuming increasing responsibilities for administration and funding under a "continuing planning process." 33 U.S.C. §§ 1288(b), 1313(e) (1976 & Supp. IV 1980). The general decrease in funds since 1981 for the programs most closely associated with agricultural pollution control is the clearest evidence of the transfer of responsibilities. *See supra* text and notes at notes 142-50.

283. RCA DRAFT FINAL REPORT, *supra* note 64, ch. 7 at 2. *See also supra* note 84.

284. C. Leman, *supra* note 52, at 60-68.

285. G. Protasel, *supra* note 192, at 12-21. *See supra* text and notes at notes 193-207 (discussing the RCWP).

federal legislation, Congress bears considerable responsibility for maintaining the discrepancy between technical and financial assistance which gives rise to these tensions.[286]

One effect of making conservation matching block grants to the states is that it consolidates conservation decisionmaking in the SCS. If continued, it may facilitate a shift of financial assistance responsibilities away from the ASCS to the SCS. On the other hand, this may simply add another program to an already confusing array of assistance programs.[287] If, as proposed, matching grants to states become a major part of conservation funding, increased coordination between federal and state agencies will become more important. Because they have been traditionally small and weak, state soil conservation agencies will need upgrading. Fortunately, in many states, considerable progress in this direction has already been made as part of water quality management programs.[288]

Another critical administrative link exists between state conservation and pollution control authorities and the conservation districts. If EPA commitments decline and the SCS workload grows without additional staff, conservation districts will depend heavily upon the states for support. Though some states have moved vigorously in this direction, progress has varied from state to state. In many states the districts continue to be essentially conduits which allow states to receive federal conservation funds. Without adequate state and local funds, districts cannot be expected to lead pollution control efforts, nor can they effectively compete for federal conservation project grants.

B. Conservation Goals

The USDA's conservation programs have always had multiple goals. This has helped maintain popularity with a wide range of constituencies. It has also been a source of confusion for program administrators, and has made the overall effectiveness of these programs difficult to measure.

After consistently widening conservation mandates for four decades, both the Resource Conservation Act of 1977 and limits on ACP cost sharing discretion signaled Congress' intent to focus conservation programs more narrowly. The Reagan Administration's proposed reorganization[289] would further narrow the focus by estab-

286. C. Leman, *supra* note 52, at 55. *See supra* text and notes at notes 108-18.

287. *See generally* Williams, *supra* note 1.

288. *See supra* text and notes at notes 212-20.

289. 1983 MAJOR THEMES, *supra* note 97, at 139-40. *See also supra* text and notes at notes 97-102.

lishing distinct priorities among objectives, and by reducing financial assistance and small watershed improvements.

The USDA moved strongly in the 1970s to lead agricultural nonpoint source pollution control implementation efforts. Most states rely heavily on USDA financial and technical assistance for carrying out areawide water quality and waste management plans. Now, with the Reagan Administration's emphasis on cost efficiency and traditional conservation efforts, it appears that incorporating environmental regulations at the state level is a political liability rather than an advantage. Hence, it is not surprising that the USDA and the states which are dependent on USDA should emphasize familiar measures, such as flood control and reduced tillage, as water quality issues become less popular politically.

C. Targeting

An important and potentially far-reaching development is the recognition of the condition of soil and water resources as the most effective criterion for allocating conservation assistance. First, it has prompted greater use and understanding of problem severity indicators (particularly the Universal Soil Loss Equation) in program administration.[290] Such indices are used increasingly to identify areas with the most pressing needs.

Second, this new approach has led to important innovations in program implementation. These innovations include variable cost share rates, increasing reliance on project grants, and willingness to identify critical areas. Third, almost by definition, targeting implies less equal allocation of conservation funds. No longer will virtually all agricultural landowners qualify for assistance, nor will funds be allocated based on acreages or participation. Some regions and individuals will necessarily receive smaller shares of conservation assistance as greater attention is paid to areas with more severe problems.

While laudable in concept, targeting defies precise definition and, consequently, can be manipulated. Problems of implementation aside, there is considerable uncertainty about the very targets being addressed. Part of the uncertainty derives from the complexities of the problems addressed. For example, soil loss rates do not translate simply into declining soil productivity; nor is water quality easily measured for any given area. Uncertainty also stems from the many

290. W. Wischmeier & D. Smith, *supra* note 60. *See also supra* notes 107-08.

goals which continue to be attached to conservation programs. Desired trade-offs between soil productivity, water quality, water supplies, flood control, and so on are not spelled out in precise terms. Changing emphases among such objectives could produce quite different "target" areas, each of which could be viewed as "critical."

Soil loss tolerance (T-value) estimates are generally accepted as the benchmarks against which erosion control performance is judged.[291] T-values essentially indicate soil losses that will not alter existing soil characteristics. Productivity might not suffer, however, even if significant departures from the status quo level of losses were allowed, particularly on soils with very deep rooting horizons.[292] Further, the location of soil losses is as important as its magnitude in considering its effects on water quality. More fundamentally, soil movement in some cases simply redistributes productivities without changing the overall productive capacity available to society.

The proposal to direct 36 percent of USDA resources towards conservation[293] is neither targeting nor very meaningful. Such a result can be attained in part by reductions in non-conservation programs, so it does not necessarily imply that conservation will have added stature. Furthermore, simply throwing money at conservation does not guarantee improved results.

The proposal to allocate 25 percent of national conservation funds on the basis of targeting[294] is more to the point, but it is difficult to evalute. In the first place, why is the remaining 75 percent off limits for purposes of program redirection? If this is needed to maintain the cooperation of traditional agricultural constituents, what cost in program inefficiency is exacted? Second, who is doing the targeting? Targets determined nationally will differ considerably from those set locally. The evolving framework of national delineation of critical areas combined with state and local prioritization within those areas[295] appears to be a reasonable approach to the problem. No guidelines for the initial selection of critical areas have been delineated, however, so the process could easily be manipulated to serve political ends, regardless of real conservation and pollution control needs.

---

291. *See supra* note 60.

292. Cook, *supra* note 60, at 89.

293. RCA DRAFT FINAL REPORT, *supra* note 101, ch. 6 at 11.

294. *Id.*

295. *See, e.g., supra* text and notes at notes 102-05 (discussion of the USDA's accelerated conservation assistance).

Targeting requires flexibility. In this regard, increasing reliance upon SCS technical expertise by state and local agencies will hamper targeting because personnel compensation constitutes the bulk of the SCS budget[296] and personnel are very difficult to reallocate quickly, especially compared to cost sharing funds. Matching grants to states should enhance flexibility and promote effective state and local management. Unfortunately, appropriation requests for matching grants are far below the targets identified in the Resource Conservation Act[297] and well below the proposed cuts in ACP cost sharing.[298]

Targeting is a means, not an end; this must be kept in mind in evaluating future conservation initiatives. Attention to the locations and types of resource problems as implied by targeting is only part of the challenge posed to public policy in the conservation area. Quantifying benefits and accounting for costs of conservation also are essential. Thus, targeting will amount to no more than a slogan unless it is conjoined with clear implementation procedures and relevant analytical methods.[299]

D. Efficiency

Implicit in greater attention to targeting is an increased emphasis on efficiency in selecting project outputs, that is, opportunities to make the greatest accomplishments with a given level of effort. Also apparent is greater concern with input efficiency, that is, choosing measures that achieve the desired outputs at least cost. Overall, efficiency implies that attainment costs are balanced against benefits at the margin.

---

296. Seventy-seven percent of direct obligations under the Conservation Operations Program in fiscal 1981 were for personnel compensation and benefits. 1983 BUDGET APPENDIX, *supra* note 91, at I-E69.

297. The $10 million requested in the President's 1983 Budget compares to fifth year (1986) targets of $30 million, $105 million, or $175 million given lower bound level, or upper bound funding levels, respectively, given in the revised RCA Program Report. 1983 BUDGET APPENDIX, *supra* note 91, at II-E70; RCA DRAFT FINAL REPORT, *supra* note 64, ch. 7 at 4. The target figures are in 1981 dollars. When adjusted for inflation, the $10 million requested for fiscal 1983 would be closer to $9 million expressed in 1981 dollars.

298. *See supra* note 98.

299. One proposal for improving efficiency in conservation assistance involves simulating farm management alternatives to find the soil conservation practice which achieves a given reduction in erosion at lowest cost. Furthermore, by simulating productivity gains over time, the model indicates the direct economic worth of conservation practices to farmers and, hence, the maximum share of conservation costs that the public must bear to induce conservation practices to be applied. *See* R. G. Dumsday & W. D. Seitz, *supra* note 60.

While much progress has been made toward infusing awareness of efficiency into conservation program implementation, expectations should be limited. First, environmental and productivity benefits are exceedingly difficult to measure. Thus, output efficiency is difficult to judge. Cost efficiency is a more realistic rule for operation. Conservation tillage, for example, has been prescribed increasingly as an inexpensive way to mitigate soil losses.[300] Similarly, it has been recognized that seemingly complicated farm conservation plans may achieve less than simple plans that are actually cheaper and more likely to be carried out.[301] Second, workable conservation goals do not always conform exactly to program purposes. The indirect connection between the installation of best management practices and improved water quality is an example.[302] Third, because trade-offs between the multiple conservation goals are not explicit, precisely efficient allocation of effort among them is impossible. Finally, the voluntary nature of most conservation programs sometimes prevents the selection of practices and land parcels to best suit public concerns for efficiency. Increased targeting and more vigorous promotion of conservation efforts by district leaders are keys to developing the efficient translation of legislatively declared conservation goals into action.

E. Program Evaluation

With added responsibilities for water pollution control and in response to rising public scrutiny, the USDA undertook to analyze and evaluate its conservation programs to an unprecedented extent. This analysis revealed that on one hand, failure to effectively address water quality needs could jeopardize the Department's cooperative relationship with the EPA and its long-term interests in agricultural land management. On the other hand, as long as scrutiny was inevitable, it was in the USDA's interest to control it.[303] The Resource Conservation Act appraisal;[304] the less pretentious ACP evalua-

---

300. RCA STUDY PART II, *supra* note 9, at 197-98; RCA DRAFT FINAL REPORT, *supra* note 81, ch. 6 at 13. *See also* Oschwald & Siemens, *Conservation Tillage: A Perspective*, AGRONOMY FACTS SM-30 (1976) (University of Illinois); E. E. BEHN, MORE PROFIT WITH LESS TILLAGE (1977); Heady & Vocke, *Trade-Offs Between Erosion Control and Production Costs in U.S. Agriculture*, 33 J. SOIL & WATER CONSERVATION 227 (1978).

301. *See supra* text and note at note 65.

302. *See supra* text and notes at notes 254, 267.

303. C. Leman, *supra* note 52, at 56-57 and 74-75.

304. *See supra* note 79; RCA STUDY PART I, *supra* note 56, RCA STUDY PART II, *supra* note 9, and RCA DRAFT FINAL REPORT, *supra* note 81.

tion;[305] and demonstration projects designed to generate evidence quickly on the relationship between USDA-induced best management practices and water quality improvements were all responses to these pressures.

Reporting, data analysis, and economic evaluation capabilities within the main conservation agencies have been upgraded considerably.[306] In 1980, the SCS created an Integrated Resources Information Systems staff.[307] The ASCS expanded the scope of its evaluation program, begun in 1975, and will also tie into the SCS system.[308] In addition, the SCS has recently pushed efforts to develop economic evaluation models of conservation methods for use by state and local conservation personnel.[309]

---

305. PHASE 1 EVALUATION, *supra* note 39.

306. One commentator has observed:

> It may seem old hat to conservationists, but laymen as well as most members of the agricultural committees in Congress are quite surprised to learn that there were no reliable national statistics on erosion until 1977. It was not for several years after the erosion data were available that they were analyzed to show the tremendous concentration of erosion on a small percentage of the land. This was another surprise, even to longtime conservationists, and of course, it immediately created a political headache for the conservation establishment.
>
> But there exists a fascinating phenomenon in this regard. One need scarcely utter a phrase about this concentration business to a conservationist these days, and one is besieged with such observations as "those soils in West Tennessee [or the Palouse or western Iowa] are so thick they could erode forever and you'd never lose productivity;" or "you can't bring those highly erosive soils down to tolerance no matter what you do;" or "SCS can't do much with a farmer who rapes his land, and ASCS shouldn't reward the guy with cost sharing." There is merit in these qualifying comments, but one is hard pressed to recall such exacting attention to topsoil depth and other details when "the conservation story" has been told in the past.

Cook, *supra* note 107, at 156-57.

307. The Integrated Resource Information Systems Staff oversees all resource-related information collected under SCS auspices. Telephone interview with J. Haglin, Soil Conservation Service (August 11, 1982).

308. Cook, *ACP, A Weak Sister No More*, 37 J. SOIL & WATER CONSERV. 157 (1982).

309. SCS recently introduced another tool to improve cost-effectiveness, a computerized system for estimating and displaying short-run costs of soil conservation practices, developed by Economist Daryll D. Raitt. Called COSTS (for "Costs of Soil Treatment System"), the model uses USLE factors, then displays in schematic fashion the erosion rates, costs per acre and costs per ton of erosion reduction. The model allows a quick and often dramatic comparison of the cost and effectiveness of alternative treatments, alone or in combination. The bulletin announcing COSTS to SCS employees illustrates the subtle but important change in conservation strategy one now sees throughout the agency: "Although reducing soil loss to 'T' value is a desirable planning objective, planners should also consider economic returns and cost-effectiveness in helping land users arrive at a practical, reasonable level of erosion control on individual operating units." This will no doubt suggest to conservation planners that their performance may be judged on a cost-effective basis too.

Cook, *supra* note 107, at 156. *See also* D. RAITT, A COMPUTERIZED SYSTEM FOR ESTIMATING

The Resource Conservation Act requires five year updates of its resource appraisal.[310] In addition, it requires annual reports evaluating progress in implementing the conservation program identified in the most recent update.[311] The report is also to contain pertinent information from the current resource appraisal and relevant costs and benefits.[312] The Resource Conservation Act Draft Report lists 25 separate programs for which evaluations were recently completed, in process, or planned by eight different USDA divisions.[313] An interagency evaluation work group, including representatives of affected USDA divisions and the USDA Office of Budget and Program Analysis, will review the evaluations and advise the SCS on technical matters.[314] The Assistant Secretary for Natural Resources and Environment is to oversee the evaluation process.[315]

While this framework institutionalizes evaluations, it also closely contains them. The SCS is clearly in charge and its interests can be expected to pervade the evaluation process. Each agency controls its own evaluations. Indeed, there are no provisions for input from outside the USDA. Thus, the Council on Environmental Quality and Office of Management and Budget, which participated in the first appraisal under the Resource Conservation Act, are not included in the annual review process. Omission of the EPA from any review role is particularly troublesome in view of the USDA's key role in controlling agricultural nonpoint source pollution.

Increased data generation and analysis do not necessarily guarantee cogent analyses or useful guides for program improvement. The RCA process, for instance, provided few practical guidelines for redirecting programs despite a huge modeling and analysis effort.[316] The proposed changes are essentially political. The less elaborate Agricultural Conservation Program evaluation, by contrast, identified cost efficient practices and areas where conservation measures would have the greatest impacts.[317]

Despite much recent attention to developing inventories of resource problems and cost efficient treatments, such information has

---

AND DISPLAYING SHORTRUN COSTS OF SOIL CONSERVATION PRACTICES (U.S. Dep't of Agriculture, Economic Research Service, Tech. Bull. No. 1659, 1981); R. G. Dumsday & W. D. Seitz, *supra* note 60. The latter model was developed under USDA sponsorship.

310. 16 U.S.C. § 2006(a) (Supp. IV 1980).

311. 16 U.S.C. § 2006(b) (Supp. IV 1980).

312. 16 U.S.C. § 2006(c) (Supp. IV 1980).

313. RCA DRAFT FINAL REPORT, *supra* note 64, ch. 9 at 3.

314. *Id.* ch. 9 at 2.

315. *Id.*

316. C. Leman, *supra* note 52, at 69, 74.

317. PHASE 1 EVALUATION, *supra* note 39.

not been incorporated in regular budget allocation and personnel decisions. For example, local and state SCS offices report acres to be protected, amounts of soil to be saved, and progress to be made toward selected goals identified at the national level, such as acres converted to reduced tillage.[318] Such performance indicators provide administrators minimal incentives to focus on the real nature of critical problems and their economical solutions. Unfortunately, the absence of meaningful performance indicators is characteristic of the public sector in general; it does not set soil conservation programs apart.

Program evaluation can be a double edged sword, permitting both improved management and increased critical scrutiny. By concentrating on physical resource appraisals, the Resource Conservation Act effectively avoided asking which programs and methods should be stressed. Ironically, the ASCS, which would suffer most under the Reagan Administration's "preferred program," focused directly on these fundamental questions in its own program evaluation. In general, thorough integration of specific performance measures into a management system reduces managerial leeway and is, thus, naturally avoided by administrators.

Hopefully, enhanced conservation program evaluation capabilities will be used increasingly to plan agency efforts and expenditures to achieve greater productivity. Too much should not be expected, however. Improved analysis will not relieve administrators and legislators of the burden of setting policy: "can members of any county committee or conservation district board be expected to embrace a system—a 'tool' if you will—that undercuts their historic claim to government services?"[319] Furthermore, all reasonable efforts to increase administrative efficiency must still confront the problem of inducing cooperation from reluctant landowners.

F. Federalism

The Reagan Administration plans to have states and local governments assume greater conservation responsibilities.[320] This is to be facilitated largely through matching block grants. In theory at least, states that attach high costs to erosion should be willing to pay more

---

318. Interview with J. Eckes and Ron Murphy, Soil Conservation Service in Champaign, Illinois (June 25, 1982).

319. Cook, *supra* note 107, at 156.

320. RCA DRAFT FINAL REPORT, *supra* note 81, ch. 7 at 1-4; 1983 MAJOR THEMES, *supra* note 97, at 139-40.

of the conservation bill. At $10 million in fiscal 1983, the proposed initial funding levels for matching grants are small.[321] The final proposals of the Resource Conservation Act envisioned as much as $175 million for matching grants by 1986.[322] Only critical areas designated by the Secretary of Agriculture may receive funding.[323] Thus, these proposals do not go very far toward decentralizing control over conservation programs; to the contrary, they imply considerable doubt about state and local capabilities to assume greater leadership in this area.

Greater federal controls over state and local discretion in conservation programs are included in many recent initiatives. If major new state and local roles are apparent in the federal proposals, they are as seekers and managers of federal grant funds. The objectives and policies according to which federal funds are allocated would be determined in Washington as never before. At the same time, state and local governments do play more visible roles in soil conservation programs than they did prior to the 1970s. Areawide pollution control planning and management responsibilities under section 208 account for much of the impetus in this direction. Cost sharing, erosion and sediment control laws, and increased conservation district staffing are expressions of increased state and district involvement. An outgrowth of the heightened involvement has been a greater ability to compete for and manage funding under various special federal grant programs. This is an essential ingredient if those grant programs are to be effective.

VI. Summary and Conclusions

Reform in the goals and implementation strategies of soil conservation programs is the consequence of three basic forces: 1) the assumption of water pollution abatement responsibilities;[324] 2) the increasing scrutiny and analysis of public resource management programs;[325] and 3) the federalist policies of the Reagan Administration.[326] The preceding analysis suggests the reforms have resulted in centralization of the process for setting conservation priorities; decentralization of program management; increased internal pro-

321. *See supra* note 297.

322. RCA Draft Final Report, *supra* note 81, ch. 7 at 4.

323. Agriculture and Food Act of 1981, Pub. L. No. 97-98, § 1514(a), 95 Stat. 1213 (1981) (to be codified in 16 U.S.C. 3431).

324. *See supra* text and notes at notes 177-208.

325. *See supra* text and notes at notes 74-89.

326. *See supra* text and notes at notes 90-117.

gram analysis and evaluation; and improved interagency cooperation. Furthermore, there has been a shift toward project funding, increased appreciation of efficiency in selecting conservation measures, and a narrowing of program goals.

These trends present opportunities for vigorous new conservation efforts which embrace environmental resource concerns. They do not, however, divorce conservation agencies from their traditional agricultural concerns and practices. Weakening environmental impetus, declining federal funds, and ebbing prosperity in United States agriculture all threaten to undermine recent progress. The most significant advance, directing conservation work to important resource problem areas, has not been consolidated with clear guidelines for implementation. In the absence of such guidelines, conservation programs are likely to revert to service programs for agricultural production, once again turning away from the greater resource conservation mission entrusted to them.