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The Renewed Concern Over Soil Erosion: The Current Federal Programs and Proposals

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Because soil erosion affects the quantity and quality of farmland, it is a matter of great concern for both the government and the farm industry. Whereas in the past concern was over the potential damage to productivity, concern is now being voiced over off-site damage and water pollution. There are numerous federal programs set up to fight soil erosion, but they are all voluntary, thereby making it difficult for the government to target funds. The author reviews the seriousness of the problem, looks at the numerous government programs, and then analyzes the Food Security Act of 1985—the first act to make continued federal support contingent upon compliance with conservation guidelines.

Preserving the Quality of Farmland

Although soil erosion is a natural process that is constantly occurring,¹ it is generally believed that it has become a more serious problem than at any time since the Great Depression. Human actions

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have accelerated the erosion process to an unacceptable level. Based on the 1977 National Resources Inventory, the national average loss of soil on croplands from sheet and rill erosion is in excess of 4 billion tons. If concentrated in one area, 4 billion tons of soil loss would mean the removal of six inches of topsoil of 4 million acres. With that kind of loss each year, it has been estimated that it would take only 100 years to wash away every single acre of cropland in the United States to a depth of six inches. More recent estimates of total soil


Of course, measures can be taken to control soil erosion. Minimum tillage, contour farming, strip cropping, and terracing may all be used to curb excessive erosion. Approximately 81 percent of row cropland and 40 percent of all cropland have one of these conservation measures applied. Of these, minimum tillage is the most common measure followed in contouring and terrace systems. National Research Council, 2 Soil Conservation: Assessing the National Resources Inventory 213 (1986) (hereinafter 2 Soil Conservation).

The 1982 National Resources Inventory (NRI) is a computerized national resource database covering all nonfederal land in the United States. USDA personnel entered more than seventy observations on resource conditions and land and water uses at approximately one million locations across the country. The 1982 NRI is a primary source of data for researchers, government program administrators, and policymakers and is the most recent of a series of national resource surveys. The first NRI was conducted in 1977 in anticipation of the passage of legislation directing the USDA to evaluate resource conditions and trends. The Soil and Water Resources Conservation Act of 1977 mandated that such an inventory continue on a five-year cycle, the next survey to be conducted in 1987. 2 Soil Conservation in America, note 2 supra, at 1. Earlier, but significantly less comprehensive inventories done by the Soil Conservation System (SCS) include the Erosion Reconnaissance Survey of 1934 and the Conservation Needs Inventories of 1958 and 1967. See 1 Soil Conservation in America, note 1 supra, at 21. The 1987 NRI is scheduled for publication in 1988. SCS, Soil and Water Conservation News 8 (April 1987).

N. Sampson, Farmland or Wasteland: A Time to Choose 63, 117 (1981) (hereinafter Sampson). But see Batie, note 1 supra, at 33:

The General Accounting Office (GAO) claims the United States was 'losing 4 billion tons of soil a year through water erosion in 1972, compared with 3 billion tons in 1934. However, a closer reading shows that 3 billion of the 4 billion tons of soil loss was from agricultural and forested lands in 1972. This is the same result as the 1934 loss of 3 billion tons of agricultural and forested land. Thus, the validity of the GAO's comparison of 4 billion tons with 3 billion is doubtful.

There are three forms of water erosion: sheet, rill, and gully. Sheet erosion occurs when water removes a thin layer of soil relatively equally from the land. Rill erosion is caused by streamlets from precipitation until small channels, called rills, form. Gully erosion is the most serious and evident form of water erosion. 2 Soil Conservation, note 2 supra, at 90-96. There is currently no accepted method for measuring a fourth type of erosion, ephemeral gully erosion. 2 Soil Conservation, note 2 supra, at 34. The natural topography of a field causes runoff to collect in ephemeral natural waterways or swales before leaving the field. These gullies are plowed in and tilled
loss indicate that some progress in soil conservation has been made. A 1982 appraisal estimated that total soil loss from U.S. cropland is two tons a year.  

Analysis of both the 1977 and 1982 National Inventories suggest the following conclusions:

- Soil erosion continues to be a major problem in the United States.  
- Erosion is unevenly distributed, with the most serious erosion occurring on a concentrated percentage of cropland.  
- Wind erosion may be a problem in humid areas, not just in the Great Plains.  
- Present technology is inadequate to quantify soil erosion, particularly for wind erosion, concentrated flow erosion, and off-site impacts of erosion.  
- The focus of concern over soil erosion has shifted away from concern about degradation of soil to off-site impacts of soil erosion.

Yet, despite these problems, questioning the need for soil conservation is inevitable in an era of agricultural surpluses.

In the 1980s, there was renewed concern over soil conservation despite agricultural surpluses and the crisis in the farm economy. Soil across annually, unlike permanent gullies. This form of erosion is also known as concentrated flow or megarill erosion. Id. Neither the 1977 NRI nor the 1982 NRI included estimates of the ephemeral gully erosion. Id. at 60. For further analysis of the significance of ephemeral gully erosion, see 2 Soil Conservation, note 2 supra, at 90-91.

5 Batie, note 1 supra, at 10.  
6 For a thorough analysis of the problem in one important agricultural state, California, see American Farmland Trust, Eroding Choices and Emerging Issues: The Condition of California's Agricultural Land Resources (1986).  
7 In the United States, land eroding at less than five tons per acre per year accounts for one third the soil loss in the continental United States. Land eroding at five to fifteen tons per acre per year accounts for another third. The remaining one third has an erosion rate greater than fifteen tons per acre per year. This third has one third the total erosion but represents only 6 percent of the total cropland. 2 Soil Conservation, note 2 supra, at 207-208.  
10 Batie, note 1 supra, at 11.
erosion affects both the quantity and the quality of farmland. Soil erosion has not only an on-site detrimental impact but an off-site detrimental impact as well. On-site damage can reduce productivity, diminishing the efficacy of labor and capital. Off-site damage, caused by runoff of polluting fertilizers, nutrients, and pesticides and transport of sediment to water bodies or other sensitive areas, degrades the environment. Although damage to productivity has been the central concern of soil conservationists since the 1930s, in the 1970s public concern shifted to off-site damage and the water pollution associated with soil erosion and water runoff.

The measures chosen to prevent soil erosion depend largely on the perceived need for erosion control. Under the "present-value" approach, all the on-farm and off-farm costs of erosion, present and future, are used to determine when conservation is economical for society. A second approach, the "insurance" approach, emphasizes preservation of soil beyond that which is economical under the "present value" approach to preserve food and fiber production for future contingencies. The third approach, and the most protective of soil, is based on a conservation ethic that emphasizes soil conservation as a moral issue of preservation of natural resources for future generations.

Measuring Soil Loss

Soil rebuilds in two ways. First, there is extremely gradual formation of soil from "parent materials" such as bedrock, organic

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11 There are several possible causes of the renewed concern over excessive soil erosion. The lingering effects of the 1970s export boom, the hard economic terms for farmers who increase production to survive economically, and possibly the increase in corporate and absentee landlord farming have all contributed to a perceived need for control of soil erosion. The SCS has promulgated a definition of, "prime farmland" reflecting soil productivity and stability. The definition encompasses nine factors that express the best combination of physical and chemical characteristics for producing "Food, feed, forage, fiber and oilseed crops." Prime farmland must have an adequate and dependable water supply, a favorable temperature and growing season, acceptable acidity, or, alternatively, acceptable salt and sodium content and few or no rocks. The land must allow water and air to flow through the soil, be protected from flooding, not be saturated with water for long periods of time, and not be subject to excessive soil erosion. See 7 C.F.R. § 657.5(a)(1) (1987), discussed in M. Schnepf, Farmland Food and the Future 15 (1979); see also D. Meyer, D. Pedersen, N. Thorson & J. Davidson, Agricultural Law 839 (1985).

12 1 Soil Conservation in America, note 1 supra, at 1; see also E. Clark, Eroding Soils: The Off-Farm Impacts (1985) (hereinafter Clark).

13 Batie, note 1 supra, at 110-111; see also A. Leopold, A Sand County Almanac (1949).
deposits, or sediment. A second, more rapid soil formation process deepens the rich surface soil layer (topsoil). This layer is deepened through additions of plant material and subsequent biological degradation, which changes the plant material to "soil humus."  

Soil loss per acre is estimated by either the universal soil loss equation (USLE) or the wind erosion equation (WEE), both of which estimate the average annual tons of soil loss from each soil type as a result of climate, topography, cropping systems, and management practices. There are limitations to the accuracy of both of these systems. Losses are frequently reported in tons per acre per year. These losses are compared to loss tolerances ("T-values"), which reflect the maximum annual soil losses that can be sustained without adversely affecting the productivity of the land. The USDA has assigned T-values ranging from one to five tons per acre per year to cropland, depending on the soil conditions. A soil loss of five tons per acre per year translates into a net loss of one inch of soil over thirty years, or one foot of soil every 360 years.

On many soils, current T-values have been set too high to ensure the long-term maintenance of the soil. The use of T-values is based on soil formation rates, not on levels of productivity. It has been estimated that under proper agricultural management, one inch of new topsoil will be formed every 100 to 1,000 years. At the most

14 1 Soil Conservation, note 1, supra, at 13-14.
15 Batie, note 1 supra, at 26. For a detailed explanation of both equations, see Sampson, note 4 supra, at 360-364; 2 Soil Conservation, note 2 supra, at 34-59.
16 Uses of the universal soil loss equation (USLE) and the wind erosion equation (WEE) are limited. Both measure the movement of soil but do not indicate whether the soil moves inches or miles. The equations do not actually estimate soil loss per se; rather, they estimate the amount of dislodged soil. If USLE estimates are used as substitutes for soil loss from a field, they may therefore overestimate the severity of erosion. Batie, note 1 supra, at 26. The WEE is far less accurate than the USLE. Moreover, there is no current, widely accepted, practical method for estimating another form of erosion known as ephemeral gully erosion. 2 Soil Conservation, note 2 supra, at 34. For a detailed analysis of the WEE, see 2 Soil Conservation, note 2 supra, at 129-162.
17 Batie, note 1 supra, at 28-29.
18 Sampson, note 4 supra, at 131.
19 It has been proposed that a measure of acceptable soil loss preferable to T-values is the depth of the root zone. The proposal has not been viable for political reasons, in particular, the problem of credibility for soil conservationists who have emphasized T-values to farmers for fifty years. See 1 Soil Conservation in America, note 1 supra, at 14.
20 Clark, note 12 supra, at 5; 2 Soil Conservation, note 2 supra, at 8.
rapid rate, soil is rebuilt at a rate of 1.5 tons per acre per year.\footnote{Sampson, note 4 supra, at 124.} Although no single tolerance rate is applicable to all types of soils, in the multiple judgments of soil scientists, environmentalists, and geologists, five tons per acre per year is the maximum rate of loss for which indefinite economic productivity can be maintained.\footnote{1 Soil Conservation in America, note 1 supra, at 15.} Soil erosion in amounts greater than T-values is defined as excess soil erosion.\footnote{Batie, note 1 supra, at 28.}

Another method of translating soil loss to loss of productivity is the use of "acre equivalents." Assuming a six-inch layer of topsoil weighs approximately 1,000 tons per acre, and the loss of six inches of topsoil will destroy the productivity of most cropland, it has been suggested that 1,000 tons of soil loss is equivalent to the loss of productivity of one acre, and thus the loss of 1,000 tons of soil is the loss of an "acre equivalent."\footnote{Sampson, note 4 supra, at 131.}

The Effects of Soil Loss

The off-site impacts of soil erosion include damage to air and water quality and toxic contamination from nutrients and pesticides. Estimates of cropland's contribution to air particulates in the United States caused by wind erosion range from 33 million tons to 239 million tons annually. Dust problems are particularly acute in the arid and semiarid areas of the Great Plains, the Far West, and the Southwest.

Agriculture is also considered to be the greatest contributor to non-point-source water pollution. Sediment from soil erosion and the water runoff carry pollutants, fertilizer residues, insecticides, herbicides, fungicides, dissolved minerals, and animal-waste-associated bacteria. In 1976, more than 196 million acres of land were treated with herbicides, 75 million acres with insecticides, another 75 million acres with pesticides \textit{and} insecticides, and 10.5 million acres with fungicides. Three crops—corn, soybeans, and cotton—accounted for 70 percent of all herbicide use on farms in 1979, and two crops—corn and cotton—accounted for nearly 64 percent of insecticide use.\footnote{Sampson, note 4 supra, at 44-46.} It has been estimated that 360 tons of pesticides are carried from ag-
Agricultural land by wind and water each year.\textsuperscript{26} Sediment flows themselves may produce high levels of turbidity infiltration of streams, lakes, and reservoirs.\textsuperscript{27} Despite traditional concerns over on-site soil degradation, recent estimates have confirmed that the off-site costs of erosion far exceed earlier estimates and significantly exceed on-site costs.\textsuperscript{28}

Erosion directly affects the inherent productivity capacity of land by degrading the physical, biological, and chemical characteristics of the uppermost layer of soil, and by reducing the depth of the plant-rooting zone.\textsuperscript{29} The resulting loss of productivity\textsuperscript{30} leads to increased use of fertilizers and pesticides to increase yields per acre.\textsuperscript{31} The direct impact of such increased use is increased runoff and contamination of water sources.

Despite the current agricultural surpluses, production increases may not necessarily continue. Inexpensive energy and plentiful water are things of the past. The growth of agricultural productivity has slowed. Anticipated losses in productivity over the next decades only increase the need for improved soil conservation.\textsuperscript{32}

Studies of soil erosion have revealed how to increase the efficiency of soil conservation measures. Although the national average loss of soil and croplands from water erosion, based on the USLE, was estimated at 4.8 tons per acre in 1977, the most serious problems of soil erosion are concentrated on a relatively few acres.\textsuperscript{33} Almost 70 percent of the combined erosion over five tons per acre per year was concentrated on 8.6 percent of the cropland. The USDA

\textsuperscript{26} Clark, note 12 supra, at 47.
\textsuperscript{27} Batie, note 1 supra, at 47-51; Clark, note 12 supra, at 63.
\textsuperscript{28} See generally Clark, note 12 supra.
\textsuperscript{29} 1 Soil Conservation in America, note 1 supra, at 1.
\textsuperscript{30} It is difficult to correlate loss of productivity to erosion damage, despite the years of emphasis on the loss to justify soil erosion control. For models to assess soil erosion productivity damage, see 2 Soil Conservation, note 2 supra, at 21-62.
\textsuperscript{31} See 1 Soil Conservation in America, note 1 supra, at 2.
\textsuperscript{32} Batie, note 1 supra, at 30, 42, 55.
\textsuperscript{33} Almost one third of the nation's agricultural land is experiencing very little erosion (less than one ton per acre per year), accounting for 2.6 percent of total erosion. At the other extreme, slightly less than 3 percent of the agricultural land (including some of the best cropland) is eroding at a rate of more than twenty-five tons per acre per year—almost one third of the nation's total erosion. Approximately 6 percent of the erosion occurs in the Corn Belt and the Northern Plains. However, Hawaii and the U.S. Virgin Islands, as well as the Appalachian States, have higher erosion rates per acre of land. Clark, note 12 supra, at 5.
estimates that overall there are 1.2 billion acres with an annual soil loss of five tons per acre or less, and 124 million acres with losses of five to fifteen tons per acre per year. Sheet and rill erosion alone accounted for 60 percent of the 6.42 billion tons of erosion reported in 1977, the 6.42 billion tons representing an average of more than 200 million tons of erosion per second.\(^3^4\) Sheet and rill erosion on cropland accounted for 30 percent of the total such erosion. From a national perspective, cropland and rangeland are the major sources of soil erosion. Combining sheet, rill, and wind erosion, cropland erosion totaled 2,818 million tons, or 44 percent of the total estimated erosion on all types of land.\(^3^5\) These statistics point out that soil conservation efforts should focus on the highly erodible cropland that is responsible for a disproportionate amount of the total erosion. The concept of concentrating federal funding for soil conservation in problem areas, or “targeting,” became the focus of soil conservation “reform” after forty years of federal conservation programs had proven ineffective.

**Federal Programs: The Carrot But Not the Stick**

Federal legislation to control erosion began as a response to the Great Depression and the extensive droughts in the early 1930s.\(^3^6\) During the Depression, soil erosion, the depressed economy, and high unemployment were seen as one and the same problem.\(^3^7\) There are more than twenty-seven federal programs under eight different agencies that are designed to control soil erosion\(^3^8\); how-

\(^3^4\) Batie, note 1 supra, at 32-33.

\(^3^5\) I Soil Conservation in America, note 1 supra, at 23.

\(^3^6\) Agricultural Law, note 11 supra, at 772. In 1928, Hugh Hammond Bennett, then a scientist with the USDA Bureau of Chemistry and Soils, published “Soil Erosion, A National Menace,” which led to the first federal funding for soil conservation. In 1933, Bennett was named director of the Soil Erosion Service in the U.S. Department of the Interior. Sampson, note 4 supra, at 256. Bennett’s pleas for a national program of soil conservation led to the creation of the Soil Conservation Service as a permanent agency in the USDA. Id. at 258. See also N. Sampson, For Love of the Land 1-20 (1985).

\(^3^7\) Sampson, note 4 supra, at 256.

ever, all are voluntary. As a result, there is limited direction of federal funding or “targeting” of funding for soil conservation toward the soil that needs it most. Also, until the 1985 Farm Bill, there were no meaningful sanctions of any sort that could be imposed on a landowner guilty of contributing to, or failing to control, excessive erosion. Nevertheless, these programs continue to be of importance in providing technical assistance and cost-sharing for conservation measures. The three major soil conservation programs at the federal level are the Conservation Operations Program, the Great Plains Conservation Program, and the Agricultural Conservation Program.

The Conservation Operations Program

The Conservation Operations Program (COP) is administered by the USDA Soil Conservation Service (SCS) in cooperation with local conservation districts. Under the program, the SCS provides technical assistance to farmers and ranchers for application of full conservation measures. Technical assistance may include formal and informal consultation with farmers, development of conservation plans and guidance on implementing specific conservation practices. The results of the 1982 NRI supported three conclusions first apparent from the 1977 NRI: (1) nearly 50 percent of the intensively cultivated cropland in the United States is treated with some conservation practice, (2) about 50 percent of the practices are used on land not subject to excessive erosion, and (3) much of the land most in need of erosion control under the USLE is not treated with any practice.

The validity of targeting was strengthened by the 1977 and 1982 NRIs, which revealed that much soil erosion was concentrated on a small percentage of cropland. The SCS began targeting in 1980. Soil Conservation in America, note 1 supra, at 73. For further history of the targeting concept, see id. at 86-89. In 1986, the SCS, ASCS, and other USDA agencies continued targeting of funds to areas in forty-four states and Puerto Rico. Erosion was reduced an average of 7.4 tons per acre per year on the 5.5 million acres targeted in fiscal year 1986. SCS, Soil and Water Conservation News, April 1987, at 7.

39 The results of the 1982 NRI supported three conclusions first apparent from the 1977 NRI: (1) nearly 50 percent of the intensively cultivated cropland in the United States is treated with some conservation practice, (2) about 50 percent of the practices are used on land not subject to excessive erosion, and (3) much of the land most in need of erosion control under the USLE is not treated with any practice. 2 Soil Conservation, note 2 supra, at 76. Targeting is simply the obvious notion that technical assistance and funding for conservation should be directed toward the areas where erosion is the most acute. The validity of targeting was strengthened by the 1977 and 1982 NRIs, which revealed that much soil erosion was concentrated on a small percentage of cropland. The SCS began targeting in 1980. 1 Soil Conservation in America, note 1 supra, at 73. For further history of the targeting concept, see id. at 86-89. In 1986, the SCS, ASCS, and other USDA agencies continued targeting of funds to areas in forty-four states and Puerto Rico. Erosion was reduced an average of 7.4 tons per acre per year on the 5.5 million acres targeted in fiscal year 1986. SCS, Soil and Water Conservation News, April 1987, at 7.

40 Batie, note 1 supra, at 92.

41 Sampson, note 4 supra, at 267-268.

42 1 Soil Conservation in America, note 1 supra, at 69.
SCS cooperates with the local soil and water conservation districts to implement the program. Initial participation in the program is voluntary. Technical assistance is offered to farmers who want assistance and contact the soil conservation district office.  

**The Great Plains Conservation Program**

The Great Plains Conservation Program (GPCP) is a similar program. When Congress created the GPCP, it was the first program with cost-sharing under a multiple-year contract for a conservation plan under the administration of the SCS, and it is the only federal program in which technical assistance and cost-sharing are the responsibility of one agency. The GPCP includes cost-sharing with technical assistance to farmers.

The Great Plains area was seen as necessitating a regional approach because of the area's unique problems with drought, wind erosion, and climate changes around a point critical for crop production. The Great Plains encompasses approximately 37 percent of the land of the United States and about 40 percent of its cropland. The SCS administers the GPCP, with cost-sharing funds for designated counties in Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming.

To receive the cost-sharing, farmers must enter into contracts with the SCS that range from three to ten years. The cost-share contracts provide that the original contractor must refund payments

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43 Sampson, note 4 supra, at 267-268.
44 1 Soil Conservation in America, note 1 supra, at 75.
45 Sampson, note 4 supra, at 272-273.
46 For the Love of the Land, note 36 supra, at 139.
47 Agricultural Law, note 11 supra, at 777.
48 First, a landowner or operator applies to the SCS to have land included in the program. The district conservationist, with the local soil and water conservation district, prioritizes applications consistent with a state priority system. If the application is accepted, the SCS helps the applicant to prepare a conservation plan that includes a system of conservation measures, a schedule for application of the system, and an estimated cost for the system. The plan is reviewed for approval by the local conservation district, and, after approval, a contract is prepared requiring the system to be applied by the applicant with costs and technical assistance from the SCS. 1 Soil Conservation in America, note 1 supra, at 75. An important aspect of the program is the goal of reestablishing grassland and marginal areas of agricultural production due to erosion. Id. at 76. However, once a contract expires, nothing prevents such land from being put back into production. Id. at 77.
made if the land is transferred to a party that refuses to honor the contractual obligations. If the SCS finds the contractor is not complying with the terms of the contract, the agency can compel compliance or seek repayment of the cost-sharing funds already received. Cost-sharing is limited to $35,000 per contract, and the cost-sharing cannot exceed 80 percent of the cost of any one practice. Although most of the funding is intended for vegetative cover, by 1977 more than 70 percent of the funds had gone toward productivity-enhancing measures, such as irrigation and livestock-watering facilities, rather than true conservation measures.

The Agricultural Conservation Program

The Agricultural Conservation Program (ACP) is administered by the Agricultural Stabilization and Conservation Service (ASCS) with long-term and short-term contracts for financing soil conservation practices. The cost-sharing is limited to 50 percent to 75 percent of the cost of approved practices. There is a maximum payment of $3,500 per farmer per year under agreements that range from three to ten years. A local agricultural stabilization and conservation committee, elected by local farmers, recommends how the cost-sharing should be distributed. The SCS provides technical advice for the conservation measures. Contractors and farmers may be responsible for statutory double damages and penalties if false claims for reimbursement are made.

49 Batie, note 69 supra, at 78.
50 Sampson, note 4 supra, at 273.
51 Batie, note 1 supra, at 78, 94. For a harsh criticism of the effectiveness of the program, see 1 Soil Conservation in America, note 1 supra; at 77-79. In 1986 alone, 946 farmers and ranchers signed long-term contracts covering 2.7 million acres, and conservation work was completed on 998 contracts covering 2.3 million acres. SCS, Soil and Water Conservation News, April 1987, at 7.
53 7 C.F.R. § 701.13(c) (1987); see also Batie, note 1 supra, at 79.
54 Batie, note 1 supra, at 79.
55 Agricultural Law, note 11 supra, at 777. In 1986, the SCS provided technical assistance to about 100,000 farmers and ranchers under the ACP. Through the agreements, the SCS assisted 11,000 farmers in installing lasting conservation practices. Farmers and ranchers under the ACP installed water conservation practices benefiting 989,000 acres, ten-acre systems benefiting 442,000 acres, and applied conservation tillage benefiting 1.8 million acres. SCS, Soil and Water Conservation News, April 1987, at 7.
Soil Conservation Districts

In 1937, despite the opposition of state extension services, land grant colleges, and the American Farm Bureau, the Standard State Soil Conservation District Model Law was formulated by the USDA for adoption by the states. By leaving the responsibilities of conservation to the states, the SCS avoided the controversial political issue of federal regulation of private land use. By 1947, every state had passed soil conservation district enabling laws. Under these laws, districts could be established voluntarily and used to promote soil conservation. Today, there are nearly 3,000 soil conservation districts covering nearly 2.5 billion acres. Essentially all privately held farmland is now encompassed in a soil conservation district. Almost all states give the districts authority to study erosion problems, develop conservation plans, and provide cost sharing to private landowners.

In addition, some states give regulatory authority to the districts. In response to Section 208 of the Clean Water Act, which required state planning to control non-point-source pollution, the National Association of Conservation Districts formulated a model state erosion and sediment control act. As early as 1980, twenty states, the District of Columbia, and the Virgin Islands had legislation for sediment and erosion control programs. Most of these programs prohibit issuance of subdivision approvals or building permits without an erosion and sediment control plan approved by the conservation district. Sixteen of the statutes included direct regulatory requirements. Although districts have some land use authority, the authority cannot ordinarily be exercised without a favorable vote.

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56 For the Love of the Land, note 36 supra, at 23.
57 Sampson, note 4 supra, at 260. Also, on November 11, 1941, the Soil Conservation Society of America was formed as a forum for soil conservationists. For Love of the Land, note 36 supra, at 44. In addition, in 1947, the National Association of Soil Conservation Districts was established. Id. at 56-57.
58 Batie, note 1 supra, at 90, 101.
60 The model act was formulated and promoted with the cooperation of the Council of State Governments, the USDA, and the EPA. Sampson, note 4 supra, at 277.
61 Id. The twenty states include Delaware, Georgia, Hawaii, Illinois, Iowa, Maine, Maryland, Michigan, Minnesota, Montana, Nevada, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, and Virginia. Clark, note 12 supra, at 221.
62 Sampson, note 4 supra, at 277.
63 Clark, note 12 supra, at 219-220.
from a significant number of landowners. Most districts receive federal cost-sharing under a Memorandum of Understanding with the USDA.\textsuperscript{64}

Soil conservation districts are also responsible, under the Water Quality Act of 1987, for controlling non-point-source pollution. Soon districts will have to promulgate plans to control non-point-source pollution, including runoff from farms.\textsuperscript{65}

**Soil Conservation and Domestic Allotment Act of 1936**

In the mid-1930s, many farmers left their land and others needed federal help to adjust to circumstances brought on by drought, the Depression, and the mechanization of farming. Congress decided to make financial adjustments to farmers to address these new economic realities. The Agricultural Adjustment Act of 1933 established such payments to be made directly to farmers, but the Act was subsequently ruled unconstitutional by the U.S. Supreme Court. In attempting to determine how to subsidize payments to farmers constitutionally, a farmers' conference recommended that soil conservation payments from federal funds be distributed to farmers.\textsuperscript{66}

As a result, the first soil conservative program at the federal level was actually designed to be a form of subsidy to distressed farmers. In 1936, the Soil Conservation and Domestic Allotment Act was passed.\textsuperscript{67} Under that act, the USDA made federal payments to farmers who shifted cropland from soil-depleting crops to soil-conserving crops.\textsuperscript{68} The Act also created the ASCS with a network of offices at the national, state, and local levels. It was through the Soil Conservation and Domestic Allotment Act that the Agricultural Conservation Program was created.\textsuperscript{69}

**The Soil and Water Act of 1935**

The Soil and Water Act of 1935 created the Soil Conservation Service.\textsuperscript{70} Under this act, the Soil Conservation Service was au-

\textsuperscript{64} Sampson, note 4 \textit{supra}, at 260-261.


\textsuperscript{66} Sampson, note 4 \textit{supra}, at 263; see also United States v. Butler, 297 U.S. 1 (1936).


\textsuperscript{68} Batie, note 1 \textit{supra}, at 90.

\textsuperscript{69} Sampson, note 4 \textit{supra}, at 264.

\textsuperscript{70} Batie, note 1 \textit{supra}, at 4:
Authorized to give technical assistance only for conservation measures,71 although the SCS had been established to be the primary federal agency overseeing control of soil erosion.72 The 1935 and 1936 acts created a battle that raged for many years between the SCS and the ASCS.73 The ASCS had an advantage in that it was able to offer cost sharing, rather than just technical assistance, to farmers wanting to implement conservation measures. The political result of the agencies’ battle to obtain farmers as supporters was that the SCS and ASCS emphasized productivity over conservation.

**Tax Deductions for Soil Conservation**

Farmers implementing soil conservation measures may deduct their expenses, although capital in nature, rather than capitalizing them.74 Expenditures made for soil and water conservation for land used in farming, or for prevention of erosion on land used for farming,

The Great Depression put nearly one-quarter of the labor force out of work at a time when there were no public welfare programs, unemployment insurance, or food stamps. The Depression also meant that farmers, faced with high debts and low prices, could not afford to practice soil conservation.

Then, in 1934, severe drought hit. Dust storms carried soil from the plowed fields of the Great Plains all the way to the Atlantic Ocean. Although likely apocryphal, it is said that one of these storms rained dust on Washington, D.C., in April 1935, as Congress was considering H.R. 7054, the Soil Conservation Act. The Act, which later passed, declared the United States was:

“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. . . .”

The act also established the Soil Conservation Service (SCS) as a permanent agency within the Department of Agriculture.

*Id.* at 4-5.

71 Sampson, note 4 *supra*, at 258.

72 *Agricultural Law*, note 11 *supra*, at 777. The SCS also administers the Land Capability Class System, which is designed to rate farmland under eight capability classes for agricultural purposes. The risk of erosion increases from Class I to Class VIII (the poorest farmland). Soils in the first four classes are considered the most suitable for agricultural production. Sampson, note 4 *supra*, at 339. The class designations from I to VIII may be accompanied by letter designations e, w, s, and c, which indicate whether the land is subject to problems of erodibility, wetness, stoniness, shallowness, drought, or climate, respectively. *2 Soil Conservation*, note 2 *supra*, at 85. The system’s accuracy has been criticized because of the wide range of erosion and inherent erosion on land in the same class and subclass. *Id.* at 86; see also *2 Soil Conservation*, note 2 *supra*, at 1-20.

73 Sampson, note 4 *supra*, at 264.

74 *Agricultural Law*, note 14 *supra*, at 779.
are deductible.\textsuperscript{75} To qualify for the deduction, the farmer must meet certain criteria in Section 175. If these criteria are not met, the expenditures are not deductible and increase the basis of the property. In some circumstances, the deductions may be recaptured upon disposition of the property.\textsuperscript{76}

Equipment used to implement conservation measures is also depreciable. Farmers can deduct assessments by conservation districts, and such assessments to acquire depreciable property are deductible if the depreciable property is used in the district’s conservation or drainage projects.\textsuperscript{77}

Until 1986, national tax policy was inconsistent with regard to soil conservation. Tax incentives, such as investment tax credits and accelerated depreciation, made conversion of fragile land to agriculture economically feasible.\textsuperscript{78} As a result of the Tax Reform Act of 1986 (TRA '86), the investment tax credit was abolished and accelerated depreciation is only available for personal property, not real estate.

Previously, accelerated depreciation deductions and investment tax credits were available for purchases of most farm equipment. Income from the sale of farm assets was subject to relatively modest capital gains taxation.\textsuperscript{79} TRA '86 extended the period over which depreciation deductions can be taken and ended preferential treat-

\textsuperscript{75} I.R.C. § 175 (1986).
\textsuperscript{76} Reg. § 1.175-1 (1960).
\textsuperscript{77} See Fed. Taxes (P-H) ¶ 16,211 (1982).
\textsuperscript{78} See Agricultural Law, note 11 supra, at 779.
ment of income from the sale of assets including land, breeder livestock, and some unharvested crops. There are also limits on the tax treatment of "passive" investments in agriculture. Overall, farmers lost special tax breaks while benefiting less than nonagricultural taxpayers from the rate reductions.

Specifically, income from sale of highly erodible land or wetland converted to production after March 1, 1986, is ineligible for capital gains treatment. TRA '86 limits soil and water conservation deductions to those practices implemented under a conservation plan approved by the SCS or a "comparable agency." No deduction may be taken for expenses in converting wetland or preparing land for center pivot irrigation. TRA '86 also repeals the deduction for farmers for expenses in clearing land for farming.

Soil Preservation Under the Surface Mining Control and Reclamation Act

Under the Surface Mining Control and Reclamation Act (SMRA) of 1977, there is a program of minimum environmental standards that must be met before a permit for surface mining of coal will be issued. If a state submits a regulatory and enforcement program that meets the statutory criteria, and it is approved by the Secretary of the Interior, the state will have exclusive authority over surface mining on nonfederal lands. Otherwise, the Office of Surface Mining Reclamation and Enforcement in the Department of the Interior will create a program for the state. If a state fails to enforce its program, enforcement may be at the federal level.

No person may conduct surface mining without a permit under the applicable state or federal program. There are environmental protection performance standards with which every permit must comply. After a permit is approved, the applicant files a bond for performance of all requirements of the Act and permit.

If the mining will be done on prime farmland, the mine operator must demonstrate technical capability to restore the mined area, within a reasonable time, to equivalent or higher yields compared

81 See Benfield, Ward & Kinsinger, note 79 supra, at 421.
with nonmined farmland in the surrounding area. There is also a requirement of soil reconstruction. Soil layers must be separately removed, segregated, stockpiled, and then replaced and regraded. The required performance bond will not be released until yields have been restored.

In *Hodel v. Indiana*, the additional requirements for mining on prime farmland were challenged. The U.S. Supreme Court held that Congress could rationally find that the regulated activity on prime farmland affected interstate commerce. The Court found no violation of equal protection or due process. The failure to provide variances for mining on prime farmland, as was done with steep-slope mining, was found to have a rational basis given the differences between the two operations. The allegation that it was technologically impossible to reclaim prime farmlands to required standards did not constitute a violation of due process as a taking. As a facial challenge to the Act, the Court found that the Act did not deprive owners of all economically beneficial use of their property.

The implications of *Hodel* extend beyond the limited reach of the SMRA. The Act is a form of federal land use enforced through a permit requirement. Such an approach raises several issues of unconstitutionality, most of which were addressed and rejected in *Hodel*. It is not inconceivable that at some point federally mandated conservation requirements could be imposed on farmland (perhaps even in conjunction with a permit requirement).

**The Failings of the Federal Approach**

In the 1970s, given the export boom and the direction to farmers to plant “fence row to fence row,” soil conservation was viewed as a practical necessity. The ASCS and SCS were seen, and appropriately so, as doing very little to emphasize conservation over productivity. Then, in 1977, the Comptroller General of the United States criticized federal soil conservation programs in a pivotal report to Congress.

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85 See *Agricultural Law*, note 11 supra, at 784-785.
titled "To Protect Tomorrow's Food Supply, Soil Conservation Needs Priority Attention." Among other criticisms, the report pointed out that federal financial assistance was not directed toward the most erosive land, and cost-sharing practices seemed to be designed to enhance productivity rather than to control erosion.90

A report to Congress by the Comptroller General six years later echoed these criticisms, indicating how little reform had been made.91 Declining appropriations for both agencies reflected a general sense of dissatisfaction and disapproval of how the agencies had handled the conservation programs.92 It has been estimated that after fifty years of conservation programs, as much as $30 billion had been spent to control soil erosion in the United States,93 with little to show for it.

The Soil and Water Resources Conservation Act of 1977

The Soil and Water Resources Conservation Act of 1977 (RCA)94 was passed by Congress to reform and improve federal conservation programs. It requires the USDA to (1) appraise, on a continuing basis, the soil, water, and other resources along federal land; (2) develop a program for furthering the conservation, protection, and enhancement of those resources; and (3) evaluate annually program performance in achieving conservation objectives.95 The RCA was designed to compel review of soil and water conservation programs in the USDA with recommendations for improvement. An earlier version of the RCA had been vetoed by President Gerald Ford as posing a threat to federal land use.

The RCA has already accomplished several significant improvements in conservation policymaking. After the RCA, soil and water conservation clearly has become a national priority. The Na-

90 Batie, note 1 supra, at 94-95. The criticism led to changes required by the Agriculture Rural Development and Related Agencies Appropriation Act of 1979, which prohibits cost sharing for practices that increase production but have little conservation or pollution control benefits.

91 Id.

92 Sampson, note 4 supra, at 282-285; Soil Conservation in America, note 1 supra, at 79-86.

93 Agricultural Law, note 11 supra, at 776.

94 Sampson, note 4 supra, at 287.

tional Resources Inventories required by the RCA have improved decision making with better data. Also, conservation has been broadened to include more than just soil productivity and on-site impacts of soil erosion.\textsuperscript{96}

The first two RCA national programs were published in 1982 and 1987.\textsuperscript{97} The five-part program in 1982 identified as the long-term objectives for resource conservation attacking excessive soil erosion, improving irrigation efficiency, reducing upstream flood damage, improving the condition of rangeland, and improving water quality in streams receiving runoff from agriculture. The first priority was to reduce excessive soil erosion; the second priority was to conserve irrigation water in the West and reduce upstream flood damage in the East. The 1982 report emphasized two long-delayed concepts: targeting and cross-compliance.\textsuperscript{98} With targeting, federal funding for soil conservation would not simply go to those who were willing to use it, but to those who needed it most.\textsuperscript{99} Cross-compliance emphasizes restriction of federal subsidies to those farmers who fail to use acceptable conservation measures. By requiring cross-compliance, the USDA would no longer be subsidizing continued production by farmers who failed to utilize accepted and necessary conservation measures.\textsuperscript{100}

The program's emphasis on cross-compliance was a tentative rejection of the voluntary nature of federal conservation programs. The failings of the federal conservation programs resulted in part from farmers' concern with productivity at the expense of conservation. There are many possible reasons why farmers have not voluntarily adopted conservation measures to the extent necessary to control excessive erosion. Personal preferences, costs, land investment

\textsuperscript{96} \textit{Making Conservation Work}, note 9 supra, at 72.


\textsuperscript{98} See Agricultural Law, note 11 supra, at 778.


policies, the increasing number of tenure arrangements, tax policies, and loan policies all create disincentives to conservation.  

The 1977 National Resources Inventory had revealed that approximately 38 million acres of nonirrigated cropland—11 percent of the total cropland—were eroding in excess of fifteen tons per acre per year. These acres accounted for 53 percent of the total sheet, rill, and wind erosion on nonirrigated cropland. Sheet and rill erosion, the most serious forms of soil loss, were even more concentrated. Six percent of the total cropland was responsible for 43 percent of the total annual sheet and rill erosion.  

A study done by the American Farmland Trust (AFT) concluded that highly erodible land on which excessive erosion was concentrated was not being farmed with conservation farming or with traditional USDA conservation programs. Most USDA programs were aimed at production, and even those programs that tried to limit production resulted in farmers removing from production their least productive land, not their most erosive land. A second AFT study recommended, as a solution, legislation that essentially would become the conservation provisions of the 1985 Farm Bill. Despite

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101 Batie, note 1 supra, at 73-85.
102 Making Conservation Work, note 9 supra, at 72-73.
103 Id.
104 The USDA has utilized several methods to limit production. With so-called set-asides, the Secretary of Agriculture may require farmers to withhold a percentage of base acreage during the set-aside year. Agricultural Law, note 11 supra, at 29. Acreage limitations also restrict the amount of acreage to be planted, but differ from set-asides in that acreage limitations apply to a specific crop. Id. In addition, diversion payments may be made to farmers who agree to devote to conservation uses a percentage of cropland in addition to any required by a set-aside or acreage limitation. Id.

In 1983, the USDA announced the payment-in-kind (PIK) program. Id. at 30. Under PIK, land could be set aside in addition to existing acreage reduction programs for wheat, corn, sorghum, rice, and upland cotton. Under the program, farmers could elect to divert additional acres from production in return for payment in kind of commodities that would have been produced on the diverted acres. It was thought that this program would decrease production and rid the federal government of its surpluses of commodities. Id. The PIK program in practice, however, became a symbol of the cost of government support programs, "embarrassing largesse" to large farm operations, and "modest" conservation benefits. Soil Conservation in America, note 1 supra, at 94.

Although farmers tended to remove their least productive land if permissible under the specific program, coincidentally, the low production was often due to erosion. Id. at 55. To a limited extent, then, conservation was effectuated through production controls, although in an effective and year-by-year manner.

general dissatisfaction with a purely voluntary approach to soil conservation, a major hurdle remaining to federal conservation legislation was the long-standing aversion to anything approximating "federal land use."

The Conservation Provisions of the Food Security Act of 1985

Overview

Congress had refused twice before 1985 to pass legislation similar to the conservation title of the 1985 Farm Bill (FSA). The relatively uneventful passage of the conservation programs arguably resulted from a combination of four key developments: the first opportunity since 1981 for a comprehensive revamping of agricultural policy; the spiraling cost of farm programs calling for reduced farm output and government subsidies; the growing recognition of the environmental destructivity of many agricultural policies; and—perhaps most important—the recognition by urban and suburban interests, as well as environmental groups, of their stake in the farm bill debate. Conservation organizations such as the AFT, the National Audubon Society, and the Sierra Club battled fiercely to ensure passage of the conservation provisions.106 The Sierra Club, for example, distributed a "Farm Bill Alert" to its members urging them to lobby for establishment of sodbusting, swampbusting, and conservation reserve programs.107 The vigorous debate over other provisions of the bill obscured the significance of the conservation provisions, and, as a result, the opposition focused its resources in other areas.108

The 1985 Farm Bill109 was signed on December 23, 1985 and was titled the Food Security Act of 1985 (The Act). It contained several conservation provisions that were new to agricultural programs: the so-


107 Letter from Sierra Club to membership (June 17, 1985) (discussing the 1985 farm bill).

108 Visser, note 106 supra, at 9, col. 2.

called sodbuster, swampbuster, conservation compliance, and conservation reserve programs.¹¹⁰

Until the Act, soil conservation had been primarily a voluntary initiative. Both the SCS and the ASCS administered voluntary programs in which farmers could receive technical assistance and financial assistance for soil conservation measures. As noted earlier, many of these programs were administered to increase productivity, rather than to control and limit soil erosion. Also, there was nothing to prevent a producer not in compliance with conservation requirements from receiving all of the financial support available under other USDA programs. Critics urged that there should be cross-compliance, that is, a producer should not be able to obtain financial support from one branch of the USDA while violating the conservation requirements of another branch of the USDA. The basic purpose of the sodbuster, swampbuster, and conservation compliance provisions is to ensure cross-compliance between conservation programs of the USDA and price and income support programs of the USDA. Under these provisions, a producer will receive no USDA program payments, that is, price and income supports, disaster payments, crop insurance, Commodity Credit Corporation (CCC) storage payments, farm storage facility loans, Farmer's Home Administration loans if proceeds will be used to contribute to conversion, and all other USDA production payments unless the producer is in compliance with the conservation provisions.¹¹¹ The legislation does not, however, make soil and water conservation mandatory. Farmers may still refuse to use conservation measures or preserve wetlands, but, if they do so, they pay the price by being excluded from certain USDA payment programs.

Swampbusting

The Act

Under the swampbuster provision of the Act, federal farm subsidies may not subsidize destruction of wetlands. Drainage and plant-


¹¹¹ 16 U.S.C. § 3811. The Act provides that any person who produces an agricultural commodity without an approved conservation plan on highly erodible land or on wetlands converted after December 23, 1985, will be ineligible for loans made, insured, or guaranteed by the FmHA if proceeds of the loan will be used for a purpose that will contribute to excessive erosion of highly erodible land or to the conversion of wetland for agricultural commodity production. The regulations implementing this restriction are in 53 Fed. Reg. 7330 (March 8, 1988).
ing of wetlands destroys critical wildlife habitats, impairs groundwater recharge, and diminishes stream quality.\textsuperscript{112} Wetlands can reduce flooding and stabilize shorelines against erosion and storm damage. Approximately 43 million acres of the remaining 99 million acres of wetlands could be farmed if drained, and 5.1 million of those acres have a high or medium potential for conversion.\textsuperscript{113} About half of the 5 million acres is in Alabama, Florida, Michigan, Minnesota, Mississippi, North Carolina, North Dakota and South Carolina.\textsuperscript{114}

Under the swampbuster provision, any person who produces an agricultural commodity on wetlands converted after December 23, 1985, will be ineligible for price and income supports and other USDA payments. Availability and application of a conservation plan to the converted wetlands under the swampbuster provision, unlike the sodbuster provision, is irrelevant to the prohibition of financial support.\textsuperscript{115}

A wetland is defined as land that has a predominance of hydric soil and that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances support, a prevalence of hydrophytic vegetation typically adapted for life in the saturated soil conditions.\textsuperscript{116} Converted wetland is wetland that has been drained, dredged, filled, leveled, or otherwise manipulated for the purpose or to have the effect of making the production of an agricultural commodity possible if such production would not have been possible but for the action and, before such action, the land was wetland and was neither highly erodible land nor highly erodible cropland.\textsuperscript{117}

\textsuperscript{113} USDA \textit{Farmline} 4 (Oct. 1986).
\textsuperscript{115} An “agricultural commodity” is any commodity planted and produced by annual tilling of the soil, including tilling by one-trip planters, and sugarcane. 16 U.S.C. §§ 3801(a), 3822.
\textsuperscript{116} 16 U.S.C. § 3801(16). “Under normal circumstances” refers to “the soil and hydrological conditions that are normally present, without regard to whether the vegetation has been removed.” 52 Fed. Reg. 35,207 (Sept. 17, 1987).
“Hydrophytic vegetation” is a plant growing in water or “a substrate that is at least periodically deficient in oxygen during a growing season as a result of excessive water content.” 16 U.S.C. § 3801(a). Exempt from the definition of “wetland” are lands in Alaska identified as having high potential for agricultural development which have a predominance of permafrost soils. 52 Fed. Reg. 35,207 (Sept. 17, 1987).
“Hydric soil” is soil that “in its undrained condition, is saturated, flooded, or ponded long enough during a growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation.”
\textsuperscript{117} 16 U.S.C. § 3801(16).
There are several exemptions from the requirements of the Act. If conversion of the wetland was commenced or completed before December 23, 1985, agricultural products continue to be eligible for subsidies. An artificial lake, pond, or wetland created by excavating or diking non-wetland to collect and retain water for purposes such as water for livestock, fish production, irrigation, a settling basin, cooling, rice production, or flood control is not subject to the provisions of the Act. A wet area created by a water delivery system, irrigation, or irrigation system is also not considered wetland under the Act. Wetland on which production of an agricultural commodity is possible as the result of a natural condition, and without action by the producer that destroys a natural wetland characteristic, is not wetland under the Act. Converted wetland may also be exempt if the SCS determines that the actions of the person with respect to the production of the agricultural commodity, individually and in connection with all other similar actions authorized by the SCS in the area, would have only a minimal impact on the hydrological and biological

118 16 U.S.C. § 3822(a)(1). The final rule has been revised at length to clarify when conversion is considered to have been “commenced” before December 23, 1985. Conversion was “commenced” before that date if: (1) draining, dredging, filling, leveling, or other manipulation (including any activity that results in impairing or reducing the flow, circulation, or reach of water) was actually started on the wetland; or (2) the person applying for benefits has expended or legally committed substantial funds either by entering into a contract for the installation of any of the above activities or by purchasing construction supplies or materials for the primary and direct purpose of converting the wetland. 52 Fed. Reg. 35,203 (Sept. 17, 1987). Even if the criteria for “commencement” conversion before December 23, 1985, are not satisfied, the person may request a commencement determination from the ASCS upon showing that undue economic hardship will result because of substantial financial obligations incurred prior to December 23, 1985, for the primary and direct purpose of converting the wetland. Id. Also under the final rule, activities of a water resource district, drainage district, or similar entity are attributable to all persons within the jurisdiction of the entity who are assessed for its activities. Id. A separate rule applies to determine when conversion by such an entity was “commenced” before December 23, 1985. Id. A person seeking a determination of conversion commencing before December 23, 1985, must request the determination before September 19, 1988; must demonstrate that the conversion has been actively pursued; and must complete the conversion by January 1, 1995. Id. at 35,203. Conversion of a wetland is considered to have been completed before December 23, 1985, if any of the above-described conversion activities was applied to the wetland and made the production of an agricultural commodity possible without further manipulation where the production would not otherwise have been possible. Id.

119 16 U.S.C. §§ 3822(a)(2), 3822(a)(3). An area is considered an artificial wetland if such area was formerly non-wetland or wetland on which conversion was started or completed before December 23, 1985, but meets the wetland criteria “due to the actions of man.” 52 Fed. Reg. 35,207 (Sept. 17, 1987).
aspects of wetlands. The legislative history makes it clear that this is intended to be a very limited exemption.\textsuperscript{120}

\textit{The Regulations}

A person will have produced an agricultural commodity on converted wetlands if (1) all or a portion of the field is converted wetland; (2) the ASCS has determined that the person was entitled to share in the crops available for the land, or the proceeds thereof; and (3) the ASCS has determined that the land is or was planted to an agricultural commodity during the year for which the person is requesting benefits. A party may continue to be eligible for USDA benefits if the wetland on which the agricultural commodity is produced was converted by unrelated third parties if such conversion was not the result of a scheme or device to avoid compliance. However, any further drainage improvement on such land is not permitted by the party without loss of eligibility for USDA program payments unless the SCS determines that further drainage activities applied to such lands would have a minimal effect on any remaining wetland values. Converted wetlands are presumed to have been converted by the person applying for benefits unless the person can show that the conversion was caused by an unrelated third party. Activities of a water resource district, drainage district, or similar entity are all attributable to persons within the jurisdiction of the district or other entity who are assessed for the activities.\textsuperscript{121}

\textit{Sodbusting}

\textit{The Act}

The sodbusting provision ensures that no highly erodible land will be placed into production for the first time without active application of a conversion plan. High grain prices in the early 1970s brought outside investors to marginal lands, such as those in southeastern

\textsuperscript{120} 16 U.S.C. § 3822(c). A request for such a determination must be made prior to the beginning of activities that would convert the wetland. 52 Fed. Reg. 35,208 (Sept. 17, 1987).

\textsuperscript{121} In determining whether wetland has been converted, the following factors are to be considered: (1) where the altering activity is not clearly discernable, there must be comparison of other sites containing the same hydric soils in a natural condition to determine if the wetland has been converted; and (2) where woody hydrophytic vegetation has been removed, and wetland conditions have not returned as a result of abandonment, the area is to be considered converted wetland. Also,
Colorado. The investors would buy cheap and fragile rangeland, grow wheat to reap a quick profit and government subsidies, and then sell the abused land when the price for wheat dropped from overproduction.\textsuperscript{122} There are 345 million acres of highly erodible land in the United States of which 118 million are cropland and 5 million are wetlands with medium-to-high potential for conversion to agricultural use.\textsuperscript{123} Comments to the interim regulations estimate that 25 percent of all agricultural land is highly erodible and that 58 percent of all cropland erosion comes from that 25 percent of agricultural land.\textsuperscript{124} Under the sodbuster provision, a producer is ineligible for USDA program payments for agricultural commodities produced on highly erodible land unless there is application of a conservation plan.\textsuperscript{125}

potholes, playas, and other wetlands flooded or ponded for extended periods will not be considered converted based on activities occurring prior to December 23, 1985, and further conversions may result in loss of eligibility unless determined to have a minimal effect on wetland values. 52 Fed. Reg. at 35,207 (Sept. 17, 1987). If there was acquiescence in, approval of, or assistance to acts of the third party, the person applying for benefits is subject to the scheme or device restrictions and may lose eligibility. 52 Fed. Reg. 35,203 (Sept. 17, 1987).

\textsuperscript{122} See \textit{Sierra}, May/June 1987, at 27, col. 1.


\textsuperscript{124} 51 Fed. Reg. 23,497 (June 27, 1986).

\textsuperscript{125} The regulatory definitions of "conservation plan" and "conservation system" are more specific than the statutory definitions:

"Conservation system" means the part of a cropland resource management system applied to a field or group of fields that provides for cost effective and practical erosion reduction based upon the standards contained in the SCS field office technical guide. A conservation system may include a single practice or a combination of practices.

"Conservation plan" means the document containing the decisions of a person with respect to the location, land use, tillage systems, and conservation treatment measures and schedule which, if approved, must be or have been established on highly erodible cropland in order to control erosion on such land.


Under an interim rule:

A conservation plan, or a conservation system \ldots{} will be based upon the SCS field office technical guide, addressing considerations of economic and technical feasibility and other related factors.

52 Fed. Reg. 24,133 (June 29, 1987). The change in the definition of "conservation plan" and "conservation system" is significant. An important question, unanswered by statutory provisions, is what level of conservation would be required by the mandatory conservation plans. The interim rule would not require absolute environmental requirements with "economic and technical feasibility and other factors." \textit{Id}. From a purely environmental perspective, the interim rule provides a dangerous opportunity for SCS representatives to succumb to pressure from farmers to weaken
After December 23, 1985, any person producing an agricultural commodity on a field in which highly erodible land is "predominant" without an approved conservation plan is ineligible for USDA program payments. "Highly erodible land" falls within two possible statutory classifications. Highly erodible land is land that is within classes IV, VI, VII, or VIII under the SCS classification system, or that has an "excessive average annual rate of erosion in relation to the soil loss tolerance level" as established by the Secretary through application of the universal soil loss equation and the wind erosion equation.\(^{126}\)

Note two important statutory exemptions. First, the sodbuster provision does not apply to any land cultivated to produce an agricultural commodity or set-aside under a USDA program any year from 1981 to 1985. Such land, under the conservation compliance provision, must have actively applied to it a conservation plan approved by the local conservation district by January 1, 1990, or two years after the SCS has completed a soil survey for the farm, whichever is later. The second major exemption is that a producer on land subject to the sodbuster provision is still eligible for USDA program payments if farming the land under a conservation plan approved by the Secretary or local conservation district as in accordance with SCS technical standards. If a person produces an agricultural commodity on highly erodible land in reliance on an SCS determination that the land was not highly erodible, the person is eligible for benefits for commodities planted before a positive identification of the land as highly erodible by the SCS.\(^{127}\)

The Regulations

Under the final regulations, highly erodible land is land that has an erodibility index of 8 or more. The erodibility index is a numerical value that expresses the potential erodibility of the soil in relation to its soil loss tolerance value without consideration of applied conservation practices or management. Therefore, land that may actually be eroding at an acceptable rate but that has an inherent potential of


\(^{127}\) "Conservation districts" are districts formed under state or territorial law to develop and administer soil and water conservation programs. 16 U.S.C. §§ 3801(a)(2), 3812(a)(1), 3812(a)(4).
eroding eight times faster than it is rebuilding will be considered highly erodible land. No person who produces an agricultural commodity on a field in which highly erodible land is predominant will be eligible for USDA program benefits. Highly erodible land is “predominant” in a field if one third of the field is highly erodible or fifty or more acres of the field are highly erodible.\textsuperscript{128}

The regulations restate that no person is ineligible for benefits under the sodbuster provision if such production is in compliance with an approved conservation system. Also exempt is highly erodible land that was planted to an agricultural commodity in any year from 1981 through 1985 or that was set aside, diverted, or otherwise not cultivated in any such crop year under a program administered by the Secretary for any such crops to reduce production of an agricultural commodity. In response to a statutory amendment on April 24, 1987, persons who had, during each of the 1981 to 1985 crop years, alfalfa on highly erodible land in a crop rotation determined by the SCS to be adequate for protection of highly erodible lands shall have until June 1, 1988, to fully implement an approved conservation system. If the person has not fully implemented an approved conservation plan by June 1, 1988, the person shall be deemed to be ineligible for the 1988 crop year and for every year following that an agricultural commodity is produced without an approved conservation system. If alfalfa or other legumes were used in crop rotation with the land cropped any year from 1981 to 1985, the sodbuster provision does not apply. A person is not ineligible for program benefits as a result of production on highly erodible land without a conservation plan if there is a determination by the SCS that the land was not highly erodible when production began, except that the exemption does not apply to any agricultural commodity that was planted on any land after the SCS determines that such land is highly erodible land and the person is so notified.\textsuperscript{129}

Conservation Compliance

The most controversial conservation section to come out of the 1985 Farm Bill is the conservation compliance provision. All farmers


\textsuperscript{129} Id. at 35,203–35,204. For the first time under the final rule, persons are allowed to exchange certain crop acreage bases for crops that have a high-residue
must be actively applying soil conservation plans to their highly
erodible cropland as defined under the sodbuster provision by 1990
with the plan to be fully implemented by 1995, or else they will lose all
USDA program payments. It has been estimated that to meet this
requirement the SCS will need 3,000 additional technicians at a cost
of at least $95 million, and that one million farms will need to develop
conservation plans. Under the regulations, conservation com-
pliance is required for all highly erodible land as defined under the
sodbuster program. The conservation compliance provision, how-
ever, applies to land that was in agricultural production between 1981
and 1985 or set aside under a USDA program. Under the conservation
compliance provision, producers on such land have until January 1,
1990 (or two years after the SCS soil survey is completed), to be
actively applying a conservation plan that must be fully in effect by
January 1, 1995. A conservation plan is defined as a document con-
taining the decisions of a person with respect to the location, land
use, tillage systems, and conservation treatment measures as sched-
uled which, if approved, must be or have been established on highly
erodible cropland in order to control erosion on the land. A conserva-
tion system means the part of a cropland resource management sys-
tem applied to a field or group of fields that provides for cost
effectiveness and practical erosion reduction based on the standards
contained in the SCS Field Office Technical Guide.

base if the high-residue crop is recommended by the SCS as being essential for the
conservation plan and the SCS’s recommendation is approved by the ASCS. Id.

Sierra, May/June 1987, at 27, col. 2.

52 Fed. Reg. 35,201–35,205 (Sept. 17, 1987). A person is “actively applying” a plan if the plan “is being applied according to the schedule specified in the plan and
the applied practices are properly operated and maintained.” Id. at 35,206. Revisions
in the final regulation indicate that the soil survey that must be completed is that
which applies only to the cropland portion of the tract or farm, not the plan for the
entire farm. Id.

A new section dealing exclusively with conservation plans and systems encour-
ages persons who require SCS assistance in developing a plan or installing a system
to request assistance well in advance of deadline dates for compliance. 52 Fed. Reg.
35,206 (Sept. 17, 1987). Conservation districts approve or disapprove conservation
plans and systems as in conformance with the SCS Field Office Technical Guide. If
the conservation district fails to act without due cause within forty-five days of the
request for approval, the SCS will approve or disapprove the plan or system. Id.

Sections 12.9 and 12.10 are revised in the final rule to expand the ineligibility of
landlords for tenants’ actions. Under the final rule, landlords are ineligible for benefits
not only when noncompliance is required in the contract with a tenant, but also if the
landlord has acquiesced, approved, or assisted in the noncomplying activities of the
tenant. Id. at 35,205.
The Conservation Reserve Program

In June 1985, the Reagan Administration, in an apparent reversal of prior policy, decided to support the establishment of a 20-million-acre conservation reserve. Then Secretary of Agriculture John Block announced the Administration’s support of such a reserve despite its earlier opposition to the program as being too costly.\(^\text{132}\) The Administration’s support for a conservation reserve, although relatively limited, paved the way for the more far-reaching conservation provisions ultimately included in the FSA.\(^\text{133}\)

The conservation reserve serves several purposes. First, it reduces soil erosion on the most erosive land. By controlling erosion, the reserve also reduces the off-farm damage of sedimentation in water sources. To a limited extent, the program will also reduce production of some surplus agricultural commodities, such as cotton, sorghum, wheat, corn, soybeans, and small grains. Also, the reserve could improve water quality, increase forest resources, create wildlife and fish habitat, and provide additional needed income to farmers. It has been estimated that the reserve would prevent 750 million tons of erosion every year.

The conservation reserve program is designed to take highly erodible land out of agricultural production and put it into a reserve to control erosion directly.\(^\text{134}\) Under the program for the 1986 to 1990 crop years, not less than 40 million acres nor more than 45 million acres are to be put into the reserve. For 1986 the goal was 5 million acres, for 1987 the goal was 10 million acres, and for 1988 the goal was not to exceed 10 million acres.

Land placed in the reserve will be converted to permanent vegetative cover in accordance with an approved conservation

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Persons who wish to participate in the USDA programs are responsible for contacting the appropriate agency in the USDA well in advance of the intended participation date to assure that determinations regarding highly erodible land, wetland, and conservation plans or systems are scheduled in a timely manner. \(\text{Id.}\) at 35,202. The final rule applies to crops planted after September 17, 1987, and to all determinations made after or pending on that date. \(\text{Id.}\) at 35,193.

\(^{132}\) “Administration Backs Soil-Saving Reserve,” 5 American Farmland (July-Aug. 1985).


\(^{134}\) USDA, Selected Speeches and News Releases 16 (Sept. 3-10, 1987).
plan. The stated objectives of the program are to reduce wind and water erosion, protect the nation’s long-term capability to produce food and fiber, reduce sedimentation, improve water quality, create better fish and wildlife habitats, curb production of surplus agricultural commodities, and provide needed income support to farmers.

The conservation reserve corrects three failings of traditional USDA production adjustment programs. The traditional programs operated on a year-to-year basis, failed to remove the most erosive land from production, and often were not directed toward the most erosive crops. The reserve specifically improves upon the Soil Bank and similar concepts in the 1950s and 1960s, because it selectively removes only highly erodible land.

The conservation reserve program for highly erodible land runs from the 1986 crop year to the 1990 crop year. By October 1987, the reserve had already accepted 18.8 million acres, halfway to the 40-to-45-million-acre goal in two years. To put highly erodible land in the conservation reserve, the owner or operator of a farm or ranch must contractually agree (1) to apply a conservation plan removing the land from commodity production to a less intensive use; (2) to place the land in the reserve; (3) not to use the land for agricultural purposes except as permitted by the Secretary; (4) to establish vegetative cover on the land; (5) to forfeit the right to receive cost-

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137 In 1956, Congress had created a soil bank. Under this program, farmers received federal payments for placing previously harvested croplands in soil conservancy uses. The program was designed to reduce surpluses and soil erosion. In 1960, new participation in the program was unavailable, and the last contract expired in 1970. Nearly 30 million acres were placed in the bank from 1956 through 1960. Batie, note 1 supra, at 91.
138 In 1986, 68.5 million acres of farmland were idled, including 15.8 million acres placed in the Conservation Reserve. This number of idled acres was the most since 1983 and a 24 percent increase from the 45 million idled acres in 1985. BPI, Land Use Planning Report 359 (Nov. 16, 1987).
139 1 Soil Conservation in America, note 1 supra, at 99.
140 16 U.S.C. § 3831(a)(c). For the 1986 crop year, 5 to 45 million acres were to be placed in the reserve, for the 1986 to 1987 crop year, a total of not less than 15 and not more than 45 million acres, for the 1986 to 1988 crop years, a total of not less than 25 and not more than 45 million acres, for 1986 to 1989 crop years, a total of not less than 35 and not more than 45 million acres, and for the 1986 to 1990 crop years, not less than 40 and not more than 45 million acres. 16 U.S.C. § 3831(b). For the fiscal 1986 to 1989 years, the Secretary may reduce the number of acres required to be placed under contract by 25 percent if rental payments are likely to be significantly lower in the succeeding year. 16 U.S.C. § 3831(c).
SOIL EROSION

sharing and rental payments and to refund payments received with interest for violations of the terms of the contract warranting termination, as well as to refund payments if the transferee of the contract refuses to assume the contractual obligations; (6) not to conduct harvesting, grazing, or commercial use of forage except when permitted by the Secretary in a drought or similar emergency; (7) not to make commercial use of trees unless expressly permitted in the contract; (8) not to adopt any other practice that would defeat the purposes of the program; and (9) to comply with any additional requirements the Secretary might impose. In return, the owner or operator receives technical assistance, cost sharing for conservation measures required, and annual rental payments to compensate for the retirement of the land and permanent retirement of the cropland base and allotment history, not to exceed $50,000 a year for the duration of the contract. Cost-sharing payments are to be made “as soon as possible” after the obligation is incurred. Rental payments are to be made “as soon as practicable” after October 1 of each calendar year, or at any time prior to such date during the year that the obligation is incurred.

Under the conservation program, farmers are still free to charge access fees for fishing, camping, and hunting, although grazing and timber cutting are not permitted. Twenty states also have programs to compensate landowners for access to private land for recreation and wildlife management, an option that does not violate the terms of the reserve contract.

Contracts range from ten to fifteen years. Under a 1986 amendment, alfalfa and other multiyear grasses and legumes in a rotation practice approved by the Secretary are considered agricultural com-


141 16 U.S.C. §§ 3832(a)(9), 3832(10), 3833(1), 3833(3). To encourage participation in the Midwest, a one time bonus was offered by the USDA for farmers enrolling in the first 1987 sign-up. The USDA offered farmers $2 per bushel per acre for their base yield of corn retired to the reserve. The bonus payment was made in a generic PIK certificate at contract acceptance. USDA, Landowner, Jan. 26, 1987, at 1.


143 BPI, Land Use Planning Report 366 (Nov. 23, 1987). These states are Missouri, Colorado, Idaho, North Dakota, South Dakota, Illinois, Minnesota, Texas, New Hampshire, Louisiana, Indiana, Maryland, Montana, Oregon, Connecticut, Michigan, Wisconsin, Nebraska, California, and Wyoming. Id.
modifies. A conservation plan must include the conservation practices and measures to be applied and any commercial use that may be permitted, and may provide for permanent retirement of any existing cropland base and allotment history.\footnote{144}{16 U.S.C. §§ 3831(e), 3831(f), 3836.}

The FSA provided that, in addition to highly erodible land, the Secretary may include in the reserve program land that poses an off-farm environmental threat or land that poses a threat to productivity due to soil salinity. The Act generally limits the amount of land from any one county that can be put in the reserve to 25 percent. The Secretary has some discretion in this matter, and may exceed the 25 percent limit if this would not have an adverse effect on the local economy. “[T]o the extent practicable,” at least one eighth of the acres placed in the conservation reserve for the 1986–1990 crop years must be devoted to trees.\footnote{145}{16 U.S.C. §§ 3831(c)(2)(d), 3832.}

Regarding transfer of land that is subject to a conservation reserve contract, the Act authorizes the Secretary to make adjustments to the contract at the time of transfer, unless the transferee assumes all of the contract obligation. Also, the Secretary is allowed under the Act to include land on which shelterbelts, windbreaks, and similar strips are to be established.\footnote{146}{16 U.S.C. §§ 3832(a), 3834(2)(B). A “shelterbelt is a linear vegetative barrier of trees, shrubs, or other approved perennial vegetation.” 16 U.S.C. § 3801(13).}

The Act limited the amount of payment any one owner or operator could receive under a reserve contract to $50,000 annually. The mode of payment may be cash or in-kind commodities.

The cost of establishing the conservation measures called for in a conservation contract is to be shared equally by the government and the owner of the land. The Act directs the Secretary to pay 50 percent of the cost of such measures.\footnote{147}{16 U.S.C. §§ 3834(b), 3834(d), 3834(f). “In-kind commodities” are commodities normally produced on the land that is in the conservation reserve. Id. § 3801(a)(10).}

In determining the annual rental payment, the amount may be determined by submission of bids by the owner or operators or any other means set by the Secretary. In determining acceptance of contract offers, the Secretary may consider the extent of erosion and productivity of the land, establish different criteria for different areas of the United States, give priority to farmers subject to a high degree
of economic stress, and, where appropriate, accept offers that provide for establishing shelterbelts, windbreaks, or permanent vegetation to reduce sedimentation substantially. The Act also goes into detail on restrictions on ownership changes and payments upon death, disability, or succession. Annual rental payments are not subject to the $250,000 cap on certain USDA payments.\textsuperscript{148}

\textit{The Regulations}

To be eligible to participate in the conservation reserve program, a person must be an owner or operator of eligible cropland and, if an operator of eligible cropland, must have operated the cropland for the period beginning not less than three years prior to the close of the applicable sign up period (and must provide satisfactory evidence that he will be the operator of such cropland for the contract period). If an owner of eligible cropland, the person must have owned the cropland for not less than three years prior to the close of the applicable sign up period, unless it was acquired by will or succession as a result of the death of the previous owner, the new owner acquired such cropland prior to January 1, 1985, or it is determined that the new owner of such cropland did not acquire such cropland for the purpose of placing it in the reserve program.\textsuperscript{149}

To be eligible cropland, a field must have been annually planted or considered planted to produce an agricultural commodity other than orchards, vineyards, or ornamental plantings in two of the five crop years from 1981 through 1985, be physically able to be planted to produce an agricultural commodity other than those mentioned, and

\begin{footnotesize}
\begin{enumerate}
\item[148] 16 U.S.C. §§ 3834(c), 3834(e), 3834(f). The Secretary is required to determine who is entitled to payments if performance of the contract is completed by one other than the owner or operator under contract. \textit{Id.}

The Secretary will not enter into a contract if land ownership has changed in the preceding three years, unless new ownership was acquired by will or succession or before January 1, 1985, or the Secretary determines the land was not acquired to be placed in the reserve. If the landowner subject to a contract sells or transfers the land, the new owner-operator may either continue with the contract, enter into a new contract, or elect not to participate in the program. Upon agreement with the owner, the Secretary may modify or terminate any terms or conditions, or the entire contract. 16 U.S.C. § 3835.

For example, if the farmer’s total cropland is 200 acres, with a corn base of 100 acres, and the farmer puts fifty acres into the reserve, 25 percent of the cropland is retired, and the corn base is reduced 25 percent. Ordinarily, the retired base is returned to the farm after the contract expires. The farmer can designate which program crop bases to reduce. \textit{Landowner}, Feb. 10, 1986, at 7.

\end{enumerate}
\end{footnotesize}
consist predominantly of soils that meet the criteria for highly erodible land.150 Land is considered highly erodible if it (1) has an erosion rate during the crop years from 1981 to 1985 greater than that recommended by the Soil Conservation Service Field Office Technical Guide; (2) is classified by the Soil Conservation Service as being predominantly land capability classes II, III, IV, and V with an average annual erosion rate of two times or greater as announced by the Secretary; or (3) is classified by the SCS as being predominantly land capability classes VI, VII, or VIII.151 The field is considered highly erodible if two thirds or more of the land in such field meets the requirements for eligible cropland.152 Under the foregoing criteria, land identified as highly erodible land and having an erosion rate during the crop years from 1981 to 1985 greater than that recommended by the SCS must meet additional criteria. To be highly erodible, such land must have an erodibility index equal to or greater than eight for wind or water erosion.153

150 Id. Under an interim rule, a field suitable for a filter strip may be placed in the reserve even if it does not meet the eligibility criteria, if the participant agrees to grow permanent grass, forbs, shrubs, or trees on the field. A field is considered suitable for use as a filter strip if it:

[1] Meets the criteria of paragraph [a][1] of this section [§ 704.7];

[2] Is located adjacent to streams having perennial flow, other waterbodies of permanent nature (such as lakes and ponds, or seasonal streams, excluding such areas as gullies or sod waterways);

[3] Is capable, when permanent grass, forbs, shrubs, or trees are grown on the field, of substantially reducing sediment that otherwise would be delivered to the adjacent stream or other waterbodies; and

[4] Is 1.0 to 1.5 chain lengths (66 to 99 feet) in width: Provided, that such width may be exceeded to the extent necessary to meet SCS Field Office Technical Guide criteria.


152 Id. Under an interim rule, land on which trees are to be planted is eligible even if only one third or more of the land meets the eligibility criteria. 53 Fed. Reg. 734 (Jan. 12, 1988).

153 52 Fed. Reg. 4271 (Feb. 11, 1987). For CRP contracts entered into under sign ups held after March 1987, erodibility eligibility may be based on the criteria that applied to contracts for the 1987 crop year (see 51 Fed. Reg. 8,780 (March 13, 1986)) or on the criteria under the February 11, 1987 final rule (52 Fed. Reg. 27,536 (July 22, 1987)).

Land under contract with the Great Plains Conservation Program, Agricultural Conservation Program, Forestry Incentives Program, Rural Clean Water Program, or similar programs may still be eligible for the reserve if the contract requirements are consistent with the requirements of the reserve. 52 Fed. Reg. 4,271 (Feb. 11, 1987).
To enter into the conservation reserve, the applicant must submit a bid to the local county ASCS office during the announced sign up period for the applicable crop year. The offer is irrevocable for a period of thirty days subsequent to the close of the sign up period. The CCC then may reject or accept the offer. If the offer is accepted, the applicant will enter into a Conservation Reserve Program (CRP) contract with the CCC. 154

The obligations of the owner-operator under the regulations are as follows: (1) to enter into the contract, (2) to implement the required conservation measures, (3) to reduce the base acreage allotments and quotas by the amount of land in the reserve unless otherwise determined by the Secretary, (4) to produce no agricultural commodity on the land, (5) to engage in no grazing, harvesting, or any commercial use of the property, (6) to plant vegetative cover on it, (7) to control noxious weeds, and (8) not to do anything else that would otherwise defeat the purpose of placing the land in the program. In return, the owner-operator gets an annual rental payment of not more than $50,000 a year. These annual rental payments are not included in any other applicable payment limitations under USDA programs. The owner-operator also gets cost sharing for the conservation measure of not more than 50 percent of the cost. Technical assistance can be provided and the owner-operator is allowed to install conservation measures to be in compliance with conservation compliance requirements on expiration of the contract. The duration of the contract is ten years. If the owner or operator withdraws the bid or violates the terms of the program or contract, a penalty is assessed of payment of all annual rental payments received plus interest and liquidated damages as set forth in the contract. 155

Once the reserve contracts expire,

154 52 Fed. Reg. 4,272 (Feb. 11, 1987). The ASCS ranks bids within substate bid pools, and then the Secretary establishes a maximum acceptable bid for each pool. SCS, Soil and Water Conservation News, Sept. 1986, at 4. The CCC may reject offers to place land into the CPR from (1) applicants who have previously offered at lower rental rates and then revoked the earlier offer, (2) applicants whose previous CRP contracts have rental payments due in excess of $50,000 and (3) those who have violated the terms or conditions of earlier CRP contracts. 52 Fed. Reg. 4,272 (Feb. 11, 1987).

If an applicant revokes an offer prior to thirty days before the close of the sign up period, the CCC may assess liquidated damages as provided in the contract. The CCC can waive payment of liquidated damages if it determines that assessment is not in the best interest of the CRP. Id.

155 Id. at 4,272–4,274. The participant may also not allow the harvesting of Christmas trees, nursery stock, or any other trees planted during the contract period. Also those who share in the risk of producing crops on the land under the CRP,
farmers may return the land to production; however, most of the land will then be subject to the sodbuster requirements of the Act.

The first sign up period for the reserve was in March 1986 and resulted in only 838,000 acres being enrolled in the reserve. Farmers had offered 4.8 million acres, but most bids were too high, in all likelihood from lack of information and past experience. After the second sign up in May of 1986, however, 3.8 million acres total were enrolled in the reserve. The second sign up attracted 22,800 farmers, and the land enrolled had an average price of $44.00 per acre per year. Thus, the USDA fell short of its goal to enroll 5 million acres in the reserve for the 1986 crop year. In large part, farmers were still

including tenants and sharecroppers, shall receive a fair and equitable portion of payments made to the landowner.

The annual rental payments are divided among participants as stated in the contract. Certain individuals may be considered separately for payment limitation purposes as per 7 C.F.R. pt. 795. Participants entitled to cash payments may assign their rights to receive those payments and may also use the money to secure or pay preexisting debts. *Id.*

The requirements of this program will be met if performance was done in good-faith reliance upon the action or advice of the conservation district, SCS ASC committees, STC, or county ASC committees (COC) representatives. Where good-faith reliance related to the plan or an erodibility determination, a request for consideration must be filed with the SCS and the COC. Other program requirement performance requests need to be made to the COC. *Id.* at 4,274.

During the ten-year contract period, a new owner-operator may become a participant to the existing contract or may enter into a new contract. The new owner-operator assuming the existing contract will incur its benefits as well as its obligations. *Id.*

Under an immediately effective interim rule, however, liquidated damages are expanded:

The program regulations, as implemented in the final rule, required a full refund to CCC of all payments received under the CRP contract in cases of contract non-compliance or contract termination and further specified that, if no payment had been received under the CRP contract, liquidated damages would be due in an amount specified in the CRP contract. CRP contracts provide for assessment of liquidated damages at a rate of 25 percent of the annual rental payment provided for in the contract.

It has been determined that the requirement for refund of payments received is not adequate in some circumstances to compensate for the adverse effects on the program caused by the participant's failure to comply with the CRP contract. Accordingly, this rule amends § 704.22 to provide specifically for the assessment of liquidated damages as provided for in the CRP contract, in addition to a full refund of all payments received plus interest, in cases of contract non-compliance or contract termination, regardless of whether any payments have been received under the CRP contract.


cautious about the new program. Many farmers had already decided on a cropping plan, and, of course, the program was competing against crop deficiency payments. In the first two sign ups, the strongest response to the program was in farm states in the Midwest, South, and parts of the West. Colorado had the most land enrolled (620,611 acres).\(^{157}\)

In the August 1986 sign up, more than 45,000 bids were submitted for almost 6.5 million acres. Accepted bids ranged from $90 per acre with an average accepted bid of $46.94 per acre. With the addition of more than 5 million acres, the total land enrolled was brought to 9 million acres.\(^{158}\) A poll conducted by the AFT concluded that most farmers who did not apply in erosion-prone areas thought their land was not eligible, and more than two thirds said they would be more likely to apply if haying and grazing were permitted.\(^{159}\)

By 1987, surprised farmers began to feel the effects of the sodbuster and swambuster provisions. Farmers who innocently squared off pastures for production found themselves denied USDA program payments on all their land.\(^{160}\) In February, 10.6 million more acres were accepted into the reserve: The bids were as high as $90 per acre, with an average bid of $51.17 an acre.\(^{161}\) The fifth sign up period in July brought in 5.28 million additional acres, bringing the total acreage to 22.9 million acres in the first two years of the program. Accepted bids were up to $90 an acre, with an average of $47.90.\(^{162}\)


\(^{160}\) USDA, *Landowner*, Feb. 9, 1987. However, in 1988 one of the original proponents of the swambuster bill asserted before the Senate Agriculture Appropriations Subcommittee that the provision was being “circumvented and in many cases wholly ignored in the north central U.S.” BPI, *Land Use Planning Report* 47 (Feb. 8, 1988 (remarks of Sen. Robert Kasten, Jr. (R-Wis.)).


\(^{162}\) BPI, *Land Use Planning Report* at 279 (Aug. 31, 1987). Under the provisions of the Act, the Secretary is required to establish an appeals procedure for any person adversely affected by any of the conservation reserve, conservation compliance, sodbuster, or swambuster provisions. 16 U.S.C. § 3843(a) (West Supp. 1987). The ineligibility of a tenant or sharecropper will not cause the landlord to be ineligible for commodities on lands not operated by the tenant or sharecropper. *Id.* § 3843(b). The Secretary must provide adequate protection for tenants and sharecroppers, including a provision for sharing of payments received under the conservation reserve program. *Id.* § 3843(c).
Conservation Easements With the Farmers Home Administration

The Farmers Home Administration (FmHA) is authorized under Section 1318 of the Act¹⁶³ to cancel its borrowers' debts secured by farmland in proportion to the value of conservation easements received on the farmland.¹⁶⁴ Eligible borrowers include borrowers who own land that secures FmHA farmer program loans closed prior to December 23, 1985, and who are unable to service their debts without the easements.¹⁶⁵

Conservation easements may be placed on wetlands, highly erodible lands, or uplands to preserve wildlife habitats, scenic areas, or aquifer recharge areas, historic or cultural areas that are adjacent to certain nationally protected areas, areas that the SCS determines contain soil generally not suited for cultivation such as classes V, VI, VII or VIII, or floodplains. Land other than wetland must also have been row cropped each year from 1983 to December 23, 1985. Rotation in hay and participation in set-aside programs may be used to qualify. Land proposed for the easement may also be in the conservation reserve if the requirements of both programs can be met.¹⁶⁶

A conservation easement must be for at least fifty years. The easement will only be accepted by the FmHA if the easement with other feasible servicing options will allow the borrower to develop a feasible Farm and Home Plan. The borrower may not engage in any cultivating that will defeat the conservation objectives of the easement. The easement must be recorded in compliance with applicable state law. If the borrower violates any terms or conditions of the easement, the borrower will be responsible for all costs of enforcement, including attorney's fees, costs of any litigation, and the cost of

¹⁶⁶ Id. Nationally protected areas include areas within or adjacent to national parks, wildlife refuges, forests, BLM lands, wild and scenic rivers, wilderness areas, nationally designated trails, or other lands designated for flood control or recreational purposes.
Row cropping is the annual production of an agricultural commodity by use of a rotational system of tilling of the land.
repair or restoration of the land to a condition compatible with the easement's conservation purpose. Successors in interest are similarly responsible for violating the terms and conditions of an easement.\textsuperscript{167}

**The Future of the Conservation Provisions**

The continued success of the Act's conservation provisions is far from certain. Funding for the conservation reserve is periodically threatened by demands for reform in federal spending. In any event, the program will expire in 1990 without congressional authorization. The sodbuster, swampbuster, and conservation compliance provisions face political resistance from farmers unaccustomed to this new form of governmental interference. In the short term, arguments for continuance of these conservation programs have been largely impressionistic. A recent study of the conservation reserve by the AFT, however, has added empirical data to assertions of the program's effectiveness. The study projects that the federal government will save millions of dollars and farm income will increase from the reserve's reduction of subsidized crop production. The report estimated a $578 million net reduction in federal budget costs. The reserve program will cost $8.1 billion, less than the $8.7 billion in farm payments for which the enrolled land would otherwise have been eligible. The report projects that, as production drops, increased commodity prices will result in $2.3 billion more in income for farmers by 1990. According to the report, an incidental benefit of the program will be rising farmland values in areas in which the supply of farmland is limited from enrollment in the reserve.\textsuperscript{168} The SCS itself estimated that 209 million tons of soil annually were saved on the initial 8.2 million acres of land enrolled in the reserve in 1986, and the chief of the SCS has stated that the program is "exceeding our expectation."\textsuperscript{169}

\textsuperscript{167} Id. at 1764–1765.

\textsuperscript{168} American Farmland Trust, Newsletter, Aug. 1987.

\textsuperscript{169} SCS, Soil and Water Conservation News, July 1987, at 10. The impact of the program has exceeded the original expectations for the reserve. For example, the USDA itself projected only limited benefits from the reserve. The agency estimated that of the 2.3 million acres of highly erodible land converted between 1979 and 1981 approximately 1.9 million acres were planted with program crops in 1982. Those 1.9 million acres equal only 17 percent of the newly converted cropland and less than one half of one percent of the total U.S. cropland. If owners of this land participated in farm programs, the benefits would have made a significant economic difference for only 384,000 acres. Farmline, Aug. 1985, at 7. It is not surprising, then, that aspirations for the reserve were relatively limited.
The Iowa Experiment With Controls

Only a handful of states have enforcement mechanisms and penalties for failure to comply with soil conservation measures. Iowa has the highest erosion rate in terms of tonnage. For every ton of corn raised by a farmer in Iowa in 1977, five tons of soil were eroded. It has been estimated that $285.6 million would be necessary annually to "adequately treat" Iowa's erosion problem. As a result, in 1971 Iowa passed a statute that made soil erosion control mandatory, and in 1973 added state cost sharing for soil conservation practices.

Under the Act, landowners have an affirmative duty to use soil conservation practices. Upon a complaint by a neighboring landowner, the soil conservation district officials may inspect the land to determine what the soil loss rate is. The soil conservation district will have set an acceptable soil loss limit for the land. Landowners or operators must have conservation measures to control soil erosion, but do not have to do so unless there is cost sharing with the soil conservation district. There is 75 percent cost sharing for mandatory soil erosion measures imposed by the district and 50 percent for voluntarily accepted soil conservation measures.

Under the Act as originally passed, a tolerance was first set, then a complaint by a neighboring landowner might be filed, followed by an inspection by the district. Soil loss limits were enforceable through an administrative order, with district court enforcement of the order and ultimately contempt proceedings for failure to follow the district court's enforcement order. Thus, the district could only enforce soil loss limits upon complaint by a neighboring landowner.

170 Clark, note 15 supra, at 3.
171 Batie, note 1 supra, at 105.

Implementation of the conservation measures required by an administrative order must commence within six months of notice of the order and be completed within one year notice. The cost of the measures may not exceed $10.00 per calendar year for each acre of land belonging to the owner located in the "county containing the land on which the required practice is being established or in counties contiguous thereto."

Id.

175 Note, note 173 supra, at 1039.
In Woodbury County Soil Conservation District v. Ortner, the failings of the original mandatory control system were demonstrated. In Woodbury County, a complaint had been filed by a neighboring landowner against another farmer based on the soil erosion that was occurring on the defendant’s land. The complaint was settled by private agreement among the parties, a procedure that did not appear to be permitted under the statute at the time. The next year, another complaint was filed alleging similar damage. At this point, the district did investigate the property and found that the soil loss was in excess of the established statutory limits. An administrative order was issued. The order, as required by the statute, offered the defendants two alternatives for controlling the soil loss. When there was no compliance with the order, a district court proceeding was begun. The defendants claimed that the statute was an unreasonable burden and a taking under the Fourteenth Amendment to the Constitution and comparable provisions of Iowa’s constitution. The court concluded that there was no taking and that there was no unreasonable burden as a result of the statute. The defendants still had use of their property, and three fourths of the cost of the mandatory conservation measures was paid by the district.

Even absent the cost-sharing provision, there probably would be no taking of property under the statute insofar as the landowner still retains several uses of the property. In important dicta, the court said that the soil district, on its own, could enforce the requirements of the Act without first obtaining a neighbor’s complaint.

In response to Woodbury County, the Iowa statute was amended to provide for enforcement of soil loss tolerances by the district on its own authority. Under the amendments, the soil conservation district officials may inspect property that they have reasonable grounds to suspect is eroding beyond the statutory limits. If they find that the loss is more than twice the acceptable limit, they send notice to the owner or operator. The officials may petition the court for an order to comply with the conservation plan if notice is sent to an owner or operator for three consecutive years.

There is much delay in the implementation of the enforcement provisions. The commissioners of the district may not petition the court for an order until January 1, 1985, or five years from completion

176 279 N.W.2d 276 (Iowa 1979).
177 Id.
178 279 N.W.2d at 276.
of the conservation folder for the offending farm, whichever date is later. The offending landowner also has five years from the date of the order to comply, and three years of consecutive notice must be sent before the official can petition the court for an order. However, officials may also inspect and petition the court for an order if the practice mandated by cost sharing is not being maintained.  

Few complaints have been filed under the statute, and, as of 1983, no complaints had been filed by the districts on their own. The districts may wish to remain popular with their farmer constituency and otherwise have enough demands on funding to have other priorities. Nevertheless, the advantage of giving the soil conservation district itself the authority to enforce the requirement is that the district may itself target particular trouble areas without having to wait for a neighbor to complain. Although there is potential for abuse in collusive complaints against neighbors in order to get the benefit of 75 percent cost sharing, it appears this has not occurred.  

**Private Initiatives**

Increasingly, landlords and owners are requiring conservation measures in leases and installment land contracts. In *Moser v. Thorp Sales Corporation,* an action to quiet title was sought by the Mosers, who had purchased the farm at an auction. The sellers refused to perform. The bank foreclosed on an existing mortgage that the Schmidts redeemed, and they again held title subject to Moser’s interest. The Schmidts then sold to Woods, who took possession but who was a good-faith purchaser. The Mosers then brought a lawsuit seeking to quiet title.

The issue involving soil erosion was whether the Mosers were entitled to recover for damages to the land and buildings for the time the Schmidts were in possession. The damages were caused by the planting of row crops, particularly corn, in rows on steep hills and the use of a moldboard plow. Previously, the Mosers had planted the corn in contours with terracing and minimum tillage. The resulting

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179 Iowa Code § 469.A.61.
180 Batie, note 1 supra, at 105.
181 Note, note 173 supra, at 1049, 1050.
183 312 N.W.2d at 882.
damage doubled the erosion, with a soil loss of sixty-three tons per acre per year that would take fifty years to remedy.

Although the majority found no liability or damages, the dissent disagreed. The basis for liability, given the unusual nature of the case, was trespass (although the court also mentioned implied covenants might be violated). The difficulty with damages in the case was that the usual remedy for trespass was the difference in value between that of the property and the cost or reparation. The cost of reparation could not be estimated, and therefore it seemed the difference in value had to be utilized for the measure of damages. However, due to inflation, the land value had actually increased during the time the Woods were in possession. The dissent then suggested that the measure of damages should be the difference between the value of the land without the damage and the value of the land with the damage.\textsuperscript{184}

The Moser case is just one example of the increasing use of measures to control soil erosion in installment land contracts or leases. As this measure is increasingly used, it seems inevitable that tougher leases will be drafted and more cases will arise wherein possessors have abused the land and failed to control soil erosion.\textsuperscript{185}

\textsuperscript{184} Id.

\textsuperscript{185} For example, in Buras v. Shell Oil Co., 666 F. Supp. 919 (S.D. Miss. 1987), an oil company had a written easement grant to construct a pipeline across the plaintiff's land. \textit{Id.} at 921. The plaintiffs alleged that the oil company had negligently constructed the pipeline, resulting in excessive erosion damage to the farmland on which it was constructed. \textit{Id.} Because of an express provision in the easement grant that the company would bury the pipeline "so it will not interfere with the ordinary cultivation of the land," the court held that the company was liable for damage to crops, fences, buildings, and timber, without regard to negligence. \textit{Id.} at 92. The court stated that under this provision the company was liable for erosion and destruction of the topsoil. Damages for destruction of topsoil on the right-of-way were recoverable only if the destruction was unnecessary for construction or amounted to negligence. Destruction of topsoil on adjacent land was compensable without a showing of negligence. Damage for erosion and off the right-of-way were held to be recoverable without a showing of negligence as well. \textit{Id.} at 923. The court found the company liable for damages caused by erosion on the right-of-way and adjacent land. \textit{Id.} According to the district court, where damage is temporary and subject to restriction, damages are based on the costs of restoration. \textit{Id.} The court required the company to pay the costs of restoring the eroded areas "substantially" to their former condition "and in some manner preventing the recurrence of the erosion." \textit{Id.} The plaintiff's distribution of rye grass seed, fertilizer, and lime to halt erosion was found to be a proper effort to prevent additional erosion and was a reasonable effort to mitigate damages. \textit{Id.} at 924. In any event, the court stated that a damages award will not be reduced by damages the "defendant could have avoided as easily as the plaintiff." \textit{Id.} The oil company was also held liable for damages for one cow that fell into the erosion gullies and had to be shot, because the company was negligent in failing to take remedial steps to correct the erosion. \textit{Id.} at 925.
Neighbors may sue neighbors in nuisance for damage caused by excessive erosion. Absent off-farm damage, however, litigation poses no hurdle to abuse of the soil. The public trust has yet to be extended to protect the soil from abuse by the landowner absent damage to others' property or health.

**Conclusion**

The current renaissance in soil conservation is somewhat puzzling. Agricultural surpluses, reform in federal spending, and economic efficiency arguments seem to undercut the movement for strengthened soil protection. Soil conservation is perhaps best explained by extension of environmental concern to one of the most valuable natural resources, the soil. It remains to be seen if that concern will last or be a passing trend. The first important test of that concern will be in 1990, with reauthorization of the conservation reserve before Congress. Until then, much of the impetus for soil conservation may come from private lawsuits to enforce contractual covenants or to protect property from nuisances.