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Cover Page Footnote

The authors wish to acknowledge Professor Judith Wegner, Dean, University of North Carolina, School of Law, for her review and comments of earlier drafts.

RETHINKING LOCAL AND STATE AGRICULTURAL LAND USE AND NATURAL RESOURCE POLICIES: COORDINATING PROGRAMS TO ADDRESS THE INTERDEPENDENCY AND COMBINED LOSSES OF FARMS, SOILS, AND FARMLAND

JAMES E. HOLLOWAY* AND DONALD C. GUY**

I. Introduction

Soil erosion and farmland conversion are robbing the United States of its economic and natural resources by slowly reducing farmland productivity and by gradually causing major damage off the farm. Productive farmland and agricultural land are steadily

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With the doubled pressures of soil erosion and land use conversion threatening the productivity of the land as perhaps never before, it is time for a new public debate to review the prevailing land ethic. The symptoms of land abuse indicate that our current ethic is in drastic need of improvement.

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^{1.} See R. Coughlin, State and Local Regulation for Reducing Agricultural Erosion Am. Plan. Ass'n Report No. 386, 1-2 (1984); Agricultural Productivity and Environmental Quality: Joint Hearings Before the Subcomm. on Natural Resources and Environment of the House Comm. on Science and Technology and the Subcomm. on Conservation and Credit of the House Comm. on Agriculture, 96th Cong., 1st Sess. 285-89 (1979) [hereinafter Agricultural Productivity and Environmental Quality] (report by Neil Sampson, Executive Vice President, National Association of Conservation Districts). Mr. Sampson's statement of the agricultural land use problem remains most appropriate:

Id. See also Arts & Church, Soil Erosion—The Next Crisis?, 1982 Wis. L. Rev. 535, 539-40 (discussing Wisconsin's soil and water conservation program); NATIONAL ASS'N. CONSERVATION DISTS., NATIONAL AGRICULTURAL LANDS STUDY—SOIL DEGRADATION: EFFECTS ON AGRICULTURAL PRODUCTIVITY 8-9 (1980) [hereinafter NALS—Soil Degradation] (discussing the nature of soil erosion and its impact on economic and natural resources).

^{2.} Based upon data collected in 1982, non-federal agricultural land or farmland included approximately 1.5 billion acres: 421 million acres of cropland, 406 million acres of rangeland, 394 million acres of forestland, and 133 million acres of pastureland. U.S.D.A., The Second RCA Appraisal: Soil, Water, and Related Resources on Nonfederal Land in the United States—Analysis of Conditions and Trends 2 (1989) [hereinafter Second

being idled or converted to non-agricultural uses.3 Few state and lo-

RCA APPRAISAL].

The most productive land is prime farmland. Prime farmland is composed of the most productive soils, and these soils can be cultivated with little or no damage, and crops can be produced at least cost. Moreover, the properties of these soils make them most suitable for non-agricultural uses. See id. at 20-21.

In 1982, only 342 million acres of prime farmland remained for agricultural uses, comprising approximately 23% of America's farmland. Much of this prime farmland is situated in the Corn Belt, Northern Plains, and Southern Plains. *Id*.

Similar data on agricultural land and its uses were collected in 1977, and the data and analyses were reported in 1981 in the following reports: U.S.D.A., 1980 Appraisal Part I—Soil, Water, and Related Resources in the United States: Status, Condition, and Trends 47-49 (1981) [hereinafter 1980 Appraisal—Part I]; U.S.D.A., 1980 Appraisal Part II—Soil, Water and Related Resources in the United States: Analysis of Resource Trends 49-54 (1981) [hereinafter 1980 Appraisal—Part II].

Although the data collected in 1977 and 1982 are similar, the analyses and trends reported on the data resulted in different projections. The projections differ because assumptions were changed and new analytical techniques and methodologies were used to evaluate and analyze the data in the 1982, or second, appraisal. Second RCA Appraisal, supra, at 20, 153-56.

The Soil and Water Resources Conservation Act of 1977, 16 U.S.C. §§ 2001-2009 (1988) [hereinafter SWRCA], authorizes the Secretary of Agriculture to appraise our soil, water, and related resources and requires the Secretary to update the resource appraisal at specified intervals.

3. Approximately 1.5 million acres of agricultural land is converted to non-agricultural uses each year. The U.S.D.A. projects that the cropland base will be reduced by 12% between 1982 and 2030 based on projected resource trends and conditions. Second RCA Appraisal, supra note 2, at 4. Conversion and idling of farmland are not simple processes. Conversion can take place over a period of 10-15 years. National Ass'n. Conservation Dists., National Agricultural Lands Study—The Protection of Farmland 11 (1980) [hereinafter NALS—Protection of Farmland].

Actual conversion of farmland is not the only indicator of urbanization. Other indicators include rural land speculation, economic expectation about conversion, absentee ownership, and shorter leases. G. Gustafson & N. Bills, U.S. Cropland, Urbanization and Landownership Patterns 1 (U.S. Dep't of Agric., Econ. Rep. No. 520, 1984); NALS—Protection of Farmland, supra, at 11.

There are 142 million acres of non-agricultural land that includes urban areas, mined land, highways, shopping centers, factories, residencies, man-made lakes, recreation areas, and rural lands. Second RCA Appraisal, supra note 2, at 2; 1980 Appraisal—Part I, supra note 2, at 49.

Conversion of cropland to non-agricultural uses affects the amount and quality of land available for food and fiber production. The loss of high quality cropland will force production onto other land that may be less productive. Second RCA Appraisal, supra note 2, at 4.

All commentators do not agree with the finding of the National Agricultural Land Study (NALS). Some argue that the NALS findings on the conversion of farmland are inaccurate and that the NALS data is flawed. See S. Redfield, infra note 57, at 3, 53; Second RCA Appraisal, supra note 2, at 20. See also Fischel, The Urbanization of Agricultural Land: A Review of the National Agricultural Land Study, 58 Land Econ. 236 (1982); Raup, An Agricultural Critique of the National Agricultural Land Study, 58 Land Econ. 260 (1982).

Notwithstanding these differences, there is one common concern in many circles: Farmland conversion is currently a land use problem that threatens rural ways of life. See Second RCA Appraisal, supra note 2, at 24. Land use planners, conservationists, and policy-makers should not ignore local and state losses of farmland, and the socioeconomic impact these losses could have on farm and rural communities. The failure of state and local governments

cal governments have implemented effective farmland preservation programs to halt or slow the irreversible loss or conversion of productive agricultural land. Moreover, much of the remaining productive agricultural land is either erodible or eroding. When soil erosion causes excessive soil losses, farmland loses its productivity and agricultural runoff reduces water quality. Similarly, few states and local governments have implemented effective soil conservation programs to control or prevent soil erosion. Much of the erodible land is still in use or production as cropland or as other agricultural land. In some regions, erodible land in use or productions is a significant factor in sustaining the economic base and social stability of many rural and farm communities. Existing agricultural land use and resource policies and programs, however, do not effectively address the interdependency of farmland, farming, and soils, their combined losses, and their impact on the community, environment, and agribusiness.

The goal of soil conservation is to sustain long term productivity of agricultural land. Farmland may receive adequate conservation treatments yet still be subject to conversion to non-agricultural use. The goal of farmland preservation is to prevent farmland from being forced into conversion to non-agricultural use. Yet existing farmland preservation programs generally do not require sufficiently adequate soil conservation treatments, thus allowing preserved land to become unsuitable for agricultural use due to soil erosion. This article discusses the nature of land use problems and the means for better coordinating and integrating farmland preservation and soil conservation policies and programs within the existing regulatory scheme.

Federal and state policies and programs that have contributed significantly to the agricultural land use problem are also considered. Section II discusses the interdependency of farming, farmland, and soils and the combined losses of land, soil, and water resources under existing policies and programs. Section III reviews the objectives

to act prudently begs for federal intervention, especially after substantial losses and damages on and off the farm. See infra note 153. The urgency to act is greater, and losses are most significant, when farmland conversion and soil erosion are simultaneously occurring in the same areas of a state, region, or county. The end product of soil erosion is the conversion of the land to a lesser use. Second RCA Appraisal, supra note 2, at 20, 27.

^{4.} See infra note 7.

^{5.} In this article erodible land in use or production refers to agricultural land that is susceptible to erosion and conversion.

^{6.} Erodible land in use or production has degradable natural properties, but remains a valuable economic resource. Such land is fragile and its loss threatens communities' economic, social, and environmental health, safety, and welfare. Second RCA Appraisal, supra note 2, at 20. See infra notes 72-85 and accompanying text.

of farmland preservation and soil conservation policies. Section IV discusses the common factors that connect farmland preservation and soil conservation policies and programs when they are applied to control the use and treatment of agricultural land. Section V discusses actual compliance in farmland preservation and soil conservation programs when these programs are implemented on-site to prevent and control conversion and soil erosion. The seminal argument supported by these sections is that existing soil conservation and farmland preservation programs are generally ineffective.

Many social and economic factors must be considered before agricultural land use policies are changed. Section VI explains how national policies and local property interests influence agricultural land use policies. Section VII outlines how coordination would advance existing policies and what is required for coordination. Section VIII discusses the most significant legal issues that would be encountered if land use programs were coordinated with forceful land use obligations that impose requirements upon owners to conserve soils and preserve farmland and farming. Section IX outlines the most important economic, social, and political conditions that must be considered in changing land use obligations, programs, and goals. The crux of the argument in sections VI through IX is that an effective regulatory scheme must concurrently protect farming, farmland, and soils while maintaining water quality and the farm way of life.

Section X discusses changes in the land use obligations, regulatory schemes, and mechanisms that would more effectively further land use policies and objectives. In this section, we urge state and local governments to establish more forceful land use obligations and to design more coordinated regulatory schemes and multipurpose land use mechanisms that implement land use policies. The article ultimately concludes that agricultural land use problems demand that production, farmland preservation, and soil conservation programs not remain isolated and ineffective.

II. THE LOSS OF PRODUCTIVITY AND SOIL AND WATER RESOURCES

Federal farm production policies provide for stable farm income and product markets while state farmland preservation policies urge the preservation of farmland. In contrast, federal and state soil conservation policies promote the conservation of soil and water resources. In furtherance of these policies, various land use goals and objectives are set, and numerous land use regulatory schemes are in place at all levels of government. Despite the presence of these numerous regulations, farmland conversion and soil erosion are still occurring at alarming rates. Production, conservation, and preserva-

tion policies are inadequately protecting soil, farmland, and farming.

A. The Interdependency of Economic Use, Production, and Natural Resources

Existing land use policies and programs fail to recognize the interdependency of natural and economic resources. Local, state, and federal governments are slow to recognize that less forceful obligations and inconsistent land use goals that are implemented through uncoordinated regulatory programs do not protect farmland, farming, and soils. Many local and state government land use programs loosely connect farmland conversion and soil erosion programs that target erodible agricultural land. The federal government has only recently required cross-compliance between farm production and soil conservation programs. Inadequate conservation treatments and unsuitable uses, however, still degrade agricultural land as well as reduce productivity.7 Since farmland conversion and soil erosion affect primarily local interests, the federal government should urge states to develop more consistent agricultural land use objectives and priorities, while the federal government continues to provide technical assistance and financial support. State objectives, however, must be consistent with federal objectives in order to reduce soil losses and to improve water quality under the National Program for Soil and Water Conservation: 1988-97 Update (NP-U).8 The federal govern-

Farmland preservation and soil and water conservation objectives are not always incompati-

^{7.} Soil erosion degrades the land, water, and air. Soil erosion is a threat to the nation's water quality. It is a threat even where erosion rates do not threaten productivity. Soil erosion washes sediment into rivers and streams. Sediment, salts, pesticides, animal waste, and chemicals for agricultural operations are a major non-point source of pollution. See Second RCA Appraisal, supra note 2, at 101-05; 1980 Appraisal—Part II, supra note 2, at 77-92.

[&]quot;Gradually, but over wide areas, erosion can diminish the fertility of the soil. The loss of productivity [and water quality] may become as complete and permanent as a conversion to urban and built-up uses" NALS—Soil Degradation, supra note 1, at 8-9. If erosion is not abated or controlled, permanent damage could result to the topsoil and subsoil. The topsoil and subsoil contain those properties and particles of the soil that determine the water holding capacity, nutrient retention capacity, natural fertility, and physical responsiveness to mechanical tillage. Id. at 11. Erosion is a destructive natural and man-induced process that creates an irreversible loss of productive soil resources. Id. at 8-9.

^{8.} U.S.D.A., NATIONAL PROGRAM FOR SOIL AND WATER CONSERVATION: THE 1988-97 UPDATE (1989) [hereinafter NP—U]. The NP—U lists the national soil and water conservation objectives and priorities for 1988-1997. *Id.* at 7. The NP—U updates earlier objectives and priorities that were established by the Secretary of Agriculture. These earlier objectives and priorities were for 1982-1987 and were listed in the 1982 national program. U.S.D.A., A NATIONAL PROGRAM FOR SOIL AND WATER CONSERVATION: 1982 FINAL PROGRAM AND ENVIRONMENTAL IMPACT STATEMENT (1982) [hereinafter NATIONAL PROGRAM—1982].

ment should also urge states to impose forceful obligations because not all farmers can participate in the Conservation Reserve Program (CRP) or are subject to conservation compliance under Title XII of the Food Security Act of 1985 (FSA). Federal policies and support are needed to establish more forceful obligations and more consistent state and local objectives for farming, soils, and farmland.

B. Existing Policies and Programs Contribute to Environmental Harm and Farmland Losses

Existing soil conservation policies and programs allow inadequate conservation treatment and unsuitable use of erodible agricultural land. Even though the FSA establishes greater consistency between federal farm production and soil conservation policies, inadequate conservation treatments or unsuitable uses still cause excessive soil losses on erodible agricultural land. Soil losses gradually limit productive use of agricultural land and reduce water quality. If soil erosion continues unabated, much of the erodible agricultural land in use must be changed to other agricultural uses or converted to nonagricultural uses. Similarly, existing farmland preservation policies and programs do not adequately preserve much productive farmland. Urban expansion and other real estate developments convert or idle much of the productive land for residential, commercial, transportation, or other non-agricultural use. Much of the land that is

ble. Soil and water conservation objectives are set in order to minimize degradation to farmland and natural resources that are caused by agricultural production. NP—U, supra, at 8. On the other hand, farmland preservation programs prevent the conversion of farmland to nonagricultural use. See NATIONAL PROGRAM—1982, supra, at 13, 15. Both conservation and preservation programs seek to support agricultural productivity as well as the environment. See id. at 18-19.

9. Pub. L. No. 99-198, 99 Stat. 1354 (codified as amended at 16 U.S.C. §§ 3801-3845 (1988)). The Food Security Act of 1985 (FSA) was enacted to make the policies and goals of conservation and commodities programs more consistent and to reduce soil erosion, production of surplus crops, and conversion of wetland. See NP—U, supra note 8, at 23. The conservation subtitles of the FSA include the following: Conservation Reserve Program (CRP), Highly Erodible Land Conservation (HELC), and Wetland Conservation. 16 U.S.C. §§ 3811-3845 (1988). The cross-compliance or conservation compliance provision (CP) of the FSA is included in the HELC subtitle. Id. at § 3811.

The conservation subtitles require that conservation treatments be applied to highly erodible land and that some wetland not be converted if owners and operators of that land are planning to qualify for federal programs such as commodities, loans, and price-support programs. In some instances, farmers and operators can retire some highly erodible land with annual payments under 10 to 15 year contracts. These subtitles will increase the incentive to conserve soils which has been discouraged by commodity support programs. See NP—U, supra note 8, at 9-10, 23. See generally, infra notes 48-49 (discussing the FSA subtitles).

being converted or idled is among America's most productive farmland or prime farmland. The conversion of farmland reduces open space and affects local ecology and could eventually change the farm way of life. Moreover, the irreversible loss of our most productive land makes the need to keep other less productive agricultural land in its most productive state. The combined harm to agricultural land and the environment caused by soil erosion and farmland conversion simply means that many communities have a significant agricultural land use problem at hand.

III. THE OBJECTIVE OF FARMLAND PRESERVATION AND SOIL CONSERVATION POLICIES

Unfortunately, farmland use and soil conservation are separate land management activities.¹⁰ It should not be assumed that programs and policies to protect these activities serve similar purposes in maintaining agricultural productivity and protecting soil and water resources. Farmland preservation policies protect farmland from conversion. Use of farmland with erodible soils degrades soil and water. Soil and water conservation programs are designed to prevent and control soil and water degradation.¹¹

^{10.} The differences between soil conservation and farmland production practices result in federal policy conflicts. Conflicting production and conservation policies have been a source of constant criticism at the federal and state levels. Batie, *Policies, Institutions and Incentives for Soil Conservation*, 4 Agric. L.J. 77, 82 (1982). In 1985, the federal government addressed these criticisms by enacting the FSA, 16 U.S.C. §§ 3801-3845 (1988), to alleviate some of the conflicts between conservation and production programs that are under the authority of the U.S.D.A. See generally D. Rapp, How the U.S. Got Into Agriculture: And Why It Can't Get Out (1988) (reviewing American farm production policies and programs).

Land use planning and environmental regulation are regulatory activities that governments purposely distinguish by delegating authority to different agencies to regulate specific activities. See California Coastal Comm'n v. Granite Rock Co., 480 U.S. 572, 586-88 (1987). In Granite Rock, the Court held that the California Coastal Commission could impose permit requirements as an environmental regulation on the operation of unpatented mining claims on federal land and that environmental regulations were not an impermissible exercise of state land use planning. Id. at 588. The Court recognized that it had to consider land use planning and environmental regulations "as distinct, until an actual overlap between the two is demonstrated in a particular case." Id.

Federal, state, and local governments can purposely delegate to agencies separate authority for land use planning and environmental regulation of farmland. See id. at 587. The distinct activities of soil conservation and farmland preservation and the overlap between land use planning and environmental regulation in soil and water conservation on the same farmland means that coordination between these programs is necessary to prevent inconsistencies among state and local land use and environmental objectives.

^{11.} The small quantity and huge demand for prime farmland is a strong indication that much erodible land should be protected by farmland preservation programs. See infra notes 72-85 and accompanying text.

A. The Objectives of State and Federal Farmland Preservation Policies

The objectives of farmland preservation policies include preserving agriculture and farming,¹² farmland,¹³ and aesthetic qualities.¹⁴ While findings contained in farmland preservation and farmland protection¹⁵ statutes are silent as to the importance of each objective, such statutes recognize that farming, farmland, and aesthetic qualities of the land need protection. For example, the findings and declarations contained in the North Carolina,¹⁶ Oregon,¹⁷ California,¹⁸ and Maryland¹⁹ statutes implicitly recognize that farming has declined, and farmland is being converted and idled by urban growth and development,²⁰ and that productive agricultural land must, therefore, be protected.²¹ Such findings usually explicitly state that

For a listing and analysis of state and local farmland preservation programs as of 1980, see National Agricultural Lands Study, An Inventory of State and Local Programs to Protect Farmland, (1980) [hereinafter NALS—Inventory]; National Agricultural Lands Study, Case Studies on State and Local Programs to Protect Farmland (1980) [hereinafter NALS—Case Studies].

- 16. N.C. GEN. STAT. § 139-2(b) (1989).
- 17. OR. REV. STAT. § 215.243 (1983).
- 18. CAL. GOV'T CODE § 51220 (West 1983 & Supp. 1989).

- 20. See supra note 3 and accompanying text.
- 21. See supra notes 13-15.

^{12.} Farmland preservation programs protect farmland from encroaching urban development. If farming is not protected, a way of life will be lost. G. Gustafson & N. Bills, supra note 3, at 1; NALS—Protection of Farmland, supra note 3, at 11; Green Level Wants to Stay 'Country', The News and Observer, Aug. 8, 1988, at 1, col. 1. Many farmland preservation programs protect farming and agricultural operations by restricting political and legal actions that can be taken by local officials and citizens. J. Opie, The Law of the Land 169 (1987) (a survey of two hundred years of American agriculture and farmland policies and programs); NALS—Protection of Farmland, supra note 3, at 20 (examples of right-to-farm statutes).

^{13.} To insure that farming remains a source of income and a profit center, productive agricultural land must remain a part of farming. If farmland is lost, agricultural production could eventually decline despite improved technology. NALS—PROTECTION OF FARMLAND, supra note 3, at 11.

^{14.} Farmland has aesthetic value as open land, greenery, and as habitat for wildlife. Some pastureland, rangeland, cropland, and forestland have significant aesthetic value as scenic landscape. See 1980 Appraisal Part I, supra note 2, at 271; 1980 Appraisal Part II, supra note 2, at 135; Second RCA Appraisal, supra note 2 at 124; NP—U, supra note 8, at 7, 19-20.

^{15.} Farmland preservation regulations establish land use controls to prevent conversion. See NALS—PROTECTION OF FARMLAND, supra note 3, at 11. Federal farmland protection and land policy statutes proscribe government agencies from making decisions that would be inconsistent with state and local efforts to preserve farmland, and thus insure consistency among government programs. See, e.g., 7 U.S.C. §§ 4201-4209 (1988); N.C. GEN. STAT. §§ 113A-150 to -159 (1989).

^{19.} Md. Tax—Prop. Code Ann. § 8-209(a), (b) (1986 & Supp. 1988); Md. Agric. Code Ann. § 2-501 (1986).

farmland preservation programs are intended to maintain the agricultural economy,²² to assure a supply of food,²³ to conserve open land as a natural resource,²⁴ to prevent the conversion of agricultural land,²⁵ and to protect rural economies and communities.²⁶ In sum, state farmland preservation and protection policies evidence concern for the economic, social, and aesthetic values of farmland.

Similarly, in the federal Farmland Protection Policy Act (FPPA),²⁷ Congress recognized the perils of the conversion of farmland to non-agricultural uses,²⁸ the economic consequences of lowering food and fiber production,²⁹ and the societal consequences of undermining rural economies.³⁰ The FPPA protects farmland and farming from farmland conversion. Both state and federal policies

^{22.} E.g., CAL. Gov't Code § 51220(a) (West 1983 & Supp. 1989) ("preservation . . . is necessary to the conservation of the state economic resources, and is necessary . . . to the maintenance of the agricultural economy of the state "); Or. Rev. Stat. § 215.243(2) (1983) ("Preservation . . . is necessary in maintaining the agricultural economy of the state "). See generally Christensen, Budd, Reganold, & Steiner, Farmland Protection in Washington State: An Analysis, 43 J. Soil & Water Conservation 411 (1988) (finding that "maintenance of the agribusiness sector is the main reason for protecting agricultural land ").

^{23.} E.g., OR. REV. STAT. § 215.243(2) (1983) ("for the assurance of adequate, healthful and nutritious food for the people of this state and nation . . . "); MD. TAX—PROP. CODE ANN. § 8-209(a)(1) (1986 & Supp. 1988) ("maintain a readily available source of food and dairy products").

^{24.} E.g., OR. REV. STAT. § 215.243(1) (1983) ("Open land used for agricultural use is an efficient means of conserving natural resources that constitute an . . . aesthetic . . . asset"); MD TAX—PROP. CODE ANN. § 8-209(a)(2) (1986 & Supp. 1988) ("encourage the preservation of open space as an amenity").

^{25.} E.g., OR. REV. STAT. § 215.243(3) (1983) ("Expansion of urban development into rural areas is a matter of public concern..."); Md. Tax—Prop. Code Ann. § 8-209(a)(3) (1986 & Supp. 1988) ("prevent the forced conversion of open space to more intensive uses..."); Cal. Gov't Code § 5122(c) (West 1983 & Supp. 1989) ("That the discouragement of premature and unnecessary conversion of agricultural land to urban uses is a matter of public interest...").

^{26.} E.g., OR. REV. STAT. § 215.243(3) (1983) ("Expansion of urban development into rural areas is a matter of public concern because of the unnecessary increases in costs of community services, conflicts between farm and urban activities"). See generally infra notes 251-72 and accompanying text (discussing social and economic issues and problems facing rural and farm communities).

^{27.} Pub. L. No. 97-98, 95 Stat. 1341 (codified as amended at 7 U.S.C. §§ 4201-4209 (1988)).

^{28. 7} U.S.C. § 4201(a)(2) (1988) ("Congress finds that . . . the Nation's farmland is irrevocably converted from actual or potential agricultural use").

^{29.} Id. § 4201(a)(1) ("Congress finds that... the Nation's farmland is a unique natural resource and provides food and fiber necessary for the continual welfare of the people...."); Id. § 4201(a)(3) ("Congress finds that... continued decrease in the Nation's farmland base may threaten the ability of the United States to produce food and fiber....").

^{30.} Id. § 4201(a)(4) ("Congress finds that . . . the extensive use of farmland for non-agricultural purposes undermines the economic base of many rural areas").

protect farmland as a natural resource of beauty and pleasure. These findings, however, do not recognize the immediate dangers of soil erosion. This is not a legislative oversight because land use policies and programs for farmland preservation and soil conservation have been intentionally separate.³¹

B. Objectives of State and Federal Soil Conservation Policies

Federal³² and state³³ soil and water conservation policies address the consideration of soil and soil resources³⁴ and water and water resources.³⁵ Declarations and findings included in these statutes recognize the need to conserve and control soil and water resources on and off agricultural land. For example, in North Carolina,³⁶ Iowa,³⁷ and New Jersey,³⁸ the declared policies seek to control soil erosion,³⁹ prevent soil erosion damages,⁴⁰ reduce non-point source pollution,⁴¹

Both sediment control and soil conservation district legislation, however, have been generally unsuccessful in effectively controlling soil erosion and sediment loss. See NP—U, supra note 8, at 9-11. In contrast, the standards for controlling soil erosion and runoff might in some cases be stricter than those needed to maintain agricultural productivity. See id. at 13. Federal and state agencies are currently developing soil and water conservation programs that improve water quality and maintain agricultural productivity. These programs will reduce

^{31.} See supra notes 12-13 and accompanying text.

^{32.} See 1980 APPRAISAL—PART II, supra note 2, at 209-34; NATIONAL PROGRAM—1982, supra note 8, at 5-17; NP—U, supra note 8, at 4-8 (explaining the various federal policies and programs authorizing federal agencies to conduct soil and water conservation activities).

^{33.} See 1980 APPRAISAL—PART II, supra note 2, at 235; R. COUGHLIN, supra note 1, at 13-20, 22 (reviewing various state and local soil and water conservation programs and their close link to federal policies and programs).

^{34.} The first and second appraisals locate, list, and analyze soil and soil resources in the United States. See generally 1980 APPRAISAL—PART I, supra note 2, at 47-102; 1980 APPRAISAL—PART II, supra note 2, at 47-76; SECOND RCA APPRAISAL, supra note 2, at 15-18.

^{35.} The first and second appraisals list and analyze water and water resources in the United States. See generally 1980 APPRAISAL—PART I, supra note 2, at 189-232; 1980 APPRAISAL—PART II, supra note 2, at 77-133; SECOND RCA APPRAISAL, supra note 2, at 69, 86.

^{36.} N.C. GEN. STAT. § 139-2(b) (1989).

^{37.} IOWA CODE ANN. § 467A.2 (West 1971 & Supp. 1989).

^{38.} N.J. STAT. ANN. § 4:24-1 (West 1973 & Supp. 1989).

^{39.} E.g., N.J. Stat. Ann. § 4:24-40 (West 1973 & Supp. 1989); N.C. Gen. Stat. § 139-2(b) (1989); Iowa Code Ann. § 467A.2 (West 1971 & Supp. 1989). Most soil and water conservation district enabling legislation are enactments of a model law proposed by the federal government. See 1980 Appraisal—Part II, supra note 2, at 237-38.

^{40.} E.g., N.C. GEN. STAT. § 139-2(b) (1989); IOWA CODE ANN. § 467A.2 (West 1971 & Supp. 1989).

^{41.} N.J. Stat. Ann. § 4:24-40 (West 1973 & Supp. 1989). The erosion and sediment control policies strengthen soil and water conservation policies. 1980 APPRAISAL—PART II, supra note 2, at 237. Sediment and erosion control policies explicitly recognize that soil erosion and sediment sources from non-agricultural land are major sources of non-point source pollution. See e.g., N.J. Stat. Ann. § 4:24-39 to -55 (West 1973 & Supp. 1989); N.C. Gen. Stat. §§ 113A-50 to -66 (1989).

conserve soil and soil resources,⁴² maintain the tax base,⁴³ prevent impairment of dams and reservoirs,⁴⁴ and assist in maintaining the navigability of rivers and harbors.⁴⁵ State soil and water conservation programs are intended to maintain farmland productivity, water quality, and economic stability.

There are numerous federal soil and water conservation policies⁴⁶ and programs⁴⁷ and they are often inconsistent with farm production policies.⁴⁸ Prior to the Food Security Act of 1985 (FSA),⁴⁹ farm pro-

runoff, soil erosion, and ground water contamination. Id. at 11-14. See generally Buresh, Land Use Regulation for Control of Groundwater and Nonpoint Source Pollution Control, 95 YALE L.J. 1433 (1986) (finding that state and local governments need to develop land use regulations and mechanisms to control nonpoint source pollution and ground water contamination).

- 42. E.g., N.C. GEN. STAT. § 139-2(b) (1989); IOWA CODE ANN. § 467A.2 (West 1971 & Supp. 1989).
- 43. E.g., N.C. GEN. STAT. § 139-2(b) (1989); IOWA CODE ANN § 467A.2 (West 1971 & Supp. 1989).
- 44. E.g., N.C. GEN. STAT. § 139-2(b) (1989); IOWA CODE ANN § 467A.2 (West 1971 & Supp. 1989).
- 45. E.g., N.C. GEN. STAT. § 139-2(b) (1989); IOWA CODE ANN § 467A.2 (West 1971 & Supp. 1989).
- 46. The federal government has enacted numerous programs and statutes pertaining to soil and water conservation. See NP—U, supra note 8, at 4-8. See also The Soil Conservation Act of 1935, Pub. L. No. 74-46, 49 Stat. 163 (codified as amended at 16 U.S.C. §§ 590(a)-(g)(3) (1988) [hereinafter Conservation Act] (the major federal legislation guiding soil conservation during the last 50 years).
- 47. NATIONAL PROGRAM—1982, supra note 8, at 1-3. See generally Arts & Church, supra note 1, at 597-600 (discussing U.S.D.A. agencies administering soil and water conservation programs).
- 48. Agriculture policies to support commodity programs are inconsistent with conservation programs to reduce soil erosion on and off the farm. Surplus crops are grown on highly erodible cropland that should be actively managed to reduce soil erosion or retired. S. Webb, C. Ogg & W. Huang, Idling Erodible Cropland: Impacts on Production, Prices and Government Costs iii (U.S. Dep't of Agric., Agric. Econ. Rep. No. 550, 1986).
- 49. 16 U.S.C. §§ 3801-3845 (1988). The FSA primarily impacts highly erodible cropland. It does not apply to excessively eroding rangeland, pastureland, and forestland. NP—U, *supra* note 8, at 10.

First, under the FSA, only 45 million acres of high erodible land can be placed in the CRP. 16 U.S.C. § 3831(b). This acreage is approximately one-half of the eligible acreage. Management of Inventory Properties Held by Agricultural Lenders: Hearing before the Subcomm. on Conservation and Forestry of the Senate Comm. on Agriculture, Nutrition and Forestry, 100th Cong., 1st Sess. 132 (1987) [hereinafter Management of Inventory Properties]. CRP will affect only 10% of the nation's cropland for a period of 10 years; NP—U, supra note 8, at 9, but this reduces erosion in agricultural land by only 15%. Id. at 10.

Second, approximately 5.2 million acres of wetlands have a medium-to-high probability for conversion to cropland. Second RCA Appraisal, supra note 2, at 137. The wetland subtitle of the FSA preventing the conversion of wetlands may prove ineffective because tax deductions and credits provided in the subtitle may be an even greater incentive for conversion than commodity support payments. See R. Heimlich, Swampbusting: Wetland Conversion and Farm Programs 24 (U.S. Dep't Agric., Agric. Econ. Rep. No. 551, 1986). Third, approximately 118 million acres of highly erodible lands could be affected by conservation planning

duction programs encouraged increased production⁵⁰ and income⁵¹ and de-emphasized soil conservation. The FSA reduced conflicts between production and conservation goals, but limited participation in FSA programs, and state legislative deference to high farm production still permit soil erosion resulting in increased off-site damage to soil and water resources.⁵² Although the primary objective of soil conservation policy is to maintain soil and water resources,⁵³ this objective is subordinate to federal and state land use programs that favor production and use of soils.

C. The Shared Objectives of Soil Conservation and Farmland Preservation Policies

For the most part, farmland preservation and soil conservation statutes explicitly recognize that agricultural land is a natural resource that should be kept in production.⁵⁴ Soil conservation policies

and treatment under the HELC subtitle and CP provisions of the FSA. Management of Inventory Properties, supra, at 131; NP—U, supra note 8, at 10. The CP will affect 145 million acres because it includes predominantly highly erodible fields. NP—U, supra note 8, at 10. All farmers are not required to practice conservation planning under HELC or CP because approximately 50 to 75% of farmers whose land is eroding in excess of five tons per acre maximum tolerance level do not participate in U.S.D.A. commodity and conservation programs. K. REICHELDERFER, DO USDA FARM PROGRAM PARTICIPANTS CONTRIBUTE TO SOIL EROSION? 41 (U.S. Dep't Agric., Agric. Econ. Rep. No. 532, 1985).

50. 1980 APPRAISAL—PART II, supra note 2, at 13 ("Cash flow and income squeezes encourage farmers to manage their land more intensively and to postpone investments in conservation that produce returns only in the long run or produce offsite benefits that do not accrue to the farmer.").

The CRP, 16 U.S.C. §§ 3811-3836 (1988), pays farmers rent for idling their land while deferring the more costly application of soil and water conservation practices, but conservation will eventually be required to keep the land in production. *The Perspective of the Chairman of the Senate Agricultural Committee*, 14 EPA J., Apr. 1988, at 8 (interview with Senator Patrick Leahy, Chairman of the Senate Agriculture Committee).

- 51. 1980 APPRAISAL—PART II, supra note 2, at 13, 14. Some farmers during periods of economic uncertainty will forego capital investments in soil and water conservation if long term returns are uncertain or inadequate. The U.S.D.A. Economic Research Service has recorded a decline in conservation capital of 100 million dollars per year from 1955 to 1975. Id. Capital investment under current economic conditions are not likely to increase. See generally infra notes 250-61 (discussing the economic condition of American farms).
- 52. NP—U, supra note 8, at 9-14. Federal and state soil and water conservation policies recognize that many economic and environmental problems are caused by soil erosion. Federal, state, and local governments, however, insist on enacting voluntary soil conservation programs. These voluntary programs enable farmers and operators to either neglect soil conservation or to pass on the cost of any treatments. As a consequence, the public must pay to clean up rivers, reservoirs, and lakes that are being polluted by agricultural runoff and erosion. See supra note 7. The off-site damages of agriculture runoff are estimated at \$2.2 billion for cropland in 1980. Second RCA Appraisal, supra note 2, at 11-13.
- 53. See generally NP-U, supra note 8, at 8 (discussing federal soil and water conservation objectives, priorities, and critical resource problems).
 - 54. See supra notes 10-53 and accompanying text.

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seemingly conflict with this farmland preservation goal, insofar as they limit short-term productivity in the interest of long-term productivity and water quality goals. Changes, however, can be made to soil conservation and farmland preservation regulatory schemes so that suitable use and adequate conservation treatments are integrated and regulated during production and cultivation. Before changes are made to programs and regulatory schemes, however, it is important to determine whether erodible farmland is preserved under farmland preservation statutes, and whether productive agricultural land subject to farmland preservation schemes can also be conserved under soil conservation programs. As will be shown, erodible agricultural land is often subject to regulation under separate farmland preservation and soil conservation programs but conflicts in these programs often lead to a failure to achieve the objectives of either program.

IV. AGRICULTURAL LAND CLASSES AND USES PROTECTED UNDER FARMLAND PRESERVATION AND SOIL CONSERVATION PROGRAMS

Farming and other farmland uses may cause or accelerate soil erosion, and many such uses are subject to conversion of millions of acres of American agricultural land.⁵⁵ These uses are protected by farmland preservation and soil conservation programs. Much of the erodible farmland in production or use is subject to urban development and soil erosion. Many local communities cannot afford the social or economic cost of the gradual irreversible loss of erodible productive farmland.⁵⁶ Therefore, erodible land in use or production

^{55.} See generally infra notes 58-85 and accompanying text.

^{56.} Soil erosion and agricultural runoff are a threat to society. Agricultural uses and farming produce food and fiber and, along with related agribusinesses, support local economic and social stability by providing jobs for local citizens, business for local merchants, and revenues for local governments. Much farming and other uses take place on erodible farmland. Farmers and users of erodible farmland usually do not control soil erosion. Consequently, erodible farmland is gradually depleted of its most productive capabilities. NALS—Soil Degradation, supra note 1, at 8-10.

Degradation of land gradually results in a decline in productivity. A substantial loss of productivity changes the economic base and social condition of the community: farmers stop farming, agribusinesses close, layoffs occur, the local tax base decreases, and migration from rural communities to urban centers increases. *Id*.

Land degradation not only creates economic instability in rural communities, but also helps destroy the environment. Soil erosion leads to agricultural runoff that pollutes streams, lakes, and rivers, which reduces surface water quality, contaminates ground waters, and harms aesthetic values. Thus, not only is farming at risk, but also an entire quality of life. See generally P. BLAIKE & H. BROOKFIELD, LAND DEGRADATION AND SOCIETY (1987) (reviewing land degradation and its effects on society). See also Little, Annie-Fanny-Mike and the Dunsmore Proposition 44 J. Soil & Water Conservation 16 (1989) (proper land management practices

that is subject to farmland conversion and soil erosion must be identified so that existing farmland preservation programs may require soil treatments in order to sustain the long term productivity of the land.57

A. Soil Limitations and Their Effects on Farmland and Farming

Many acres of farmland are protected under both farmland preservation and soil conservation programs. An example of such land is productive farmland used for agricultural purposes in need of soil conservation; at times the land has soil properties, topography, or a climate that often leads to erosion. This land often requires intensive conservation treatment to sustain productivity. The intensity of conservation treatment depends on the severity of the limitations and the use of the land. Severe limitations require major conservation treatment or a restriction of agricultural uses.⁵⁸ In many instances, highly erodible agricultural land used for cropland may require a complete ban on cultivation.⁵⁹ Ironically, agricultural land preservation and soil conservation programs that protect use but ignore the land's limitations may further unsuitable agronomic use and inadequate conservation treatment. This is evident from the unabated soil erosion on erodible agricultural land and its inclusion in the broad land classes and uses protected under preservation statutes.⁶⁰

protect soils and control non-point source pollution).

New technology, crop varieties, and fertilizers can mask the reduction in productivity caused by excessive soil losses. Consequently, farmers may not be aware of on-site damages until the soil yields cannot be maintained or improved. Second RCA Appraisal, supra note 2, at 34. See The News and Observer, Sept. 20, 1988, at 1, col. 1 (pollution of North Carolina coastal rivers, sounds, and streams is partly caused by agricultural runoff).

^{57.} A few states require participants in agricultural districts to apply conservation practices. D. Callies & R. Freilich, Cases and Materials on Land Use 885 (1986). Many Conservation Districts and preservationists have recognized the need to implement soil and water conservation plans on farmland under farmland preservation programs. See S. REDFIELD, Vanishing Farmland 149 (1984).

Many farmland preservation and soil conservation programs are voluntary and have not protected the large quantity of erodible land that could be preserved under farmland preservation programs. See infra notes 97-110 and accompanying text. Recent research has provided useful information on why farmers do not voluntarily adopt conservation practices, but the specific reasons are unknown. Second RCA Appraisal, supra note 2, at 5-47.

^{58.} See infra note 59.

^{59.} SECOND RCA APPRAISAL, supra note 2, at 16-17. Idling, highly erodible cropland could harm some communities economically. See The Effect of Land Diversion Programs on Agricultural Support Industries, Hearing before the Subcomm. on Rural Economy and Family Farming of the Senate Comm. on Small Business, 100th Cong., 1st Sess. 1-6 (1987) (hearing on the economic impact of diverting cropland from production) [hereinafter Land Diversion].

^{60.} See infra notes 61-85 and accompanying text.

Erodible agricultural land is classified by soil capabilities,⁶¹ soil losses,⁶² or by an index of susceptibility to erosion.⁶³ Such classifications identify agricultural land that is eroding or erodible, and land being put to unsuitable use or subject to inadequate conservation treatment. For example, the *National Program for Soil and Water Conservation: 1988-97 Update* (NP—U)⁶⁴ states that "277 millions acres (19%) of nonfederal agricultural land is eroding at levels above

61. The U.S.D.A. Land Capability Classification System groups agricultural lands on the basis of their suitability to produce common cultivated crops and pasture plants. The classification system uses two significant groupings to evaluate the land: capability classes and capability subclasses. The groupings, classes and subclasses, are made after soil surveys are conducted on the land. The capability classes are grouped into eight classes, classes I through VIII, with one to four identified limitations: wet, erosion, root zone limitation, and climate. Second RCA Appraisal, supra note 2, at 16-17.

Land in class I has few limitations, broad uses, and no requirements for special management or conservation treatment. Generally, land in classes I through VI has been used for cultivated crops, and land in class V through VII for rangeland, pastureland, and forestland. Land in class VIII is best suited for recreation, wildlife habitat, and nature areas. All land, other than land in class I, requires special management and conservation practices when it is used for cultivated crops or pasture. Land in classes VII and VIII should not be used for pasture or cultivated crops. Id. at 16.

Land in classes IV through VIII comprise 57% or 793 million acres of non-federal rural land. Id. at 3-4. Nineteen million acres of land in classes V through VIII is in cropland unsuitable for cultivated crops. Id. at 3-6. Fifty-two percent of all cropland is susceptible to erosion. Id. at 17.

Seventy-four percent or 220 million acres of land in class II is cropland and pastureland, id. at 16, and 50% or 145 million acres of land in class II is moderately susceptible to erosion. Id. For land in class III, 180 million acres are highly susceptible to erosion, id. at 17, and 170 million acres are in cropland and pastureland. Id. When the acres in use as cropland, rangeland, and pastureland exceed the acres not susceptible to erosion, then erodible cropland or other agricultural land could be placed in use or production. This may not occur on a national level, but local occurrences often create environmental problems. Consequently, land use management and conservation treatment is necessary on these lands.

- 62. Soil losses on 286 million acres of agricultural land exceed acceptable soil loss tolerances. Second RCA Appraisal, supra note 2, at 25. Erosion exceeds soil loss tolerance levels on approximately 173 million acres of cropland; 11 million acres of pastureland; 23 million acres of forest land; 70 million acres of rangeland; and 10 million acres of other lands. Id. at 28. The soil loss tolerance or T value is an assigned rate of erosion that can occur on a soil without reducing agricultural productivity of the soil. T values for cropland, pastureland, and forestland range from one to five tons per acre annually. Id. at 27. The T values consider the impact of erosion on the landscape, soil productivity, and damages on and off the farm by moving soils. Id.
- 63. The U.S.D.A. uses the "erosion-sensitivity index," or EI index, to rate the susceptibility of soils to erosion damage. The EI index, uses soil tolerance values (T values) and factors from the Universal Soil Loss Equation or the Wind Erosion Equation to estimate susceptibility. Second RCA Appraisal, *supra* note 2, at 31-32. The EI Index has values that range from one through fifteen. As the values increase, the greater the probability that the soil will be damaged by erosion.
- 64. See supra note 8. The Secretary of Agriculture sets soil loss standards guided by the FSA. Soil loss standards are set to insure that conservation practices and land uses comply with soil conservation program requirements.

soil loss tolerance." About 173 million acres of this excessively eroding land are cropland acres. About 118 million acres of cropland are classified as highly erodible. In addition, two-third's of the nation's pastureland, and three-fifths of the nation's rangeland are in poor condition. Excessively eroding agricultural land is situated throughout the nation and is in production or use.

B. The Nature and Capabilities of Preserved Farmland

Continued use of some eroding and erodible agricultural land⁷² is essential to maintain the economy and way of life of many farm and rural communities.⁷³ Broad statutory language which defines protected land classes or uses and preservable farmland are found in several agricultural land preservation statutes. For example, the California Code broadly defines land eligible for preservation to include: land that may be moderately-to-severely erodible, or Class II land,74 land which supports the production of livestock,75 and other land which supports production of agricultural products with a minimum annual revenue.76 The Oregon Code allows slightly-to-severely erodible land, or Classes II-VI, to be included in farmland preservation programs. 77 California, Oregon, and other states with similar preservation statutes that allow agricultural land in Capability Classes II-VI to be preserved may include some farmland that is excessively eroding or moderately-to-severely erodible.78 Likewise, the federal FPPA⁷⁹ classifies land eligible for federal protection as prime farm-

^{65.} NP-U, supra note 8, at 9.

^{66.} Id. In 1982, 50 million acres of the most susceptible or highly erodible land was cultivated; 25% was located in Missouri and Iowa, and 30% was located in Texas. Second RCA Appraisal, supra note 2, at 15-21.

^{67.} NP—U, supra note 8, at 10. Under the FSA the use of highly erodible land is linked to eligibility for commodity price supports and other farm programs. 16 U.S.C. §§ 3811-3813 (1988).

^{68.} NP-U, supra note 8, at 18.

^{69.} Id.

^{70.} See Second RCA Appraisal, supra note 2, at 48-50, 220-21.

^{71.} Id. at 20-21, 48-50 & 212-14.

^{72.} NP-U, supra note 6, at 9-11; SECOND RCA APPRAISAL, supra note 2, at 4.

^{73.} See supra notes 22-26 and accompanying text.

^{74.} CAL. GOV'T CODE § 51201(c)(1) (West 1988).

^{75.} Id. § 51201(c)(3).

^{76.} Id. § 51201(c)(4)-(5).

^{77.} See Or. Rev. Stat. §§ 215.203, 215.317 (1983).

^{78.} See generally SECOND RCA APPRAISAL, supra note 2, at 200-07.

^{79. 7} U.S.C. §§ 4201-4209 (1988). See generally supra notes 27-30 and accompanying text.

land,⁸⁰ unique farmland,⁸¹ and farmland other than prime or unique farmland of local or statewide agricultural importance.⁸² The FPPA recognizes that prime farmland must not be excessively erodible⁸³ and that unique farmland and other farmland can require treatment and management.⁸⁴ The statutory land use classes are facially broad enough to include farmland that is slight-to-severely erodible and to include uses that subject erodible land to the most erosion.

C. Erodible Land Included in Broad Preservation Land Classes

Farming and other uses on eroding and erodible land are protected under farmland preservation programs because land in Capability Classes II-VI are preserved even when a minimum annual revenue is received. So On such land, soil erosion is accepted as a manageable limitation, and existing soil and water conservation treatment and land use are seen as acceptable land management practices to prevent soil erosion. Nevertheless, soil erosion still occurs and farmers still fail to apply suitable uses and adequate treatments to prevent the destruction of farmland and soil and water resources. Such destruction may not assure policy failures, but are strong evidence of programs and schemes that fail to properly implement the various single purpose land use controls and techniques.

V. SINGLE PURPOSE MECHANISMS AND THE EFFECTIVENESS OF FARMLAND PRESERVATION AND SOIL CONSERVATION PROGRAMS

State and federal governments have implemented various single purpose mechanisms or land use controls and techniques to protect agricultural land, farming, and soils. Most soil conservation programs include land use regulations or agreements between landowners and local governments that are seldom enforced in the event of noncompliance by landowners. Similarly, most farmland preservation programs include land use controls and tax relief and other incentives that are inadequate to induce meaningful long-term

^{80. 7} U.S.C. § 4201(c)(1)(A) (1988).

^{81.} Id. § 4201(c)(1)(B).

^{82.} Id. § 4201(c)(2)(C).

^{83.} Id. § 4201(c)(1)(A).

^{84.} Id. § 4201(c)(1)(B). For farmland other than prime or unique farmland, the local government must determine the land's importance for production with the Secretary of Agriculture's approval. Id. § 4201(c)(1)(C).

^{85.} See supra notes 74-84 and accompanying text.

^{86.} See infra notes 117-120 and accompanying text.

preservation.⁸⁷ As a result, many soil conservation and farmland preservation programs have failed to attain their goals. To understand these failures, it is necessary to consider the participatory nature and efficacy of land use controls and techniques designed to protect agricultural land, farming, and soils.

A. Controls and Techniques for Farmland Preservation and Soil Conservation

All states have established agricultural land preservation programs, but most of these programs are voluntary. The most common agricultural land preservation program controls and techniques⁸⁸ are the creation of agricultural districts,⁸⁹ agricultural zoning,⁹⁰ differential tax assessments,⁹¹ purchase and transfer of development

90. NALS—PROTECTION OF FARMLAND, supra note 3, at 13. Agricultural zoning restricts agricultural and related uses. See e.g., OR. Rev. Stat. § 215.203(2)(a)-(c) (1983). "Agricultural zoning is the most popular and common method used by local governments to prevent the use of agricultural land for non-agricultural purposes." NALS—PROTECTION OF FARMLAND, supra note 3, at 21. At least 270 jurisdictions have adopted zoning as of 1980. Id. Agricultural zoning is usually a part of a larger preservation program that often includes community plans and urban boundary agreements. Id.

Oregon has the most comprehensive land use program in the country. Oregon permits counties to adopt ordinances designating farm use zones. Or. Rev. Stat. § 215.203(1) (1983). Additionally, counties in Oregon are required by law "to adopt . . . a comprehensive plan and zoning, subdivision and other ordinances applicable to all land in the county." Id. § 215.050(1). See generally NALS—Protection of Farmland, supra note 3, at 31-32 (discussing Oregon's comprehensive land use plan).

91. Differential assessment of farmland permits the local government to assess farmland based on the farm use value of the land rather than on its market value. There are three major types of differential assessment: pure preferential assessment with full abatement, deferred taxation with partial or with no abatement, and restrictive agreement under which a farmland owner contracts to maintain his land in farm uses in return for a lower assessment. NALS—PROTECTION OF FARMLAND, supra note 3, at 13. Tax incentives, however, are not very effective in and of themselves. Id. at 17; S. REDFIELD, supra note 57, at 97.

^{87.} See infra notes 111-16 and accompanying text.

^{88.} For a more detailed review of state and local agricultural preservation programs, see NALS—PROTECTION OF FARMLAND, supra note 3 and NALS—An Inventory, supra note 13. These sources are dated, but provide the most comprehensive information available. This article discusses public programs, but private programs have also been established to preserve agricultural lands. See J. Opie, supra note 12, at 172-74. Some states require permits for certain land uses. See NALS—PROTECTION OF FARMLAND, supra note 3, at 14 (Table 2); S. REDFIELD, supra note 57, at 100-01.

^{89.} Agricultural districts are composed of farmers who have voluntarily agreed to preserve their farmland for a term of years in return for the receipt of specific rights and benefits, such as tax relief, protection from certain legal actions, and other protection. See NALS—PROTECTION OF FARMLAND, supra note 3, at 18; J. OPIE, supra note 12, at 166-69. See generally Geier, Agricultural Districts and Zoning: A State-Local Approach to a National Problem, 8 Ecology L.Q. 655 (1980) (discussing agricultural zoning as the preferable land use control or technique); Jurgensmeyer, Farmland Protection: A Vital Agricultural Law Issue for the 1980's, 21 Washburn L.J. 443 (1982) (discussing farmland preservation problems, land use controls, and legal limitations).

rights, 92 and right-to-farm statutes. 93 These controls and techniques provide farmers and landowners financial benefits, guidelines for land use, and security. 94 Since most state agricultural land preservation programs are voluntary, they do not provide sufficient economic incentives to discourage farmland conversion and idleness. 95 Voluntary programs, however, are politically safe and easy to enact. 96 Most states have preserved some agricultural land through voluntary compliance but many acres of agricultural land are still threatened by conversion. 97 Nevertheless, the policies and objectives of the programs remain important goals for the states.

Similarly, all the states have established soil and water conservation programs, but the controls and techniques in these programs are

Id.

^{92.} Purchase of Development Rights (PDR) programs permit the government or private parties to purchase the rights to develop from owners of farmland while leaving the owners all other rights of ownership. The price of the development rights is the diminution in the market value of the farmland as a result of the removal of the development rights. The remaining value of the land is the agricultural or use value. NALS—PROTECTION OF FARMLAND, supra note 3, at 13; S. REDFIELD, supra note 57, at 99.

Some state and local governments have established Transfer of Development Rights programs. Owners of farmland are given the power to transfer development rights to other parcels of land designated for development that have a more restricted use. The developer pays the owner for the development rights, and the public avoids the cost of purchasing the rights. S. Redfield, supra note 57, at 98-99; NALS—PROTECTION OF FARMLAND, supra note 3, at 24-26; See generally S. Redfield, supra note 57, at 115-17 nn.45-65 (discussing PDR programs).

^{93.} Right-to-farm laws are statutes that prohibit local governments from restricting normal farming practices unless these practices endanger public health or safety, and provide farmers with some protection against private nuisance laws. NALS—PROTECTION OF FARMLAND, supra note 3, at 13, 18; S. REDFIELD, supra note 57, at 97-98; See generally Comment, "Right to Farm" Statutes - The Newest Tool in Agricultural Land Preservation, 10 FLA. ST. U.L. Rev. 415 (1982) (reviewing farmland preservation controls and techniques with emphasis on right-to-farm statutes).

^{94.} S. REDFIELD, supra note 57, at 95; NALS—Protection of Farmland, supra note 3, at 27-32.

^{95.} Profit from the sale of farmland provides a strong incentive to convert or idle the land. Voluntary programs do not provide sufficient inducements to overcome individual economic expectations. The motive to convert or idle farmland is only lessened when other direct and indirect economic incentives are available. S. REDFIELD, *supra* note 57, at 108-09; NALS—PROTECTION OF FARMLAND, *supra* note 3, at 31.

^{96.} NALS—Protection of Farmland, supra note 3, at 30.

Voluntary programs . . . tend to generate relatively little political opposition and are relatively easy to enact, particularly if they consist only of tax expenditures. . . . If the controls are too strong and the incentives too weak, participation is likely to be low. Conversely, if attractive incentives are coupled with weak obligations, participation is likely to be high. At the same time, the weakness of the controls is likely to reduce effectiveness. The balance between participation and effectiveness is a delicate one.

^{97.} See supra note 3. See generally Second RCA APPRAISAL, supra note 2, at 24-25 (several states reporting that farmland conversion is still a land use problem).

voluntary as well.98 Soil conservation district acts99 include such controls and techniques as land use regulations,100 conservation con-

98. See, e.g., NP-U, supra note 8, at 12-14; R. COUGHLIN, supra note 1, at 2; 1980 APPRAISAL—PART II, supra note 2, at 9; S. BATIE, CRISIS IN AMERICA'S CROPLANDS? XV (1983). See also supra note 117 (discussing ineffective mandatory soil conservation programs).

Most soil conservation regulations are voluntary, and poorly enforced because local government and soil conservation district officials are reluctant to restrict landowners' property rights. S. BATIE, supra, at 101-02.

The recognition that voluntary compliance is dreadfully ineffective is an old precept in agricultural land use. Many environmentalists and conservationists have recommended more forceful land use regulations to control and prevent soil erosion. One commentator has proposed zoning ordinances:

As shortcomings of existing programs to control agricultural lands became more generally recognized, new approaches will be called for. Approaches emphasizing regulation, rather than simply relying on voluntary efforts, are likely to be put forth. . . . Regulations concerning erosion on agricultural land may become incorporated into zoning ordinances, the prime province of the planner.

R. Coughlin, supra note 1, at 2.

99. Soil and Water Conservation District Acts are state enabling statutes that created Soil and Water Conservation Districts, provided for district organization, and granted the Districts powers to enhance soil and water conservation. See, e.g., N.C. Gen. Stat. § 139(1)-(15) (1983), amended by 1989 N.C. Adv. Legis. Serv. 92; Iowa Code Ann. §§ 467A.2-A.75 (West 1971 & Supp. 1989). Conservation districts generally have authority to plan programs for soil conservation, flood prevention, water management, recreation, and other similar purposes. Most districts have the power to contract, acquire property, conduct surveys, and receive funds. See 1980 Appraisal—Part II, supra note 2, at 236-37. The U.S.D.A. is strengthening its relationship with conservation districts to improve soil and water resource problems. NP—U, supra note 8, at 11.

as to require the use of other conservation practices and land uses. 1980 APPRAISAL—PART II, supra note 2, at 248-49 & 252-53; R. COUGHLIN, supra note 1, at 13-25. Many conservation districts have refused to adopt land use regulations to control soil erosion. Arts & Church, supra note 1, at 579.

Many district acts permit a small percentage of landowners to decide if land use regulations should be adopted or repealed. For example, the New Jersey District Act, grants conservation districts the authority to adopt, amend, repeal, and enforce land use regulations. But if owners of 25% of the acreage in the conservation district object to the regulations, the conservation district cannot adopt the regulations. N.J. Stat. Ann. § 4:24-23 (West 1973 & Supp. 1989). The North Carolina District Act requires that two-thirds of the qualified voters in a conservation district-wide referendum must approve the adoption of any land use regulations. N.C. Gen. Stat. §139-9 (1989).

The Iowa soil loss provision is an example of a more forceful land use regulation for soil and water conservation. Iowa requires conservation districts to adopt soil loss limits to enhance soil and water conservation and to control soil erosion. Iowa Code Ann. § 467A.44 (West 1971 & Supp. 1989). A soil loss limit is the maximum amount of soil loss due to erosion by water or wind, expressed in terms of tons per acre per year, which the commissioners of the respective soil and water conservation districts determine is acceptable in order to meet the objectives expressed by section 467D.1. Id. § 467A.42(1). The Iowa soil loss limit provision mandates that farmers and owners apply soil erosion practices. Id. § 467A.44(3).

Another unique provision of the Iowa soil loss limits statute is the duty imposed upon the owner or occupier to practice soil conservation. Id. § 467A.43. The duty is a statutory requirement recognizing the owner's right to use the land as well as the obligation to conserve it. Moreover, the conservation district supervisors have the authority to conduct discretionary

tracts, 101 non-point source pollution control plans and regulations, 102 tax incentives, 103 and sediment and erosion control regulations. 104

inspections under the statute. Id. § 467A.61. See infra note 117 (legal implications and enforceability of the Iowa soil loss limits regulation).

101. The land conservation contract is an agreement between the district and the land-owner. The districts agree to provide cost-sharing and technical assistance to initiate soil and water conservation planning. The landowner agrees to implement conservation planning and to employ conservation practices. See 1980 APPRAISAL—PART II, supra note 2, at 236-37. The authority to enter into conservation contracts is a standard provision in district acts. See supra note 99. These agreements are usually voluntary, but conservation districts have the authority to make binding agreements and to deny landowners the privilege of unilaterally refusing to operate under a conservation plan. Id. Conservation districts, however, have not been willing to take legal action to mandate landowner investment in conservation. See S. Batie, supra note 98, at 103; R. COUGHLIN, supra note 1, at 10.

102. See, e.g., The Clean Water Act of 1977, Pub. L. No. 95-217, 91 Stat. 1566 (codified as amended at 33 U.S.C. §§ 1251-1387 (1988) (granting the states the authority to identify, regulate, and control non-point source pollution from farmland); The Water Quality Act of 1987, Pub. L. No. 100-4, 101 Stat. 7 (codified as amended at 33 U.S.C. §§ 1251-1387 (1988) (placing increased emphasis on controlling non-point source pollution to improve and protect ground and surface water quality). States are required, with federal assistance, to implement programs to control agricultural runoff. NP—U, supra note 8, at 11-14. Some programs to abate agricultural runoff are under state clean stream statutes. See, e.g., PA. STAT. ANN. tit. 35, §§ 691.1-.1001 (Purdon 1977 & Supp. 1989).

103. NP—U, supra note 8, at 21; See generally Griswold, Conservation Credit: Motivating Landowners to Implement Soil Conservation Practices Through Property Tax Credits, 42 J. Soil & Water Conservation 41, 41-45 (1987) (cropland adequately protected from soil erosion increases by approximately 40%); Massey & Silver, Property Tax Incentives For Implementing Soil Conservation Programs Under Constitutional Tax Limitations, 59 Den. L.J. 485 (1981-82) (constitutionality of using tax incentives to encourage participation in soil and water conservation programs).

Federal and state governments allow income tax incentives for conservation. Some states allow income tax deductions and credits for the application of conservation measures and purchase of conservation tillage equipment. See, e.g. N.C. Gen. Stat. § 105-151.13 (1985). The Tax Reform Act of 1986, includes incentives for soil and water conversation and disincentives for soil erosion and degradation. The Tax Reform Act of 1986 discourages the clearing of highly erodible soil and converting wetlands for cropland or agricultural production. See Durst & Jeremias, Tax Policy and Agricultural Land, in Our American Land 292-93 (W. Whyte ed. 1987); See also Benfield, Ward & Kinsinger, Conservation Gains in the Tax Reform Act: An Analysis of the Implications of the Tax Reform for Farmers and Natural Resources in Rural America, With a Policy Agenda for the Future, 11 Harv. Envil. L. Rev. 415 (1987) (discussing impact of tax reform on the farm economy and conservation of natural resources).

104. Soil erosion and sediment control has been recognized as a serious environmental problem on agricultural and non-agricultural land. An acceleration of soil erosion and sedimentation has occurred because of changes in land use from agricultural to urban uses, residential, industrial, commercial developments, and other land disturbing activities. Consequently, state policy established laws to control soil erosion and sedimentation on urban land, especially those under construction. 1980 Appraisal—Part II, supra note 2, at 237.

The policy for soil erosion and sediment differs from soil conservation policy. Farmland is usually exempted from many soil erosion and sedimentation control laws. These laws are usually targeted at soil erosion and sedimentation from non-agricultural activities. These laws are usually enforced by the local conservation district or the local municipality. Moreover, the soil erosion and sedimentation standards are promulgated under a state-wide comprehensive plan. Also, these laws have no effect on erodible farmland unless the land has been converted to erodible, non-agricultural land (urban land).

Federal, state, and local governments have generally not required compliance with controls and techniques even when government cost-sharing was provided to reduce the financial burden.¹⁰⁵ Moreover, voluntary controls and techniques have not adequately induced owners to restrict the exercise of their property rights or to force owners to incur the cost of applying soil conservation practices.¹⁰⁶ Consequently, voluntary controls and techniques under most federal, state, and local soil conservation programs have failed to control soil erosion.¹⁰⁷

Often land preservation and soil conservation programs use similar land use controls and techniques. In some states, landowners can receive benefits and incentives from both programs¹⁰⁸ as well as receiving multiple benefits under either program.¹⁰⁹ Nevertheless, the voluntary controls and techniques fail to achieve state soil conservation and agricultural land preservation goals.¹¹⁰

B. Effectiveness of Farmland Preservation and Soil Conservation Programs

Differential tax assessments and tax credits preserve agricultural land by indirectly reducing the financial burden of farmers.¹¹¹ Independent tax credits and incentives, however, are insufficient to prevent the conversion or idleness of land.¹¹² Contracts for the purchase of development rights and for participation in agricultural districts is another method by which to preserve farmland.¹¹³ Yet, if contracts

^{105.} Local, state, and federal agencies pay part of the cost of applying and installing conservation measures or changing the use of the land. See supra notes 32-33. The remaining cost is often a financial burden for those farmers who do not have cash or credit to pay ordinary expenses or service debts, or let alone to install conservation practices. See generally NP—U supra note 8, at 8, 12. But economic hardship should not dictate a national or state policy to permanently relieve farmers of the responsibility for mismanaging or abusing the land, except as a temporary measure during financially difficult times. In Iowa, financial hardships generally do not justify noncompliance with conservation land use regulations. Id. at 22.

^{106.} See supra note 98 and accompanying text.

^{107.} See supra notes 64-71 and accompanying text.

^{108.} Farmers and landowners are granted differential property tax assessments under farmland preservation programs and paid conservation payments under soil conservation programs. See supra notes 32, 33 & 91.

^{109.} Farmers and landowners can be granted differential property tax assessments and also receive rights under right-to-farm statutes under land use and conservation programs. See S. REDFIELD, supra note 57, at 103-07 (integrating land use techniques and controls for farmland preservation).

^{110.} See supra note 98 and accompanying text.

^{111.} See supra note 91.

^{112.} Id.

^{113.} See supra notes 89 & 92.

between state or local governments and owners for participation in agricultural districts or for restrictions on development are not perpetual, obligations under these contracts would not likely advance land use policies when non-agricultural gains exceed the benefits received from land use contracts.¹¹⁴ Other land use regulations, such as zoning and land use permits, are subject to exceptions and exclusions, such as variances and special use permits.¹¹⁵ Moreover, land use regulations are most effective in preserving agricultural land when a comprehensive state land use and resource plan is implemented.¹¹⁶ Thus, traditional controls and techniques for farmland preservation are often ineffective for reasons other than voluntary compliance.

Soil conservation programs have applied similar controls and techniques and have failed to control soil erosion. Land use conservation regulations are seldom adopted or enforced because of deference to landowner property rights.¹¹⁷ Conservation contracts are rarely enforced, except when the federal government threatens to terminate other benefits such as farm subsidies and loans.¹¹⁸ Additionally, tax credits and deductions are earned for the application of conservation practices,¹¹⁹ but are insufficient to offset the investment needed to

^{114.} See supra note 95 and accompanying text.

^{115.} S. REDFIELD, supra note 57, at 103. Local boards and commissions can grant variances to local land use regulations. In some instances, agricultural districts and zones may not be exclusively agricultural. NALS—PROTECTION OF FARMLAND, supra note 3, at 22.

^{116.} See S. REDFIELD, supra note 57, at 100; NP—U, supra note 8, at 21; NALS—PROTECTION OF FARMLAND, supra note 3, at 37.

Oregon has the most comprehensive land use program in the country. In Oregon, counties may adopt ordinances designating farm use zones. OR. REV. STAT. § 215.203(1) (1983). Counties must also adopt a comprehensive land use plan, however. *Id.* § 215.050.

^{117.} See supra notes 98 & 101. But see Iowa Code Ann. § 467A.42 (West 1971 & Supp. 1989) and S.D. Codified Laws Ann. § 38-8A-6 (1985 & Supp. 1989). Iowa and South Dakota have mandatory soil and water conservation regulations. Iowa's soil loss limit regulations mandate soil conservation to control and prevent soil movement by wind and water. The Iowa soil loss limit regulation was challenged as a taking of private property, but the Iowa Supreme Court held that the regulation was a proper exercise of the state's police power. Woodbury County Soil Conservation Dist. v. Ortner, 279 N.W.2d 276 (1979). In an earlier case, the Iowa Supreme Court had implicitly recognized that soil is an important natural resource needed for the welfare of the state. See Iowa Natural Resources Counsel v. Van Zee, 261 Iowa 1287, 1297, 158 N.W.2d 111, 118 (1968). Iowa's soil loss limit regulations evidence that mandatory soil conservation treatment and land use regulations are enforceable and can withstand legal challenges. See generally Comments, Regulatory Authority to Mandate Soil Conservation in Iowa After Ortner, 65 Iowa L. Rev. 1035 (1980).

South Dakota's program is mandated by the state and enforced by local conservation districts. Committee of the Wisconsin Chapter, SWCS, State Regulation of Soil Erosion, 44 J. Soil & Water Conservation 209 (1989) [hereinafter Committee of Wisconsin, SWCS].

^{118. 16} U.S.C. § 3811 (1988); see also supra notes 9 & 49.

^{119.} See supra note 102.

install conservation practices. Consequently, they do not induce voluntary compliance with soil erosion tolerance levels. Soil conservation programs are thus founded on controls and techniques that reflect a regulatory compromise among conflicting property interests, farm production policies, environment policies, and other government policies.¹²⁰

Voluntary single purpose mechanisms have failed to induce participation in farmland preservation and soil conservation, to provide adequate incentives to overcome resistance, and to enforceably restrict owner use and management of the land. Soil conservation programs have failed to control soil erosion and maintain water quality, and farmland preservation programs have failed to control conversion and idleness. Consequently, coordinated regulatory schemes and multi-purpose mechanisms must be implemented to control farmland conversion and soil erosion.

An effective regulatory scheme must focus on soil capabilities and limitations as well as on the preservation of farmland use in order to maintain agricultural productivity and the economy of the rural community. An effective regulatory system recognizes the interdependency of farmland, soils, and farming. This recognition insures that the programs for farmland preservation and soil conservation will be implemented in order to prevent the combined losses of soil and water resources and farmland.

Before discussing the requirements of more effective regulatory schemes, it is necessary to consider the policies that influence the course of soil and water conservation and farmland preservation policies and programs.

VI. NATIONAL POLICIES AND PUBLIC RESPONSIBILITIES FOR LAND USE

Government regulations designed to conserve farmland and soil and water resources could be challenged as impermissible restrictions on the property interests and rights of landowners.¹²¹ Such challenges should not foreclose conservation and land use policy-makers from advocating greater protection for farmland, farming, and soil. Before such protection is established, a number of competing policy concerns need to be taken into account. The direction of American agricultural policies is greatly influenced by national and interna-

^{120.} See infra notes 129-47 and accompanying text.

^{121.} See infra section VIII.

tional affairs.¹²² Policies regarding food supply, farming, foreign affairs, and environmental concerns suggest agricultural land policies and decisions are not determined by landowners and rural or farm communities, but rather by consumer needs, foreign relations, and deficit spending.¹²³ Moreover, a small percentage of farmers produce the largest percentage of crops, but these farmers own a small percentage of American agricultural land.¹²⁴ These farmers have an enormous influence on agriculture policy based not upon what they own, but on how much they produce.

A. Influences Affecting National Policy-making

Federal policies determine the agricultural productivity and financial health of many farmers in many ways. Federal policies and programs are greatly influenced by agribusiness interests off the farm. Federal policies and decisions control commodity, conservation, agricultural import and export, and credit programs that determine the acres of land in production. In recent years, changes in federal agricultural land policies have resulted from the increased influence of the agribusiness sector, preferences for the most productive farmers, and from the effects of foreign and domestic politics and economics. Thus, both property interests on the farm 127 and factors off the farm are likely to influence decisions about continued reliance on voluntary agricultural land use regulations. Many landowners and farmers have little influence over agricultural land programs that affect the local economy and environment. I28

B. National Policies and Objectives for Farmland Production and Soil Conservation

The Food Security Act of 1985 (FSA)129 and the National Program

^{122.} J. Opie, supra note 12, at 191. National policies about farmland are inconsistent, outdated, contradictory, and mean different things to different private and government groups: a food policy for the U.S.D.A.; a farm policy for Congress; an agricultural policy for agribusiness; and a farmland preservation policy for environmentalists. These policies and programs make farmers and agricultural land a part of a complex large-scale, national and international, economic, and political structure. *Id*.

^{123.} Id. at 184 ("Farm policy itself turns, more often than not, on 'externalities'—consumer needs, foreign policy, and deficit spending.").

^{124.} See NP-U, supra note 8, at 22.

^{125.} See supra notes 8, 9 & 48.

^{126.} See J. OPIE, supra note 12, at 192.

^{127.} See Wilkinson, Soil Conservationists and the Uses of Law, 42 J. Soil & Water Conservation 304, 310 (1987). "As long as people believe that property rights transcend the public welfare, there will be no effective regulation of soil erosion on private land." Id.

^{128.} J. Opie, supra note 12, at 188.

^{129.} See supra notes 7, 46 & 47.

for Soil and Water Conservation: 1988-97 Update (NP-U)130 are strong evidence of federal efforts to support soil and water conservation policies and farm operations in order to maintain productive agricultural land.¹³¹ The FSA was enacted to develop greater consistency between farm production and soil and water conservation programs. The FSA imposes more forceful obligations for soil and water conservation in the form of cross-compliance for those farmers dependent on government commodity supports and other subsidies. 132 The NP-U is mandated by The Soil and Water Resources Conservation Act (SWRCA)¹³³ and requires the United States Department of Agriculture (U.S.D.A.) to periodically establish soil and water resource goals, objectives, and priorities for the conservation and protection of these resources.134 The NP—U urges state and local governments to accept greater responsibility, provide more funds, and establish objectives and priorities for soil and water conservation.

1. National Objectives for Farmland Preservation and Farming

The FPPA explicitly recognizes the federal government's concern about farmland conversion, but the NP—U does not list farmland preservation as a conservation objective. The National Program for Soil and Water Conservation: 1982 Final Program Report and Environmental Impact Statement states that farmland conversion is a potentially grave national problem. The absence of such an

^{130.} See supra note 8.

^{131.} NP—U, supra note 8, at 8-14. The U.S.D.A.'s top conservation activity goals from 1988 to 1997 are to "[r]educe the damage caused by excessive soil erosion on crop, pasture, range, forest and other rural lands . . . [and to] [p]rotect the quality of ground and surface water against harmful contamination by nonpoint sources" Id. at 8.

^{132.} See supra notes 7 & 46.

^{133.} Pub. L. No. 95-192, 91 Stat. 1407 (1977) (codified as amended at 16 U.S.C. §§ 2001-2009 (1988)). The SWRCA authorizes the Secretary of Agriculture to appraise soil, water, and related resources, and to develop a national soil and water conservation program. *Id.* §§ 2004(a), 2005(a). The SWRCA requires the Secretary to update both the resource appraisal and national program at specified intervals. *Id.* §§ 2004(b), 2005(b).

^{134.} Id. § 2005(a).

^{135.} NP—U, supra note 8, at 7. The long-term national objectives are set to minimize degradation caused by agricultural production.

^{136.} NATIONAL PROGRAM—1982, supra note 8. The National Program was the first national program for soil and water conservation under the SWRCA, and it listed the national soil and water conservation objectives for the years 1982-1987. Id.

^{137.} The National Program recognized that the loss of agricultural land or farmland conversion was a serious threat to agricultural productivity and water quality. NATIONAL PROGRAM—1982, *supra* note 8, at 13.

objective may mean that the federal government believes that farmland conversion is primarily a local land use problem that should be regulated by state and local governments.

Moreover, the NP—U explicitly states that local and state governments may establish objectives different from federal soil and water conservation objectives¹³⁸ and still remain eligible for federal funds and assistance.¹³⁹ Therefore, farmland preservation objectives may be adopted by state and local governments so long as such objectives do not conflict with federal soil and water conservation activities designed to reduce soil erosion and improve water quality.¹⁴⁰ The federal government also expects states to provide more local funding for all objectives.¹⁴¹

The NP—U implicitly calls public attention to the relationship between farm size and farm production, but it is nearly silent on the relationship between federal farm programs and farm size and production. The NP—U states that since large scale farmers are larger producers than small-scale farmers, they receive more federal benefits and subsidies.¹⁴² The small-scale farmers produce only eleven percent of the total value of annual U.S. production¹⁴³ but own approximately seventy-four percent of the nation's 2.3 million farms.¹⁴⁴ Consequently, the U.S.D.A.'s conservation programs will be developed, as stated in the NP—U, to provide more support and encourage more participation by the small-scale farmer.

2. National Objectives for Soil and Water Conservation and Agricultural Productivity

The NP—U sets forth national objectives for soil and water conservation.¹⁴⁵ Reducing soil erosion and protecting water quality are given top priority in U.S.D.A. soil and water conservation activities. Such objectives only further the ultimate federal goal of maintaining agricultural productivity because soil erosion and poor water quality

^{138.} NP-U, supra note 8, at 15-16.

^{139.} Id.

^{140.} See id.

^{141.} Id. at 16.

^{142.} See id. at 22; J. OPIE, supra note 12, at 188. See also infra notes 50-62 and accompanying text.

^{143.} U.S.D.A., NATIONAL PROGRAM FOR SOIL AND WATER CONSERVATION: 1988-97 UP-DATE REVIEW DRAFT 14 (1988) [hereinafter NP—U REVIEW DRAFT] (issued by the U.S.D.A. to solicit comments on its proposed update of its national program for soil and water conservation).

^{144.} Id. at 14. Forty percent of U.S. farms are less than 50 acres in area and 50% of U.S. farms have an annual income of less than \$20,000. Id.

^{145.} See NP-U, supra note 8, at 8.

are major threats to agricultural productivity. 146 This does not necessarily mean that production policy will take priority over soil and water conservation policy. The FSA provides for consistency between federal production programs and soil and water conservation programs. The FSA attempts to insure that federal programs for conservation and production are coordinated to avoid conflicts when both programs are applied on the land. 147 On much erodible land, farmers will be required under conservation compliance provisions to apply soil and water conservation treatments as a condition for federal production subsidies, or under the Conservation Reserve Program (CRP), farmers may voluntarily change some cropland to a land use suitable to local soil limitations or capabilities. Regardless of federal calls for better program coordination and consistency and better defined resource objectives, however, soil erosion and farmland conversion will not be controlled until state and local governments and local landowners provide more grassroot support.

VII. THE VALUES, PROVISIONS, AND BENEFITS OF COORDINATION

Farmland preservation and soil conservation policy decisions evidence a need to protect finite, non-renewable farmland, soil, and water resources. A reduction in these resources will produce dire terminal consequences for farmers and the public. Notwithstanding many noteworthy federal and state policy statements, farmers and government officials do not yet broadly demonstrate the sincere individual and institutional values required to preserve farmland and to conserve soil and water on and off the farm. Because of such attenuated values, farmers and government officials do not act prudently to protect farmland, soil, and water. The lack of forceful land use obligations and minimal regulatory requirements perpetuates minimal regulatory activity as well as minimal concern for land preservation and soil conservation on the farm. In the face of attenuated values and regulatory inactivity, preservation and conservation programs are inconsistent and largely unenforced, and fail to actually advance declared policy objectives.

Before forceful obligations and consistent programs can be prudently imposed, individual and institutional values as well as existing and proposed regulations must be examined. Moreover, it is necessary to show that coordinated regulations and forceful obligations would actually further declared policy decisions.

^{146.} Id. at 9.

^{147.} See supra note 9.

A. A Better Ethic for Agricultural Land Use

The National Program for Soil and Water Conservation: 1988-97 Update (NP-U) and the Food Security Act of 1985 (FSA) provide an important impetus for an individual land ethic and government philosophy that needs more public support to establish effective agricultural land use programs and schemes. The NP-U and FSA are important for two fundamental reasons. First, the NP-U explicitly recognizes the individual owner's obligation for soil and water conservation. 148 and FSA imposes a somewhat forceful obligation upon select landowners for soil and water conservation. Thus, the NP-U provides critical support for the view that owners and farmers do not conserve and use the soil and land in compliance with voluntary land use regulations¹⁴⁹ even though they have an ethical obligation to do so. 150 Second, the NP—U is evidence that land use and conservation objectives are needed to effectively implement land use and resource policies and planning.¹⁵¹ Similarly, the FSA is evidence that forceful obligations and better coordinated programs are needed to avoid the conflicts caused by competing interests. The NP-U and FSA demonstrate that environmental, social, and economic interests are less difficult to balance and serve when coordinated regulatory schemes, mechanisms, and programs control the suitable use and adequate treatment of soil and water resources.

The NP—U and FSA are models of effective agricultural land use programs that states ought to consider. Most state and local soil conservation and farmland preservation programs are a patchwork of ineffective, uncoordinated regulations. The declared policies of such programs state that soil erosion and farmland conversion must be controlled and water quality must be protected. The declared policies are not furthered, however, by the programs when they are applied on the farm.¹⁵² In light of these program failures, the NP—U and FSA might be the forerunners of other more persistent federal ef-

^{148.} NP—U, supra note 8, at 8. The NP—U "is based on the concept that individuals have an important ethical obligation to conserve and protect soil and water resources. It also acknowledges private property rights and responsibilities and that landowners are ultimately responsible for how their land will be used and treated" Id.

^{149.} See generally id. at 9-11 (the scope and duration of the soil erosion problem demonstrates that voluntary programs continue to fail).

^{150.} Id. at 8.

^{151.} Id. at 21. The SCS has developed a comprehensive method to evaluate farmland that should remain in production. This method is called the Land Evaluation and Site Assessment System (LESA). LESA is a part of FPPA. LESA considers social, economic, and political conditions. Wright, LESA Shows Which Lands Should Stay in Farms in Using Our Natural Resources 508, 508-09 (J. Hayes ed. 1983).

^{152.} See supra notes 117-20 and accompanying text.

forts that mandate state governments to adopt programs and standards that may be inconsistent with the state's actual land use problems and needs.¹⁵³ Before such federal efforts become a reality, the states should adopt some of the mechanisms used in the NP—U and FSA to further their declared policies.

The NP-U and FSA are guides for developing a better approach to conserve soil and water and to preserve farmland and farming. They adopt several key mechanisms that are needed to coordinate programs and to apply multi-purpose land use controls. The key mechanisms include cross-compliance,154 program consistency,155 conservation priorities. 156 and resource planning. 157 These mechanisms are most useful as vehicles for identifying and establishing better coordinated programs and more consistent objectives for agricultural land use. 158 First, program consistency must be built into regulatory schemes to insure that farmland preservation and soil conservation programs do not counteract each other. Second, at a minimum, cross-compliance-type mechanisms must be used to insure that landowners and farmers who are receiving direct and indirect government incentives comply with land use requirements. Third, resource planning must identify those soil and water resources and farmlands that are threatened by man-made activities and natural forces. Fourth, land use objectives and priorities must be set forth so that land use, treatment, and government assistance are applied to control uses of economic and natural resources that are degrading the community's natural environment and social and economic conditions. But in the absence of forceful obligations, the effectiveness of such mechanisms are wholly dependent upon landowner and government willing-

^{153.} Federal conservation policy has progressed from purely voluntary to somewhat mandatory cross-compliance under the FSA. Cross-compliance reveals the concern and influence of the federal government on agricultural land use within the states. Cross-compliance enables the federal government to impact local land use policies by forcefully enrolling farmers into voluntary local soil and water conservation programs. Many farmers, who are dependent on federal farm subsidies and loans, must enroll or lose their land and farms. See supra note 48.

If the federal government uses cross-compliance type mechanisms to improve water and other environmental qualities, such forceful federal land use mechanisms could be used to further national land use policies for production, farming, water quality, and soil and water conservation. See NP—U, supra note 8, at 14; Benbrook, The Environment and the 1990 Farm Bill, 43 J. Soil & Water Conservation 440 (1988) (components to be considered under the 1990 farm bill).

^{154.} See supra note 8. See generally supra notes 48 & 49.

^{155.} NP-U, supra note 8, at 23; See also supra note 48.

^{156.} See supra note 8, at 15-16.

^{157.} See supra note 151.

^{158.} See NP-U, supra note 8, at 23-24.

ness to control and prevent soil erosion and farmland conversion. Under voluntary programs, the commitment to maintaining the environmental and aesthetic qualities of farmland have been negligible.

B. Reassessing Landowner and Governmental Responsibility for Land Use

The failure of soil conservation and farmland preservation programs is evidence that the American land ethic does not foster the prudent use and maintenance of finite, non-renewable farmland and soil and water resources. Landowners and governments are misunderstanding or ignoring fundamental land use concepts. First. policy-makers do not seem to understand that the prudent exercise of government power must take into account the interdependency of farmland, soils, and farming. 159 Local and state policy-makers must wisely coordinate soil conservation and farmland preservation programs so that such programs are applied consistently. Second, many farmers and landowners seemingly do not realize that farmland productivity and environmental quality are directly related to the prudent use and conservation of land, soil, and water resources. 160 Farmers and landowners must be weaned off the antiquated assumption that they are free to use soil and farmland as they see fit. That assumption is foolhardy. It should be axiomatic that when farmland is preserved, it is not preserved to let soil erode or to let water quality degrade. To preserve farmland and conserve soils and water, farmland preservation and soil conservation programs must be coordinated and their objectives implemented through dual or multiplepurpose land use mechanisms. Furthermore, public support for forceful land use obligations must be secured. Even with these adjustments to policies and obligations, other requirements are necessary to make existing programs work more effectively.

^{159.} Federal, state, and local government policies and programs vacillate in protecting soils, farmland, and farming. See J. OPIE, supra note 12, at 191. Federal policies for production and conservation are not entirely effective under the FSA. At most, the CRP and CP are long over-due beginnings that are constrained in scope and duration by landowner desire for government benefits and subsidies. See supra notes 48 & 49; See also Wilkinson, Soil Conservationists and the Uses of Law, 42 J. Soil & Water Conservation 308, 309-10 (1987) (government officials, as trustees of the public, have failed to create active means to conserve economic and natural resources on the land and farm).

^{160.} See supra notes 4-7. When farmland is preserved for farming, and erodible soil on that farmland is not conserved, erodible soil remains lawfully exposed to greater degradation. When erodible land is used without treatment, farmland preservation is solely protecting a factor of production. See also Wilkinson, supra note 159, at 309-11 (the landowner's obligation to conserve the soil is grossly inadequate. America refuses to adopt Aldo Leapold's land ethic for American farmland).

A revitalized land ethic would strengthen public support for agricultural land use that enhances the aesthetic and environmental qualities of the land. Existing programs, however, lack effective vehicles or mechanisms that can capture public support. Single-purpose mechanisms are no doubt of value, but other requirements are needed to protect both economic and natural resources and to insure that reciprocal benefits flow to landowners owing to the burdens imposed upon them. Other requirements are needed to make certain that public interests and private interests are balanced in land use schemes. To protect both private and public interests, agricultural land use programs must include the following requirements for better coordinated land use programs: 1) tying individual obligations and uses to government benefits and incentives;161 2) individualized planning to protect uses and resources; 162 3) interagency cooperation and coordination of separate programs and schemes;163 4) limits on liability for landowners who comply with land use obligations; 164 and, 5) reasonable government programs and mechanisms to enforce land use obli-

^{161.} Individual land use obligations would be tied to indirect and direct government benefits and substantive rights under state or local land-use, tax, and environmental programs. These obligations would be imposed on farmers and owners situated in agricultural districts or zones, protected by preservation easements, and taxed at lower rates for property and income. See 16 U.S.C. § 3811 (1988). Government assistance should, however, increase with the additional requirements imposed on erodible farmland under forceful obligations. These requirements should be based upon government objectives and priorities that are firmly set, adequately funded, and routinely enforced. Obligations and objectives should establish primary protection for fragile, finite natural resources.

^{162.} Soil and water conservation and farmland preservation programs should make certain that land use requirements are consistent with the soil limitations and land capabilities of each farmer or owner's tract of land or farm. These programs must also recognize that certain natural and economic conditions may require exceptions and variances to land use requirements, objectives, and priorities to adjust for environmental conditions, land capabilities, and economic conditions. See generally Wilkinson, supra note 159, at 308-10 (forceful land use regulations must be implemented over time so that farmers and the public have adequate time to adjust).

^{163.} Numerous local and state agencies regulate farmland, farming, and soils. See supra notes 32, 33 & 47; infra note 170. Land use, natural resource, and administrative agencies should communicate to avoid inconsistent objectives and priorities that affect agricultural land and natural resources. See Wilkinson, supra note 159, at 310 (interagency cooperation is needed to accomplish comprehensive land use and resource management). See also infra notes 292-98 and accompanying text.

^{164.} Some farmers and owners of farmland could comply with land use requirements under local objectives and priorities, but agricultural runoff from their land might still cause harm to public or private lands and water. These owners and farmers should not be held liable for that harm. They should be provided rights or privileges to mitigate or relieve them of liability in light of their compliance with prioritized land use requirements. Such a limit on liability is similar to and could be incorporated into right-to-farm laws under farmland preservation programs. See supra note 93. As a reciprocal benefit, such a limitation on liability could ease an owners' burden when their property rights are restricted. See infra notes 240-44 and accompanying text.

gations.¹⁶⁵ At a minimum, such requirements must be included in agricultural land use schemes that set more than two objectives, and multi-purpose mechanisms must be applied to implement these objectives. Such requirements make programs sensitive to the interdependency and combined losses of soil and water resources and farmlands. Finally, such requirements would help to establish consistent objectives and provide for timely applications of agricultural land use policies. In light of existing environmental and economic conditions, government officials and landowners can no longer advance programs that result in more farmland conversion, soil erosion, and environmental harm.

C. Coordinated Programs Advance Existing Declared Policies

Farmland preservation and soil conservation programs are failing to advance declared policies. Because farmland, soil, and water qualities and uses are interdependent, existing programs and schemes must be coordinated. Quite simply, state and local governments, with federal assistance, must establish consistent and prioritized objectives and a cooperative and consultative administrative framework for implementing agricultural land use programs. Coordination demands that local and state governments accomplish the objectives of each program concurrently. Land use controls and techniques for each program must be forcefully applied through a multi-purpose mechanism that provides for the planning, use, and treatment of each farm or tract.

By definition, coordinated farmland preservation and soil conservation programs would not counteract each other. Coordinated programs do not change or add to existing policies, but they help achieve policy goals by recognizing the following: 1) the interdependency of farmland, soil, and farming and their combined losses; 166 2) the wide variety of direct and indirect benefits and incentives available to achieve policy goals; 167 3) off the farm policy influences on farming, farmland, and farm communities; 168 4) the need to tie land-

^{165.} The American land ethic should support the exercise of police power to adopt and enforce forceful land use regulations. The government should then enact land use regulations that restrict property rights to protect soils, farmland, and farming to advance local and state declared land use and conservation policies. There are, however, legal limitations on the state government exercise of police power that restrict the property rights of landowners. See infra section VIII.

^{166.} See supra notes 7-10 and accompanying text.

^{167.} See supra notes 88-109 and accompanying text.

^{168.} See generally supra notes 250-281 (discussing issues and problems confronting rural and farm America).

owner duties to both government benefits and land use objectives; 169 and, 5) the need for administrative agencies that make land use decisions to cooperate with each other and consult regularly. 170 Coordination, however, only advances policies by establishing consistent and prioritized objectives. Consistent objectives must be broadly applied to actually advance the declared policies of separate programs and schemes. Therefore, owners and lessors should be subject to forceful land use obligations. These obligations should require landowners to broadly apply multiple-purpose mechanisms that implement the consistent objectives of separate farmland preservation and soil conservation programs. It is evident that coordinated schemes and programs only advance policies when forceful obligations are imposed and multiple-mechanisms are applied on the farm and on agricultural land.

Legal, economic, social, and political constraints would affect how coordinated programs with forceful obligations and multiple purpose mechanisms would advance declared policies. Section VIII discusses the most significant legal limitations on coordinated programs: principally whether such programs may be challenged as an exercise of police power that unconstitutionally restricts the use of farmland. Section IX discusses the greater economic, social, and political constraints impacting coordination.

VIII. LAND USE REQUIREMENTS AND CONSTITUTIONAL LIMITATIONS

Existing farmland preservation and soil conservation programs are separate. They attempt to induce voluntary participation and impose

^{169.} See supra notes 129-178 and accompanying text.

^{170.} State policies and local land use regulations often conflict. Most farmland preservation programs and regulations are under the administrative authority of local planning commissions at city and county levels. On the other hand, local soil and water conservation programs and regulations are under the administrative authority of the Conservation Districts. See supra notes 103-104; R. COUGHLIN, supra note 1, at 9-10. The planning commissions and the conservation districts are the major land use and natural resource agencies, respectively, regulating the use and treatment of agricultural land. Other farming and farmland programs are administered by other municipal and administrative agencies, such as tax offices, federal farm credit agencies, farm production agencies, extension agencies, and others. See Arts & Church, supra note 1, at 614-20.

Many states have created state soil and water commissions and committees to assist and coordinate programs between conservation districts and to secure federal assistance for the districts. See, e.g., N.J. Stat. Ann. § 4:24-2.1 to 6 (1973 & Supp. 1989); N.C. Gen. Stat. § 139.4 (1983).

Federal and state conservation policies may also conflict. Such a conflict has occurred under the FSA. See supra note 104 (discussing how the relationship between conservation districts and SCS are strained).

mostly single-purpose controls. Because of the voluntary nature and general ineffectiveness of these programs, their constitutional validity is not a concern. Coordinated programs, however, that impose forceful obligations and require multi-purpose mechanisms for individualized land use planning and control would likely heighten concern about the exercise of police power. Coordinated schemes require owners and lessors to comply with land use regulations for both farmland preservation and soil and water conservation programs. In some instances, such schemes and programs may not allow owners and lessors to indefinitely defer land conservation and treatment of erodible farmland or to use the land as profitably as they see fit. Consequently, owners and lessors may argue that restrictions on the use of their farmland constitute a regulatory taking of private property for a public use in violation of the taking clauses of the Fifth¹⁷¹ and Fourteenth¹⁷² Amendments of the United States Constitution.¹⁷³ Coordinated programs with forceful obligations and multipurpose mechanisms are, however, a valid exercise of police power because these programs and mechanisms protect agricultural productivity and environmental qualities.

A. General Land Use Requirements and Restrictions

Coordinated programs and schemes that require individualized planning, use, and treatment for erodible farmland impose restrictions on agricultural land uses. Use restrictions are determined by

^{171.} U.S. Const. amend. V.

^{172.} U.S. Const. amend. XIV, § 1.

^{173.} Taking and other legal issues may be raised if forceful soil conservation and farmland preservation regulations restrain agricultural production and commercial development of farmland. These issues will more than likely arise when farmland is changed from a more productive and profitable use to a less profitable but productive use. Changing the land use or treatment is dictated by the land capability and characteristics that could make it wholly unsuitable for cropland and harmful to the environment. See supra note 61. For example, lands in Class V through VI are not suitable for cultivation, and some lands in classes III and IV require intensive management. NALS—Soil Degradation, supra note 1, at 49. On these lands, owners will be forced to change their uses from cultivation to pastureland, forest land, or rangeland. These uses are not as profitable as cultivation of cropland and may not provide an immediate return on invested capital. It is, therefore, necessary to develop new crops or agricultural uses to reduce the loss of profits and cropland productivity. If new crops are not developed and more capital is needed to change the use, owners may challenge land use regulations as a taking.

In addition to taking challenges, substantive due process issues could be raised by farmers and owners who believe that land use regulations are arbitrary and capricious. See generally S. REDFIELD, supra note 57, at 48-66; Maher v. City of New Orleans, 516 F.2d 1051 (2d Cir. 1975) (discussing substantive due process and taking). See also Strong, On Placing Property Due Process Center Stage in Takings Jurisprudence, 49 Ohio L. J. 591 (1988) (discussing the role of substantive due process in the taking analysis).

the natural and economic conditions on and near the farm, such as the soil capabilities, farming needs, farmland productivity, and water quality of the land. Restrictions on erodible farmland that is both improperly used and inadequately treated, or that is about to be imprudently converted or idled, are likely to be the most burdensome.

There are four general regulatory restrictions in land use and individualized planning: 1) erodible farmland in use or production shall be kept in agricultural use rather than converted to non-agricultural uses; 2) erodible farmland shall be farmed or used for its most suitable use or crop; 3) erodible farmland shall be treated both to reduce agricultural runoff or to prevent a loss of productivity; 174 and, 4) the use or treatment of erodible farmland shall not be changed if such changes reduce aesthetic and environmental qualities and substantially threaten social and economic conditions. 175 In some instances, all four restrictions may be applicable to a particular farm or specific tract of land.

Owners and lessors must pay a share of the cost of changes in agricultural land use and for the application of conservation treatments, but existing government programs must also pay a share of the cost and provide other technical assistance. Notwithstanding these strict land use requirements, exceptions to the restrictions may be required when economic and natural conditions, availability of funds, and other exogenous factors cause substantial economic or financial hardships on a farm. Moreover, where state governments have not done so under their right-to-farm statutes, they are urged to cap liability for harm caused by soil erosion.

Coordinated schemes and programs establish land use requirements that restrict the use of erodible farmland in production or use. Such programs and schemes continue to provide reciprocal benefits and rights to substitute for restrictions on property rights. Nevertheless, even with reciprocal benefits and rights flowing to the landowner, the restrictions could eventually be challenged as an unconstitutional taking of private property for public use.

^{174.} See supra notes 88-120 and accompanying text.

^{175.} These restrictions require local and state governments to consider the impact of land diversion and land use changes on the social and economic stability of the community. See Land Diversion supra note 59, at 1-6.

^{176.} See supra notes 32, 33 & 46.

^{177.} See supra note 93 and accompanying text.

^{178.} See generally supra note 164 (discussing limiting liability for damages caused by land under a conservation plan to control soil erosion); S. Redfield, supra note 57, at 156-61 (discussing reciprocal benefits in farmland preservation programs).

B. General Principles of Taking Law

The fifth amendment prohibits state and local "[g]overnment[s] from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole."179 Court's must determine whether restrictions on property rights effect a taking based on the facts and circumstances of each case. 180 A court's "ad hoc, factual inquiries" must focus on several factors to determine whether land use and other restrictions on property effect a taking: 1) the economic impact of the regulation; 2) the extent of interference with investment-backed expectations; and, 3) the nature of government action. 182 Supreme Court decisions applying these factors have established constitutional principles that are crucial in determining whether land use regulations effect regulatory takings. These factors and constitutional principles are central to a court's balancing of public and private interests in its taking jurisprudence. Public and private interests are brought into play as use restrictions on private property are imposed under the police power to protect the public good.

Our focus is on constitutional principles applied to land use regulations that are made in light of a neglected public concern over land use that has a destructive environmental and economic impact on farmland. Thus, it is necessary to determine whether a coordinated program imposing an affirmative duty for soil conservation and use restrictions for preservation and conservation constitutes a regulatory taking.

A land use regulation does not effect a taking if it "substantially advance[s] legitimate state interests" and does not "deny an owner economically viable use of his land." The Supreme Court has found that a variety of land use regulations advance substantially

^{179.} Armstrong v. United States, 364 U.S. 40, 49 (1960).

^{180.} United States v. Central Eureka Mining Co., 357 U.S. 155, 168 (1958).

^{181.} Penn Central Transp. Co. v. City of New York, 438 U.S. 104, 124 (1978).

^{182.} Id.

^{183.} Agins v. City of Tiburon, 447 U.S. 255, 260 (1980).

^{184.} Id. In Agins, the plaintiff (Agins) acquired five acres of unimproved land in the city of Tiburon (City) for residential development. Afterward, by order of California land use laws, the City adopted zoning ordinances and placed the Agins' land in a residential zone that could be used for single family dwelling, accessory building, and open space, and the density of the single-family residences was limited to one to five residences. Before seeking approval for development, Agins initiated an action against the City alleging that the City had taken his property without just compensation in violation of the fifth and fourteenth amendments. The California Supreme Court affirmed the trial court ruling that Agins' complaint failed to state a cause of action. Agins v. City of Tiburon, 24 Cal.3d 266, 278, 598 P.2d 25, 32, 157 Cal.Rptr. 372, 379 (1979), aff'd on other grounds, 447 U.S. 255, 263 (1980).

legitimate state interests.¹⁸⁵ Government actions that advance a legitimate state interest are not takings, even when such actions deny reasonable use or prohibit beneficial use of the land.¹⁸⁶ Zoning laws that prohibit industrial use, preserve open space, and control urbanization require owners to forego other residential and commercial uses that are highly beneficial. In addressing the impact of the government action on the owner's parcel, court's consider the nature and value of the interest that was allegedly taken. The court focuses, however, on the total interests and rights in a tract that remain rather than on any lost specific right or interest to determine whether a government action affects a taking.¹⁸⁷

Often the nature and character of government actions result from changed circumstances that justify expanding public interests to protect the public good. As circumstances change, the government may see fit to regulate activities that previously have been viewed as essentially private. An example is found in *Block v. Hirsh.* ¹⁸⁸ In *Block*, the Court held that a temporary District of Columbia law enacted by Congress to regulate leased buildings was not a taking. ¹⁸⁹ That law prohibited owners from evicting tenants after the expiration of the lease, and the tenancy was subject to regulations of a District of Co-

^{185.} See, e.g., Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 493 (1987) (to prevent subsidence damages by subsurface mining operations); Agins, 447 U.S. at 261 (to preserve open space in an urban setting); Penn Central Transp. Co. v. City of New York, 438 U.S. 104, 138 (1978) (to preserve a historic landmark); Euclid v. Ambler Realty Co., 272 U.S. 365, 397 (1926) (to establish urban zoning). But see Nollan v. California Coastal Comm'n 483 U.S. 825 (1987) (conditional building permit effectuated a taking); Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 413 (1922) (regulation of coal mine subsidence effectuated a taking).

^{186.} See e.g., Agins, 447 U.S. at 262-63; Euclid, 272 U.S. at 383-85. In these cases, owners were not denied an economically viable use, although the permitted use was not the one contemplated by the owner. Similarly, historic preservation laws that limit alteration and development of historic structures and sites do not allow owners to make the most beneficial use of the structure or site. See Penn Central, 438 U.S. at 168.

^{187.} Penn Central, 438 U.S. at 130-31. The Court compared the "value that has been taken with value that remains." Id. Court decisions demonstrate that reasonable restrictions on the right to use and develop air and surface rights do not constitute a taking even though the restrictions affect the owner's right to transfer or sell the property. See id. at 138; Agins, 447 U.S. at 262; Euclid, 272 U.S. at 383-85; see also infra notes 195-208 and accompanying text. Moreover, in Keystone, the Court found that the right to mine coal, and interest in the support estate, were not such valuable rights that to burden them would be a taking. 480 U.S. at 496-99. But see Hodel v. Irving, 481 U.S. 704 (1987) (the Court found that legislation designed to terminate the right of devise and descent of private Indian land effectuated a taking). The Court's decisions demonstrate that some rights in the bundle of rights are more fundamental or essential than others, but none are sacrosanct, especially use and development of the land.

^{188. 256} U.S. 135 (1921).

^{189.} Id. at 158.

lumbia Commission.¹⁹⁰ The Court found that war conditions created a public exigency justifying a public interest for the temporary regulation of rights to use property and to make contracts.¹⁹¹ Moreover, the Court observed that "[p]lainly circumstances may so change in time or so differ in space as to clothe with such an interest what at other times or in other places would be a matter of purely private concern."¹⁹² In short, if as circumstances change, it becomes evident that private parties are neglecting private property concerns in ways detrimental to the public, the state may be justified to restrict property rights to protect the public.¹⁹³

Court decisions have addressed the economic impact of state regulation of private property and the extent of interference with investment-backed expectations. When the owner is not denied all beneficial use, the Court has generally found that diminution in value alone does not establish a taking. 194 In addition to the value of the property, lost income must be considered in determining economically viable use. In Pennsylvania Coal Co. v. Mahon, 195 the Court found that anti-subsidence legislation made it commercially impracticable to conduct profitable mining operations. 196 The Court held that such legislation constituted a taking because it effectively "appropriate[d] or destroy[ed] the owner's right to mine coal".197 But in Keystone Bituminous Coal Association v. DeBenedictis, 198 the Court found a de minimis interference with commercial mining operations since the legislation did not prevent the owner from extracting over ninety-eight percent of the coal from the mine. 199 The Court held that the anti-subsidence legislation did not effect a facial taking.200

^{190.} Id. at 153-54.

^{191.} Id. at 157.

^{192.} Id. at 155 (quoting Holmes, J.).

^{193.} See Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 493 (1987). In Keystone, the Court found a public interest in the state's regulation of subsurface mining. Id. at 487-88. The Court had earlier found that similar legislation did not protect a public interest. Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 413 (1922). The Court in Keystone reasoned, however, that Pennsylvania could not be estopped to permanently restrict mining operations that cause subsidence of surface estates because surface owners did not acquire private rights or interests to protect themselves from a mining operations that was akin to a nuisance. 480 U.S. at 506.

^{194.} See Penn Central Transp. Co. v. City of New York, 438 U.S. 104, 131 (1978).

^{195. 260} U.S. 393 (1922).

^{196.} Id. at 414-15.

^{197.} Id. at 414.

^{198. 480} U.S. 470 (1987).

^{199.} Id. at 501.

^{200.} Id. at 506. See Hodel v. Virginia Surface Mining & Reclamation Ass'n Inc., 452 U.S. 264, 295-97 (1980) (the Court's test for a facial challenge); See also Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 493-502 (1987).

The Court's taking test weighs public and private interests.²⁰¹ In weighing these interests, court's must consider the burden placed upon the owners as well as the benefits bestowed upon them by the government action. The Court's test demonstrates that benefits to the owner flowing from the government action should be considered in determining whether there has been a taking.²⁰² Such benefits not only provide reciprocal advantages to the owner but they mitigate the burden imposed on the owner. For example, in *Penn Central* Transporation Co. v. City of New York, 203 the Court found that New York City's transferable development rights program allowed an owner to transfer rights for the use of air above his building to owner's of nearby buildings and that the transferable development rights were valuable.204 The Court concluded that these "rights nevertheless undoubtedly mitigate whatever financial burden the law has imposed on appellants "205 In Agins v. City of Tiburon, 206 the Court observed that owners subject to land use or zoning ordinances benefit from the assured orderly development,²⁰⁷ and concluded that "these benefits must be considered along with any diminution in market value that the appellants might suffer." As reciprocal benefits flow to the owner from the government action, the weight of the owner's burden lessons and the balance might then tilt toward the public interest.

In summary, as Justice Holmes observed in *Pennsylvania Coal*, "[t]he general rule at least is, that while property may be regulated to a certain extent, if regulation goes too far it will be recognized as a taking." But the Court waited more than a half century to decide whether a temporary regulatory taking requires just compensation. The Court answered the question in the affirmative and finally decided that the government must pay just compensation when a temporary regulatory taking occurs. Specifically, the Court held that

^{201.} Agins v. City of Tiburon, 447 U.S. 255, 261 (1980). See Kramer, When Does A Regulation Become a Taking: The United States Supreme Court's Most Recent Pronouncements, 26 Am. Bus. L. J. 729 (Winter 1989) (discussing the Court's balancing of public and private interests in its most recent cases).

^{202.} See Agins, 447 U.S. at 262; Penn Central Transp. Co. v. City of New York, 438 U.S. 104, 137 (1978); Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 415 (1922);

^{203. 438} U.S. 104 (1978).

^{204.} Id. at 137.

^{205.} Id.

^{206. 447} U.S. 255 (1980).

^{207.} Id. at 262.

^{208.} Id.

^{209.} Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 415 (1922).

^{210.} First English Evangelical Lutheran Church of Glendale v. County of Los Angeles,

"where the government's activities have already worked a taking of all use of property, no subsequent action by the government can relieve it of the duty to provide compensation for the period during which the taking was effective." It is settled that a regulatory taking requires that the government provide compensation, but that principle is neither well tried nor well tested, and limited, like all cases, by its facts.

C. Coordinated Programs and Taking Law

In discussing whether coordinated programs might effect a regulatory taking, the Court's decisions required a discussion of the following factors: the economic impact, interference with investment-backed expectations, and the nature of the government action.²¹² As noted, coordinated programs include three major parts: the regulatory purpose of coordination, forceful obligations, and multi-purpose mechanisms to concurrently control and prevent farmland conversion and soil erosion. In the discussion that follows, the merits of each part of the coordinated program are examined in light of the significant factors and principles of taking law.

482 U.S. 304 (1987). In First English, a church owned a 21 acre tract of land along the banks of Mill Creek in the Angeles National Forest. Twelve of the acres, known as Lutherglen, contained buildings that were used by the church for recreational activities. In February 1978, the Church's buildings at Lutherglen were destroyed by runoff from the denuded hills upstream. As a result of the flooding, the County of Los Angeles passed an ordinance prohibiting the construction, placement, or enlargement of any building within the flood protection area located in the Mill Creek Canyon. The flood protection area included the site of Lutherglen. The Church initiated an action alleging, inter alia, that the ordinance denied it all use of the land and sought damages for inverse condemnation. The trial court struck down the suit because the Church sought only monetary damages as a remedy. The California Supreme Court denied review. The U.S. Supreme Court reversed, and held that monetary relief was an appropriate remedy for a regulatory taking. Id. at 322.

211. Id. at 321 (quoting Rehnquist, C.J.). Moreover, the Court in First English made a significant assumption about the merits of the case and an important observation about the impact of the case on land use planning. First, the Court assumed that a temporary regulatory taking had occurred and it found no need to determine the merits of the taking claim in order to decide whether monetary relief was available as a remedy for a temporary regulatory taking. Id. at 312. The Court found that the California Supreme Court had rejected the appellant's claim solely because it believed that monetary relief was not the appropriate remedy under state law. Id. Second, the Court observed that the discretion of land use policy-makers and planners would be restricted when enacting land use regulations, but it further recognized that the Constitution has always limited the government's exercise of its powers. Id. at 321. First English fosters the concept that land use policy-makers and planners must carefully consider all factors or conditions in the design and implementation of land use programs that might deny an owner all reasonable use. See generally Thompson, Temporary Takings and Farmland Protection: The Limited Import of First Lutheran Church, reprinted in ZONING AND PLANNING LAW HANDBOOK 363 (N. Gordon ed. 1988) (discussing temporary takings and farmland preservation).

212. Penn Central Transp. Co. v. City of New York, 438 U.S. 104, 124 (1978).

1. Regulatory Purpose of Existing Programs and Coordination

Coordinated government programs help establish consistent and prioritized objectives for the use of interdependent economic and natural resources on or near the farm. Coordination requires that state and local agencies, with federal funds and technical assistance, work closely together to implement goals that are consistent with declared policies. Accordingly, coordination requires that state and local governments balance the public interests of the state against the private interests of landowners and users.

Section III discussed the declared policies of both soil conservation and farmland preservation, and Section VII explained how coordinated programs further the declared policies. Generally, farmland preservation policies protect a variety of public interests, such as open space, productive agricultural land, and farming.²¹³ Likewise, soil conservation policies protect a variety of public interests, such as agricultural productivity, water quality, and soils.²¹⁴ Coordination enhances the public interests embodied in both policies by fostering consistent objectives, providing for the consideration of factors off the farm, and promoting cooperative administrative schemes.²¹⁵ The question that remains, however, is whether such declared policies and their coordinated enhancement embody "substantial legitimate state interests." In determining whether these interests exist, the courts generally look to the declared policies or purposes of legislative acts.²¹⁶

The question of whether farmland preservation and soil conservation are legitimate state interests has rarely arisen in the federal courts, but the Supreme Court has found a variety of similar programs that serve a substantial legitimate state interest.²¹⁷ The Court in Agins found that a state policy to preserve open space in an urban setting is a legitimate state goal²¹⁸ and "protect[s] [local] residents

^{213.} See supra notes 12-31 and accompanying text.

^{214.} See supra notes 32-53 and accompanying text.

^{215.} See supra notes 163-70 and accompanying text.

^{216.} See Penn Central, 438 U.S. at 124-27; Nollan v. California Coastal Comm'n, 483 U.S. 825, 838-42 (1987). Federal, state, and local governments have been successful in enacting voluntary land use legislation and regulations to preserve and conserve agricultural land and soils. See generally S. Redfield, supra note 57; NALS—PROTECTION OF FARMLAND, supra note 3; NALS—Inventory, supra note 13; NALS—Case Studies, supra note 15 (these sources list and discuss local and state programs). In addition, the federal and certain state governments have set forth declared policies for farmland preservation and soil conservation. See supra notes 8-52 and accompanying text.

^{217.} See supra note 183-93 and accompanying text.

^{218.} Agins v. City of Tiburon, 447 U.S. 255, 261 (1978).

... from the ill effects of urbanization."²¹⁹ In rural and farm communities, farmland preservation maintains open space for aesthetic purposes and preserves agricultural land and farming in the path of urban sprawl.

Federal policy to reclaim prime farmland is a legitimate federal interest. The Court held in *Hodel v. Virginia Surface Mining and Reclamation Association*, ²²⁰ that the federal government has the authority under the Surfacing Mining and Reclamation Act of 1977, ²²¹ to require surface mine operators to reclaim surface mined land. ²²² Moreover, in *Hodel v. Indiana*, ²²³ the Court held that the federal government has the authority under the commerce clause to require mine operators to restore the topsoil on prime farmland to its original condition after surface mining the land. ²²⁴ The federal courts have recognized the state interest in the need to preserve open space and prime farmland. Likewise, some state courts have found that preservation of farmland is a substantial legitimate state interest, but it would be beyond the scope of this article to discuss these cases. ²²⁵

State and federal courts have heard very few cases challenging the validity of soil conservation policies. In one instance, soil and water conservation has been found to be a legitimate state interest by the Supreme Court of Iowa. The seminal soil conservation cases in that state are *Iowa Natural Resources Council v. Van Zee*²²⁶ and *Woodbury County Soil Conservation District v. Ortner*. 227 In these cases,

^{219.} Id.

^{220. 452} U.S. 264 (1981).

^{221. 30} U.S.C. §§ 1201 (1982).

^{222.} Id.

^{223. 452} U.S. 314 (1981).

^{224.} Id. at 324, 331-33.

^{225.} In *Hodel v. Indiana*, the Court held that the prime farmland provisions under the Surface and Reclamation Act of 1977, 33 U.S.C. §§1201 (1982), did not violate the equal protection and substantive due process guarantees of the fifth amendment, where reclamation requirements to protect prime farmland differ from state to state based upon the "lay of the land." 452 U.S. at 331-33.

Under agricultural land use regulations, a similar situation might arise within a state. When land characteristics and qualities differ from owner to owner and from location to location, land use requirements might appear to be applied arbitrarily across a county or state. But conservation practices and changes in land use are imposed on erodible land because the characteristics of this land makes it susceptible to natural and man-made degradation and conversion. When all land in a capability class or with similar characteristics, such as highly erodible land in production or use, is subject to the same land use requirements, arbitrary land use decisions should be avoided. Moreover, the Court in *Hodel v. Indiana* recognized that land use requirements and exceptions based upon the natural properties or the lay of the land are not necessarily irrational or arbitrary. *Id.* at 332.

^{226. 261} Iowa 1287, 158 N.W.2d 111 (1968).

^{227. 279} N.W.2d 276 (Iowa 1979).

the Iowa Supreme Court affirmed that "[t]he state has a vital interest in protecting its soil . . . "228 As other federal and state courts address that issue, the nature and purpose of soil conservation policies and programs leads to the conclusion that these courts will follow *Van Zee*.

Both farmland preservation and soil conservation programs serve legitimate state interests, and coordination does not change the existing policies of either program. As stated above, coordination enhances the effectiveness of existing programs by making certain that farmland preservation and soil conservation objectives do not counteract each other. Coordination also seeks to prioritize objectives to avoid inconsistent land use decisions, and to foster cooperation among land use and natural resource agencies. Coordination promotes consistency among both programs at the state and municipal levels so that agricultural land use regulations better maintain farmland, farming, and soil and water resources.

2. Forceful Obligations

Legitimate state interests in farmland and soil and water resources have traditionally been enforced through voluntary landowner participation in preservation and conservation programs. Strict mandatory participation, however, is not urged. The better strategy is tying landowner obligations to government assistance and objectives. Owners of erodible land will likely carry a heavier burden than other landowners as they comply with these use restrictions and treatment requirements that follow from individualized planning.²²⁹ Tying

^{228. 279} N.W.2d at 278 (Iowa 1968).

^{229.} Landowners' obligations are based upon the uses, properties, and limitations of the land. The limitations and uses of the land and their threat to the surrounding environment determine the conservation practices and land uses required to comply with land use requirements. When these limitations and uses are not major threats to the local environment, local governments should still impose forceful land use obligations to maintain consistency among land use, natural resource, and environmental objectives. In all instances, some financial and technical assistance should be targeted to landowners to further establish local and state land use and natural resource objectives.

Targeting was established as a federal regulatory mechanism to direct technical assistance, funds, and other resources to critical resource problems. National Program—1982, supra note 8, at 2. Targeting is no longer the preferred mechanism of the U.S.D.A. to implement soil and water conservation policy under the FSA. See NP—U, supra note 8, at 10. Currently, the U.S.D.A. sets objectives and priorities and then directs assistance and funds to critical resource areas under the FSA. The assistance and funds are now provided to critical resource areas with an emphasis on highly erodible land under the FSA to coordinate federal production and conservation policies. Id. Still, targeting can be a method to deliver technical and financial assistance to control and prevent resource problems. See generally J. Neilson, Targeting Erosion Control: Delivering Technical and Financial Assistance (U.S. Dep't of

landowner obligations to government assistance and prioritized objectives create forceful obligations that should establish more order in implementing and enforcing land use regulations while addressing landowner and public burdens.²³⁰ Moreover, forceful soil conservation obligations are necessary to further the objectives of farmland preservation programs directed at erodible land.

Voluntary participation implicitly recognizes that the preservation of farmland and conservation of soil and water are primarily the private concern of landowners and users. The combined losses of farmland, soil, and farming is evidence of a change in both economic conditions and environmental resources that threaten both the farm, and rural and urban ways of life. In most instances, these losses and resulting changes are irreversible and spread far beyond the farm. These changes in circumstances require that a public concern exercise greater authority to protect what has been generally a neglected pri-

Agric., Conservation Res. Rep. No. 33, 1985); H. HOOVER, J. NEILSON, P. WEST, & W. DOMKA, TARGETING EROSION CONTROL: BASEBOOK—METHODS AND DATA (U.S. Dep't of Agric., Conservation Res. Rep. No. 32, 1985) (analyzing methods of targeting financial and technical assistance).

Forceful obligations for the maintenance of historic landmarks have been held to be valid by courts so long as the costs are not burdensome. See, e.g., Maher v. City of New Orleans, 516 F.2d 1051 (5th Cir. 1975) (affirmative maintenance requirements are not unconstitutional); Buttnick v. City of Seattle, 105 Wash. 2d 857, 719 P.2d 93 (1986) (the cost of replacing a parapet was not an undue hardship).

Reclaiming degraded or eroded farmland could impose a costly financial burden upon landowners because erosion covers large land areas and removes both topsoil and subsoil. See supra notes 61-71. Conservation measures and land uses to reduce or control erosion differ from reclamation in that they keep topsoil and subsoil on site rather than replacing it. Lost soil, whether surface or subsurface, cannot be restored except by natural processes over decades, if not centuries. Federal and state governments require reclamation of subsurface mined land.

230. Local governments should require speculators and developers to apply conservation practices when they idle land rather than immediately converting it to commercial, residential, or industrial uses. The government should not be hesitant about requiring non-agricultural users to internalize the cost of applying conservation practices and changes in land use. These owners may be forced to capitalize land conservation and later pass it on to buyers. See infra note 260. The government should still provide technical and financial assistance to all owners who meet eligibility requirements.

The capabilities of the land is not the sole determinant for classifying owner eligibility for participation in land use and natural resource programs. For example, owner classification for participation in the CRP is based upon the duration of ownership of highly erodible land as well as other criteria. During hearings conducted to investigate the impact of the FSA, some institutional landowners expressed great concern about the duration of ownership as a criteria for eligibility. *Management of Inventory Properties, supra* note 49, at 59-61. Some financial institutions, who had recently acquired some cropland, were ineligible because they owned the land for less than three years or held acreage in excess of statutory limits. *Id.* at 59-60. Most of these institutional owners had acquired ownership through defaults of farmers. Not all parties shared the concern of the institutional owners. *See id.* at 128-39 (The American Farmland Trust testified against changing the eligibility requirements).

vate concern. The Court in *Keystone* found that the circumstances surrounding the private interest had changed as the harm to the private interests posed a threat to the public health, safety, and welfare.²³¹ The Court then reasoned that the government was not estopped to protect what was once a purely private concern.²³² In *Block*, the Court observed that the changed circumstances caused by war justified the regulation of the rights to lease and to contract.²³³

A more forceful obligation upon the landowner is now needed to halt the ruinous land conditions caused by private neglect. That private neglect is manifested in the combined losses of soils, farming, and farmland as well as in other environmental damage. The combined losses are permanent and their consequences include dying rivers and shallow soils. As farmers and landowners neglect damage to the land, they pass on to the public the high cost of cleaning up rivers and streams. It seems unwise to maintain as a sole private concern what Congress and most state legislatures have long declared to be a legitimate public interest: the long-term preservation of finite, non-renewable soil and water resources.

Another relevant principle of taking law is the economic impact of the newly imposed requirements and the interference with investment-backed expectation. Forceful obligations require owners and users to comply with these land use requirements that restrict certain uses and require treatments on erodible land in use or production. Owners and users may be required to pay for the installation of soil and water conservation practices and changes in agricultural land uses. Many farmers and users must invest income from current operations to pay for these installations and changes. Many farmers and users are barely making profits, are heavily debt-ridden, or are scarcely making ends meet. Moreover, many farmers may lose profits from existing uses when forced to change to other uses. Many farmers may not have capital to invest in those changes and applications that do not provide an immediate return. The necessity for new capital clearly places an added financial burden upon farmers and investors. 234

Land use regulations, however, may not deny the owner all "economically viable use of his land ..." and financial hardships

^{231.} Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 490-93 (1987).

^{232.} Id. at 487-88; see supra note 193 and accompanying text.

^{233.} Block v. Hirsh, 256 U.S. 135, 157-58 (1921).

^{234.} See infra notes 250-58 and accompanying text (discussing economic conditions and constraints on the farm).

^{235.} Agins, 447 U.S. 255, 260 (1980).

alone do not constitute a taking.²³⁶ Use restrictions and treatment requirements are necessary to effectuate the purpose of the farmland preservation and soil conservation regulations. Such restrictions may change the existing use of erodible land and require the application of conservation treatments. These restrictions and treatments benefit the land and the public because the land remains in agricultural use.²³⁷

When the land is held primarily for speculative purposes in the path of urban sprawl, owners might argue that restricting the use to only agricultural uses would cause a diminution in value and an interference with investment-backed expectations. Diminution in value alone, however, does not effect a taking.²³⁸ In addition, economically viable use does not mean the highest and best use.239 As stated above, restrictions are imposed to effectuate the purpose of the programs. The loss of profits and failure to realize expected value are business risks associated with any business investment. Owners may still purchase land with the reasonable expectation that it will appreciate in value, but when sold the land must remain in agricultural use. The government is not the insurer of risk for failed speculative land deals. Risk assessment is not the public's responsibility. In short, government regulation may restrict the most profitable use of the land, but owners and users of the land still derive many economic benefits from the land.

Tying regulatory obligations to the level and type of government assistance lessens the burden imposed upon many farmers. When land use regulations and ordinances have been challenged as an unconstitutional taking, the Court has considered benefits and rights flowing to owners under these regulations and ordinances as mitigating factors²⁴⁰ and reciprocal advantages²⁴¹ of the owner.²⁴² Government technical assistance and funds are provided to offset part of the

^{236.} See Penn Central Transp. Co. v. City of New York, 438 U.S. 104, 131 (1987); Woodbury County Soil Conservation Dist. v. Ortner, 279 N.W.2d 276, 279 (Iowa 1979).

^{237.} If substantial amounts of land are diverted to less profitable or productive uses, this could adversely affect local social and economic conditions. See Land Diversion, supra note 50

^{238.} Penn Central, 438 U.S. at 131.

^{239.} See supra note 191. Owners do not have the unrestricted right to exploit property interests. Penn Central, 438 U.S. at 124-27.

^{240.} See Penn Central, 438 U.S. at 137. See also supra notes 201-08 and accompanying text.

^{241.} See Hodel v. Irving, 481 U.S. 704, 715 (1987); supra notes 201-08 and accompanying text.

^{242.} See supra notes 176-78 and accompanying text (discussing reciprocal benefits in farmland preservation programs).

cost of changes in uses and installation of treatments. Such benefits and assistance reduce out-of-pocket expenditures for technical assistance, material, and other services. These benefits and assistance mitigate the financial burden imposed upon the owner.²⁴³ The owners of farmland also benefit from farmland preservation and soil conservation programs in the same way as the general public: clean water, clean air, aesthetic qualities, and productive land benefit everyone.

Right-to-farm laws that limit the legal actions that non-farm owners can bring against farmers and owners of farmland limit the rights of the public. The public right to preserve open space and farmland is substituted for its right to bring claims and legal actions to halt noxious farming practices. The farmer's privilege to be free of these claims or legal actions is a lawful benefit that gives farmers added legal protection from expensive litigation that could interfere with farming and farm life. The added legal protection is a reciprocal advantage to each farmer, and thus, reduces any added burden imposed by coordinating farmland preservation and soil conservation programs.²⁴⁴

3. Multi-Purpose Mechanisms

Individualized land use requirements on farms or tracts require that the owner or user enter into a plan for use and treatment followed by compliance with the requirements specified in the plan. Individualized planning, use, and treatment are implemented and monitored through land use controls and techniques discussed in Section V. This Part is not concerned with whether these techniques and controls are valid; it is concerned with whether the enforcement of more than one of these controls and techniques to concurrently advance both the land use requirements of soil conservation and farmland preservation programs effect a taking.

Land use regulations must advance a substantial legitimate state interest.²⁴⁵ Soil and water conservation and farmland preservation are legitimate state interests.²⁴⁶ The land use requirements must further these policies adopted by the legislatures. Multi-purpose mechanisms impose planning, use, and treatment requirements through permits, plans, and other traditional techniques to control farmland conversion and soil erosion. These mechanisms are similar to those

^{243.} Penn Central Transp. Co. v. City of New York, 438 U.S. 104, 137 (1978).

^{244.} See supra notes 201-08 and accompanying text.

^{245.} Agins v. City of Tiburon, 447 U.S. 255, 260 (1980).

^{246.} See supra notes 12-30 and accompanying text.

used in agricultural zoning and districting.²⁴⁷ Unlike many zoning and districting programs, however, participation is not voluntary, and each plan is individually tailored to land capabilities and land use standards. Land use requirements for use and treatment are applied based upon land capabilities and community land use objectives.

Judicious planning would insure that farmland not suitable for conservation or preservation would not be subject to soil conservation or farmland regulation. A lack of proper planning and analysis of land capabilities could lead to the enforcement of soil erosion requirements on non-erodible land and farmland conversion restrictions on nonproductive land. Requiring soil conservation treatments on non-erodible land would unnecessarily burden the owners and users and would unquestionably effect a taking. Similarly, preserving highly erodible farmland for cropland uses could burden the owner because runoff from such land may severely reduce water quality and such land may not be practical to farm.248 In both instances, restrictions on use do not effectuate the purposes of the program. This should not discourage land use policy-makers from requiring good land management practice on the better and prime farmland. With careful analysis, individualized planning should further the purposes of controlling soil erosion and farmland conversion.249

4. Summary of Taking Analysis

States have exercised their police power to establish land use regulations to preserve historic sites, to control urban growth, preserve

^{247.} See supra note 57 and accompanying text (reviewing farmland preservation programs that require the application of soil and water conservation practices).

^{248.} Soil capability is an essential factor in land use decisions to conserve or preserve farmland. Soil limitations that severely limit or reduce productivity could prevent farmland from being preserved under a farmland preservation program. Smeja v. County of Boone, 34 Ill. App. 3d 628, 339 N.E.2d 452 (1975) (agricultural zoning was not allowed on part of farm that included submarginal soil because the restrictions imposed by the zoning ordinance did not advance a legitimate state interest). Factors other than productivity that should be considered before a decision is made not to preserve a tract of land include the environmental harm from runoff, the economic impact, and the social consequences.

In many instances, unsuitable land use and inadequate treatments are the result of poor land management decisions. Poor land management decisions on farmland with slight-to-moderate soil limitations should not be grounds to declare farmland preservation restrictions invalid or to refuse to preserve the land. See Eck v. City of Bismarck, 302 N.W.2d 739 (1981) (soil quality or capabilities would produce average to above average yields). See generally Thompson, supra note 211, at 372-73, nn.27-30 (other citations on enforcing farmland preservation policies on unsuitable and improperly managed land).

^{249.} See supra note 185 and accompanying text.

open space, and control mining. Police powers have been validly exercised even when these land use regulations benefit the holder of a different property interest, impose a financial burden on the landowner, burden the owner's economic or investment expectations, and restrict its use. Therefore, it is evident that federal and state courts have decided that states can exercise their police powers to create land use regulations to protect environmental, social, aesthetic, and economic qualities. Consequently, carefully formulated land use regulations that impose forceful obligations for land use and resource conservation should be held by state and federal courts not to effect a taking.

Constitutional limitations are not the only factors that might impede the coordination of agricultural land use policies and programs. The Court's test for a taking requires a careful weighing of the owner's interests and the public's concerns in the circumstances of each case. Section V, Part A discussed the changing nature of the property interests of farmers and farmland owners, but in that discussion the broader public concerns were only touched upon in explaining the conflicting policies for agriculture and the farm. These conflicting policies were the result of various public concerns that arose regarding then existing social, economic, and political conditions and problems.

Such conditions and problems were threatening to constrain farming operations and restrict farmland use, which in turn would affect urban and rural markets and communities. Consequently, such conditions and problems became broad public concerns. These economic, social, and political conditions remain significant elements in coordinating agricultural land use and resource objectives and in implementing programs that further these objectives. What follows is a discussion of how such conditions could impact coordination between land use and natural resource programs.

IX. ECONOMIC, SOCIAL, AND POLITICAL CONSTRAINTS IMPACTING COORDINATION

Many rural and farm communities need farming and agribusinesses to help sustain the rural and farm ways of life. Agricultural land use programs and regulations clearly influence farming. Land use regulations that alter use or divert the land from production may threaten local economies and the social infrastructure. When these regulations do not recognize urban and rural differences, they may inadvertently foster rural-urban political conflicts. In short, land use regulations do not operate in a vacuum. Economic, social, and polit-

ical conditions must be evaluated and their impact considered as a part of agricultural land use decisions.

A. Economic Conditions And Policy Issues

Small to mid-sized family farms²⁵⁰ and rural and farm communities²⁵¹ are struggling to maintain their economic existence.²⁵² The decline in farm income,²⁵³ assets,²⁵⁴ and number of farms²⁵⁵ are

"Total farm debt, excluding operator households, declined for the fourth consecutive year from \$155 billion to \$145 billion. Real estate liabilities fell to \$81 billion in 1987 from \$88 billion... Non-real estate debt declined to \$62 billion from \$67 billion." 1987 NATIONAL SUMMARY, supra, at 6. Debt to asset ratio increased 29% from 1979 to 1984. Richard, supra note 251, at 25. The debt to asset ratio was 22.5 in 1984. By the end of 1987 the debt to asset ratio had declined to 20.1. Id. at 58.

254. "Farm land values have fallen by more than 30 percent since 1981. In the four core states of the corn belt, the average acre of farm land is worth less than half of its 1981 value." USER'S ADVISORY BOARD, supra note 251, at 25. "[In 1986], the drop in farm values resulted from low income return to capital invested in agriculture, the difficult cash flow positions of many heavily debt-ridden farmers, and high real interest rates." U.S.D.A., Economic Indicators of the Farm Sector: National Financial Summary 1986 6 (Economic Research Service, 1987) [hereinafter 1986 National Summary]. Moreover, "the real value of the agricultural tax base has shrunk by 20 percent or more since 1982" User's Advisory Board, supra note 251, at 25. Direct federal payments constituted 36% of net farm income in 1987 compared to 32% in 1986. 1987 National Summary, supra note 253, at 4.

Several experts and officials have proclaimed 1988 as a good year for many farmers, but they admit that farmers have not fully recovered. See N.C. farmers urged to use caution in '89, The News and Observer, Jan. 29, 1989, at 17J, col. 5 (farmers should consider changes in world markets, government set aside programs, and crop production in other regions when deciding 1989 production goals).

255. Nearly 20% of farms which existed in 1980 are gone. The number of agricultural workers and farms are still declining. 1980 Appraisal—Part II, supra note 2, at 11, (citing General Accounting Office, Changing Character and Structure of American Agriculture (1978)).

^{250.} See supra notes 142-44 and accompanying text.

^{251.} See L. Waterfield, Conflicts and Crisis In Rural America 87-100 (1986) (discussing the impact of politics, culture, and economic policy on rural America); Users National Agricultural Research and Extension Advisory Board, Appraisal of the Proposed 1988 Budget for Food and Agricultural Sciences—Report to the President and Congress 25, 26 (1987) (report to the President on the state of rural and farm America) [hereinafter Users Advisory Board]; Paarlberg, Rural America, State Legislatures, Mar.-Apr. 1988, at 34 (social and economic conditions of farm and rural communities); Richard, Rural America Needs a True Coalition, State Legislatures, May-June 1988, at 30 (response to Paarlberg's comments).

^{252.} See infra notes 253-58 and accompanying text.

^{253. &}quot;Net farm income, measured in constant 1982 dollars, declined by 64 percent between 1979 and 1983. During the 1980's, net farm income has averaged 40 percent less than that of the 1970's." USERS ADVISORY BOARD, supra note 251, at 25. The net farm income, however, has been increasing since 1984 in both constant 1982 dollars and nominal dollars. U.S.D.A., Economic Indicators of the Farm Sectors: National Financial Summary 1987 7, 8 (Economic Research Service, 1988) [hereinafter 1987 National Summary].

[&]quot;The prospect for the family farm is dismal for the rest of the 1980's and into the 1990's.

evidence of economic problems on the farm and in rural America. Any government intervention that imposes a greater financial burden and more economic uncertainty upon farmers and the rural sector could hasten conversion, idleness, and soil erosion. Federal and state regulatory programs should provide more financial assistance or at a minimum maintain current levels of direct financial support to implement changes in land use and conservation treatments. Federal, state, and local governments are urged to provide more indirect financial support, such as tax deductions and credits and differential assessments for farmland preservation and soil conservation. Regulatory programs, however, must limit financial support, such as cost-sharing and rent, when owners and users fail to comply with land use regulations. Direct and indirect financial support will be necessary until a new conservation ethic is fully accepted by owners as cost-effective and wise land management.

Moreover, where capital investment in conservation treatments and changes in land use result from mandatory land use regulations, the government is urged to make improvements to the cultivable qualities of the land a factor in establishing the market value of erodible land in use.²⁵⁹ A regulatory scheme that requires conservation land uses and practices on substantial amounts of agricultural land would represent a structural change in the agricultural land market.²⁶⁰ Federal and state governments could hasten the recognition of

Government policies . . . hasten abandonment of the mid-size and small operator " J. Opie, supra note 12, at 188. "If present trends continue, the failure of the small independent farmer will take place on a massive scale by 1990 " Id. at 189.

^{256.} See infra note 264.

^{257.} See NP-U, supra note 8, at 15-16. Federal funds are limited but are not entirely restricted to federal objectives, and can be used to support state objectives. Id.

^{258.} See supra notes 91 & 103 (discussing tax incentives for soil and water conservation).

^{259.} See supra notes 51 & 105. See also 1987 NATIONAL SUMMARY, supra note 253, at 36-37 (discussing that the annual capital investments and maintenance expenses for soil conservation structures and facilities are still declining).

^{260.} The cost of the conservation treatment and land use changes must be included in the value of farmland when the land is appraised and sold. Farmers and speculators, alike, must gain from the application of practices and land uses that conserve the soil and preserve uses. As a result, farmers and landowners might be more willing to apply conservation practices and to change land uses. One possible effect is that the cost of housing and development could increase as the costs of past conservation practices and land use changes are capitalized in the land value, when farmland is later sold for agricultural and non-agricultural development.

Consumers may eventually pay for poor conservation and lower productivity in higher food prices. See J. OPIE, supra note 12, at 183. The public is already paying an enormous amount for the cleanup of rivers, lakes, and streams that were polluted by agricultural runoff. Capitalizing the cost of conservation practices and land use changes should be factors in the appraisal of farmland in order to stimulate conservation. See infra note 290.

these structural changes by taking measures such as requiring explicit consideration of conservation land uses in appraisal reports supporting agricultural loans.²⁶¹ If the value of agricultural land reflects the capital invested in improvements, the owners receive a return on invested capital when the land is sold. New owners would be required to invest less capital to prevent erosion or other types of degradation. This would hopefully stimulate greater investment in land use changes and conservation practices. In the meantime, direct and indirect financial support would be needed to reduce the financial burden to landowners and to encourage investment in land use management and conservation treatments.

B. Social Conditions And Policies

The rural-urban dichotomy²⁶² and the rural sector's decline have the potential to create social instability and undermine the status of American farmers.²⁶³ Land use and resource conservation regulatory programs that exacerbate farm and rural economic conditions could cause further decay in the social infrastructure.²⁶⁴ A decline in the

^{261.} Moreover, some conservation groups are urging Congress to enact legislation that would require financial institutions to condition land sales on the buyers agreeing to comply with conservation requirements. *Management of Inventory Properties*, supra note 49, at 136 (testimony by Thomas Kuhule, an economist for American Land Trust). This view is not shared by some financial institutions. *Id.* at 59 (testimony of Charles Miebe, Chairman of the Board, Farm Credit Services of St. Paul).

^{262.} See generally L. WATERFIELD, supra note 251, at 87 (summaries of conflicts and disputes between urban dwellers and rural landowners and farmers); Heimlich, Agriculture and Urban Areas in Perspective, in Our American Land 141 (W. Whyte ed. 1987) (compares and contrasts the land, people, and land uses in urban and rural areas).

^{263.} The status of farmers and agribusiness persons has greatly changed during the 1980's. See supra notes 251-61. In the past, the small independent farmer was the focal point of national agricultural policies. J. OPIE, supra note 12, at 191. Now, national policies and programs support the large scale centralized farm operations and agribusiness. Id. at 186-88. See supra notes 142-44 and accompanying text.

^{264.} If land use and resource regulations cause a further decline in the agricultural tax base, land values, and farm assets, the implementation of these regulations could create more hardships on and off the farm. See supra note 254. These regulations could force landowners to remove land from production until financial resources are available to invest in land use and conservation practices and facilities. See supra notes 49-51. Some farmers could even be forced to seek additional debt to finance conservation practices and land uses which might make a bad situation worse. See supra note 253.

In contrast, land speculators might be forced to invest in land in production so that they could earn an adequate return on capital, and others might completely forego purchasing land for non-agricultural uses. In short, the existing social and economic conditions of many rural and farm communities require that careful thought be given to implementing land use regulations for farmland. See, e.g., S. Redfield, supra note 57, at 109; Richard, supra note 251, at 248; Land Diversion, supra note 59, at 1-2.

economic base could displace part of the rural population, ²⁶⁵ reduce the standard of living, ²⁶⁶ and reduce necessary local government services. ²⁶⁷ First, as farmers migrate to seek employment away from the farm, ²⁶⁸ they lose independence and standing long associated with farm ownership. ²⁶⁹ Second, aesthetics and recreation are social factors that are dependent upon good water quality and open space. ²⁷⁰ Urban dwellers see these qualities as important natural resources, but the farmers see them as part of land and production. When farmers and owners cause reduction in surface water quality and usable open space, urban dwellers are harmed. Third, as farmers invest more in conservation treatments and land use changes, the farmers might be forced to pass on the additional cost to consumers through higher food prices. ²⁷¹ This is inconsistent with the current federal

Additional comments by Richard illustrate the interdependency of farming and other local businesses:

The rural picture is indeed changing. For every seven farms that fail, a small rural business fails. In my township in 1980, there were 10 full-time farms. Now for various reasons there are four remaining. All but one have substantial off-farm income. In my county since 1980 we have gone from four car dealers to two; from four farm equipment dealers to two; from three bulk fertilizer dealers to two; from three hospitals to two. Gone are the related jobs. Here with us is the related poverty and social upheaval.

Id.

267. As farm income and the tax base decline, local governments could have less revenues to finance government services. See supra notes 253-55. If more federal or state support is not made available, rural and farm communities will suffer a reduced standard of living. See supra notes 265-66.

268. See supra note 265.

269. J. OPIE, supra note 12, at 186.

Government farm programs over the past fifty years centered on keeping resident farmers in safe ownership of their land. Even today it is not this stated policy that has come under severe criticism but its soaring cost, from \$1 billion in 1980, \$15 billion in 1985, and \$30 billion in 1986.

Id. See also supra note 255 (discussing how farm and farm population are declining). More farm families are working off the farm to supplement their farm income. Supra note 265.

270. See NP-U, supra note 8, at 19.

271. J. OPIE, supra note 12, at 199. See supra note 260 and accompanying text.

^{265.} A decline in farming and agribusiness in a community could cause the emigration of some of the younger population. As agribusinesses and farms fail, farmers and other workers would likely leave the farm and rural communities to seek employment elsewhere. See generally L. WATERFIELD, supra note 251, at 1 (discussing the movement of the American population from rural communities to urban areas).

Income for farmers from non-farm sources has increased by approximately 30% from 1980 to 1987. More farmers and their families are seeking work off the farm to support their households and farms. See 1987 NATIONAL SUMMARY, supra note 253, at 13. See also supra note 255 (reviewing how farms and farm populations are declining).

^{266. &}quot;'Farm' and 'rural' may not be totally synonymous, but to separate them completely is to deny any relationship between the chicken and the egg. A decline in farming means business failure and the combination means unemployment and poverty in rural America. The package cannot be separated or glossed over . . . "Richard, supra, note 251, at 30.

policy to keep food prices as low as possible. The public might be forced to pay more of the costs of maintaining soil and water quality if food prices are to remain artificially low. Fourth, land use and conservation regulations imposed by urban centers upon rural areas might further divide rural and urban communities along agricultural and non-agricultural lines.²⁷² In short, a lower social status for the farmer, higher food prices, less open space and recreational waters, and rural-urban conflicts are potential social problems and conditions that must be considered in land use planning. Changes in the regulatory scheme must create more stability in farming and farmland to maintain or provide better social conditions for farmers and for rural or farm communities.

C. Political Or Governmental Support And Responsibilities

The ability of federal and state governments to provide technical assistance and financial benefits and incentives may be severely limited as budget deficits and competing programs reduce the availability of funds for direct and indirect government support for land use management.273 Federal funds are available under existing water quality programs²⁷⁴ and soil conservation programs²⁷⁵ to reduce soil erosion and control agricultural runoff. The federal government strongly encourages state and local governments to provide more funding for soil conservation so that federal funds can be used to protect highly erodible cropland and control agricultural runoff.²⁷⁶ Moreover, federal officials are encouraging states to establish land use and management objectives and priorities on most agricultural land, except cropland.²⁷⁷ Other political issues include the reticence of state governments to impose forceful agricultural land use regulations, 278 potential conflicts between rural and urban sectors, 279 and conflicts and inconsistencies with federal farm production, and foreign and food policies.²⁸⁰ Political issues are major obstacles in the

^{272.} See supra notes 251 & 262-66 and accompanying text.

^{273.} NP—U, supra note 8, at 7. For a discussion of government financial assistance and payments to farmer, see supra notes 105 & 253.

^{274.} NP—U supra note 8, at 11-14. For a discussion of programs to control non-point source pollution, see supra note 102.

^{275.} NP—U, supra note 8, at 15-16. "State and local funds for cost sharing programs have increased from about \$50 million in 1983 to \$159 million in 1987 (constant 1987 dollars)" Id. at 16.

^{276.} See generally id. at 10 (CP does not apply to most agricultural land).

^{277.} Id. at 15-16.

^{278.} See supra note 98 and accompanying text.

^{279.} See supra notes 250-72 and accompanying text.

^{280.} See supra notes 121-47 and accompanying text.

design and implementation of land use regulations on agricultural land because policy conflicts, financial assistance, resource planning, and the enforcement of regulations may shift with changes in political philosophies.

Economic, social, and political constraints must be considered in formulating coordinated programs that regulate farming and use of farmland and soils. Considering these constraints in public policy-making and decision-making heightens awareness about the flexibility and cooperation within regulatory schemes that administer programs to regulate the use and treatments of agricultural land. Awareness about such constraints leads to broader public concern²⁸¹ and can reveal the integral role these constraints play in shaping policies and decisions for the use of interdependent economic and natural resources.

X. COORDINATION OF EXISTING PROGRAMS AND SCHEMES

The earlier Sections explained that coordination is possible among land use and natural resource problems on and near the farm. Section VI outlined an approach to coordination of agricultural land use programs that addressed the need for protection of interdependent natural and economic resources²⁸² in the face of mounting water quality, farmland, and soil losses. It is beyond the scope of this arti-

^{281.} See, e.g., Agricultural Productivity and Environmental Quality, supra note 1, at 292-93; Wilkinson, supra note 159, at 310.

^{282.} In Vanishing Farmland, Redfield proposed that regulatory controls and techniques be integrated to improve effectiveness in planning and implementing the farmland preservation strategies and to make agriculture more secure. S. Redfield, supra note 57, at 95. Redfield recognized the need to protect against both conversion and soil erosion and to consider the social and economic constraints facing farm America. *Id.* at 108. Redfield's approach and proposal is thorough.

When erodible land is preserved, soil and water conservation become necessary measures and should be accorded the same concern as production and farming. Inadequate soil and water conservation measures and practices threaten both urban and rural ways of life. The off-site harm of soil erosion reduces water quality and aesthetic values, and the on-site harm reduces productivity and the economic base. The integration of preservation techniques and controls is only the beginning. What is most needed is coordination of programs and policies for the use and conservation of American farmland and its soil and water resources.

For policy and program analyses of the soil erosion problem in America prior to the FSA, see S. BATIE, supra note 10. Batie discusses the soil erosion problem, its man-made causes and their effects, government policies and programs, and solutions to the problems. But soil erosion is only one of many problems on American agricultural land. NALS—DEGRADATION, supra note 1, at 9. Other soil limitations, such as wetness and shallowness, limit land uses or require specific practices or land uses to prevent degradation of soil and water resources. See supra note 61. On erodible and other degradable land, more effective land use and natural resource planning regulations are needed to prevent a loss of productive land, improve surface and ground water quality, and preserve aesthetic values.

cle, however, to develop a detailed land use program and scheme reflecting adjustments and changes in the structure, authority, and responsibilities of state and local land use and natural resource agencies.

Coordinated agricultural land use programs further agricultural land use and environmental policies. Coordination includes regulatory provisions, interagency cooperation, forceful individual land use obligations, and regulatory mechanisms for individualized farm and tract planning, use, and treatment. Forceful land use obligations imposed upon owners of erodible land in use or production is most crucial in meeting individualized land use requirements. Cooperative regulatory schemes develop consistent goals and objectives that avoid competition among land use and natural resource agencies and programs that regulate interdependent economic and natural resources. These schemes do not change the roles of land use and resource agencies or courts in the administration of land use and resource programs. Finally, multipurpose mechanisms identify land uses and treatments that control the combined losses of soils, farmland, and farming on individual farms and tracts of land. These mechanisms group land use and resources controls and techniques by applying existing land use, production, and environmental regulatory standards. The concept of coordination does not give preference to soil and water conservation over farmland preservation or water quality; that priority is a state and local policy choice from which land use and resource decisions follow.²⁸³

Mechanisms and requirements that are proposed to coordinate regulatory schemes and programs are similar to mechanisms and requirements currently applied in some federal and state

^{283.} The purpose of the concept is to make certain that natural resource and agricultural land use policies and programs for production or farming do not protect uses that degrade and erode farmland. The concept promotes land use regulatory schemes that can be implemented to control the use of the land, the application of practices that facilitate use, and practices that protect water quality and aesthetic values. The concept proposes that agricultural land use programs specify: 1) agricultural uses; 2) land use or production, (e.g., corn, soybean, or wheat); and, 3) conservation land use and practices, (e.g., pastureland, forest land, minimum tillage, terracing, and strip cropping).

The concept promotes coordination between farmland preservation, soil conservation, and water quality programs by requiring that agricultural land use programs be applied through schemes and mechanisms that concurrently protect land use, production, and environmental quality. To achieve coordination, these schemes and mechanisms should foster land use and natural resource interagency cooperation in setting objectives and priorities. To make objectives achievable in light of existing ineffective programs, the concept recognizes that land use obligations should be more forceful and should require individualized farm or tract land use and natural resource planning. In the absence of coordination, forceful obligations, and individualized planning, it is doubtful whether existing inconsistent land use or natural resource programs could prevent the combined losses of farmland and soil and water resources that result from the natural interdependency of farmland, soil, and farming.

A. The Needs and Risks Associated with Forceful Obligations

Various local and state land use and natural resource agencies have authority to create and enforce land use regulations for soil conservation and farmland preservation.²⁸⁴ For the most part, however, governments have chosen to make participation voluntary²⁸⁵ even when the courts have held that governments can exercise police power to impose forceful obligations for land use on a broad range of land.²⁸⁶ It stands to reason that police power could be used to impose forceful land use obligations on erodible land in production or use while that land is provided local or state land use protection, benefits, and incentives in order to better maintain farming, farmland, water quality, and the rural way of life.²⁸⁷ This would simply tie forceful obligations to the availability of government assistance, incentives, and prioritized objectives and goals.

The power to impose forceful obligations is not estopped even when erodible land is idled or awaiting conversion or pending transfer to another party.²⁸⁸ Forceful obligations are not based on landowners' acceptance of regulatory benefits and incentives but rather on government objectives and goals. For some land developers and speculators, forceful obligations will increase the costs and economic risks of agricultural uses or conservation treatments that are inconsistent with the owner's contemplated non-agricultural development.²⁸⁹

Forceful obligations are imposed to conserve the soil and to protect water quality that is continuously harmed by agricultural runoff. For some owners, these obligations would increase the economic and legal cost of holding and using the land. Many land developers and speculators would have to resort to a real estate market that valued the improved condition of conserved land to recover unexpected costs for land use and treatment.²⁹⁰ Local and state governments

soil conservation and farmland preservation policies and programs. See supra note 57. See also 16 U.S.C. §§ 3801-3838 (1988) (FSA requirements and mechanisms to coordinate federal production and soil conservation policies); NP—U, supra note 8, at 23-24 (discussing federal efforts to coordinate production, income, and conservation programs).

^{284.} See supra note 170.

^{285.} See supra note 98 and accompanying text.

^{286.} See supra notes 185-86 and accompanying text.

^{287.} See supra notes 229-44 and accompanying text.

^{288.} See supra note 3 and accompanying text.

^{289.} See supra notes 259-61 and accompanying text.

^{290.} See King & Sinden, Influence of Soil Conservation on Farmland Values, 64 Land Econ. 242 (1988). King and Sinden investigated the relationships between in-farm soil conservation practices and farmland values in New South Wales, Australia, but they cited studies

should provide whatever benefits and incentives are available, but should not minimize obligations otherwise imposed on land developers or investors. Developers and investors must look to the real estate markets for economic survival. These markets should efficiently balance the supply and demand for non-agricultural land.²⁹¹ Local and state governments can better reduce land degradation and improve water quality when land use obligations for agricultural land are imposed on all users and owners regardless of their purposes for using or owning the land.

B. Establishing Coordination Among Land Use Programs and Administrative Agencies

Mechanisms must be established so that state and local governments can effectively regulate erodible land in use and production

conducted in the United States. *Id.* at 243. King and Sinden's investigation of farmland markets revealed that land markets conserve the soil in a part of New South Wales. *Id.* at 254. "The market has clearly recognized land condition, with better land selling for higher prices . . . in ways other than, and in addition to, expectations of immediate wheat yields." *Id.* But American studies have failed to find any relationship between soil conservation and farmland prices. American studies generally agree that soil conservation practices are not capitalized into the value of farmland prices. *Id.* at 242 (citing Erwin & Mill, *Agricultural Land Markets and Soil Erosion: Policy Relevance and Conceptual Issues*, 67 Am. J. of Agric. Econ. 938, 942 (1985); Barrows & Gardner, *The Impact of Soil Conservation Investments on Land Prices*, 67 Am. J. of Agric. Econ. 943-47 (1985); Rausser, *Economics of Soil Conservation from the Farmer's Perspective: Discussion*, 62 Am. J. of Agric. Econ. 1093-94 (1980) (discussing land values that do not reflect soil quality encourage farmers to ignore resource conservation)).

The cross-compliance or conservation compliance provision, 16 U.S.C. § 3811 (1988), could eventually lead agricultural land markets to realize that the improved condition of conserved land should be a factor in appraising the value of land. The improved condition of the land sustains or improves productivity, limits damages off the farm, and maintains eligibility for government programs. These benefits of conservation land use and practices limit the investment required by new owners or users who in turn are not required to make an investment to comply with land use requirements. These benefits and the need for less of an investment should have a monetary value to the new owner or user that should be included in the price of the land.

Private efforts to require cross-compliance for private loans to farmers and landowners could have the same results as federally mandated compliance for federal loans and subsidies. Government funds, however, should be made available for changes in land use and the application of conservation practices if cross-compliance is made a requirement for private loans. For a more extensive list of citations on agricultural land markets in the United States, see King & Sinden, supra, at 254.

291. Many conservation practices and land uses do not later prohibit the development of farmland for industrial, residential, recreational, or commercial developers. In some instances, vegetation cover, grading, or drainage systems can be used as a part of the man-made landscape for urban and rural non-agricultural uses. These practices and land uses are generally man-made measures to improve and protect qualities of the land. These practices and land uses could make much erodible land more suitable for non-agricultural uses by maintaining surface and environment qualities.

when forceful obligations are imposed. Erodible land uses support rural and farm communities but also degrade the land, soil, and water. Enforceable land use regulations restrict the property rights and increase the costs of the landowner for the benefit of the public. Accordingly, it is necessary for local and state governments to avoid inconsistent land use requirements and to gain greater public support for enforceable and restrictive regulatory programs. As landowners and farmers are subjected to broader enforceable obligations, land use and natural resource agencies must coordinate existing regulatory programs.

1. A Cooperative Administrative Framework

Effective coordination will require new regulatory procedures. In turn, these procedures will require land use, natural resource, and other agencies to cooperate on state and local land use objectives and goals. New regulatory procedures are needed to achieve coordination because of the broad impact of land use goals and objectives on local farmland. At a minimum, land use, natural resource, and other agencies should meet to review land use and soil conservation objectives. Thus, regulatory schemes must not only strictly regulate farmland susceptible to soil erosion and conversion, but also remain flexible enough to coordinate programs that protect both interdependent resources and prevent the combined losses of these resources.

The Soil and Water Conservation Districts (conservation districts) and municipal Planning Boards and Commissions (planning boards) are only two of the many land use and natural resource agencies at the state and local levels of government whose regulations and decisions affect the use of farmland. Land use and natural resource agencies, especially conservation districts, are reluctant to create and enforce forceful land use obligations.²⁹² For several decades state and local governments and a few conservation districts have had the authority to establish and enforce forceful obligations for agricultural land use.²⁹³

The coordination of regulatory programs and schemes would not alter the authority and functions of state and local land use and natural resource agencies to plan, adopt, implement and enforce regulations. Coordinated regulatory schemes would require the expertise of

^{292.} See generally supra notes 98-102 and accompanying text (discussing state and local soil and water conservation programs and controls).

^{293.} See supra notes 99-100.

urban land use and natural resource agencies to set objectives to protect interdependent natural and economic resource uses and to prevent combined losses on and off the farm. Coordination would foster the cooperative participation of the rural and urban governmental units that are affected differently by land and water degradation.

Coordination would require urban and rural land use, natural resource, tax, production, credit, and education agencies to exercise their administrative authorities and functions in a cooperative and prudent manner.²⁹⁴ Planning boards and other land use agencies must develop greater expertise in planning for the use and control of soil, water, and farmland resources. The planning boards must use their information gathering authority, where permitted by local laws, to better understand how local urban growth and needs affect farmland uses and soil and water quality. On the other hand, the conservation districts must be more active in enforcing land use regulations and in gaining an understanding of rural and urban natural resource needs.295 The conservation district must remain willing on the local level to certify land capabilities, monitor compliance, and if necessary, supervise corrective actions. Finally, local governing boards and other agencies must be willing to regularly consult with planning boards and conservation districts about the potential influence and

^{294.} American farms and agribusinesses are profit making centers, but national and state policies and programs have altered the economics of these centers. A large amount of farm income, especially cropland operations, is subsidized by government incentives and payments for production and land diversion. 1987 NATIONAL SUMMARY, supra note 253, at 4. In 1986, direct government payments were 36% of net farm income. Id. The impact of government subsidies and programs for conservation and production requires that the land use planners understand more than land use. There is an incipient need to understand the role of the state and federal governments in farm operations. Land use and natural resource planning for agricultural land has to consider the impact of federal programs on land uses, water quality, and farm operations.

Land use and resource objectives on the farm for soil and water conservation are not the same as cultivation or production goals. Many production practices do not necessarily conserve the soil. See supra note 10. Some crops and uses are most erosive when the crops are cultivated on erodible land. Second RCA Appraisal, supra note 2, at 16-17. The ineffectiveness of existing programs make it evident that land use programs on or near the farm should be designed and staffed to regulate both production and use of farmland and the protection of soil and natural water resources. See NP—U, supra note 8, at 23-24; R. COUGHLIN, supra note 1, at 2; Arts & Church, supra note 1, at 592-95.

^{295.} See R. COUGHLIN, supra note 1, at 2; Sampson, Dedication in the Face of Challenge, 44 J. Soil & Water Conservation 103, 104 (1989); Arts & Church, supra note 1, at 594; Durban, Conservation Districts in Transition, 43 J. Soil & Water Conservation 378, 378 (1988). See also supra note 99 (conservation districts are changing to meet demands, but the FSA has created conflicts).

impact of other programs, such as tax, credit, and production programs, on local and state agricultural land use objectives. In turn, these other agencies must understand how their goals relate to the agricultural land use objectives and whether other agency goals counteract or support land use objectives.

The following illustrates the need for coordination: State and local governments allow different property assessments of erodible farmland in use or production and protect use of such land under various right-to-farm laws. These differential assessments and right-to-farm laws allow agricultural runoff that is wholly or partly responsible for reducing water quality that in turn results in the killing of fishes, ovsters, and clams in local rivers and sounds. Thus, differential assessment and right-to-farm laws indirectly finance and encourage the growth of farming, or one food producing industry, while helping to destroy other food producing industries. Consequently, additional tax dollars are spent and more laws are enacted to clean rivers, grow more fish, and keep fishermen on the dole. When governments make inconsistent policies and decisions that encourage the agricultural industry to destroy the fishing industry, they should do it knowingly and not inadvertently. In short, government policies encourage the destruction of waters that produce the fish, and lands that produce the loaf. Eventually fishermen and farmers will have neither fish nor loaf to feed the multitudes. At that time, coordination of existing soil and water conservation and farmland preservation programs will be meaningless. To avoid that end, coordination must be considered now.

2. Judicial Review and Enforcement

Coordination does not change the structures or functions of conservation districts, planning boards, or other agencies. In formulating its objectives and goals, each agency must be mindful of what policies are being advanced when land use requirements are enforced on individual farms and tract lands. It is well settled that courts invalidate land use requirements that do not effectuate a legitimate purpose.

Forceful obligations and land use requirements relating to use and treatment are designed to restrict certain farming practices on certain farmland. These requirements rest upon the soil limitations and land capabilities of the farm and on other surrounding environmental conditions. Before farmers are asked to comply with these requirements, state and local governments should provide each farmer an opportunity for an individual administrative technical review of the use restrictions and treatments required for that farmer's land or farm.

Aggrieved landowners and farmers must be given the opportunity to seek judicial review in local courts. The courts must review the land capabilities and environmental conditions of the individual farm to determine whether they necessitated the land use requirements set forth by the local land use and natural resource agencies. The courts should determine whether use restrictions and treatment requirements allow erodible land in use or production to be productively managed and whether such requirements are consistent with local comprehensive land use plans.

State and local governments must exercise their police power to enforce land use requirements under coordinated programs. They must give a specific agency the authority to issue administrative orders requiring compliance with land use requirements.²⁹⁶ If owners and users still fail to comply, that agency must have the authority to seek court orders which enjoin further soil degradation and compel compliance with conservation land uses and practices.²⁹⁷ Coordinated programs require enforcement provisions, otherwise forceful obligations would be a sham. Enforcement of individualized land use requirements is necessary to establish better resource planning and to protect resource use.²⁹⁸

^{296.} The local government should have authority to issue administrative orders requiring the planning for and the application of conservation practices or land uses. See Iowa Code Ann. § 467A.47 (West 1971 & Supp. 1989). Such orders should be issued only after a notice and hearing and when a complaint is filed by a Conservation District or a member of the public. Id. The order should also require the landowner to install conservation practices only if government cost-sharing is available to pay for 50% or more of the cost. See generally id. § 467A.48; 16 U.S.C. §§ 3801-3813, 3831-3836 (1988).

^{297.} When a landowner fails to comply with forceful land use obligations, the local government should have the power to seek a court order to compel compliance. See Iowa Code Ann. § 467A.49-50 (West 1971 & Supp. 1989). If local government cannot enforce soil conservation and farmland preservation regulations, then forceful land use obligations are pointless. Local government should enforce land use obligations on the farm and develop schemes and mechanisms to insure that landowners and farmers remain in compliance with these obligations.

Existing soil erosion problems prove that farmers and landowners do not voluntarily apply soil and water conservation land uses and practices. Farmers and much of the general public do not comply with voluntary farmland preservation programs. Forceful obligations that are enacted in the absence of enforcement mechanisms could only prolong existing farmland conversion and soil erosion or signal that the government is not ready to control agricultural land abuses.

Each landowner should be required to acquire a permit before changing land uses to make certain that they are complying with conservation and land use orders, plans, and requirements. The issuance of a permit provides local agencies with the opportunity to monitor changes in land use. A permit allows the government to verify that a change does not exceed the capabilities of the land or that the owner is still in compliance with an earlier order. See infra note 307.

^{298.} See supra note 283.

C. Multi-Purpose Mechanisms

Land use and resource conservation regulations control the agricultural uses²⁹⁹ of erodible agricultural land.³⁰⁰ Erodible agricultural land is a finite and fragile class of land. It is finite because it takes nature hundreds of years to form such land. It is fragile because the land's natural properties and climatic conditions make it susceptible to erosion.³⁰¹ Fragile and finite land, however, sustains the economic and social life of many rural and farm communities.³⁰²

As fragile and finite as erodible agricultural land is, such land has seldom been targeted for specific protection. Protection programs have had incidental beneficial effects because such programs have been essentially voluntary and without economic value. Incidental protection occurs particularly when fragile and finite erodible farmland is situated in agricultural districts, zoned for agricultural use or soil conservation, farmed under a right-to-farm statute, taxed at a differential rate, managed under statutorily required conservation plans, granted cost-sharing under water quality programs, granted state tax deductions and credits, or restricted to open space or farming under land use regulations, agreements, or deeds.³⁰³ Fragile and finite erodible land requires enforceable specific protection.

State and local land use and natural resource agencies should review agricultural land that has both economic value and natural limitations. Then state and local governments should subject owners and farmers of such land to forceful obligations that impose land use requirements upon the land. The law should then require owners and users of such land to protect the land's agricultural productivity and soil quality, and to reduce other environmental damages resulting from the use of such land. To further these ends, such land should be subject to production and conservation planning³⁰⁴ (P/C plan-

^{299.} See supra notes 2 & 7 and accompanying text.

^{300.} See supra notes 61-85 and accompanying text.

^{301.} See supra notes 61-64 and accompanying text.

^{302.} See supra notes 12-14 and accompanying text.

^{303.} See supra notes 88-120 and accompanying text (discussing farmland preservation and soil conservation programs). For a discussion of the coordination of federal farm production and soil and water conservation policies, see supra notes 9, 48 & 49.

^{304.} See infra notes 305-313. Compare FSA, 16 U.S.C. §§ 3801-3813 (1988). The CP provision of the FSA requires many farmers or operators to develop and implement conservation plans. See supra note 101 (discussing conservation planning). The FSA, however, is a limited federal effort because it controls soil erosion only on that agricultural land receiving benefits under commodity, price-support, and other programs. See 16 U.S.C. § 3811. When federal subsidies and support programs expire for farmers not receiving benefits under these federal programs, much American agricultural land in use or production will still need protection from degradation and conversion. It is most evident that consistency between production and

ning) and then should be given the highest priority for all government funds, incentives, and assistance that promote prudent land use, production, and conservation.

Production and conservation planning targets individual farms and tracts and is an essential part of the multi-purpose mechanism. It sets forth how coordinated programs are implemented and how individual land use requirements are set for specific farms and tracts. As an essential part of the multi-purpose mechanism, P/C planning addresses agricultural land production and treatment of erodible land by applying existing land use controls and techniques.³⁰⁵ Production and conservation planning maintains land use and soil treatment consistent with the land's prevailing land use, soil limitations, and surrounding water and aesthetic qualities.³⁰⁶ Production and conservation planning also sets forth land use and soil treatment requirements based upon local and state water quality, production, and conservation standards and the availability of funds and assistance.

An effective individualized land use plan would require owners and users to certify erodible land and evaluate the land's soil limitations, potential off-site damages, and agricultural uses. Certification would necessitate that owners and users, along with land use and natural resource agencies, design a P/C plan for land use and management that establishes productive agricultural uses and maintains suitable use and adequate treatments of erodible land.³⁰⁷ Some owners and users may have to change the use of their land from cropland to pasture or forestland when the land is not suitable for its existing or contemplated use.

Production and conservation planning addresses use restrictions and treatment requirements by incorporating such controls and tech-

conservation policies, therefore, will be addressed in future conservation, production, and preservation programs. NP-U, *supra* note 8, 23-24. The FSA and its subtitles are effective, but local agricultural land use problems must be dealt with at the local and state levels.

^{305.} See supra notes 86-120 and accompanying text

^{306.} See supra notes 61-85 and accompanying text. See also NP—U, supra note 8, at 24-25 (the U.S.D.A. will encourage the application of resource management systems rather than the application of individual conservation practices).

^{307.} Compare FSA, 16 U.S.C. §§ 3811-3813 (1988) (conservation planning and plans are requirements of FSA). Land use permits have been and remain viable land use controls. See S. REDFIELD, supra note 57, at 100-01. Farmers and owners of farmland must acquire a permit or certification to establish production and conservation planning. At a minimum, that planning should include land or agricultural use, conservation practices, and methods of cultivation. Farmers and owners must renew their permits periodically when they change uses or practices. See supra note 297. The requirements of land use permits insures that new uses or practices do not exceed the capabilities of the land and that the owners are in compliance with existing regulations as well as earlier orders.

niques as conservation contracts, agricultural zoning, purchase of development rights, right-to-farm laws, agricultural districting, and water quality programs. Other farm and production programs that assist farmers in improving production and increasing the survivability of the farm include agricultural management, production, and credit and education programs. These programs create a broader focus for P/C planning that help encompass the entire farm and land use operations. The use of control and techniques are an integral part of P/C planning, and their use must derive from an evaluation of the limitations of the land. These controls must then direct assistance, funds, and other resources to help meet regulatory standards for soil losses, water quality, and farmland conversion rates.

Production and conservation planning does not set forth new regulatory land use standards but rather applies existing standards to meet coordinated priorities and objectives. The quantitative and qualitative standards incorporated into P/C planning are regulatory standards set for each regulatory program and then given force and purpose in the coordination of objectives and priorities. This type of planning applies both use and treatment standards to comprehensive land use plans, 308 farm or production goals, 309 soil and water conservation programs, 310 farmland preservation programs, 311 and water quality regulations and plans.312 Production and conservation planning sets standards for these plans and programs based upon state and local priorities. If water quality standards for agricultural runoff are stricter than production standards for soil erosion, then P/C planning applies the stricter standard. Such planning simply makes land use and treatment of erodible land an individual concern by focusing on the total land use problem: agricultural runoff, soil erosion, and farmland conversion.

XI. CONCLUSION

The need for coordinated regulatory programs with forceful obligations and multipurpose mechanisms has become apparent. Coordinated land use programs have become essential because existing

^{308.} State and local governments should initiate comprehensive land use and natural resource planning and plans before they attempt to implement individualized or site specific production/conservation planning and plans that include land use, soil erosion, and water quality. See supra note 116 and accompanying text.

^{309.} See NP-U, supra note 8, at 23-24; FSA, 16 U.S.C. §§ 3801-3813 (1988).

^{310.} See supra notes 98-107 and accompanying text.

^{311.} See supra note 104 and accompanying text.

^{312.} See supra notes 99-102 and accompanying text.

programs have failed to control soil erosion and the conversion of fragile erodible agricultural land, all at great harm to the public.

Once erodible farmland has become severely eroded, it is usually converted or idled. Before conversion occurs, however, much of the land is subject to one farmland preservation program or another. Many of these programs are in conflict and consequently defeat the policies they are designed to advance. In contrast, coordinated programs would make the farmers' or owners' use and treatment of erodible land consistent with the land's limitations and with government objectives for land use and environmental quality.

Coordination would also heighten agency interaction and public trust and confidence in land use regulations. Coordination would require planning boards, soil and water conservation districts, and other local and state land use and resource agencies and boards to communicate and cooperate. Coordination would broaden the public's involvement in land use matters by requiring broader participation from local and state agencies in the planning, adopting, implementing, and enforcing of land use policies, objectives, and rules.

Coordinated programs would be more responsive to the different private interests and various public needs than the existing regulatory framework. Coordination would allow state and local governments to seek a steady balance between private and public interests in light of legal limitations and existing economic, social, and political constraints. Such a balance would minimize conflicts that could thwart the effective implementation and enforcement of regulatory programs and schemes.

Enforceable coordinated land use programs would foster a more efficient administrative framework while preserving American farmland and America's precious soil and water resources.