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Jennifer Hoffpauir*

*Georgetown University Law Center

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THE ENVIRONMENTAL IMPACT OF COMMODITY SUBSIDIES: NEPA AND THE FARM BILL

*Jennifer Hoffpauir**

The Department of Agriculture throws billions of dollars at farmers each year, encouraging them to grow as much as they can of certain crops. Farmers respond by doing just that. In the process, they use fertilizers to replenish the soil, pesticides to kill the bugs, herbicides to kill the weeds, and plow grassland to grow yet more crops. The enormous yields that result exact a huge environmental cost. This Article comprehensively documents the water pollution, soil erosion, and habitat loss caused by current farming methods and traces them to the Farm Bill's commodity payment programs as carried out by the Farm Service Agency. As major federal actions significantly affecting the environment, these programs should be subject to the National Environmental Protection Act. This Article shows how the Act's requirements, and the Farm Service Agency's own environmental regulations, obligate the agency to do an Environmental Impact Statement of the commodity programs. Agency regulations, however, categorically exclude these programs from NEPA, but the Article argues that an outside group could successfully pressure compliance with NEPA and force the federal government to finally acknowledge the significant environmental damage caused by U.S. farm policy.

I. INTRODUCTION

In this time of increased environmental awareness, concern about the environmental impacts of agriculture, and of agricultural policy,

* J.D. Candidate, 2009, Georgetown University Law Center. The author wishes to thank E. Donald Elliott for the suggested topic, and Dian Hoffpauir and Tony Hurst for their encouragement and support.

is becoming more widespread and farmers are now frequently finding themselves on the defensive.¹ According to fifth-generation farmer Art Shultheis, “the only way to convince the American people that food produced in the USA is worth supporting is to convince them that they are also being rewarded by increased environmental awareness.”² Countering this are resilient images of farmers as environmentalists. In signing the 2002 Farm Bill, President Bush stated: “There’s no better stewards of the land than people who rely on the productivity of the land. And we can work with our farmers and ranchers to help improve the environment.”³

Environmental considerations may or may not influence American farmers, but government subsidies certainly do. Since the Great Depression, the federal government has been subsidizing key agricultural commodities, and virtually all farmers growing these commodities have been affected by government programs, either directly or indirectly.⁴ These government subsidies stimulate crop production, “and to the extent that such increases in output impose unintended and unaccounted for environmental costs on society, those environmental costs can be seen as a form of government ‘policy failure.’”⁵ The full ramification of that policy failure with regard to environmental costs has never been fully realized by the federal government.

The National Environmental Policy Act (NEPA) provides a logical framework for the government to analyze the environmental impacts

1. Bill Couser, who farms 5,000 acres in central Iowa said of his corn crop, “When we planted this crop, people said we were the villains of the world.” Joel Achenbach, *So What’s So Bad About Corn? As Iowa Enjoys a Bumper Crop, Farmers Hear It From Environmentalists, Ethanol Skeptics and Other Critics*, WASH. POST, Nov. 23, 2007, at A01.

2. United States Department of Agriculture, Transcript of the Washington State Farm Bill Forum with Agriculture Secretary Mike Johanns and Moderator Bob Hoff, Northwest Ag Information Network, Cheney, Washington, (November 3, 2005).

3. See George W. Bush, Remarks by the President Upon Signing the Farm Bill, May 13, 2002, <http://www.whitehouse.gov/news/releases/2002/05/20020513-2.html>.

4. Nigel Key et al., *Farm-Level Production Effects from Participation in Government Commodity Programs: Did The 1996 Federal Agricultural Improvement and Reform Act Make a Difference?*, 87 AM. J. AGRIC. ECON. (2005) 1211, 1212.

5. Jan Lewandrowski et al., *The Interface Between Agricultural Assistance and the Environment: Chemical Fertilizer Consumption and Area Expansion*, 73 LAND ECON. 404, 405 (1997).

of 75 years of federal farm subsidies. Passed in 1969 at the height of the environmental movement, NEPA has had a massive impact on governmental decision-making with regard to the environment.⁶ Yet farming, so mythologically coupled with the environment, has never been subject to NEPA. The categorical exclusion of farm subsidies from NEPA's procedural requirements ignores the very real environmental problems caused by those subsidies. Part I of this paper explains the types of subsidies given to farmers under the Commodity Title of the Farm Bill. Part II provides an overview of NEPA and the responsibilities of the Farm Service Agency—the agency responsible for carrying out commodity subsidy programs—under NEPA and supplemental agency regulations. Part III explains why commodity subsidies trigger NEPA. Subsidies are major federal actions that significantly affect the environment through a myriad of interconnected ways, notably worsening water and soil quality. Farm Service Agency regulations themselves should force NEPA compliance, as explained in Part IV. The substance of that compliance could be modeled on the Farm Service Agency's environmental impact statement for another Farm Bill program, the Conservation Reserve Program. The paper concludes by discussing various ways in which outside environmental groups might force commodity subsidy program compliance with NEPA.

II. THE BROAD SCOPE OF FARM BILL SUBSIDIES

A. *The Commodity Programs of the Farm Bill*

The 2008 Farm Bill has its roots in federal attempts to help farmers during the Great Depression. The original price supports and voluntary production limits of the Agricultural Adjustment Act of 1933 were struck down by the Supreme Court,⁷ but were replaced with a more comprehensive system of policies on production control and price supports in 1938 and 1949.⁸ That system has continued, with

6. Richard J. Lazarus, *The Greening of America and the Graying of United States Environmental Law: Reflections on Environmental Law's First Three Decades in the United States*, 29 VA. ENVTL. L.J. 75, 75 (2001).

7. *United States v. Butler*, 297 U.S. 1 (1936) (conditioning the payment of a government subsidy to a farmer on reducing planted crops was beyond the powers of the national government).

8. John H. Davidson, *The Federal Farm Bill and the Environment*, 18 NAT. RESOURCES & ENV'T 3, 4 (2003); Agricultural Adjustment Act of 1938, 7 U.S.C. §

some variation, through the many omnibus Farm Bills enacted every four or five years since then. Over the years, the many laws contained in the omnibus Farm Bill have become ever more comprehensive and complex.⁹ The many separate titles of the Farm Bill affect a variety of programs, including support for farmers, conservation measures, nutrition programs such as food stamps, aid to rural communities, and money for agricultural research.¹⁰

These programs are extremely costly. The Congressional Research Service estimates that as of March 2007, the total estimated six-year (FY2002-FY2007) cost of the major provisions of the 2002 Farm Bill was \$271.1 billion.¹¹ Nearly two-thirds of this amount was for the food stamp program, while \$92.9 billion was for the three major categories of farm support: farm commodity programs, conservation, and trade.¹² These programs are defined as mandatory spending, which means that eligibility is determined by their authorizing statute—the 2002 Farm Bill—and any person or business that meets the eligibility requirements is entitled to the benefits authorized by the law.¹³

The bulk of money spent for farm support is in Title I, the Commodity Title of the Farm Bill. Commodity support programs cost \$72.9 million during the years covered by the 2002 Farm Bill.¹⁴ The commodity programs support the incomes of farmers producing certain “program” crops, including grains, oilseeds, cotton, peanuts, sugar, and milk. Five crops—corn, wheat, cotton, rice, and soybeans—account for over 90 percent of government commodity payments to farmers.¹⁵ Commodity-related spending fluctuates from year to year depending on farm market prices; during the 2002 Farm

1281 (2000); Agricultural Act of 1949, 7 U.S.C. § 1441 (2000). Every Farm Bill is based on previous ones, and, should a new Farm Bill fail to pass, agricultural programs revert to the provisions of the Agricultural Act of 1949. Carolyn Dimitri et al., USDA Economic Research Service, Econ Info. Bull. No. 3, *The 20th Century Transformation of U.S. Agriculture and Farm Policy*, 13 (2005).

9. See Jean Yavis Jones et al., Congressional Research Service, Order Code RL30956, *What Is A Farm Bill?* (2001).

10. See H.R. 6124, 110th Cong. (2008).

11. Ralph M. Chite, Congressional Research Service, Order Code RS22694, *Farm Bill Budget and Costs: 2002 vs. 2007*, 1 (2008).

12. *Id.*

13. *Id.* Other smaller programs authorized in the Farm Bill are discretionary programs that require annual appropriations.

14. *Id.* at 2.

15. Jim Monke, Congressional Research Service, Order Code RS21999, *Farm Commodity Programs and the 2007 Farm Bill 1* (2007).

Bill cycle, spending ranged from a high of \$16.9 billion in FY2006 to a low of \$8.0 billion in FY2004.¹⁶ The Congressional Budget Office estimates spending under the 2007 House-passed Farm Bill and Senate Agriculture Committee Farm Bill to be \$286.2 billion and \$285.8 billion, respectively.¹⁷

The commodity payments given to farmers are authorized by Congress in the farm bills, and then carried out by the U.S. Department of Agriculture (USDA). The Farm Bill establishes which commodities are covered, when payments are made, and the payment rates and target rates for covered commodities.¹⁸ Within USDA, the Commodity Credit Corporation (CCC), working through the Farm Service Agency (FSA), disburses payments to farmers. Payments are made through three different programs, and the same farm can receive payments through all three programs. The commodity support programs provide three major types of subsidies to farmers growing program crops: direct payments, counter-cyclical payments, and non-recourse loans.¹⁹

B. Types of Subsidies Given to Farmers under the Commodity Title

1. Direct Payments

The Federal Agriculture Improvement and Reform Act of 1996, also dubbed the “Freedom to Farm” Act, established the direct payment program. That Farm Bill marked the end of policies intended to control supply and stabilize farm prices. The Act’s free-market philosophy removed government limits on planting and focused on finally phasing out subsidies.²⁰ In order to wean farmers off subsidies, the Farm Bill offered farmers annual, declining fixed cash payments.²¹ Yet one year into the Act, collapsing farm prices led

16. Chite, *supra* note 11, at 2.

17. *Id.* at 5.

18. H.R. 6124, 110th Cong. §§ 1103, 1104, 1202 (2008).

19. *See* H.R. 6124, 110th Cong. §§ 1101-1210 (2008).

20. Dan Morgan, Gilbert M. Gaul & Sarah Cohen, *Farm Program Pays \$1.3 Billion to People Who Don't Farm*, Wash. Post, July 2, 2006, at A01.

21. Federal Agriculture Improvement and Reform Act of 1996 §§ 111-118, 7 U.S.C. §§ 7211-7218 (2000).

Congress to authorize annual emergency payments to farmers, which reached \$20 billion in 1999.²²

Direct payments are fixed payments to farmers growing certain commodity crops based on historic acres and yield.²³ Basing payments on historic acres and yield, rather than crops that are currently grown, is intended to provide farmers more freedom to decide which commodity crops to grow, or to let land fallow. The payments are unrestricted—farmers get them whether or not they grow any crops, or whether crop prices are high or low.²⁴ Direct payments remain the same for all five years covered by both the 2002 and 2008 Farm Bills.²⁵

2. Counter-cyclical Payments

The 2002 Farm Bill also added counter-cyclical payments. These provide support counter to the cycle of market prices as part of a “safety net” in the event of low crop prices.²⁶ Counter-cyclical payments for a commodity are only issued if the effective price for a commodity is below the target price for the commodity.²⁷ The payments grew out of the loan deficiency payments program that began with the 1985 Farm Bill. These payments were originally intended to prevent the storage requirement of the marketing loans from distorting supply. However, the system did not work effectively, and between 1998 and 2001, low market prices for commodity crops led to ad hoc market loss assistance payments given to producers.²⁸ During that time, “the loan program became a major source of ‘countercyclical’ income support since the 1996 farm bill had no

22. Darrell Ray et al., *Rethinking US Agricultural Policy: Changing Course to Secure Farmer Livelihoods Worldwide* 9 (2003). Yet despite the payments, U.S. net farm income dropped by 16.5 percent from 1996 to 2001. *Id.*

23. H.R. 6124, 110th Cong. § 1103 (2008).

24. Dan Morgan, Gilbert M. Gaul & Sarah Cohen, *supra* note 20.

25. *Id.*; Farm Security and Rural Investment Act of 2002 § 1103, 7 U.S.C.A. § 7913 (2007).

26. Farm Service Agency, *Direct and Counter-cyclical Payment Program Fact Sheet* (2006), http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=pfs&newstype=prfactsheet&type=detail&item=pf_20080626_insup_en_dcpsignup.html (last visited Jul. 10, 2008).

27. *Id.*

28. Paul C. Westcott et al., USDA Economic Research Service, *Agric. Info. Bull. No. 778, The 2002 Farm Act Provision and Implications for Commodity Markets* 5, (2002).

other price-triggered supports.”²⁹ The counter-cyclical payments were designed as a replacement for the ad hoc payments.

Like direct payments, counter-cyclical payments are based on historical area and yields and are not tied to current production of the covered commodity. Counter-cyclical payments are made when the higher of the loan rate or the season average price is below the target price minus the direct payment rate.³⁰ This payment structure, however, means that farmers are not compensated for the actual price at which they sell their crops. Rather, farmers receive a subsidy based on the market price for the crop on any day of the year, regardless of whether the crop is sold on that day at that price.³¹ The program has been criticized because farmers lock in their subsidies when prices are low and sell when prices are higher.³²

3. Non-recourse Marketing Loans

Marketing, or non-recourse, loans are the prices a farmer receives at harvest for commodity crops actually produced. If the market price is below the loan rate, the government essentially buys the commodity at the loan rate.³³ The marketing assistance loans date back to the Agricultural Act of 1949.³⁴ Unlike the newer direct and counter-cyclical payments, these subsidies are actually tied to what farmers produce. Marketing assistance loans for covered commodities are termed “non-recourse” because the commodity is pledged as loan collateral and producers have the option of delivering the pledged collateral to the Commodity Credit Corporation (CCC) in satisfaction of the repayment of the outstanding loan.³⁵ As a result, CCC acquires commodities that are forfeited or delivered under

29. Jim Monke, Congressional Research Service, Order Code RS21604, Marketing Loans, Loan Deficiency Payments, and Commodity Certificates 2 (2004).

30. *Id.*

31. Dan Morgan, Sarah Cohen & Gilbert Gaul, *Growers Reap Benefits Even in Good Years*, Wash. Post, July 3, 2006, at A01.

32. *See, e.g.* at *Id.* For last year’s crop, farmers sold their corn for an average of \$1.90 per bushel, only 5 cents below the national floor price. But they received a payment averaging 44 cents, a difference amounting to \$3.8 billion.

33. Davidson, *supra* note 8, at 5.

34. Farm Service Agency, Price Support: Non-Recourse Marketing Assistance Loan, <http://www.fsa.usda.gov/FSA/webapp?area=home&subject=prsu&topic=col> (last visited July 10, 2008).

35. *Id.*

these non-recourse loans, and, acting through the Farm Service Agency, maintains provisions for their distribution and disposal.³⁶

III. AGENCY ACTION REQUIRED BY THE NATIONAL ENVIRONMENTAL PROTECTION ACT

A. Overview of NEPA

The National Environmental Protection Act (NEPA) is our nation's "basic national charter for protection of the environment."³⁷ Prior to NEPA and its contemporary environmental legislation, regulation of the country's natural resources was based on economic benefit, and detrimental environmental impacts were generally ignored by federal agencies when they engaged in planning. In response to this, NEPA obligates all federal agencies to take a "hard look" at the environmental consequences of any proposed action.³⁸ The Act's most significant provisions, sections 101 and 102, state a congressional intent to protect the environment and establish an agency's procedural duty to investigate and consider the environmental implications of any action it carries out. The procedural obligation imposed by NEPA requires all agencies to utilize a "systematic, interdisciplinary approach" in planning³⁹ and to give "presently unquantified [sic] environmental amenities and values . . . appropriate consideration in decision-making along with economic and technical considerations."⁴⁰ Environmental impacts are to be considered at the earliest possible time in the planning process "to insure that planning and decisions reflect environmental values."⁴¹

The Act's "broad national commitment to protecting and promoting environmental quality," is ensured through "important 'action-forcing' procedures."⁴² These "action-forcing" procedures require all federal agencies to prepare a "detailed statement . . . on the envi-

36. Policy for Certain Commodities Available for Sale, 71 Fed. Reg. 40,641 (July 18, 2006) (to be codified at 7 C.F.R. pt. 1402).

37. 40 C.F.R. § 1500.1(a) (2007).

38. *Natural Res. Def. Council v. Morton*, 458 F.2d 827, 838 (D.C. Cir. 1972); National Environmental Policy Act of 1969 § 101(b), 42 U.S.C. § 4331(b) (2000).

39. 42 U.S.C. § 4332(A) (1975).

40. 42 U.S.C. § 4332(B) (1975).

41. 40 C.F.R. § 1501.2 (2007).

42. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348-49 (1989).

ronmental impact” for every “recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment.”⁴³ All federal agencies must comply with NEPA “unless existing law applicable to the agency’s operations expressly prohibits or makes compliance impossible.”⁴⁴

B. Agency Responsibilities under Council on Environmental Quality and U.S. Department of Agriculture NEPA Regulations

Title II of NEPA established the Council on Environmental Quality (CEQ) and outlined its advisory responsibilities under the Act.⁴⁵ In 1978, CEQ promulgated final regulations, whose major purpose was to provide uniform procedures for federal agencies that had previously had varying NEPA procedures.⁴⁶ All federal agencies must prepare an environmental assessment to determine whether an action is likely to have “significant” environmental effects.⁴⁷ An environmental impact statement (EIS) must be prepared if the environmental assessment concludes that the impact is significant.⁴⁸ If, after the environmental assessment, the agency concludes that the action will not have a significant effect on the environment, the agency may issue a finding of no significant impact (FONSI) and may then proceed with the action.⁴⁹ Actions can be given “categorical exclusion” from these requirements if they are determined to not individually or cumulatively have a significant effect on the environment.⁵⁰

43. 42 U.S.C. § 4332(2)(C) (1975). These “detailed statements” must include: “(i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between local short-term uses of man’s environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.” *Id.*

44. 40 C.F.R. § 1500.6 (2007).

45. Although NEPA does not specifically direct the CEQ to issue regulations, the President expressly granted the CEQ such authority in Executive Order No. 11,514, 35 Fed. Reg. 4247 (March 5, 1970), *as amended by* Exec. Order No. 11,991, 42 Fed. Reg. 26967 (May 24, 1977).

46. Implementation of Procedural Provisions, 43 Fed. Reg. 55,978 (Nov. 29, 1978).

47. See 40 C.F.R. § 1501.4(b) (2007); 40 C.F.R. § 1508.9(a) (2007).

48. 40 C.F.R. § 1501.4 (2007).

49. 40 C.F.R. § 1508.13 (2007).

50. 40 C.F.R. § 1508.4 (2007).

The Council on Environmental Quality also requires agencies to adopt supplemental procedures detailing when to prepare an environmental assessment.⁵¹ Like other agencies, the procedures adopted by USDA incorporate and adopt the regulations published by the Council on Environmental Quality.⁵² The USDA Departmental Policy for NEPA describes certain actions and lists certain agencies that receive categorical exclusions from NEPA.⁵³ Neither the Commodity Credit Corporation nor the Farm Service Agency are listed among the USDA agencies excluded from NEPA.⁵⁴

C. Categorical Exclusion of Commodity Subsidy Programs under Farm Service Agency NEPA Regulations

Since the Farm Service Agency is not given categorical exclusion from NEPA, FSA adopted its own NEPA regulations further supplementing those of USDA and CEQ. These regulations detail how and when environmental assessments and EISs are done, and exclude certain agency actions from NEPA requirements. Commodity subsidies are categorically excluded from NEPA requirements under these regulations. Among FSA actions normally not requiring an assessment or an EIS are "Commodity Income and Support and Disaster Protection Programs."⁵⁵ Although the language in Title I of the Farm Bill does not actually use the terms "commodity income and support," the 2002 Farm Bill defines a commodity program as "a program administered by the Secretary under which price or income support, or production or market loss assistance, is provided to producers of agricultural commodities . . ."⁵⁶ The Economic Research Service of USDA also discusses the commodity programs as "commodity-based income support."⁵⁷ By exempting these programs from NEPA regulations, the Farm Service Agency, and the Department of Agriculture in general, do not have to consider the environmental effects of the subsidy programs.

51. 40 C.F.R. § 1507.3(a) (2007).

52. 7 C.F.R. § 1b.1 (2007).

53. 7 C.F.R. § 1b.3 (2007).

54. 7 C.F.R. § 1b.4 (2007).

55. 7 C.F.R. § 799.10(b)(2) (2007).

56. Farm Security and Rural Investment Act of 2002 § 1613, 7 U.S.C. § 7996 (2007).

57. Roger Claassen et al., USDA Economic Research Service, Econ. Res. Rep. No. 44, Integrating Commodity and Conservation Programs: Design Options and Outcomes 4 (2007).

Environmental evaluations are nevertheless required for all programs and can lead to further environmental review. FSA regulations provide that an environmental assessment or EIS may be required “where the presence of extraordinary circumstances or other unforeseeable factors indicate that some other level of environmental review may be appropriate.”⁵⁸ However, such circumstances have never been found. FSA has never done an environmental assessment or EIS for the commodity income and support programs.⁵⁹

IV. COMMODITY SUBSIDIES SHOULD TRIGGER NEPA REQUIREMENTS

A. Subsidies are a Major Federal Action

The commodity subsidies meet the definition of a major federal action that must comply with NEPA. NEPA is triggered by “major Federal actions significantly affecting the quality of the human environment.”⁶⁰ The commodity subsidies are a federal action carried out by the Farm Service Agency on behalf of the Commodity Credit Corporation (CCC). The Commodity Credit Corporation was originally established in 1933 under a Delaware charter, but was transferred to the USDA in 1939, and reincorporated on July 1, 1948, as a Federal corporation within USDA by the Commodity Credit Corporation Charter Act.⁶¹ The CCC is wholly government-owned and managed by a Board of Directors, all of whom are USDA officials.⁶² The CCC itself has no operating personnel, and its commodity subsidy programs are carried out through the personnel and facilities of the Farm Service Agency,⁶³ itself an agency within USDA.

58. 7 C.F.R. § 799.10(c) (2007).

59. For instance, in implementing Title I of the 1996 Farm Bill, the environmental evaluation found there would be no significant environmental impact, so neither an environmental assessment nor EIS would be needed. Implementation of the Farm Program Provisions of the 1996 Farm Bill, 61 Fed. Reg. 37,544 (1996).

60. National Environmental Policy Act of 1969 § 101(b), 42 U.S.C. § 4332(2)(C) (2000).

61. U.S. Department of Agriculture, About the Commodity Credit Corporation, <http://www.fsa.usda.gov/FSA/webapp?area=about&subject=landing&topic=sao-cc-ac> (last visited July 15, 2008); see also 15 U.S.C. § 714 (2000).

62. 15 U.S.C. § 714(q) (2000).

63. U.S. Department of Agriculture, *supra* note 61.

The subsidies are a “major” federal action for several reasons. First, the subsidies involve a great deal of money.⁶⁴ Second, the subsidies are national in scope, given to farmers located in all states.⁶⁵ Third, the subsidies are given to a large number of farms, covering half of the nation’s 938 million acres of farmland.⁶⁶ The major scope of the subsidy program is evident from what is included as farms. The United States Department of Agriculture defines farms as “any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold” over the course of a year.⁶⁷ This rather expansive definition allows a wide variety of farm, and even non-farm, operations to collect commodity payments.⁶⁸

B. Subsidies Significantly Affect the Environment

Farmland covers a vast amount of the physical United States, and what crops are grown and how they are grown are strongly influenced by commodity subsidies. Non-federal agricultural and forestlands occupy 1.4 billion acres or nearly 70 percent of the contiguous United States.⁶⁹ Farmland occupies roughly half of the land in the contiguous United States, and the majority of this land is privately owned.⁷⁰ In 2002, 938 million acres were farmed, with nearly half of that amount used as cropland.⁷¹ While only 25 percent of U.S. farms receive farm commodity payments, those farms control about 80 percent of cropland and 50 percent of all agricultural land.⁷²

64. \$13,125,211,134 was given to farmers through commodity programs in 2005. See Environmental Working Group, Farm Subsidy Database, <http://farm.ewg.org/sites/farmbill2007/progdetail1614.php?fips=00000&progcode=farmprog> (last visited July 12, 2008).

65. See U.S. Department of Agriculture, National Agricultural Statistics Service, 2002 Census of Agriculture (2004), available at <http://www.agcensus.usda.gov/Publications/2002/index.asp>.

66. See Claassen, *supra* note 57, at iv.

67. U.S. Department of Agriculture, *supra* note 65.

68. See Morgan, *supra* note 20.

69. U.S. Department of Agriculture, 2007 Farm Bill Theme Papers: Conservation and the Environment 1 (2006), available at <http://www.usda.gov/documents/FarmBill07consenv.pdf>.

70. Davidson, *supra* note 8, at 3.

71. U.S. Department of Agriculture, *supra* note 65.

72. Claassen, *supra* note 57, at iv.

1. Subsidies Encourage Farmers to Grow Commodity Crops, Even on Environmentally Sensitive Land

Subsidies influence crop production because farmers are paid a dollar amount based on the yield of crop produced (through the marketing loan program) or capable of being produced (through direct and counter-cyclical payments).⁷³ Direct and counter-cyclical loans were “decoupled” from prices or production in the 1996 Farm Bill; farmers are now given lump-sum payments on eligible acres used for growing program crops, rather than receiving payments based on current market prices or production levels.⁷⁴ Despite the decoupling from production, these payments nevertheless encourage farmers to grow program crops, as opposed to growing other types of crops or letting land fallow.⁷⁵ The decoupled payments and non-recourse payments create numerous incentives for farmers to grow program crops,⁷⁶ and yields continue to grow every year.⁷⁷

Under the commodity programs, farmers are paid solely based on yield, not environmental practices. Although farmers must minimize

73. See H.R. 6124, 110th Cong. §§ 1001(13), 1202 (2008). The Act relies on the definition of “payment yield” from the 2002 Farm Bill, which set payments under the direct and counter-cyclical programs based on the 1995 yield of commodity crops. Farm Security and Rural Investment Act of 2002 §§ 1102, 1302, 7 U.S.C.A. §§ 7912, 7952 (2007).

74. For an explanation of coupled and decoupled farm payments, see Paul C. Westcott & C. Edwin Young, USDA Economic Research Service, Agric. Econ. Rep. No. 838, *Farm Program Effects on Agricultural Production: Coupled and Decoupled Programs*, in *Decoupled Payments in a Changing Policy Setting* 7, 8 (2004).

75. Key, *supra* note 4, at 1218 (participation in decoupled commodity subsidy programs significantly affects decisions to plant program crops); see also Westcott & Young, *supra* note 74, at 11-14 (decoupled payments indirectly influence agricultural production decisions through raising overall farm income). *But see* Karl Beitel, *US Farm Subsidies and the Farm Economy: Myths, Realities, Alternatives* (2005), available at <http://www.foodfirst.org/backgrounders/subsidies> (arguing that as measured by inventories of commodity crops in relation to usage, subsidies do not cause overproduction of commodity crops).

76. Bruce Babcock & Chad Hart, *Risk-Free Farming?* 10 Iowa Ag Rev. 11 (2004) (cited in Government Accountability Office, *Farm Program Payments Are an Important Factor in Landowners’ Decisions to Convert Grassland to Cropland* 60 (2007)).

77. For example, farmers now harvest 20 percent more corn from each acre than just a decade ago, and yields in the past three years were the highest ever, according to USDA statistics. Dan Morgan ET AL., *supra* note 31.

the environmental impact of their activities,⁷⁸ they are only required to create a conservation compliance plan for crops grown on “highly erodible cropland.”⁷⁹ Further, farmers are not penalized for taking environmentally sensitive land out of Conservation Reserve Program (CRP) contracts in order to grow crops; as soon as the land is planted with commodity crops, farmers can receive direct or counter-cyclical payments.⁸⁰ Farmers declined to extend or re-enroll CRP or extend nearly 4.9 million acres of CRP lands expiring between 2007 and 2010.⁸¹ In addition, although farmers must certify that they are not growing crops on converted wetlands,⁸² they continue to convert native grasslands—critical for wildlife habitat, water filtration, and soil erosion prevention—to crop production. The nation’s private grassland decreased by almost 25 million acres from 1982 to 2003, with most of the grassland converted to cropland.⁸³ Over half of this land was classified as non-highly erodible, and therefore not subject to conservation requirements, and even when on land deemed highly erodible, “the potential profits from cropping the land usually outweigh the perceived costs associated with controlling soil erosion.”⁸⁴ In a recent study, the Government Accountability Office concluded that Farm Bill conservation programs are “at odds with farm programs that provide incentives for conversions of grassland to cropland.”⁸⁵

78. See H.R. 6124, 110th Cong. § 1106 (2008).

79. U.S. Department of Agriculture, *supra* note 69, at 4. Highly erodible cropland makes up about a third of U.S. cropland. See *infra* text accompanying note 147.

80. H.R. 6124, 110th Cong. § 1101(a) (2008).

81. See Farm Service Agency, CRP Enrollment Statistics and Program Summary 39-42 (2008), available at http://www.fsa.usda.gov/Internet/FSA_File/annual_consv_2007.pdf.

82. H.R. 6124, 110th Cong. § 1106(a)(1)(B) (2008).

83. Government Accountability Office, *supra* note 76, at 4. One study in central North and South Dakota reported a loss of 144,000 acres of grassland to crop production between 1984 and 2002, and another study in Montana and South and North Dakota reported losses of over 60,000 acres of grassland in 2006 alone. Martha G. Roberts et al., Potential Impacts of Biofuels Expansion on Natural Resources: A Case Study of the Ogallala Aquifer Region 1 (2007), available at http://www.edf.org/documents/7011_Potential%20Impacts%20of%20Biofuels%20Expansion.pdf.

84. Government Accountability Office, *supra* note 76, at 5.

85. *Id.* at 25. The report covered both commodity subsidies and the availability of crop insurance, and found that the latter may have the biggest influence in decisions to convert grasslands. See *id.* at 4. Crop insurance is another important subsidy provided to farmers under the Farm Bill that produces many of the same

2. Subsidies Increase Farmers' Use of Pesticides and Fertilizers

The agricultural monocultures encouraged by commodity subsidies require large applications of pesticides and fertilizers in order to obtain high yields. By reducing the risk of depending on returns from only one or a few crops, subsidies have played a large role in the increasing specialization of farms; in 1900, farms grew an average of about five commodities, but now average only one commodity per farm.⁸⁶ As agriculture has become more specialized, it has also become more intensive. Agricultural price supports encourage more intensive farming practices, increasing the use of agricultural chemicals.⁸⁷ Reduced crop diversity significantly increases crop losses due to insects and pathogens and reduces soil organic matter.⁸⁸ These problems lead to increased use of pesticides and fertilizers, and the increased use of fertilizer in turn often increases pathogen and insect populations.⁸⁹ While populations of undesirable species thrive in monocultures, habitat for wildlife, including birds and other animals that eat pest insects,⁹⁰ is reduced, compounding the need for pesticides. Corn, which receives the largest share of subsidies, is a particularly high-input crop that requires more herbicides, insecticides, and nitrogen fertilizer than other crops in order to achieve the high yields encouraged by U.S. agricultural policy.⁹¹

Commodity programs also more directly contribute to higher use of farm chemicals. By raising prices and reducing price variations in program crops, subsidies create higher marginal revenues for inputs,

environmental effects as commodity subsidies, but is outside the scope of this paper.

86. See Dimitri, *supra* note 8, at 2.

87. Richard E. Just & John M. Antle, *Interactions Between Agricultural and Environmental Policies: A Conceptual Framework*, 80 Am. Econ. Rev. 197, 199 (1990).

88. P.A. Matson et al., *Agricultural Intensification and Ecosystem Properties*, 277 Sci. 504, 505-06 (1997).

89. *Id.* at 507.

90. *Id.* at 507.

91. David Pimentel, *Ethanol Fuels: Energy Balance, Economics, and Environmental Impacts are Negative*, 12 Nat. Res. Research 127, 130 (2003). Between 2003 and 2005, corn growers received \$17.63 billion in subsidy payments, \$10 billion more than the next highest-paid crop. Environmental Working Group, Policy Analysis Database, Top Programs in United States (2007), <http://farm.ewg.org/sites/farmbill2007/region1614.php?fips=00000> (last visited July 2, 2008).

thus motivating additional input use.⁹² For example, compared with farmers who do not participate in commodity programs, corn farmers receiving subsidies significantly increased herbicide use in all cropping sequences, “supporting the conventional view that commodity programs directly contribute to greater herbicide use in corn production.”⁹³

C. *Farming Causes Widespread Water Pollution and Soil Erosion*

Despite the environmental effects of farming practices on the large percentage of the U.S. that is cropland, farms are not governed by environmental laws.⁹⁴ This is best exemplified by the Clean Water Act. Unlike factories and sewage treatment plants, the water pollution caused by agriculture is not subject to regulation under the National Pollutant Discharge Elimination System (NPDES), established in the Clean Water Act.⁹⁵ The Ninth Circuit has held that a body of water can be so polluted by agricultural non-point sources of pollution as to be listed under § 303(d) of the Clean Water Act, which provides water quality standards.⁹⁶ Nevertheless, this does not mean that the discharging parties have to get a permit, just that the water body has to be listed. Although “pollutant” is defined to include “agricultural waste discharged into water,”⁹⁷ the Act specifically exempts agricultural storm water discharges and irrigation return flows from the regulatory regime.⁹⁸ The combination of subsidies and the lack of regulation under environmental laws has created a

92. Biing-Hwan Lin et al., *Factors Influencing Herbicide Use in Corn Production in the North Central Region*, 17 Rev. Agric. Econ. 159, 162 (1995). Inputs can include fertilizers, pesticides, seed, and labor. See Economic Research Service, *Commodity Costs and Returns: Glossary*, <http://www.ers.usda.gov/Data/CostsAndReturns/glossary.htm> (last visited July 10, 2008).

93. Biing-Hwan Lin, *supra* note 92, at 167.

94. The exemption of farms from environmental laws has a long history. See generally J.B. Ruhl, *Farms, Their Environmental Harms, and Environmental Law*, 27 Ecology L.Q. 263 (2000). Ruhl calls this the “anti-law” of farms and the environment. The anti-law comes in two forms. Some laws are structured so that farms escape most if not all of the regulatory impact. Other laws expressly exempt farms from regulatory programs that would otherwise clearly apply to them. *Id.* at 293.

95. Clean Water Act § 402(l)(1), 33 U.S.C. § 1342(l)(1) (2000).

96. *Pronsolino v. Nastro*, 291 F.3d 1123 (9th Cir. 2002).

97. Clean Water Act § 502, 33 U.S.C. § 1362(6) (2000).

98. 33 U.S.C. § 1362(14).

situation in which farmers are paid to convert natural ecosystems to agriculture and ignore the environmental problems that then arise.

1. Agriculture is the Leading Source of Water Pollution

The most troublesome of the environmental effects of agriculture is water pollution. Agriculture is currently the leading cause of water pollution in the U.S.⁹⁹ EPA's National Water Quality Inventory, which inventories the degree of impairment of U.S. waters and the source of that impairment, found that agricultural activities are responsible for nearly 40 percent of impairment in rivers and streams, and 30 percent of impairment of lakes.¹⁰⁰ Agricultural nonpoint source pollution is primarily sediment, containing both pesticides and fertilizers,¹⁰¹ which pose different environmental problems.

a. Pesticide and Herbicide Pollution Affects Drinking Water Supplies and Harms Aquatic Ecosystems

Pesticides and herbicides infiltrate rivers and groundwater used to supply drinking water. Rivers that serve as drinking water sources in several midwestern states growing commodity crops are heavily polluted with herbicides, and the affected communities may "sustain intense exposure at times, particularly when heavy rains follow field applications."¹⁰² A U.S. Geological Survey study of Midwestern streams taken after spring field applications found triazine herbicides contaminating ninety percent of the streams, with thirty-four percent of the samples exceeding EPA drinking water standards for the her-

99. See Office of Water, U.S. Environmental Protection Agency, National Water Quality Inventory 2002 Report to Congress ES-2 (2002). See also U.S. Environmental Protection Agency, Section 319 Success Stories: Volume III, 1 (2002), available at <http://www.epa.gov/owow/nps/Section319III/intro.htm> (last visited June 29, 2008) ("[N]onpoint sources constitute the leading sources of water pollution in the United States today [with] . . . agriculture as the most widespread source of pollution").

100. Office of Water, at 9, 10, 13, 14.

101. See *id.* at 9 (noting that sediment is the primary source of pollution in rivers and streams).

102. James Stephen Carpenter, Note, *Farm Chemicals, Soil Erosion, and Sustainable Agriculture*, 13 Stan. Envtl. L.J. 190, 198-99 (1994) (quoting Judith D. Soule & Jon K. Piper, *Farming in Nature's Image: An Ecological Approach to Agriculture* 36-37 (1992)).

bicide Alachlor.”¹⁰³ Alachlor, already banned in Canada, has been classified by the EPA as a probable human carcinogen.¹⁰⁴

Similarly, groundwater used to supply drinking water is heavily polluted. EPA has found seventy-four different pesticides in the groundwater of thirty-eight states, and “Aldicarb, the ‘most acutely toxic pesticide registered by the EPA,’ has been found in sixteen states.”¹⁰⁵ “[I]n California alone, twenty-two different pesticides have been found in groundwater as a result of normal farming practices.”¹⁰⁶ Pesticides and other pollutants leaching into groundwater is particularly troublesome, as more than “97 percent of the nation’s rural drinking water comes from underground aquifers, and over 50 percent of the nation’s population relies on groundwater as its source of drinking water.”¹⁰⁷

Beyond concerns for drinking water, these chemicals affect aquatic ecosystems and the life forms they support. Atrazine, the second most widely used weedkiller in the U.S. and one used particularly for growing corn, has appeared in some watersheds at high enough levels “to potentially harm amphibians, fish and aquatic ecosystems.”¹⁰⁸ In many agricultural areas, atrazine levels are sustained at high levels for several weeks, potentially affecting several endangered and threatened species of animals and plants.¹⁰⁹ Moreover, the synergistic effects of pesticides are only beginning to be studied, but preliminary studies indicate that the normal combination of pesticides in agricultural runoff can have far worse effects than when pesticides are tested individually, even when each of the pesticides individually was far below the level that would have triggered effects according to individual studies.¹¹⁰

103. *Id.* at 199.

104. *Id.* at 200.

105. *Id.* at 199-200.

106. *Id.* at 200.

107. Ruhl, *supra* note 94, at 287 n.163 (citing Erik Lichtenberg & Lisa K. Shapiro, *Agriculture and Nitrate Concentrations in Maryland Community Water System Wells*, 26 J. Envtl. Quality 145, 145 (1997)).

108. Juliet Eilperin, *High Weedkiller Levels Found in River Checks*, Wash. Post, Dec. 8, 2007, at A06.

109. *Id.* Due to concerns about the chemical’s hormone-disrupting effects on amphibians, the pesticide was banned in the E.U. in 2005. *Id.*

110. Symposium, *Waste Discharge Requirements: Beyond the Point Source*, 57 Hastings L.J. 1281, 1282-83 (2006).

b. Fertilizer Runoff Causes Hypoxia in Coastal Areas

Unlike pesticides and herbicides, fertilizer is not inherently toxic, but fertilizer runoff from farms also has lethal consequences. Fertilizer applications are often poorly targeted, and it is estimated that from 40 to 60 percent of nitrogen applied as fertilizer is used by the plants, with the rest left in the soil or lost.¹¹¹ Some of the nitrogen enters drinking water sources; “EPA found nitrate in more than half of the 94,600 community water system wells and in almost 60 percent of the 10.5 million rural domestic wells.”¹¹² Some wells were found to have levels exceeding EPA’s minimum recommendations,¹¹³ presenting concerns for human health.¹¹⁴

Of greater concern is the disastrous effect of fertilizer on coastal estuaries. Nitrogen enters surface waters through run-off, and, as it travels down river to the ocean, leads “to increased algal production and increased availability of organic carbon within an ecosystem, a process known as eutrophication.”¹¹⁵ Increased algal production uses up most of the oxygen in the water, creating a hypoxic (or low-oxygen environment) that is inhospitable habitat for fish, shellfish, and most forms of marine life.¹¹⁶

The world’s second largest zone of oxygen-depleted coastal waters is in the northern Gulf of Mexico at the terminus of the Mississippi River system. The size of the Gulf of Mexico hypoxic zone reaches up to 22,000 km² in mid-summer.¹¹⁷ This hypoxic zone is largely

111. Matson, *supra* note 88, at 507.

112. Roger Claassen et al., USDA Economic Research Service, Agric. Econ. Rep. No. 794, *Agri-Environmental Policy at the Crossroads: Guideposts on a Changing Landscape 2* (2001).

113. *Id.*

114. “High nitrate concentrations in drinking water represent a human health concern, causing methemoglobinemia.” Matson, *supra* note 88, at 507.

115. National Centers for Coastal Ocean Science, Gulf of Mexico Hypoxia Assessment, Hypoxia in the Gulf of Mexico: Progress towards the completion of an Integrated Assessment (2000), available at http://oceanservice.noaa.gov/products/pubs_hypox.html.

116. See Louisiana Universities Marine Consortium, Hypoxia in the Gulf of Mexico, <http://www.gulfhypoxia.net> (last visited June 28, 2008).

117. *Id.* The severity of this problem has not gone unnoticed. Justice Kennedy, in a largely unrelated aside, noted with alarm that “nutrient-rich runoff from the Mississippi River has created a hypoxic, or oxygen-depleted, ‘dead zone’ in the Gulf of Mexico that at times approaches the size of Massachusetts and New Jersey.” *Rapanos v. U.S.*, 126 S.Ct. 2208, 2246-47 (2006) (Kennedy, J., concurring).

caused by agricultural use of fertilizers.¹¹⁸ “As much as 15 percent of the nitrogen fertilizer and up to 3 percent of pesticides applied to cropland in the Mississippi River Basin make their way to the Gulf of Mexico.”¹¹⁹ Agricultural run-off of nitrogen-rich water directly causes eutrophication, often within days of major run-off events.¹²⁰ Other coastal water bodies also experience the same phenomenon. “Recent research found that 44 estuaries, along all coasts ([fully] 40 percent of major U.S. estuaries) exhibited highly eutrophic conditions, caused by nutrient enrichment.”¹²¹ Over the last 40 years, the volume of the Chesapeake Bay’s dead zone has more than tripled, and in many summers “comprises almost a quarter of the water in the mainstem” Bay.¹²² The growth of hypoxia in the Gulf and the Chesapeake is of concern because as hypoxia worsens, ecological and fisheries effects become progressively more severe, ranging from localized loss of catch to complete system-wide loss of fishery species.¹²³

2. Growing Commodity Crops Increases Soil Erosion

“Soil erosion involves the breakdown, detachment, transport, and redistribution of soil particles by forces of water, wind, or grav-

118. See, e.g. “Two-thirds of the nitrogen in the Mississippi River comes from use of fertilizer and manure on agricultural lands . . .” Marc Ribaud, “*Dead Zone*” in the Gulf: Addressing Agriculture’s Contribution, 1 Amber Waves 37 (2003), available at www.ers.usda.gov/amberwaves/november03/Findings/dead-zone.htm. “Nonpoint sources contribute about 90 percent of the nitrogen and phosphorous discharging to the Gulf. Agricultural activities are the largest contributors of both nitrogen and phosphorous.” Donald A. Goolsby et al., Flux and Sources of Nutrients in the Mississippi-Atchafalaya River Basin 14 (1999). Nitrogen loading in the Mississippi River comes not just from fertilizer, but also other agricultural sources, including soil inorganic nitrogen and manure. *Id.*

119. Claassen, *supra* note 112, at 2.

120. See J. Michael Beman et al., *Agricultural Runoff Fuels Large Phytoplankton Blooms in Vulnerable Areas of the Ocean*, 434 Nature 211, 213 (2005).

121. Claassen, *supra* note 112, at 2.

122. Chesapeake Bay Foundation, *The Chesapeake Bay’s Dead Zone: Increased Nutrient Runoff Leaves Too Little Oxygen in 40 Percent of the Bay’s Mainstem in July* (2006), http://www.cbf.org/site/DocServer/DeadZoneFactSheet_May06.pdf?docID=5583 (last visited June 30, 2008).

123. Robert J. Diaz & Andrew Solow, *Ecological and Economic Consequences of Hypoxia: Topic 2 Report for the Integrated Assessment on Hypoxia in the Gulf of Mexico* 37 (1999), available at http://oceanservice.noaa.gov/products/hypox_t2final.pdf.

ity.”¹²⁴ The loss of soil organic matter to erosion has been one of the best documented ecosystem consequences of modern agricultural practices.¹²⁵ Soil erosion reduces “the ability of the soil to provide nutrients, [water] and air, and a place for roots to take hold.”¹²⁶ Long-term studies of soil loss following conversion of land to agriculture have documented significant decreases in soil carbon.¹²⁷ On agricultural cropland, soil erosion “has on-site impacts on soil quality and crop productivity, and off-site impacts on water quantity and quality, air quality, and biological activity.”¹²⁸

The amount of sediment eroding from agricultural areas is directly related to land use—the more intensive the use, the greater the erosion. The rate and amount of soil loss is directly “influenced by cropping systems, such as the amount of [fertilizer used], crop coverage of the soil, tillage practice, and the length and type of fallow.”¹²⁹ Far “more sediment erodes from row crop fields such as corn[,] than from pastures or woodlands.”¹³⁰ The commodity programs in the Farm Bill encourage as much production as possible from the land, and pay farmers to grow row crops, thereby discouraging more beneficial practices that would decrease soil erosion.

*a. Soil Erosion Causes Water Pollution and Impairs
Wildlife Habitat*

Sediment in surface water is largely a result of soil erosion. “Depending on a variety of factors, between 25 and 40 percent of soil that erodes from a field will reach a water body.”¹³¹ Sediment buildup in water causes a myriad of problems. It reduces the useful life of reservoirs, clogs ditches and irrigation canals, and blocks navigation channels, all of which can increase the cost of water

124. Natural Resources Conservation Service, *National Resources Inventory, 2003 Annual NRI: Soil Erosion 1* (2007), available at <http://www.nrcs.usda.gov/technical/NRI/2003/SoilErosion-mrb.pdf>.

125. Matson, *supra* note 88, at 506.

126. Carpenter, *supra* note 102, at 204.

127. Matson, *supra* note 88, at 506.

128. Natural Resources Conservation Service, *supra* note 124, at 1.

129. Matson, *supra* note 88, at 506.

130. Committee on Water Implications of Biofuels Production in the United States, National Research Council, *Water Implications of Biofuels Production in the United States* 13 (2007), available at <http://books.nap.edu/openbook.php?isbn=030911361X&page=13>.

131. Ruhl, *supra* note 94, at 278.

treatment and dredging operations.¹³² Sediment increases the probability and severity of floods by raising streambeds and filling streamside wetlands.¹³³ Impacts on wildlife can be especially severe. Sediment can destroy or degrade aquatic wildlife habitat and damage commercial and recreational fisheries.¹³⁴

Another related problem is increased soil salinization. Drainage of agricultural lands, a common practice in Midwest and Upper Midwest farmlands, causes sediment build-up in surface water, worsening water pollution.¹³⁵ Drainage also increases soil and water salinity as salts—both naturally occurring and added through chemicals on farmland—concentrate in evaporating water.¹³⁶ “This salinized water has potentially devastating effects on downstream aquatic systems.”¹³⁷

b. Soil Erosion Threatens Long-term Land Productivity

Of more immediate concern to farmers, long-term soil productivity is also threatened by soil erosion. Since the 1950s, the problem of nutrient depletion in soil has been treated by “various forms of soil chemotherapy, chiefly nitrogenous fertilizer, at least by farmers who could afford it.”¹³⁸ Although it is often argued that soil erosion has no significant effect on long-term production, this assumes that more pesticides and fertilizers will be used in order to maintain a certain level of output.¹³⁹ As discussed previously, the reliance on pesticides and fertilizers cause lasting environmental impacts in addition to the problems caused by sediment build-up.

132. Marc Ribaud & Robert Johansson, *Water Quality: Impacts of Agriculture*, in *Agricultural Resources and Environmental Indicators* 33, 34 (2006).

133. *Id.*

134. *Id.*

135. See John H. Davidson, *Factory Fields: Agricultural Practices, Polluted Water and Hypoxic Oceans*, 9 *Great Plains Nat. Resources J.* 1, 10-11 (2004).

136. *Id.* at 11.

137. Ruhl, *supra* note 94, at 281-82. Return flows from cropland in California's Central Valley were high in selenium which collected in vegetation and small animals eaten by waterfowl, and thus built up to disastrous levels in waterfowl. See Harrison Dunning, *Confronting the Environmental Legacy of Irrigated Agriculture in the West: The Case of the Central Valley Project*, 23 *Envtl. L.* 943, 953-54 (2000).

138. J.R. McNeill & Verena Winiwarter, *Breaking the Sod: Humankind, History, and Soil*, *Sci.*, June 11, 2004, at 1629.

139. Carpenter, *supra* note 102, at 206.

Fortunately, the creation of the Conservation Reserve Program in the 1986 Farm Bill has significantly improved erosion rates. Soil erosion has decreased by 450 million tons since the Conservation Reserve Program's inception.¹⁴⁰ The Natural Resources Conservation Service of USDA measures erosion by a tolerable level of soil loss. This is defined as "the maximum amount of loss per acre per year that will permit a high level of crop productivity to be sustained economically and indefinitely."¹⁴¹ "In 2003, 102 million acres[, or 28 percent of all cropland,] were eroding above soil loss tolerance rates."¹⁴² This is down from the 40 percent of cropland eroding above soil loss tolerance rates in 1982.¹⁴³ Water erosion on cropland also dropped during this period from an average of 4 tons per acre per year to 2.6 tons per acre per year; "wind erosion rates dropped from 3.3 to 2.1 tons per acre per year."¹⁴⁴

Despite these gains, soil erosion continues to threaten much of the country's agricultural land. All erosion on U.S. cropland decreased 43 percent between 1982 and 2003, but the amount of soil that erodes annually is staggering: 1.75 billion tons of soil eroded in 2003.¹⁴⁵ Erosion is of greatest concern on what is deemed "highly erodible cropland." Highly erodible cropland is generally steeper and less fertile, requires more fertilizer and other chemicals to maintain production, and can be damaged by high erosion rates.¹⁴⁶ In 2003, of the approximately 368 million acres of cropland in the United States, 100 million acres were considered highly erodible land.¹⁴⁷ This was down from 124 million acres of highly erodible land in 1982.¹⁴⁸ And soil erosion disproportionately impacts certain regions. Over half of water erosion in 2003 occurred in just two of the country's twelve major river basins—the Missouri and the Souris-

140. James M. McElfish, Jr. et al., *Inventing Nonpoint Controls: Methods, Metrics and Results*, 17 Vill. Envtl. L.J. 87, 91 (2006) (since the 1985 Farm Bill, "USDA funding programs have strongly influenced state programs aimed at reducing nonpoint source pollution" from agricultural soil erosion).

141. Pierre R. Crosson & Sterling Brubaker, *Resource and Environmental Effects of U.S. Agriculture* 105 (1982) (quoted in Carpenter, *supra* note 102, at 204).

142. Natural Resources Conservation Service, *supra* note 124, at 3.

143. *Id.*

144. *Id.* at 2.

145. *Id.* at 1.

146. Carpenter, *supra* note 102, at 204-05.

147. Natural Resources Conservation Service, *supra* note 124, at 3.

148. *Id.*

Red-Rainy/Upper Mississippi.¹⁴⁹ These river basins cover the Midwest and Upper Midwest, the largest areas of commodity grain crop production in the country.¹⁵⁰

V. AGENCY REGULATIONS REQUIRE NEPA COMPLIANCE

A. Farm Service Agency Regulations Require an EIS of the Commodity Programs

Although Farm Service Agency (FSA) regulations categorically exclude commodity subsidies from NEPA compliance, those same regulations indicate that an EIS of the commodity programs must be done. Environmental evaluations, the first step in the NEPA process, are required for programs that might have significant impacts on the environment.¹⁵¹ This includes “proposed legislation, a new program, a major change in a program, an action related to a program or an action related to part of a program . . .”¹⁵² This then becomes the basis for determining whether an environmental assessment and/or an environmental impact statement is needed.¹⁵³ The commodity programs of the Farm Bill are not new programs, but each new Farm Bill presents a major change in these programs.¹⁵⁴ And each new Farm Bill begins with proposed legislation.

FSA regulations also indicate that ongoing programs can trigger an EIS. Among FSA activities likely to have significant environmental impacts are the activities requiring environmental evaluations—legislative proposals, new program implementation, and major changes in ongoing programs—with the addition of “major environmental concerns with ongoing programs.”¹⁵⁵ This rather expansive wording dictates that the concerns that have been expressed¹⁵⁶

149. Natural Resources Conservation Service, *supra* note 124, at 2.

150. U.S. Department of Agriculture, *supra* note 65.

151. 7 C.F.R. §§ 799.3-4 (2007).

152. 7 C.F.R. § 799.4 (2007).

153. 7 C.F.R. § 799.4 (2007).

154. For instance, in the 2008 Farm Bill, there are changes to payment limits, a modification of loan rates and target prices among commodities, and a new revenue counter-cyclical payment option, among other program changes. See H.R. 6124, 110th Cong. (2008).

155. 7 C.F.R. § 799.9(b) (2007).

156. See, e.g., Davidson, *supra* note 8; Ruhl, *supra* note 94; C. FORD RUNGE, ENVIRONMENTAL PROTECTION FROM FARM TO MARKET, IN THINKING

about the environmental impacts of farm policies should trigger an EIS of FSA programs. The regulations require that initial NEPA involvement in these program categories begin at the earliest possible stage—when FSA begins developing proposed legislation, begins planning for implementing programs, “or receives notice that an ongoing program may have a significant adverse impact on the quality of the human environment.”¹⁵⁷ It could be that FSA has not received notice that commodity subsidies may harm the environment, or, more likely, that FSA, and the USDA in general, has chosen to ignore their own regulations.

B. Individual Farms Receiving Subsidies Should Trigger NEPA Requirements

Individual farm participation in FSA programs is categorically excluded from NEPA requirements,¹⁵⁸ despite their cumulative significant effects on the environment. This violates CEQ regulations regarding categorical exclusions. Under CEQ regulations, actions can be given “categorical exclusion” from NEPA’s requirements if they fall within “a category of actions which do not individually or *cumulatively* have a significant effect on the human environment and which have been found to have no such effect”¹⁵⁹ NEPA specifically covers the cumulative effect of federal programs. Although the effect on the environment from individual farms may be minor, the Eighth Circuit held in *Minnesota Public Interest Research Group v. Butz* that these effects cannot be disaggregated into “minor federal actions” for which NEPA would be inapplicable.¹⁶⁰ For, as the court noted, “There has been increasing recognition that man and all other life on this earth may be significantly affected by actions which on the surface appear insignificant.”¹⁶¹ FSA regulations merely state that “[i]ndividual farm participation in . . . price support and loans

ECOLOGICALLY: THE NEXT GENERATION OF ENVIRONMENTAL POLICY 200 (Marian R. Chertow & Daniel C. Esty, eds., 1997).

157. 7 C.F.R. § 799.9(c) (2007).

158. 7 C.F.R. § 799.10(b)(2) (2007).

159. 40 C.F.R. § 1508.4 (2007) (emphasis added).

160. See *Minnesota Pub. Interest Research Group v. Butz*, 498 F.2d 1314 (8th Cir. 1974) (the magnitude of the federal action cannot be considered separately from its impact on the environment, as this would allow for “minor federal actions significantly affecting the quality of the human environment” to which NEPA would not apply, contrary to the clear intentions of the statute).

161. *Id.* at 1322.

and other similar or related programs will not significantly affect the quality of the human environment.”¹⁶² This blanket statement does not provide the reasons why FSA reached this conclusion, and ignores the cumulative affect of tens of thousands of farms receiving federal subsidies.

Furthermore, some individual farms very likely significantly affect the environment. In 2002, 77,970 farms comprised over 2,000 acres, much larger than the nation’s average farm size of 441 acres.¹⁶³ Although USDA does not track commodity payments given to individual farms by farm size, many of these large farms receive subsidies since the bulk of commodity payments—78 percent—go to medium-sales (\$100,000-\$249,999) and large-scale farms.¹⁶⁴ Yet only 43 percent of conservation payments go to farms that also receive commodity payments,¹⁶⁵ and most conservation payments do not go to medium-sales and large-scale farms.¹⁶⁶ This means that many large farms in the U.S. receive commodity payments, but do not pursue the conservation practices that can mitigate some of the adverse environmental effects of commodity farming.¹⁶⁷

FSA’s regulations recognize that individual farms may have a significant impact. If there is such a possibility, the local county committee makes an environmental evaluation, and if shown to have a significant effect, “the county committee will not approve the [FSA] practice implementation until after the completion of the NEPA-EIS process . . .”¹⁶⁸ According to these regulations, if it were established that all farms receiving subsidies could significantly affect the environment, then the EIS process would have to be done prior to individual farms receiving subsidies.

162. 7 C.F.R. § 799.9(d) (2007).

163. U.S. Department of Agriculture, *supra* note 65.

164. Robert A. Hoppe et. al., *Structure and Finances of U.S. Farms: Family Farm Report*, 2007 Edition, iv (2007).

165. U.S. Department of Agriculture, *supra* note 69, at 28.

166. In 2004, retirement, residential, and low-sales small farms received 62 percent of conservation program payments and small farms accounted for 82 percent of the land enrolled by farmers in the Conservation Reserve and Wetlands Reserve Programs. U.S. Department of Agriculture, *supra* note 69, at 11.

167. *See infra* p. 30 and note 186.

168. 7 C.F.R. § 799.9(d) (2007).

C. *The Farm Service Agency's EIS of the Conservation Reserve Program as a Model for an EIS of the Commodity Programs*

An EIS of commodity subsidies could easily be modeled on the EIS of the Conservation Reserve Program (CRP) done by the Farm Service Agency. A Final Programmatic Environmental Impact Statement was done regarding FSA implementation of the Conservation Reserve Program under the 2002 Farm Bill.¹⁶⁹ Like the commodity subsidies, CRP is a re-authorized program in the Farm Bill. Unlike the commodity subsidies, CRP has not been categorically excluded from NEPA.¹⁷⁰ This may be due to the fact that FSA's NEPA regulations were promulgated in 1980, and have not been updated since then to include subsequent programs such as CRP, which first appeared in the 1985 Farm Bill.¹⁷¹ CRP is also re-authorized in the 2008 Farm Bill, and another EIS for the program will likely appear after final passage of the 2008 Farm Bill.

The Conservation Reserve Program is a voluntary program offering incentives and assistance to farmers and ranchers for establishing conservation practices on privately-owned environmentally sensitive land.¹⁷² In the EIS, FSA considered four alternatives and the effect of those alternatives on numerous environmental resources including soil erosion, water quality, and wildlife.¹⁷³ Also considered were the "social and economic aspects of the affected environment [which] consist of farming from a national perspective and of rural communities that may be affected by CRP enrollment."¹⁷⁴ FSA selected the Proposed Action Alternative as "the most balanced approach to achieving long-term program goals."¹⁷⁵ Perhaps not coincidentally,

169. Commodity Credit Corporation & Farm Service Agency, Record of Decision for the Programmatic Environmental Impact Statement on the Conservation Reserve Program, 68 Fed. Reg. 24,848 (2003) [hereinafter Conservation Reserve Program EIS].

170. See 7 CFR § 799.10 (2007).

171. The FSA NEPA regulations appeared in 45 Fed. Reg. 32,313 (1980).

172. Conservation Reserve Program EIS, *supra* note 169, at 24,848.

173. The environmental resources considered were: soils, soil and wind erosion (including air quality), water resources and aquatic species, surface water, total maximum daily loads (TMDLs), groundwater, floodplains, riparian areas, wetlands, vegetation, grasslands, forestlands, invasive species, wildlife, wildlife recreation, and threatened and endangered species. Conservation Reserve Program EIS, *supra* note 169, at 24,849.

174. *Id.*

175. Conservation Reserve Program EIS, *supra* note 169, at 24,854.

this also was the alternative that complied with the 2002 Farm Bill.¹⁷⁶

An EIS for the commodity programs of the Farm Bill could look very similar to the one done for CRP. As was the case for CRP, the EIS of the commodity programs would be done after passage of the Farm Bill, but before implementation of the programs. An EIS should be done for each different type of subsidy, since each have differing policy bases. After providing historical background and an explanation of the differences of the various commodity programs, the EIS would present several alternatives. As was done for CRP, one alternative should consider the environmental impact of having no commodity subsidy programs.¹⁷⁷ Another alternative might be based on the programs and funding levels existing prior to the current Farm Bill, and still another alternative would be based on FSA implementing changes to the programs authorized in the current Farm Bill.¹⁷⁸ The EIS would then conclude with an explanation of the rationale for decision for the chosen alternative and a commitment to implementing the program in order to minimize adverse effects on the environment.

D. *An EIS of the Commodity Title of the Farm Bill*

It might be argued that the Commodity Title could not be subject to an EIS due to its large scope. Although different in purpose, CRP and the commodity subsidy programs are similar in breadth. Like the commodity subsidy programs of the Farm Bill, CRP is implemented through FSA on behalf of the Commodity Credit Corporation and is a large program with nationwide effects.¹⁷⁹ Currently,

176. *Id.*

177. Compared to the CRP, which began under the Food Security Act of 1985, many of the subsidy programs date to the 1930s, so it would be futile to analyze the environmental effects of never having had subsidies. *See also* Key, *supra* note 4, at 1212.

178. These alternatives were considered in the Conservation Reserve Program EIS, *supra* note 169, at 24,849. The final alternative considered was the environmental targeting alternative, which would focus program resources on addressing national or regional priority conservation goals. *Id.* Similarly, an EIS for the commodity subsidy programs could consider an alternative with payments based on environmental stewardship. For an analysis of how these environmental benefits payments might work, *see* Erin Morrow, *Agri-Environmentalism: A Farm Bill for 2007*, 38 TEX. TECH L. REV. 345, 387-91 (2006).

179. Conservation Reserve Program EIS, *supra* note 169, at 24,848. In summarizing expected effects of the alternatives on the resources considered, the EIS of

there are about 782,000 contracts on 441,000 farms in the CRP program; 36.8 million acres are enrolled in the program, making CRP the largest public-private partnership for conservation and wildlife habitat in the United States.¹⁸⁰ \$1.8 billion was given to producers in the program for the current fiscal year.¹⁸¹ While that pales in comparison to the over \$13 billion given in commodity subsidy payments to farmers in 2005,¹⁸² when compared to all conservation and commodity payments to farmers, CRP ranks third in amount of money disbursed.¹⁸³

Although FSA ultimately adopted the program alternative that complied with the 2002 Farm Bill, it did so only after analyzing the environmental ramifications of that and other alternatives. The analysis might have been biased in favor of the program in the Farm Bill, as FSA might not have had an option but to adopt that alternative, since doing otherwise would abrogate the statutory language. Regardless, by conducting the EIS, FSA incorporated environmental concerns into its decision-making and met NEPA's procedural mandate by promising that CRP and its related programs would be implemented "in a manner that provides the greatest amount of benefits to the environment while causing the least amount of adverse impacts."¹⁸⁴

It is ironic, of course, that the only FSA-administered program to go through the EIS process is FSA's most environmentally-focused program. Four alternatives were considered in the EIS. The only alternative with severe environmental consequences established an analytical baseline that described what would have happened if CRP had never been implemented.¹⁸⁵ Analysis under this alternative

CRP noted, "[d]ue to the large programmatic scale of CRP, the timing, location, and magnitude of the environmental effects will differ under the various alternatives." *Id.* at 24,849-24,850. The same would hold true of the commodity programs, but sheer size does not preclude the environmental effects from being considered.

180. U.S. Dep't of Agric., USDA Issues \$1.8 Billion in Conservation Reserve Program Rental Payments, News Release No. 0276.07 (2007), available at http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=ner&newstype=newsrel&type=detail&item=nr_20071001_rel_0276.html (last visited June 26, 2008).

181. *Id.*

182. Over \$13 billion was given to farmers through commodity programs in 2005. See *supra* note 64.

183. *Id.*

184. Conservation Reserve Program EIS, *supra* note 169, at 24,854.

185. Conservation Reserve Program EIS, *supra* note 169, at 24,849.

briefly describes some of the worst environmental problems caused by farming—soil erosion rates greater than 1.9 billion tons per year, worsened surface water quality with more streams having a TMDL listing, approximately 3 million acres of wetlands farmed, and significant negative impacts on local wildlife.¹⁸⁶ Although largely lacking in specifics, this analysis could provide a useful starting point for analyzing the environmental impacts of farm subsidies in general. It could, at the very least, substantiate the argument that FSA has received notice that its ongoing commodity programs may have a significant adverse impact on the quality of the human environment.

VI. CONCLUSION: FORCING COMPLIANCE WITH NEPA

Although this paper proposes a large programmatic EIS for the subsidy programs, it may be that individual EISs, done at the level of individual farms receiving subsidies, would be better suited to truly fulfill the requirements imposed by NEPA. The Act contemplates both broad programmatic impact statements and smaller impact statements for individual projects.¹⁸⁷ In *Kleppe v. Sierra Club*, the Supreme Court recognized that when proposals have cumulative or synergistic effects on the environment, a programmatic EIS must be done.¹⁸⁸ In addition, as is the case with regard to commodity subsidies given to individual farms, if the national program permits private activity significantly affecting the quality of the human environment, an impact statement must be done regarding the individual projects.¹⁸⁹ *Kleppe* therefore requires both a programmatic environmental assessment and individual EISs for smaller actions within that broad program. For this to happen, an environmental group would likely have to force the agency to take action via litigation, and no environmental groups have yet expressed an interest in doing so.

186. Conservation Reserve Program EIS, *supra* note 169, at 24,850.

187. 40 C.F.R. § 1508.28 (2007) (“tiering” refers to the coverage of general matters in broader environmental impacts statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basinwide program statements or ultimately site-specific statements)).

188. 427 U.S. 390, 410 (1976).

189. *See id.* at 399 (a national coal-leasing program required a programmatic EIS and individual EISs for individual mines).

A second possibility for forcing FSA to do an EIS is through the legislative EIS process. NEPA requires an EIS on proposals for legislation that would significantly affect the quality of the human environment.¹⁹⁰ A legislative EIS is prepared in the same manner as an administrative EIS, except that there need not be a scoping process, and except for certain circumstances, only one statement need be prepared.¹⁹¹ In *Public Citizen v. United States Trade Representative*,¹⁹² the DC Circuit upheld the legitimacy of the legislative EIS and held that APA review of otherwise-final agency actions may be available.¹⁹³ The fall-out from that decision, however, led many observers to conclude that legislative EISs are without much force.¹⁹⁴ FSA regulations do not preclude creation of a legislative EIS, but state that a legislative EIS may negate the need for the subsequent preparation of a programmatic impact statement when FSA implements the resulting program.¹⁹⁵ Again, forcing FSA to do a legislative EIS would probably require litigation.

Since the Farm Service Agency would respond to such litigation by citing the categorical exclusion of commodity subsidy programs, a better avenue for action would be through attacking the categorical exclusion itself. While the promulgation of a new categorical exclusion does not require issuance of an EIS or an EA/FONSI,¹⁹⁶ the promulgation is nevertheless reviewable by the courts.¹⁹⁷ A categorical exclusion is held to the same arbitrary and capricious standard as is other agency action, and an agency must demonstrate that it made a “reasoned decision” to promulgate a categorical exclusion based on all the relevant factors and information.¹⁹⁸

190. 40 C.F.R. § 1506.8 (2007).

191. *Id.*

192. *Public Citizen v. U.S. Trade Representative*, 5 F.3d 549 (D.C. Cir. 1993).

193. *Id.* at 552.

194. *See, e.g.,* Dana Butler, Note, *The Death Knell of the Legislative Environmental Impact Statement: A Critique of Public Citizen v. U.S. Trade Representative*, 17 Loy. L.A. Int'l & Comp. L. Rev. 121, 121 (1994) (the “decision casts doubt upon the role of the EIS in many administrative agency-related proposals for legislation because no agency-prepared materials are truly final until they are implemented or enacted by Congress.”).

195. 7 C.F.R. § 799.9(c) (2007).

196. *Sierra Club v. Bosworth*, 510 F.3d 1016, 1025 (9th Cir. 2007) (citing *Heartwood, Inc. v. United States Forest Service*, 230 F.3d 947, 954 (7th Cir. 2000)).

197. *See id.* at 1026.

198. *Id.*

The Ninth Circuit in *Sierra Club v. Bosworth* listed several considerations for analyzing an agency's promulgation of a categorical exclusion. First, the agency's analysis must not be post-hoc.¹⁹⁹ The agency is required to engaged in a "scoping process" prior to establishing the categorical exclusion, in which the agency considers "cumulative impacts of connected, cumulative, and similar actions, and is required to produce an [environmental assessment] if the proposed project may have a significant effect on the environment."²⁰⁰ This has emphatically not been done with regard to the commodity subsidies, since the categorical exclusion was promulgated prior to the many significant changes made to the commodity programs in the several farm bills since 1980. The scope of the environmental impacts cannot possibly have been considered when the full scope of the commodity programs was then unknown.

Second, the agency must properly assess significance, including cumulative impacts and when the impact is highly controversial or the risks uncertain.²⁰¹ "Categorical exclusions, by definition, are limited to situations where there is an insignificant or minor effect on the environment."²⁰² Since "insignificant" is a threshold question under NEPA, the Farm Service Agency must document that the commodity subsidies are insignificant.²⁰³ FSA would be hard-pressed to establish this, given the large amounts of money and the large number of farms involved in the subsidy programs.²⁰⁴

Third, the categorical exclusion must have the requisite specificity to ensure that projects taken under it achieve program objectives but do not individually or cumulatively inflict a significant impact.²⁰⁵ The categorical exclusion for farm subsidy programs does not go into great specificity. For instance, it is not explained how the categorical exclusion fails to meet the four categories of FSA activities that have or are likely to have significant environment impacts: (1) legislative proposals, (2) initial program implementation, (3) major changes in ongoing programs, (4) major environmental concerns

199. *Id.* at 8.

200. *Id.* at 9 (citing 40 C.F.R. § 1508.25(a)(3) (2007)).

201. *Id.* at 9-14.

202. *Alaska Ctr. for the Env't v. U.S. Forest Serv.*, 189 F.3d 851, 859 (9th Cir. 1999) (quoted in *Sierra Club*, *supra* note 195, at 1026).

203. *Sierra Club*, *supra* note 195, at 1026.

204. *See supra* text accompanying notes 64-67.

205. *Sierra Club*, *supra* note 195, at 1032 (citing 40 C.F.R. § 1508.4 (2007)).

with ongoing programs.²⁰⁶ Any one of these categories could potentially include the commodity subsidy programs, and therefore, under FSA regulations, trigger the NEPA process.

Although there are several possibilities for forcing FSA to do an EIS of the commodity subsidy programs, the success of any of them remains an open question. The National Environmental Policy Act is, after all, a statute, and Congress could amend the Act to formally exclude agricultural programs, as was done with the Clean Water Act.²⁰⁷ Given the public's increasing concern with environmental problems, this may not be politically possible. Even so, amending NEPA with regard to the Farm Bill would present Congress the opportunity to finally discuss the environmental ramifications of the agricultural policies it has chosen.

206. 7 C.F.R. § 799.9 (2007).

207. See Ruhl, *supra* note 94, at 294.

