Agricultural Conservation Issues in the 111th Congress

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Summary

Agricultural conservation has been a public policy issue for more than 60 years. Congress has repeatedly taken action on the issue through water and soil legislation, often as part of omnibus farm bills. Early policy decisions were directed at addressing natural resource concerns on the farm, primarily reducing high levels of soil erosion and providing water to agriculture in quantities and quality that enhanced farm production. In more recent years, conservation policy has shifted to concerns about the off-farm impacts of agricultural activities.

The latest farm bill, the Food, Conservation, and Energy Act of 2008 (P.L. 110-246), reauthorized most existing conservation programs, modified several programs, and created a few new programs. The U.S. Department of Agriculture's (USDA's) conservation efforts have centered on implementing these conservation programs through working land conservation practices, retiring land from production or establishing conservation easements, and providing technical assistance. Program implementation controversies could lead to congressional oversight or action, especially given the recent financial statement audit reports on conservation program payments at USDA.

Other emerging issues in the 111th Congress could have a significant impact on agricultural conservation. The climate change debate and use of ecosystem services markets has brought conservation to the forefront of discussion on the role of agriculture in reducing greenhouse gas emissions. Also, the effect of ethanol production on natural resources and changes in land use is an ongoing concern in the area of biofuels policy. Other environmental issues for agriculture such as concentrated animal feeding operation regulations, greenhouse gas emission reporting for livestock producers, and wetlands mitigation could lead to expanded opportunities and challenges for many conservation efforts.

Appropriations and budget issues continue to influence conservation programs and policy. Conservation programs with mandatory funding have been routinely reduced through annual appropriation bills. In FY2008 and FY2009, the reductions were limited to a handful of programs, with the Environmental Quality Incentives Program (EQIP) receiving the largest reductions, including $270 million in FY2009. The watershed programs have experienced an increase in congressionally directed projects through appropriations, with Watershed and Flood Prevention Operations being 97% earmarked in FY2009. The ongoing issue of funding for conservation technical assistance in mandatory programs will likely be raised again due to an expiring authority.

Other issues of potential interest in the 111th Congress include implementation of conservation program payment and income limitations, use of the Conservation Effects Assessment Project, and recent financial audits and conservation contract administration concerns.

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Introduction

Agricultural conservation has been a public policy issue for more than 60 years, an issue repeatedly recast as new problems have emerged or old problems have resurfaced. Early conservation efforts were focused on two themes—reducing high levels of soil erosion and providing water to agriculture in quantities and quality that enhanced farm production.

Congress responded repeatedly to these themes by creating or revising programs designed to reduce resource problems on the farm. By the early 1980s, however, concern was growing that these programs were not adequately dealing with environmental problems resulting from agricultural activities (especially off the farm). Publicized instances of significant problems, especially high soil erosion rates said to rival the dust bowl era, increased awareness and intensified the policy debate. In 1985, conservation policy took a new direction when Congress enacted four major new conservation programs in the conservation title of the Food Security Act of 1985 (P.L. 99-198): the Conservation Reserve Program (CRP), Sodbuster, Conservation Compliance, and Swampbuster. These programs, all administered by the U.S. Department of Agriculture (USDA), were the first conservation programs designed to deal with environmental problems related to the off-farm impacts of agricultural activities.

Provisions enacted in subsequent farm bills, including in 1990, 1996, 2002, and 2008, reflect a rapid evolution of the conservation agenda, including the growing influence of environmentalists and other non-agricultural interests in the formulation of conservation policy, and a recognition that agriculture was not treated like other business sectors in many environmental laws.[1] Congress also began funding many of these new programs through mandatory spending for the first time, using the borrowing authority of USDA's Commodity Credit Corporation (CCC)[2] as the funding mechanism instead of annual appropriations. In addition to the original soil erosion and water quality and quantity issues, the conservation agenda has continued to expand to address other natural resource concerns such as wildlife habitat, air quality, wetlands restoration and protection, energy efficiency, and sustainable agriculture.

Many conservation programs receive continued support among producers and Congress, as evidenced by the recent reauthorization and expansion of existing programs and creation of new ones in the most recent farm bill (Food, Conservation, and Energy Act of 2008, P.L. 110-246). The enacted bill addressed several emerging issues, such as payment structure, geographic targeting, program complexity, the importance of large-scale conservation efforts, and measurement of costs and effectiveness. Funding also played a large role in the 2008 farm bill debate as a pronounced domestic budget constraint caused several conservation groups to compete with other farming interests for the necessary resources to expand and continue many conservation programs. Many of these general policy issues were central to outcomes in the enacted conservation title of the farm bill.

[1] Conservation and Trade Act of 1990 (P.L. 101-624), Federal Agricultural Improvement and Reform Act of 1996 (P.L. 104-127), Farm Security and Rural Investment Act of 2002 (P.L. 107-171), and Food, Conservation, and Energy Act of 2008 (P.L. 110-246).

[2] The CCC is the funding mechanism for the mandatory payments that are administered by various agencies of USDA.

Current Major Activities

USDA's conservation efforts have centered in recent years on implementing conservation programs that target working lands, remove land from production (also known as retiring land) or create conservation easements, and provide technical assistance. Funding for the overall conservation effort has grown significantly since the 2002 farm bill (P.L. 107-171) and many reauthorized programs received increases in funding in the 2008 farm bill. Recent trends in policy for the suite of conservation programs include less emphasis on land retirement and on land producing row crops, and more attention to conservation on land in other agricultural uses and to livestock producers. Congress in the 2008 farm bill expanded many program benefits to include specialty crop producers, producers transitioning to organic production, forested and managed lands, pollinator habitat and protection, and nutrient and pest management.

Lead agricultural conservation agencies within USDA are the Natural Resources Conservation Service (NRCS), which provides technical assistance and administers most programs, and the Farm Service Agency (FSA), which administers the largest program, CRP. These agencies are supported by others in USDA that supply research and educational assistance, including the Agricultural Research Service, the Forest Service, and the Economic Research Service.[3] In addition, the conservation effort involves a very large array of partners, including other federal agencies, state and local governments, and private organizations, among others, who provide funds, expertise, and other forms of assistance to the conservation effort.

Overview of Conservation Programs

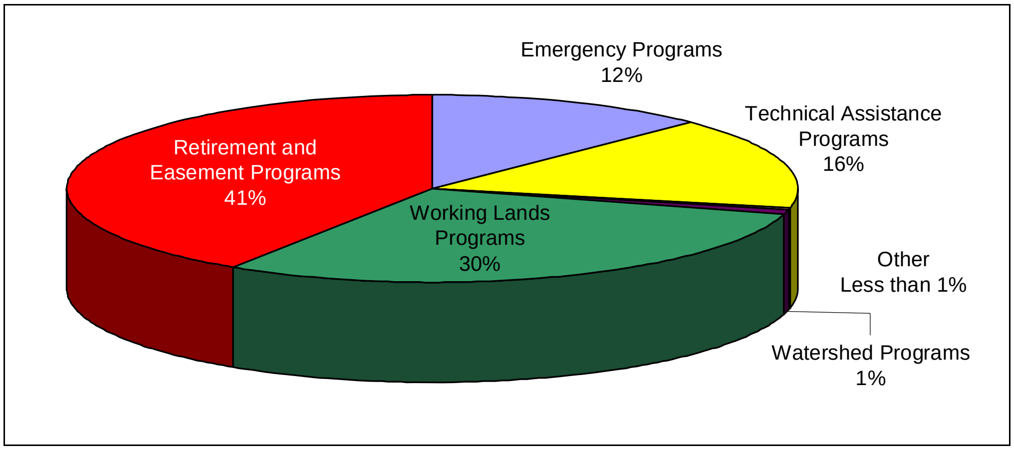
There are currently more than 20 USDA agricultural conservation programs that assist private landowners with natural resource concerns. Conservation programs are grouped into working land programs, land retirement and easement programs, watershed programs, and other programs. For a brief description of the individual USDA agricultural conservation programs, see **Appendix A**, and for program funding levels, see **Appendix B**. **Figure 1** illustrates the amount of actual funding in FY2008 for each group of programs.

Working Lands

Working lands conservation programs are typically classified as programs that allow private land to remain in production, while implementing various conservation practices to address natural resource concerns specific to the area. The largest of these programs is the Environmental Quality Incentives Program (EQIP), currently authorized at a total of $7.3 billion between FY2008 and FY2012. Others, such as the Wildlife Habitat Incentives Program (WHIP), Agricultural Management Assistance (AMA), and Agricultural Water Enhancement Program (AWEP), operate similarly to EQIP; however, they target specific resource concerns or geographic areas. The new Conservation Stewardship Program (CSP) replaces the Conservation Security Program and is designed to encourage producers to address specific resource concerns in a comprehensive manner.

[3] For more information on ARS projects, see http://www.ars.usda.gov/Research/Research.htm; for ERS projects, see http://www.ers.usda.gov/Browse/view.aspx?subject=NaturalResourcesEnvironment; and for FS projects, see http://www.fs.fed.us/projects/.

Figure 1. FY2008 Actual Funding for Conservation Programs



Source: FY2008 Actual funding (budget authority) as reported in the FY2010 Budget Explanatory Notes on basis of appropriations (or in the case of CCC, authorized levels).

Notes: Technical assistance includes funding for compliance programs. Funding for extension and research is not included. Total funding for conservation programs is approximately $5.6 billion.

Land Retirement and Easement Programs

Land retirement programs provide federal payments to private agricultural landowners for *temporary* changes in land use or management to achieve environmental benefits. Conversely, conservation easements impose a *permanent* land-use restriction that is voluntarily placed on the land in exchange for a government payment. The largest land retirement program is the Conservation Reserve Program (CRP), which removes land from production and is authorized to enroll up to 32 million acres. Other programs such as the Wetlands Reserve Program (WRP) and the Grasslands Reserve Program (GRP) use a combination of long-term or permanent easements as well as restoration contracts to protect wetlands and grasslands from production. The Farmland Protection Program (FPP) also uses easements; unlike the aforementioned programs, however, it does not remove land from production, but rather restricts productive farmland from being developed for non-farm purposes.

Watershed Programs

Watershed and Flood Prevention Operations (P.L. 83-566 and P.L. 78-534) are two separate program authorities that have almost identical objectives and operations. These programs are sometimes referred to as the Small Watershed Programs. Through these programs, NRCS partners with local sponsors to carry out activities for soil conservation; flood prevention; conservation, development, utilization and disposal of water; and conservation and proper utilization of land. The Watershed Rehabilitation program was authorized in 2000 (P.L. 106-472) to rehabilitate watershed structures created under the Watershed and Flood Prevention Operations programs that have reached or exceeded their design life.

Other Selected Programs

USDA administers several other conservation programs. Technical assistance programs, such as Conservation Operations (including Conservation Technical Assistance, Survey, Soil Survey, Grazing Lands Conservation Initiative, and the Plant Materials Centers) provide landowners with science-based conservation information and technical expertise (e.g., engineering and biological) unique to the region and land-use type. USDA also administers compliance programs such as Sodbuster, Swampbuster, conservation compliance, and Sodsaver, which halt a producer's access to many federal farm program benefits if they do not meet conservation program requirements for highly erodible lands and wetlands. Programs such as the Emergency Conservation Program (ECP) and the Emergency Watershed Program (EWP) provide disaster assistance for farmland rehabilitation and impairments to watersheds, and are funded on an ad-hoc emergency basis.

USDA Agricultural Conservation Programs

Working Lands Programs—Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program (CSP)/Conservation Security Program, Wildlife Habitat Incentives Program (WHIP), Agricultural Water Enhancement Program (AWEP), and Agricultural Management Assistance (AMA).

Land Retirement and Easement Programs—Conservation Reserve Program (CRP, including Conservation Reserve Enhancement Program (CREP) and CRP Farmable Wetlands), Wetlands Reserve Program (WRP), Farmland Protection Program (FPP), Grassland Reserve Program (GRP), and Healthy Forests Reserve Program (HFRP).

Watershed Programs—Watershed and Flood Prevention Operations (also referred to as the Small Watershed Programs), Watershed Rehabilitation, and Watershed Surveys and Planning.

Emergency Programs—Emergency Conservation Program (ECP) and Emergency Watershed Program (EWP) (includes floodplain easements).

Compliance—Conservation Compliance, Sodbuster, Swampbuster, and Sodsaver.

Technical Assistance Programs—Conservation Operations (includes Conservation Technical Assistance, Survey, Soil Survey, Grazing Lands Conservation Initiative, Plant Materials Centers), Resource Conservation and Development (RC&D) program.

Other Conservation Programs and Provisions—Chesapeake Bay Watershed Program, Cooperative Conservation Partnership Initiative, Conservation Innovation Grants, Great Lakes Basin Program, Regional Equity, State Technical Committees, Voluntary Public Access and Habitat Incentive Program, and Grassroots Source Water Protection Program.

Agricultural Conservation Issues in the 111th Congress

2008 Farm Bill Implementation

The Food, Conservation, and Energy Act of 2008 (P.L. 110-246), the 2008 farm bill, reauthorizes almost all existing conservation programs, modifies several programs, and creates various new conservation programs. The changes address eligibility requirements, program definitions, enrollment and payment limits, contract terms, evaluation and application ranking criteria, among other administrative issues.[4] Following the passage of the 2008 farm bill, USDA has taken steps toward implementation of many conservation programs. In the 111th Congress, lawmakers' attention likely will be focused on USDA's implementation of these provisions. The following

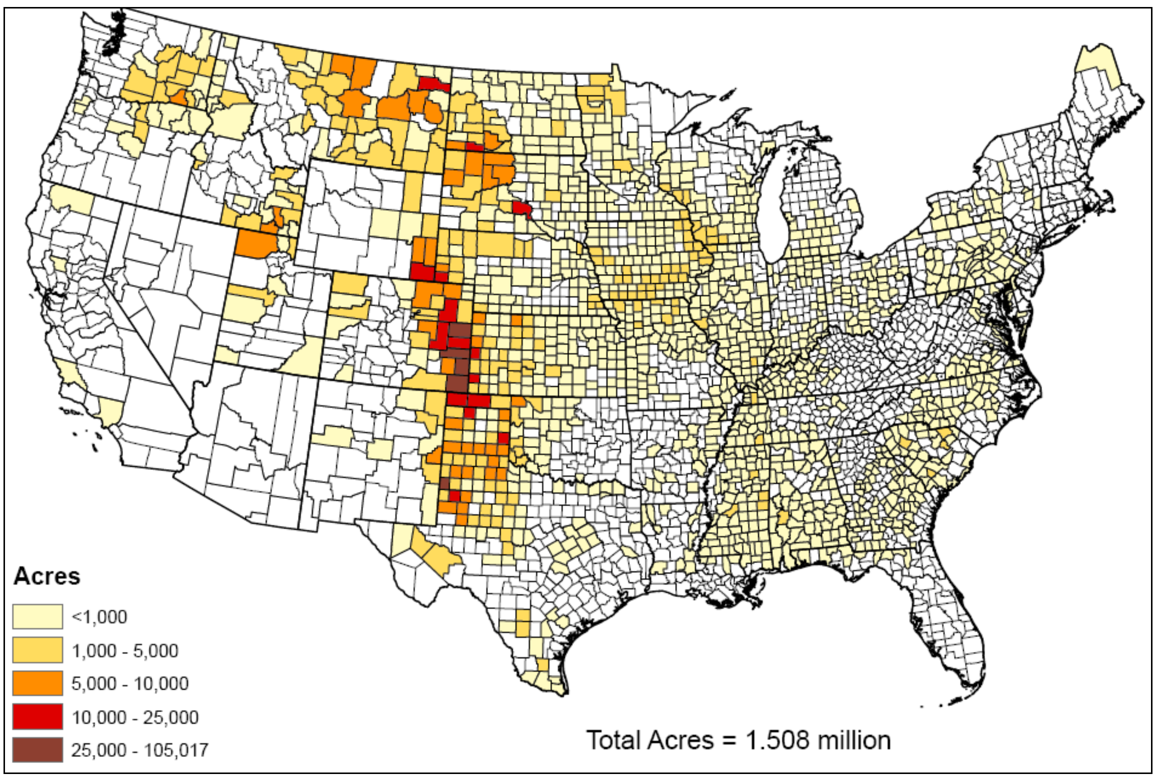
[4] For additional information on conservation provisions in the farm bill, see CRS Report RL34557, *Conservation Provisions of the 2008 Farm Bill*.

sections provide a brief description of implementation issues within some larger conservation programs and provisions.

Conservation Reserve Program (CRP)

The 2008 farm bill reauthorized CRP and reduced the maximum acreage cap to 32 million acres, down from a cap of 39.2 million acres established in the 2002 farm bill. With the reduced cap, USDA is less likely to offer reenrollment opportunities, except on the most environmentally beneficial cases with the highest environmental benefit index (known as EBI score) or highest potential to erode (known as the erodibility index, EI). **Figure 2** illustrates expiring CRP acreage eligible for extension because of high EBI and EI rankings. Many of these acres are located in the central region of the country within the central migratory bird flyway. Some wildlife organizations have expressed concern over this location due to the potential loss of benefits CRP acres provide to wildlife and migratory birds. Other conservation organizations see the acreage cap reduction as a result of CRP participants not reenrolling in the program as their 10-year contracts come up for renewal. They contend that the reduction is more realistic and allowed Congress to use the savings generated by the reduced cap to expand other conservation programs.

Figure 2. FY2009 Expiring CRP Acreage Eligible for Contract Extension



Source: USDA, Farm Service Agency

USDA announced a sign-up for voluntary extensions beginning May 18, 2009, and running through June 30, 2009. Of the expiring 3.9 million acres, approximately 100,000 acres are under continuous sign-up and will be reenrolled if the producer chooses. However, only about 1.5 million acres enrolled under the general sign-up will be offered contract extensions (**Figure 2**). Acreage eligible for contract extensions must score in the top 30% of the EBI or have an EI of 15 or higher. Participants who are eligible for contract extensions were notified by letter from their county FSA office. The reduction in contract extensions is necessary to ensure that the total acreage under contract will conform to the 32 million acre limit by October 1, 2009. Contract extensions ranges from two to five years at the same per-acre payment rate. Colorado, Kansas, Montana, and Texas have the largest number of eligible acres with a 30% EBI or a ranking of 15 on the EI. These four states account for 55% of the total national acres eligible for extension.[5]

Environmental Quality Incentives Program (EQIP)

With the 111th Congress experiencing continued budget constraints, EQIP could face similar challenges, with a potential reduction in mandatory funding levels and a continuing backlog of unfunded applications. The 2008 farm bill continued an increase in authorized mandatory funding that began with the 2002 farm bill. Mandatory funding for EQIP has grown substantially from its FY2002 level of $200 million, to the authorized level of $1.75 billion in FY2012. Despite this significant increase in authorized mandatory funding, annual appropriations acts have reduced the actual funding levels by a total of nearly $890 million from FY2005 through FY2009.[6] Some of this reduction has come at the request of both Administrations. The number of pending applications continues to exceed the amount of available funding (**Table 1**). In 2008, 67% of eligible applications were funded. Many conservation groups are concerned that this has deterred producers from applying and enrolling in the program. Others point out that despite reductions from the authorized level, total funding continues to increase. This issue will likely intensify if annual appropriations continue to reduce actual funding for EQIP below authorized mandatory levels.[7]

Table 1. EQIP Funded and Unfunded Applications and Funds Obligated

Fiscal Year	Total Applications Funded	Total Applications Unfunded	Percentage of Applications Funded	Funds Obligated (Financial Assistance, in thousands)
2000	16,249	37,712	30%	$139,606
2001	17,648	29,777	37%	$160,123
2002	19,817	70,495	22%	$322,193
2003	30,251	174,062	15%	$483,484
2004	46,413	135,394	26%	$718,150
2005	49,406	32,708	60%	$794,261
2006	41,190	32,633	56%	$787,968
2007	41,700	40,535	51%	$784,186
2008	48,116	23,803	67%	$924,221

Source: USDA, NRCS, *EQIP Contract and Funding Information*, http://www.nrcs.usda.gov/programs/eqip/.

[5] For further information on CRP, see CRS Report RS21613, *Conservation Reserve Program: Status and Current Issues*.

[6] Annual appropriations reduce funding for several other agriculture mandatory programs as a means of meeting overall budget targets. EQIP, however, has taken the largest reductions of all conservation programs.

[7] For further information on EQIP, see CRS Report R40197, *Environmental Quality Incentives Program (EQIP): Status and Issues*.

Conservation Stewardship Program (CSP)

The original Conservation Security Program, established in the 2002 farm bill (P.L. 107-171), faced numerous implementation challenges, drawing criticism by many in Congress.[8] The 2008 farm bill established the new Conservation Stewardship Program (CSP) to restructure and replace the old CSP. NRCS has not implemented the new CSP or issued a rule, although Secretary Vilsack has stated that CSP implementation is a priority for USDA.[9]

One possible implementation issue with the new CSP could be similar to one faced by the old CSP, that of technical assistance cost restrictions. NRCS argued that because the 2002 farm bill placed a statutory 15% limit on technical assistance cost to administer CSP, program implementation was constrained. The new CSP could face similar implementation concerns owing to a 2008 farm bill requirement that the program achieve a national average program cost of $18 per acre. This per-acre cost includes all financial assistance paid to the producer, technical assistance, and any other expense associated with enrollment or participation in the program.

Wildlife Habitat Incentives Program (WHIP)

The 2008 farm bill placed new limitations on lands eligible for enrollment in WHIP, which will likely reduce the number of eligible acres in traditionally high participation states. Language was added requiring WHIP to be used "for the development of wildlife habitat on private agricultural land, nonindustrial private forest land, and tribal lands." The addition of this language reverses the previous interpretation by NRCS, which extended eligibility to all privately owned land, tribal land, state/local government land, or federal land. By previously offering support for wildlife habitat projects on all land and aquatic areas, WHIP provided an assistance option to landowners who were unable to meet the specific eligibility requirements of other USDA conservation programs. The new requirement of agricultural production could shift financial assistance for WHIP contracts away from the traditionally large-allocation states in the Northeast to more agriculturally intensive states in the Midwest.

Wetlands Reserve Program (WRP)

The 2008 farm bill reauthorized WRP and increased the maximum enrollment to 3,041,200 acres, an increase of 766,200 acres above the previous cap established in the 2002 farm bill. The program receives mandatory funding through the Commodity Credit Corporation (CCC) and is estimated at $441 million for FY2009.[10] Between FY2003 and FY2007, WRP enrollment was

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[8] Many of CSP's implementation issues centered around additional eligibility and enrollment criteria added by USDA but not specified in the 2002 farm bill. These issues included implementing CSP in certain watersheds on a rotating basis; requiring producers to meet strict eligibility criteria; sorting producers' applications into enrollment categories; and reducing certain CSP payments. USDA justified the restrictive actions because congressional authorizers crafted an entitlement program with unlimited funding, but congressional appropriators limited that funding. For additional information on CSP, see CRS Report RS21740, *Conservation Security Program: Implementation and Termination*.

[9] U.S. Congress, House Committee on Appropriations, Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies, *Statement by Thomas Vilsack, Secretary of Agriculture*, Submitted Remarks, 111th Cong., 1st sess., March 31, 2009, http://www.usda.gov/wps/portal?contentidonly=true&contentid=2009/03/0077.xml

[10] U.S. Congressional Budget Office, CBO January 2009 Baseline for CCC, FCIC, and Conservation, January 2009.

reduced through annual appropriations bills. As Congress faces continued budget constraints, WRP could see similar reductions in the future.

One provision in the 2008 farm bill has generated considerable response from the environmental and conservation communities. Under Section 2203, Congress extended the length of time required to own the land before an applicant is eligible for the program from one year to seven years. The bill retained the exemptions to the ownership requirement, allowing a landowner to enroll land owned for less than seven years if the land was obtained (1) through inheritance; (2) through foreclosure; or (3) for any reason that gives NRCS assurance that the property was obtained for a purpose other than placing it in WRP. An investigation, conducted by the House Agriculture Committee, prior to the seven-year requirement found that NRCS "routinely ignored, or excluded its non-compliance with, the twelve-month ownership requirement" when in many cases partnering organizations would purchase the land for the explicit purpose of enrolling it into a WRP easement.[11] Many environmental organizations believe the seven-year requirement is excessive and will reduce the number of eligible lands and discourage enrollment. Supporters of the requirement point to the results of the House Agriculture Committee's investigation, which stated that NRCS "became a cash cow enabling partner organizations to acquire private lands at discount prices."[12]

Farmland Protection Program (FPP)

The 2008 farm bill (P.L. 110-246, Sec. 2401) reauthorized FPP and made significant changes. The enacted bill changes the program's purpose from protecting topsoil to protecting the land's agricultural use by limiting nonagricultural uses and including lands that promote state and local farmland protection. It also restructures the program to emphasize longer-term and renewable cooperative agreements, and changes the authority of the Secretary from *purchasing* conservation easements to *facilitating the purchase* of conservation easements. Some conservation organizations have praised the increased authority for partners, while others have expressed concerns that it could create inconsistencies within the program.

New Programs

In addition to the changes made to existing agricultural conservation programs, the enacted 2008 farm bill also expands the range of USDA conservation activities by creating several new programs, including a program expanding conservation activities in the Chesapeake Bay region, a new state grants program, a provision to limit production on native sod, and a provision promoting market-based approaches to conservation. The progress USDA has made in implementing these new programs varies and could be of interest for congressional oversight.

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[11] U.S. Congress, House Committee on Agriculture, Subcommittee on Conservation, Credit, Energy, and Research, *Testimony from John Jurich, Investigator, Committee on Agriculture, U.S. House of Representatives*, subcommittee hearing to review the USDA administration of conservation program contracts, 111th Cong., 1st sess., March 25, 2009, http://agriculture.house.gov/testimony/111/h032509/Jurich.pdf.

[12] Ibid.

Chesapeake Bay Watershed Program

This program (Sec. 2605) is targeted at conserving and protecting the Chesapeake Bay and the water sources that make up the watershed. The bill authorizes $188 million in mandatory funding (FY2009-FY2012) to be used through existing conservation programs. Targeting funding to specific geographic regions was debated during the 2008 farm bill. The effectiveness of targeting federal conservation spending through identified states, regions, or watersheds is still a question when developing conservation policy. The Chesapeake Bay Watershed Program has received widespread support indicating that similar programs targeting other watersheds could be created by Congress in the future.

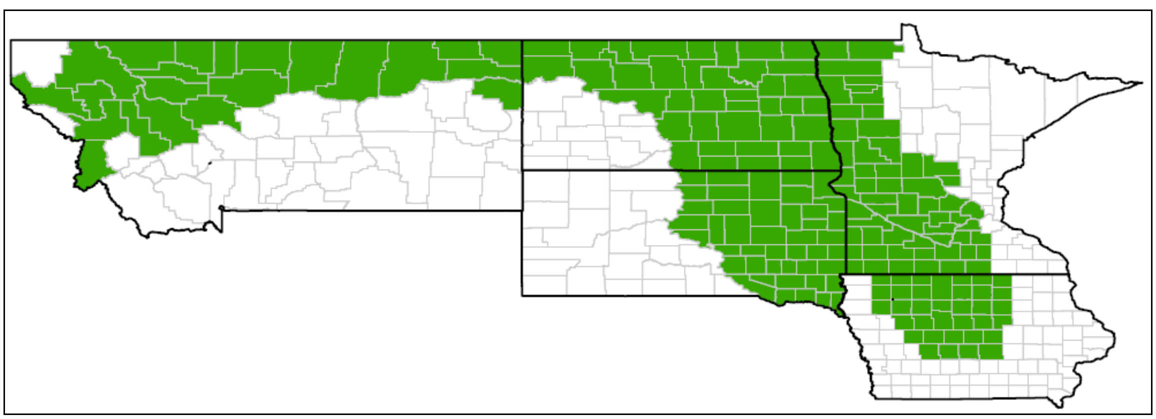
Voluntary Public Access and Habitat Incentives Program

Also referred to as the "Open Fields" program, this program authorizes state grants to encourage landowners to provide public access for wildlife-dependent recreation. The bill provides $50 million in mandatory funds (FY2009-FY2012) for the program. Despite authorized mandatory funding, USDA has not implemented this program as of the time of this report.

Sodsaver Provision

This 2008 farm bill provision (Sec. 12020) makes producers that plant an insurable crop (over 5 acres) on native sod ineligible for crop insurance and the noninsured crop disaster assistance (NAP) program for the first five years of planting. The conference agreement states that this provision may apply to virgin prairie converted to cropland in the Prairie Pothole National Priority Area (**Figure 3**), if elected by the state. USDA established a sign-up date of February 15, 2009, in which no governors opted to participate in the program. Additional opportunities to participate are possible though thought unlikely if the program remains voluntary.

Figure 3. Prairie Pothole National Priority Area



Source: USDA, RMA, Prairie Pothole National Priority Area, April 28, 2008, http://www.rma.usda.gov/data/pothole/2008/all_states.pdf

Environmental Services Markets

This new conservation provision (Sec. 2709) is intended to facilitate the participation of farmers and landowners in emerging environmental services markets, such as water and air quality, habitat protection, and carbon storage.[13] The inclusion of this provision could expand the scope of existing farmland conservation programs by facilitating the development of private-sector markets for a range of environmental goods and services from farmers and landowners (this is discussed further in the section on "Ecosystem Services Markets," below). Although the provision covers a range of farm and forestry services, it explicitly gives priority to first establishing guidelines related to participation in carbon markets.

The farm bill also directs USDA to establish a framework for developing consistent standards and processes for quantifying environmental services from the agriculture and forestry sectors, but does not authorize funding for this effort. In December 2008, USDA announced the creation of the Office of Ecosystem Services and Markets (OESM) and the creation of a federal government-wide Conservation and Land Management Environmental Services Board.[14] According to USDA , it intends to seek nominations for a federally chartered public advisory committee to advise the board.

Payment and Income Limitations

Two types of payment limits exist for conservation programs. One sets the maximum amount of conservation program payments that a person or legal entity can receive during a specified period of time The other sets the maximum amount of income that an individual can earn and still remain eligible for conservation program benefits (also know as the Adjusted Gross Income or AGI limit). Limitations on payments received through conservation programs were expanded in the 2008 farm bill. Prior to the 2008 farm bill, most conservation programs were affected by an income limitation, not a limitation on payments. Now, most programs are affected by both (see **Table 2**).

Table 2. Conservation Programs Affected by Payment and Income Limitation Changes in the 2008 Farm Bill

Prior Law (P.L. 107-171, as amended)		Current Law (P.L. 110-246)	
Payment Limit	Income Limit	Payment Limit	Income Limit
AMA, CRP, and EQIP	AMA, Chesapeake Bay Watershed Program, CRP, CSP, EQIP, FPP, GRP, WRP, WHIP, and other programs under Title II of the 2002 farm bill	AMA, Chesapeake Bay Watershed Program, CRP, CSP, CCPI, EQIP, AWEP, FPP, GRP, WRP, and WHIP	AMA, AWEP, CRP, CSP, EQIP, FPP, GRP, GSWC, WRP, WHIP, and other programs under Title II of the 2008 farm bill

Source: Income limits may be found under Section 1604 of the 2002 farm bill (P.L. 107-171) and Section 1604 the 2008 farm bill (P.L. 110-246). Payment limitations may be found under individual program sections under Title II of both enacted bills.

Notes: Listed programs include Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program/Conservation Security Program (CSP), Wildlife Habitat Incentives Program (WHIP), Agricultural Water Enhancement Program (AWEP), Agricultural Management Assistance (AMA), Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), Farmland Protection Program (FPP), Grassland Reserve Program (GRP), Cooperative Conservation Partnership Initiative (CCPI), and Ground and Surface Water Conservation (GSWC).

[13] For more information on the Environmental Services Markets provision in the 2008 farm bill, see CRS Report RL34042, *Provisions Supporting Ecosystem Services Markets in U.S. Farm Bill Legislation*.

[14] USDA, "USDA Announces New Office of Ecosystem Services and Markets," press release, December 18, 2008, http://www.usda.gov/wps/portal?contentidonly=true&contentid=2008/12/0307.xml.

Payment Limits

Payment limits are the maximum amount of conservation program funding that a person or legal entity can receive during a specified period of time. As with commodity programs, payment limits for conservation programs are controversial because of issues relating to the size of operations receiving support and who should receive payments. The effect of payment limits varies by program and the conservation practices implemented.[15] Most conservation programs with higher payments tend to be skewed to farms and ranches with larger acreage because payments for many conservation practices are scaled by the number of acres on which that practice is applied.[16]

Supporters of payment limits are often advocates for smaller farms and opponents of large animal feeding operations. Most conservation programs provide a percentage of the cost to install conservation practices (known as cost-share) or implement site-specific management practices. As noted above, most of these payments are made on a per-acre applied basis, thereby skewing larger payments to contracts with more acres enrolled. Small farm advocates claim that this disproportionately benefits large agricultural producers by making less money available for small producers. Also, in the case of EQIP, cost-share assistance is provided for more expensive practices such as animal waste storage facilities in concentrated animal feeding operations (CAFOs).[17] Opponents of these animal operations cite the higher payment limit as "further subsidizing an environmentally destructive method of production."[18]

Those who oppose payment limits (or support higher limits) for conservation programs counter that conservation programs should focus on land with the greatest environmental need and not be limited to a price per participant. They argue that higher payment limits allow for greater environmental stewardship on farms and ranches, particularly larger operations with a greater land base, which may have greater natural resource concerns. Others claim that payment limits on restoration agreements could create a disincentive to enroll larger conservation easements, which are the most desirable. Because most conservation easement programs, namely WRP and GRP, enroll land that will also require restoration, a limit on restoration payments could reduce the enrollment of large acre tracts.

Income Limits

The AGI limit sets a maximum amount of income that an individual can earn and still remain eligible for program benefits. The 2008 farm bill made the AGI limitation for conservation programs higher than the AGI limitation for the commodity farm support programs; however, income limitations on conservation programs have been somewhat controversial. Previously, the AGI limit for both conservation and commodities programs was set at $2.5 million and had an exception if three-fourths of AGI was earned from farming sources. Now, if the three-year

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[15] Payment limits vary from $300,000 for any six-year period for EQIP to $50,000 annually for WHIP payments.

[16] Soil and Water Conservation Society and Environmental Defense, *Environmental Quality Incentives Program (EQIP)—Program Assessment*, March 2007, http://www.swcs.org/documents/filelibrary/EQIP_assessment.pdf.

[17] The 2002 farm bill increased the payment limit from its 1996 farm bill levels of $10,000 for any fiscal year and $50,000 for any multi-year contract, to a limitation on total payments to $450,000. The 2002 farm bill also required that 60% of EQIP funds should be made available to payments for practices relating to livestock production.

[18] Elanor Starmer, "Industrial Livestock at the Taxpayer Trough: How Large Hog and Dairy Operations are Subsidized by the Environmental Quality Incentives Program," Campaign for Family Farms and the Environment, December 2008, p. 3.

average of non-farm income AGI exceeds $1,000,000, no conservation program benefits are allowed. The exception to this limit is if two-thirds of the three-year AGI was earned from farming sources. In addition, this limitation may be waived by USDA on a case-by-case basis for the protection of environmentally sensitive land of special significance. In general, the AGI limit for conservation programs is higher than that for commodity programs to encourage environmental stewardship on farms and ranches, particularly larger operations that may have greater natural resource problems.

Supporters of AGI limits believe that tighter limits benefit small producers and gain additional public support for all agricultural programs through fiscal responsibility. Opponents of AGI limits on conservation programs believe that if there are greater conservation benefits provided to the general public, then, irrespective of wealth, a producer's enrollment is good for the general public.

Conservation Funding and Oversight

The majority of conservation program funding is mandatory and funded through the Commodity Credit Corporation (CCC).[19] Other conservation programs, mostly technical assistance, are discretionary and funded through annual appropriations. Reductions in mandatory funding and an increase in earmarks within discretionary funding, as well as fund accountability and quantifying environmental benefits of conservation practices, could be issues for Congress.

Spending Limits on Mandatory Funding

The 2002 farm bill authorized significant increases in mandatory funding for many conservation programs. Unlike the discretionary conservation programs, which must be funded through the annual appropriations process, mandatory programs have an authorized level of funding (or acreage enrollment) that is available unless reduced to smaller amounts in the appropriations process. If appropriators do not set a spending limit or reduce the authorized level, then the program receives the authorized level of funding. Mandatory conservation programs are usually authorized through omnibus farm bills for four to five years. Mandatory funds are provided by the CCC, USDA's financing entity for many other agricultural programs and export subsidies.

Despite the increase in mandatory funding authority, many conservation programs have been reduced or capped through annual appropriations acts since FY2003. Many of these spending reductions were at the request of the Bush Administration. The mix of programs and amounts of reduction have varied from year to year. Some programs, such as the CRP, have not been reduced by appropriators in recent years, while others, such as EQIP, have been repeatedly reduced below authorized levels. EQIP's authorized mandatory funding was reduced by over $890 million from FY2005 through FY2009. Even with these reductions, total mandatory funding for conservation programs has remained relatively constant at a total of $4 billion annually.

Although some titles in the 2008 farm bill received a reduction in funding over the next five to ten years, the conservation title received increased funding. Many supporters of conservation programs viewed this as a victory during the farm bill debate and were surprised to see that the recent FY2010 President's budget requested a reduction of over $500 million in mandatory

[19] The CCC is the funding mechanism for the mandatory payments that are administered by various agencies of USDA.

funding from many conservation programs.[20] Advocates for these programs contend that these limitations are significant changes from the intent of the farm bill, which they say compromise the programs' ability to provide the anticipated magnitude of benefits to producers and the environment. Others, including those interested in reducing agricultural expenditures or in spending the funds for other agriculture purposes, counter that, even with these reductions, overall funding for conservation has not been reduced. With the 111th Congress facing tighter budget constraints, it is possible for conservation programs to face spending reductions either in the appropriations process or if budget reconciliation is required.[21]

Congressionally Directed Projects

The Watershed and Flood Prevention Operations program has received discretionary funding for an increasing number of congressionally directed projects (commonly referred to as earmarks). The program is not authorized at a specified amount. Annual appropriations reached a high of $200 million, including a $94 million supplemental, in FY2002 and have declined steadily to $24.3 million in FY2009.[22] The program also received $145 million as part of the American Recovery and Reinvestment Act of 2009 (ARRA, P.L. 111-5).[23] As appropriated funding decreased, the number of earmarks increased, reaching 97% of appropriated funding in FY2009. The past five presidential budget requests, including the FY2010 request, have sought zero funding for the program, citing the number of earmarks. Currently there are over 300 unfunded authorized watershed projects totaling $1.28 billion.

Technical Assistance

Two issues associated with technical assistance have been whether NRCS has the capacity to meet the growing technical assistance demand and how technical assistance costs should be funded for mandatory programs.

The 2002 farm bill (P.L. 107-171, Sec. 2701) dramatically increased financial assistance in conservation programs. This increase in financial assistance also led to an increased demand for technical assistance.[24] The 2002 farm bill allowed NRCS to augment its technical assistance capacity by allowing producers to use approved third parties to provide assistance. As of August 2008, approximately 1,700 individuals and businesses were certified and registered as third-party

[20] The FY2010 President's budget requested reductions in the following conservation programs receiving mandatory funding: AMA ($5 million reduction), EQIP ($250 million reduction), FPP ($30 million reduction), HFRP ($5 million reduction), WHIP ($43 million reduction), and WRP (139,000 acres reduction).

[21] For more information on the reconciliation process in general, see CRS Report RL30458, *The Budget Reconciliation Process: Timing of Legislative Action.*

[22] Much of the decline had been at the request of the USDA. Source: Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2002 (P.L. 107-76); 2002 Supplemental Appropriations Act for Further Recovery From and Response to Terrorist Attacks on the United States (P.L. 107-206); and Omnibus Appropriations Act, 2009 (P.L. 111-8).

[23] On April 16, 2009, NRCS announced the funding of 20 projects totaling $84.8 million. See http://www.usda.gov/wps/portal/!ut/p/_s.7_0_A/7_0_1OB?contentidonly=true&contentid=2009/04/0110.xml for the official USDA press release and a list of selected projects.

[24] Most conservation programs that include financial assistance require a certain amount of technical assistance. According to Section 2706 of the 2008 farm bill (P.L. 110-246), the purpose of technical assistance within farm bill programs is to "provide eligible participants with consistent, science-based, site-specific practices designed to achieve conservation objectives on land active in agriculture, forestry, or related uses."

providers with NRCS.[25] Despite this increase in capacity, NRCS, like other organizations, is facing personnel attrition in "mission critical occupations" (most of which provide technical assistance).[26] The 2008 farm bill further increased funding for mandatory conservation programs, which could cause the demand for technical assistance to increase, placing additional strain on the current capacity.

Congress has addressed the issue of how to fund technical assistance in mandatory programs in the past and will likely do so again in the future. The central issue is whether NRCS has the authority to pay for technical assistance for mandatory programs using the mandatory programs' funding.[27] Previous conflicting interpretations by the Office of Management and Budget resulted in Congress providing clarifying language through enacted legislation in 2002, 2005, and 2008.[28] The clarifying language appeared to resolve the issue until recently. The 2008 farm bill reauthorized and amended other mandatory conservation programs not originally authorized under the 1985 farm bill.[29] Because previous language only addressed those programs authorized under the 1985 farm bill, the issue of where technical assistance funding should originate for non-1985 farm bill programs was once again raised. On February 17, 2009, Congress enacted clarifying language for this issue in Section 103 of the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).[30] The new language allows all mandatory programs established or amended in the 2008 farm bill, excluding those in Title I, to use CCC funds for administrative expenses and technical assistance. Congress will likely need to address this issue again because the new language only covers FY2009 and FY2010, while funding authority for most farm bill programs expires at the end of FY2012.

Emergency Conservation Programs

Emergency programs are implemented most years when funding is provided in response to natural disasters. The most recent funding was provided in response to flooding and drought conditions in the spring and summer of 2008. Congress provided $390.5 million for the Emergency Watershed Program (EWP) and $89.4 million for the Emergency Conservation

[25] NRCS reports expending $217 million for technical assistance provided through a third-party between October 2003 through September 2008. See USDA, NRCS, "Technical Service Provider Assistance," 74 *Federal Register* 2800, January 16, 2009.

[26] USDA, NRCS, "Human Capital Strategic Plan, 2006-2010," at http://www.nrcs.usda.gov/about/humancapital/.

[27] Unlike most government agencies, NRCS does not receive a salaries and expenses appropriation. Most of the funding for employees and overhead (including what is known as technical assistance) is appropriated through the Conservation Operations account, which is discretionary. OMB originally determined that technical assistance for mandatory programs would be funded through annual discretionary appropriations and funding from larger mandatory programs. Congress disagreed and passed legislation stating that funding for a mandatory program's technical assistance could only come from that mandatory program's funding authority.

[28] Section 2701 of the 2002 farm bill (P.L. 107-171) provided that technical assistance in support of each mandatory program authorized under the 1985 farm bill, as amended, come from the funding provided by the CCC for that program P.L. 108-498, further clarified the funding source for technical assistance in mandatory conservation programs and specified that funding for technical assistance cannot be transferred among the mandatory funded programs, starting in FY2005. The language was reauthorized in the 2008 farm bill (P.L. 110-246).

[29] For example, the Healthy Forest Reserve Program authorized in section 502 of the Healthy Forest Restoration Act of 2003 (16 U.S.C. 6572), the Agricultural Management Assistance Program authorized in section 524 of the Federal Crop Insurance Act (7 U.S.C. 1524), and the Chesapeake Bay Watershed Program authorized in section 2605 of the Food, Conservation, and Energy Act of 2008 (16 U.S.C. 3839bb-3).

[30] For more information on the ARRA see, CRS Report R40160, *Agriculture, Nutrition, and Rural Provisions in the American Recovery and Reinvestment Act (ARRA) of 2009.*

Program (ECP) in Title III of the 2008 Supplemental Appropriations Act (P.L. 110-252). Both programs received additional funding through the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act of 2009 (P.L. 110-329), with the EWP receiving $100 million and the ECP receiving $115 million. Recent flooding, wildfires, and drought conditions have increased demand beyond available funding for both programs. History indicates that funding could be sought for both programs before the end of FY2009 through an emergency supplemental, pending a natural disaster.

Financial Audit and Contract Administration

Most USDA agencies are covered by a consolidated financial statement audit for the entire department. In FY2007, the Office of Management and Budget (OMB) required NRCS to conduct a stand-alone audit for the FY2008 financial statement. In FY2008, NRCS contracted with a private auditing firm, KPMG, to review the agency's financial statements in its first stand-alone audit. KPMG was unable to provide an opinion on the agency's financial statements because NRCS could not document or support its transactions or account balances.[31]

The FY2008 audit was NRCS's first attempt at a comprehensive financial statement audit. The lack of an opinion from the auditing firm was a result of several problems—namely, NRCS was unable to provide material in support of transactions and account balances with respect to obligations, accrued expenses and undeliverable orders, and unfilled customer orders. According to NRCS, the agency has taken corrective actions to address the deficiencies found in the audit, including training over 300 employees in accounting principles, developing an automated tool for general ledger accounts, and performing quality assurance reviews on over 160,000 open obligations.[32] An audit of the FY2009 financial statement is currently in progress.

The 111th Congress has already taken action on this issue. On March 25, 2009, the House Committee on Agriculture's Subcommittee on Conservation, Credit, Energy, and Research held a hearing to review the administration of conservation contracts. As additional audit reports are issued, additional hearings are possible. Also, in the FY2009 Omnibus Appropriations Act, Congress provided $10 million in Conservation Technical Assistance (CTA) funds to "strengthen the agency's program and financial management capabilities."[33] According to the committee print, NRCS is expected to use the funds to enhance the agency's budgeting, accounting, contracting, and information technology systems. The agency is expected to issue a report to Congress detailing the use of these funds. The committee print also requires NRCS to issue a report to Congress regarding the 2008 audit and any corrective actions being taken.

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[31] For a copy of the FY2008 NRCS audit report by USDA's OIG, see http://www.usda.gov/oig/webdocs/10401-2-FM.pdf.

[32] U.S. Congress, House Committee on Agriculture, Subcommittee on Conservation, Credit, Energy, and Research, *Testimony of Dave White, Chief, Natural Resources Conservation Service, USDA,* Hearing to review the USDA administration of conservation program contracts, 111th Cong., 1st sess., March 25, 2009.

[33] U.S. Congress, House Committee on Appropriations, Omnibus Appropriations Act, 2009, Division A—Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act 2009, committee print, 111th Cong., 1st sess., March 2009 (Washington: GPO, 2009).

Conservation Effects Assessment Project (CEAP)

Following the significant increase in funding for conservation programs in the 2002 farm bill, USDA initiated a project to measure the environmental benefits of many of these programs. The project is a multi-agency effort known as the Conservation Effects Assessment Project (CEAP). CEAP's stated purpose is to aid policymakers in developing new conservation programs and help existing conservation program managers implement programs more effectively and efficiently to meet the goals of Congress and the Administration.[34]

Now in its sixth year at USDA, CEAP continues to be supported by many in the conservation community as a much-needed evaluation system to ensure that conservation programs produce the desired environmental and production outcomes.[35] Although the project is not legislatively mandated, many believe its potential outcomes could prove useful in shaping future policy debates surrounding environmental issues in the 111th Congress, namely environmental services markets.

Despite some of the strides made to quantify the environmental benefits of conservation practices through CEAP, there are possible limitations to its use, namely the availability of data. To date, the depth of information gathered through this project is enormous, yet very little has been made available to the public or to other federal agencies. Despite some frustration generated by reporting delays, some in the scientific community support what they say is a meticulous in-depth assessment and evaluation system, claiming it is necessary for statistical credibility.[36] The first initial cropland regional assessment is expected to be released in fall 2009.

Emerging and Continuing Issues

Emerging and continuing issues for agricultural conservation in the 111th Congress revolve around ecosystem services markets, climate change, and bioenergy. The evolving debate over climate change legislation has provoked several questions regarding the role of agriculture and forestry. Other environmental concerns for agriculture, such as concentrated animal feeding operation (CAFO) regulations, greenhouse gas emission reporting for livestock producers, and wetlands mitigation, could lead to expanded opportunities for many conservation efforts. Production pressures generated by corn-based ethanol have also had an ongoing impact on certain conservation programs.

Ecosystem Services Markets

The participation of agriculture and forestry in emerging ecosystem services markets is gaining wide support within the farm community and its supporting organizations and agencies, as well as among the regulatory agencies and some environmental groups.[37] Market-based approaches are

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[34] Soil and Water Conservation Society, Final Report from the Blue Ribbon Panel Conducting an External Review of the U.S. Department of Agriculture Conservation Effects Assessment Project, Ankeny, IA, 2006, http://www.swcs.org/documents/filelibrary/advocacy_publications/CEAP_Final_Report.pdf.

[35] Lisa F. Duriancik, Dale Bucks, and James P. Dobrowolski et al., "The First Five Years of the Conservation Effects Assessment Project," *Journal of Soil and Water Conservation*, vol. 63, no. 6 (Nov/Dec 2008), p. 185A.

[36] "Quantifying Practices with the Conservation Effects Assessment Project (CEAP)," panel discussion at the 2009 USDA Agriculture Outlook Forum, Arlington, VA, February 26, 2009.

[37] In March 2009, Secretary of Agriculture Thomas Vilsack indicated that traditional agricultural support payments will (continued...)

often viewed as encompassing broader societal benefits by complementing existing agricultural conservation programs and evolving regulatory approaches intended to address environmental improvements in the farm and forestry sectors. Among the principal questions regarding the inclusion of ecosystem services provisions as part of any major legislative initiative is whether the agriculture and forestry sectors can effectively provide environmental goods and services along with the more traditional food, fiber, and other services these sectors already provide.

Ecosystem goods and services are the benefits society obtains from the environment and ecosystems, both natural and managed, such as water filtration, flood control, provision of habitat, carbon storage, and many others.[38] In most cases, these constitute "free services," since landowners and managers are not compensated in the marketplace. The continued degradation of these services over time has generated interest in creating markets, developed either through regulation or voluntarily, so that providers of ecosystem services can be compensated in private markets for the services they provide. This could offer a potential business opportunity to the agriculture and forestry sectors, which may be able to provide for such services and participate in the market, for example, by creating, restoring, and preserving function and value in a natural resources area, or by capturing and storing carbon before gases that contribute to global climate change are released into the atmosphere. These services would be in addition to the food and fiber services traditionally supplied by the agriculture and forestry sectors.[39]

Conservation practices on agricultural land provide one of the main vehicles through which producers may develop environmental credits and benefits to be sold or traded in a market-based system. Many existing USDA conservation programs offer incentives through financial and technical assistance to implement these practices. For example, cropland tillage practices such as reduced/medium-till, no-till, and ridge/strip-till practices sequester carbon that could be sold through a carbon offset program. Conservation programs such as EQIP, AMA, CSP, and CTA provide incentives for farmers to install these practices. Programs such as WRP offer incentives for wetland restoration, the benefits of which could then be used in a wetlands mitigation program. Other conservation practices such as riparian buffers, setbacks, wind breaks, and buffer strips offered under EQIP, CRP, CSP and WHIP create water quality improvements that could be traded in local water quality credit programs.

The inclusion of these market provisions in legislation has raised procedural and implementation questions as Congress continues to consider the role of the agriculture and forestry sectors in environmental legislation.[40] One key question is how USDA will respond to several existing

(...continued)

continue to be met with criticism and many producers should seek additional income from market-based ecosystem services. U.S. Congress, House Committee on Appropriations, Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies, *Statement by Thomas Vilsack, Secretary of Agriculture*, Submitted Remarks, 111th Cong., 1st sess., March 31, 2009. http://www.usda.gov/wps/portal?contentidonly=true&contentid=2009/03/0077.xml

[38] These may also be referred to as ecosystems services. See, for example, World Resources Institute, *Millennium Ecosystem Assessment, Ecosystems and Human Well-being*, 2005, http://www.millenniumassessment.org/en/index.aspx.

[39] For additional information, see CRS Report RL34042, *Provisions Supporting Ecosystem Services Markets in U.S. Farm Bill Legislation*.

[40] For more information on the role of agriculture in climate change policy, see CRS Report RL33898, *Climate Change: The Role of the U.S. Agriculture Sector and Congressional Action*. For other general information on climate change issues, see CRS Report RL34513, *Climate Change: Current Issues and Policy Tools*.

barriers that may prevent the development of ecosystem goods and services markets involving the farm and forestry sectors, such as participation challenges, and issues of measuring and valuing credits, monitoring, and enforcement, among others.[41] It is also unclear how USDA will bridge existing conservation program benefits with ecosystem services markets, and what direct role the new USDA Office of Ecosystem Service Markets (see "Environmental Services Markets," above) plans to play.

Climate Change

Among the many questions for Congress regarding the topic of climate change is what role the agriculture and forestry sectors will play; and, if they are allowed to participate, how concerns regarding their participation will be resolved. Farm and forestry activities both emit and sequester greenhouse gases (GHG) from the atmosphere.[42] As reported by the Environmental Protection Agency (EPA), the agriculture and forestry sectors currently account for 6%-8% of estimated total U.S. GHG emissions annually.[43] However, combined carbon sequestration on farm and forested lands is currently estimated to mitigate about 11% of total annual GHG emissions in the United States. The potential to reduce emissions and sequester carbon on agricultural lands is reportedly much greater than current rates.

Congress is considering a range of climate change policy options, including greenhouse gas (GHG) emission reduction programs that would either mandate or authorize a cap-and-trade program to reduce GHG emissions.[44] In general, the current legislative proposals would not require emission reductions in the agriculture and forestry sectors. The drafters of some proposals are reluctant to include opportunities for agriculture and forestry participation due to uncertainties regarding measuring, monitoring, and permanence of agriculture and forestry activities.[45] Others in Congress would like a GHG program to include provisions allowing farm and forestry landowners to receive emissions allowances (or credits) to generate carbon offsets.

Most land management and farm conservation practices can help reduce GHG emissions and/or sequester carbon, including land retirement, conservation tillage, soil management, and manure and animal feed management, among other practices. Many of these practices are encouraged under existing USDA conservation programs that provide financial and technical assistance to farmers, such as EQIP, CRP, CSP, CTA, and WHIP, among others. However, uncertainties are associated with implementing these types of practices depending on site-specific conditions, the

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[41] For more information, see USDA, *2007 Farm Bill, Conservation and Environment Theme Paper*, June 2006, at http://www.usda.gov/documents/FarmBill07consenv.pdf; and M. Ribaudo and C. Jones, "Environmental Credit Trading: Can Farming Benefit," *Amber Waves*, USDA's Economic Research Service, Feb. 2006.

[42] GHG emissions from agriculture are associated with livestock operations (as part of the natural digestive process of animals and manure management) and crop production (soil management, commercial fertilizer and manure application, and production of nitrogen-fixing crops). The two key types of GHG emissions are methane (CH_4) and nitrous oxide (N_2O). Estimated emissions are expressed on a CO_2-equivalent basis. See CRS Report RL33898, *Climate Change: The Role of the U.S. Agriculture Sector and Congressional Action*.

[43] EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007*, April 2009, http://epa.gov/climatechange/emissions/usinventoryreport.html.

[44] For more information on the current GHG emissions legislation, see CRS Report R40556, *Market-Based Greenhouse Gas Control: Selected Proposals in the 111th Congress*; and CRS Report RL34436, *The Role of Offsets in a Greenhouse Gas Emissions Cap-and-Trade Program: Potential Benefits and Concerns*.

[45] For more information on issues associated with measuring and monitoring carbon, see CRS Report RS22964, *Measuring and Monitoring Carbon in the Agricultural and Forestry Sectors*.

type of practice, how well it is implemented, the length of time a practice is undertaken, and available funding, among other factors.

USDA has already expanded some of its existing conservation programs to further encourage emission reductions and carbon sequestration. For example, many of the practices encouraged under EQIP and CSP reduce net emissions. Programs such as CTA, AMA, EQIP, and CSP list a reduction in emissions as a national priority for the program, which affects the funding and ranking of projects. Under CRP, USDA has modified how it scores and ranks offers to enroll land in CRP in order to place greater weight on installing vegetative covers that sequester carbon. USDA also has an initiative under CRP's continuous enrollment provision to plant up to 500,000 acres of bottomland hardwoods, which are among the most productive U.S. lands for sequestering carbon.[46] Recently, USDA has recognized the potential credits generated by these conservation programs and has removed any claim on the credits through recent changes to many of the program rules.[47] Whether or not benefits generated from existing conservation programs would be considered eligible carbon offsets under current legislative proposals varies.

Congress has already taken steps to address some of the challenges associated with measuring carbon changes from forested and agricultural lands and practices. The 2008 farm bill includes provisions that could expand the scope of existing land-based conservation and other farm bill programs by providing incentives to encourage farmers and landowners to sequester carbon and reduce emissions associated with climate change and participate in markets for carbon storage (see "Environmental Services Markets" section, above). The Energy Independence and Security Act of 2007 (P.L. 110-140, Sec. 712) directs the Secretary of the Interior to develop a methodology to assess carbon sequestration and emissions from ecosystems. This methodology is to cover measuring, monitoring, and quantifying GHG emissions and reductions, and provide estimates of sequestration capacity and the mitigation potential of different ecosystem management practices. Congress continues to face the question of whether its current authorized activities (and proposed activities) provide adequate and sufficient guidelines for accurately measuring carbon levels from forest and agricultural activities.

Energy Effects

Renewable energy and energy conservation continue to be topics of concern as Congress seeks to reduce the national use of fossil fuels. Renewable energy is energy generated through natural means, including wind, solar, geothermal, hydroelectric, and biomass, among others. With each renewable energy source comes benefits and consequences. Energy sources closely tied to the agriculture and forestry sectors are biofuels derived from corn-based ethanol and cellulosic feedstock. Federal support for ethanol through mandated levels of consumption, grants and loan guarantees, tax credits, tariffs on imports, and research and development projects has generated some controversy.[48] Critics say that important and unwanted environmental consequences

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[46] For more information on these programs, see **Appendix A**.

[47] The following program rules include a section recognizing the credits generated by programs and asserting no direct or indirect claim on these credits: EQIP (§1466.36, 74 *Federal Register* 2317), WRP (§1467.20, 74 *Federal Register* 2336), AMA (§1465.36, 73 *Federal Register* 70256), GRP (§1415.10, 74 *Federal Register* 3875), FPP (§1491.21, 74 *Federal Register* 2822), WHIP (§636.21, 74 *Federal Register* 2800), CRP (§1410.63(6), 68 *Federal Register* 24845), and HFRP (§625.8, §74 *Federal Register* 1967).

[48] For more information on ethanol policy issues, see CRS Report R40488, *Ethanol: Economic and Policy Issues*.

resulting from the production of biofuels should be considered when evaluating renewable energy options.

A continued expansion of corn-based ethanol production could have significant consequences for traditional U.S. agricultural crop production and rural economies. Supporters of an expanded renewable fuels standard (RFS, the statutorily required use of renewable fuels) claim that increased biofuels production and use would produce enormous agricultural and rural economic benefits by increasing farm and rural incomes and generating substantial rural employment opportunities.[49] However, large-scale shifts in agricultural production activities will likely also have important regional economic consequences that have yet to be fully considered or understood. As corn prices rise, so too does the incentive to expand corn production to more marginal soil environments. Further, corn production is among the most energy-intensive of the major field crops. This shift could have important and unwanted environmental consequences due to possible increases in fertilizer and chemical use and soil erosion.

Ethanol and biodiesel produced from cellulosic feedstocks, such as prairie grasses and fast-growing trees, have the potential to improve the energy and environmental effects of U.S. biofuels. A key potential benefit of cellulosic feedstocks is that they can be grown without the need for chemicals. Reducing or eliminating the need for chemical fertilizers could address one of the largest energy inputs for corn-based ethanol production. However, additional concerns about cellulosic feedstocks exist, including concerns that required increases in per-acre yields to obtain economic feasibility could require the use of fertilizers; that availability of sufficient feedstock supply is limited and expansion could generate additional land use pressures for expanded production; and that development of harvesting machinery and technology lags behind that of traditional corn-based ethanol production. In addition to these concerns, some groups say that other potential environmental drawbacks associated with cellulosic fuels should be addressed, such as the potential for soil erosion, increased runoff, the spread of invasive species, and disruption of wildlife habitat.[50]

Although the 2008 farm bill expands many existing agricultural conservation programs to encourage producers to adopt energy efficiency measures and produce renewable energy feedstocks, it does not address the potential environmental consequences that could result from biofuels production. Expanding existing conservation efforts or creating new ones can serve as a potential countermeasure to the increased environmental pressures generated by biofuel production. The extent to which this is or could be done is not clear.

Recently, the EPA has proposed changes to the RFS program, as required by the Energy Independence and Security Act of 2007 (EISA, P.L. 110-140).[51] Two areas of this proposed rulemaking have caused concerns among those in the U.S. agriculture sector: the EISA biomass definition and the requirement that EPA consider so-called “indirect land use” effects when calculating GHG emissions associated with advanced biofuels. Recent amendments to the Waxman/Markey climate change and energy legislation (H.R. 2454) would change the EISA

[49] For more information on the renewable fuels standard, see CRS Report R40155, *Selected Issues Related to an Expansion of the Renewable Fuel Standard (RFS)*.

[50] For more information on cellulosic biofuels, see CRS Report RL34738, *Cellulosic Biofuels: Analysis of Policy Issues for Congress*.

[51] 74 *Federal Register* 99, 24904-25143, May 26, 2009. EISA significantly expanded the RFS established in the Energy Policy Act of 2005 (P.L. 109-58). The RFS now requires the use of 9.0 billion gallons of renewable fuel in 2008, increasing to 36 billion gallons in 2022.

biomass definition to the definition in the 2008 farm bill (P.L. 110-246) and prevent EPA (for at least six years) from including emissions from international indirect land use changes when weighing biofuels' carbon footprint under the 2007 RFS. On June 29, 2009, the House passed H.R. 2454, which also included a new program for agriculture- and forestry-related offsets within USDA .[52]

For more information on these requirements and related RFS issues, see CRS Report R40155, *Selected Issues Related to an Expansion of the Renewable Fuel Standard (RFS)*; and CRS Report R40460, *Calculation of Lifecycle Greenhouse Gas Emissions for the Renewable Fuel Standard*. For more background on biomass definitions, see CRS Report R40529, *Biomass: Comparison of Definitions in Legislation*.

[52] For more information on H.R. 2454, see CRS Report R40643, *Greenhouse Gas Legislation: Summary and Analysis of H.R. 2454 as Reported by the House Committee on Energy and Commerce*.

Appendix A. USDA Conservation Programs: Overview

More than 20 current U.S. Department of Agriculture (USDA) agricultural conservation programs assist private landowners with natural resource concerns. Though there are some similarities among many of these programs, each is administered with slight differences. These differences and the number of programs create some confusion about the purpose, participation, and policy of the programs. The following section provides a brief overview of the primary USDA conservation programs discussed within this report. Programs are grouped into working land programs, retirement and easement programs, watershed programs, emergency programs, and technical assistance.

Working Lands

Environmental Quality Incentives Program (EQIP)

The largest working lands program is the Environmental Quality Incentives Program (EQIP, 16 U.S.C. 3839aa-3839aa9).[53] EQIP is a voluntary program that provides producers with financial and technical assistance to plan and implement soil and water conservation practices. It is a mandatory spending program (i.e., not subject to annual appropriations) and is administered by NRCS. Eligible producers enter into contracts to receive payment for implementing conservation practices. Approved activities are carried out according to an EQIP plan developed in conjunction with the producer that identifies the appropriate conservation practice or practices to address resource concerns on the land.

Conservation Stewardship Program (CSP)

Section 2301 of the 2008 farm bill (P.L. 110-246) authorizes a new Conservation Stewardship Program (CSP, 16 U.S.C. 3838e) through FY2012. The program provides financial and technical assistance to encourage producers to address resource concerns in a comprehensive manner by undertaking additional conservation activities and improving, maintaining, and managing existing activities. The enacted farm bill also terminates authority for the Conservation Security Program to make any new contracts and reauthorizes the program at $2.3 billion in funding to be used for payments under the contracts entered into prior to September 30, 2009.[54] To date, the new CSP has not been implemented.

Wildlife Habitat Incentives Program (WHIP)

The Wildlife Habitat Incentives Program (WHIP, 16 U.S.C. 3839bb-1) is a voluntary program that provides technical and financial assistance to eligible lands to improve and develop wildlife

[53] USDA, CCC, "Environmental Quality Incentives Program," 74 *Federal Register* 2293, January 15, 2009. USDA, CCC, "Environmental Quality Incentives Program Correction," 74 *Federal Register* 10674, March 12, 2009. Additional information for EQIP may be found at http://www.nrcs.usda.gov/programs/eqip/.

[54] For more information on the Conservation Security Program, see CRS Report RS21740, *Conservation Security Program: Implementation and Termination.*

habitat and enhance wildlife populations.[55] It is a mandatory spending program administered by USDA's Natural Resources Conservation Service (NRCS). Participants enter into contracts that pay up to 75% of the cost to implement conservation practices. Eligible acreage includes privately owned agricultural land, tribal land, and nonindustrial private forest land.

Land Retirement and Easement Programs

Conservation Reserve Program (CRP)

The Conservation Reserve Program (CRP, 16 U.S.C. 3831-3835a) is the largest agricultural land retirement program in the U.S., with an authorized maximum national enrollment of 32 million acres.[56] Under the CRP, producers can bid to enroll highly erodible or environmentally sensitive lands into the reserve during signup periods, retiring it from production for ten years or more. Two types of sign-ups are available for enrolling land in the CRP: general and continuous. Successful bidders receive annual rental payments, restoration cost-sharing, technical assistance, and in the case of continuous sign-up contracts, incentive payments. The program is administered by USDA's Farm Service Agency (FSA), with technical assistance provided by NRCS.

Wetlands Reserve Program (WRP)

The Wetlands Reserve Program (WRP, 16 U.S.C. 3837-3837f) is a voluntary conservation easement program administered by NRCS. The program uses both permanent and temporary easements, as well as long-term agreements, to protect farmed wetlands. The program is authorized to enroll a maximum of 3.041 million acres. Currently, slightly more than 2 million acres are enrolled.

Farmland Protection Program (FPP)

The Farmland Protection Program (FPP, 16 U.S.C. 3838h-3838i) facilitates conservation easements on farmland, rangeland, pastureland, grassland, and forestland to limit conversion to nonagricultural uses.[57] USDA provides matching funds (up to 50%) to help partners purchase development rights to keep eligible private lands in agricultural uses. Funding is mandatory and the program is administered by NRCS.

Watershed Programs

The Watershed Protection and Flood Prevention Act of 1954 (P.L. 83-566) and the Flood Control Act of 1944 (P.L. 78-534) authorized what is now collectively known as the Small Watershed Program (33 U.S.C. 701b-1 and 16 U.S.C. 1001, *et seq.*), administered by NRCS. Through this program, NRCS partners with local sponsors to carry out activities for soil conservation; flood prevention; conservation, development, utilization and disposal of water; and conservation and

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[55] For more information on WHIP, see CRS Report R40051, *Wildlife Habitat Incentives Program: Status and Current Issues*.

[56] For more information on the Conservation Reserve Program, see CRS Report RS21613, *Conservation Reserve Program: Status and Current Issues*.

[57] USDA calls this program the Farm and Ranch Lands Protection Program.

proper utilization of land. Watershed plans involving federal contributions in excess of $5 million, or construction of any single structure having a capacity in excess of 2,500 acre feet, require congressional approval. Smaller project plans can be authorized for federal funding by NRCS. All projects must have a local sponsor to request federal assistance.[58]

Congress authorized the Watershed Rehabilitation Program in 2000 (16 U.S.C. 1012, P.L. 106-472) to restore and repair many of the small watershed structures that were reaching or have exceeded their design life. In FY2007, 775 watershed dams previously built with NRCS assistance reached the end of their designated life span. By 2015, USDA estimates this number will exceed 4,300.

Emergency Conservation Programs

The two emergency conservation programs are the Emergency Watershed Program (EWP, 16 U.S.C. 2202-2205), administered by the NRCS, and the Emergency Conservation Program (ECP, 16 U.S.C. 2201-2205), administered by the FSA. The EWP provides emergency financial and technical assistance during flood, drought, and erosion caused by fire, flood, or any other natural occurrence creating a sudden impairment of the watershed. NRCS partners with local sponsors to share up to 75% of the cost to remove debris from streams, protect destabilized streambanks, establish cover on critically eroding lands, repair conservation practices, and purchase floodplain easements. [59] The ECP provides emergency financial and technical assistance for farmers and ranchers to rehabilitate farmland damaged by natural disasters and for carrying out emergency water conservation measures in periods of severe drought. Conservation problems existing prior to the applicable disaster are ineligible for ECP assistance.

Technical Assistance

Technical assistance is formally defined as, "technical expertise, information, and tools necessary for the conservation of natural resources on land active in agriculture, forestry, or related uses."[60] Technical assistance is provided at the request of the landowner, and includes professional advice on how to design, install, and maintain land management, vegetative, and structural practices that provide conservation benefits. Technical assistance is provided and funded (if only partially) within most conservation programs. Most funding for technical assistance is provided through NRCS' discretionary conservation programs, the largest of which is Conservation Operations (CO, 16 U.S.C. 590a-g and 16 U.S.C. 590q). CO provides technical assistance through the Conservation Technical Assistance (CTA) program.[61] CTA provides technical support, conservation planning, and implementation assistance through local field offices in almost every county in the United States (and territories).

[58] A local sponsor is a legal entity, either state, local or tribal organization, that has the authority to carry out, operate and maintain works of improvement. Examples of local sponsors include, municipalities, irrigation districts, or county government.

[59] NRCS can provide cost-share assistance up to 90% in limited resource areas.

[60] Congress provided the first definition of conservation technical assistance in a recent amendment to the Soil Conservation and Domestic Allotment Act (P.L. 74-46) in the 2008 farm bill (P.L. 110-246, Sec. 2802).

[61] CO also funds the Snow Survey, Soil Survey, Grazing Lands Conservation Initiative, Plant Materials Centers, and other conservation initiatives.

Appendix B. USDA Conservation Programs: Funding

Table B-1. USDA Agricultural Conservation Program Funding Levels, FY2009

(listed by FY2009 funding level, in millions)

Program	Mandatory/ Discretionary	FY2009 Available	FY2010 Authorized Limit
Conservation Reserve Program (CRP)	Mandatory	$1,959 est. (39.2 million acres)	$1,944 est. (32 million acres)
Environmental Quality Incentives Program (EQIP)	Mandatory	$1,067 ($1,337 authorized)	$1,450
Conservation Operations (includes Conservation Technical Assistance, Survey, Soil Survey, Grazing Lands Conservation Initiative, Plant Materials Centers, Conservation Compliance, Sodbuster, and Swampbuster)	Discretionary	$730	No limit
Conservation Stewardship Program (CSP)	Mandatory	$569 est. (12.5 million acres annually)	$752 est. (12.5 million acres annually)
Wetlands Reserve Program (WRP)	Mandatory	$418 est. (3.04 million acres)	$473 est. (3.04 million acres)
Emergency Watershed Program (EWP)	Discretionary	$245	No limit
Watershed and Flood Prevention Operations	Discretionary	$169	NA
Farmland Protection Program (FPP)	Mandatory	$121	$150
Emergency Conservation Program (ECP)	Discretionary	$115	No limit
Watershed Rehabilitation	Mandatory and Discretionary	$90	$165 mandatory, $85 discretionary
Wildlife Habitat Incentives Program (WHIP)	Mandatory	$85	$85
Agricultural Water Enhancement Program (AWEP)	Mandatory	$73	$73
Grassland Reserve Program (GRP)	Mandatory	$63	$78
Resource Conservation and Development (RC&D)	Discretionary	$51	No limit
Chesapeake Bay Watershed Program	Mandatory	$23	$43
Healthy Forests Reserve Program (HFRP)	Mandatory	$9.8	$9.8
Agricultural Management Assistance (AMA)	Mandatory	$7.5 (conservation only)	$15 (conservation only)
Voluntary Public Access and Habitat Incentive Program	Mandatory	$50 (total for FY2009-2012)	$50 (total for FY2009-2012)

Source: Division A, Title II of the Omnibus Appropriations Act, 2009 (P.L. 111-8); Division A, Title I of the American Recovery and Reinvestment Act of 2009 (P.L. 111-5); Title I and II of the Food, Conservation, and Energy Act of 2008 (P.L. 110-246); and Division B, Title I, Chapter I of the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009 (P.L. 110-329). Funding estimates for acreage based programs are taken from CBO Baseline projections, March 2009.

Notes: FY2009 available column represents the actual appropriated or authorized level of funding. The total includes funding from the American Recovery and Reinvestment Act of 2009 (P.L. 111-5), which provided additional funding for Watershed and Flood Prevention Operations, Watershed Rehabilitation, and Emergency Watershed Program (in the form of floodplain easements). Both EWP and ECP received funding in the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009 (P.L. 110-329). FY2010 authorized limits are provided in title I and II of the Food, Conservation, and Energy Act of 2008 (P.L. 110-246).

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