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Final Cost-Effectiveness Analysis
for the
Conservation Stewardship Program

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Final Cost-Effectiveness Analysis for the Conservation Stewardship Program

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Final Cost-Effectiveness Analysis for the Conservation Stewardship Program

Executive Summary

Pursuant to Executive Order 12866, Regulatory Planning and Review, the Natural Resources Conservation Service (NRCS) conducted a cost-effectiveness analysis (CEA) of the Conservation Stewardship Program (CSP) as formulated for the Interim Final Rule. This CEA describes how CSP financial assistance (FA) and technical assistance (TA) are made available to farmers and ranchers who agree to install and adopt additional conservation activities and improve, maintain, and manage conservation activities in place in accordance with CSP's objectives. Additional activities may be either enhancements or standard conservation practices. Enhancement activities increase the effectiveness of standard conservation practices in treating resource concerns beyond minimum practice standards. The CEA compares the impact of additional activities (both enhancements and standard conservation practices) in generating environmental benefits with program costs. Many of these improvements can produce beneficial impacts concerning on-site resource conditions (such as conserving soil) and significant off-site environmental benefits (such as cleaner water, improved air quality, and enhanced wildlife habitat).

The environmental outcomes expected to be generated by "enhancement" activities are based on extrapolations of the environmental outcomes that have been studied and associated with many traditional NRCS conservation practices. While the environmental outcomes from many traditional NRCS conservation practices have been assessed, the impacts generated from these enhancements or extensions of the traditional conservation practices are not well understood. In conducting economic analyses where benefits are not well understood or difficult to measure, but activity costs are available, the traditional benefit-cost analysis is generally replaced with a cost-effectiveness analysis, the approach used for both this assessment and the previous "Interim Final Cost-Effectiveness Analysis for the Conservation Stewardship Program."

In considering alternatives for implementing CSP, the United States Department of Agriculture (USDA) followed the legislative intent to determine applicants' current and future levels of conservation stewardship in order to gauge their environmental impacts, rank applicants according to their estimated impacts, and offer enrollment to the highest ranked applicants until acreage or program funding limits are reached. Because CSP is voluntary, the program is not

expected to impose any obligation or burden upon agricultural producers and non-industrial private forestland owners who choose not to participate.¹

Congress authorized the enrollment of 12,769,000 acres for each fiscal year (FY) during the period October 1, 2008, through September 30, 2017. For fiscal years 2009 through 2012, CSP has been authorized 51,076,000 acres (four years multiplied by a 12,769,000 acre program cap per year).

Total program costs for CSP are shown in Table 1. Full participation is assumed for each of the 4 years CSP is offered, and the duration of each contract is five years. Total costs include only costs to government². Cumulative program costs for four program sign-ups are estimated to be \$2.990 billion in constant 2005 dollars, discounted at 7 percent. At a 3 percent discount rate, program costs increase to \$3.520 billion in constant 2005 dollars.

Table 1. Total Program Costs of CSP, FY 2010 through FY 2017

	Yearly Cost¹ (million \$)	GDP Price Deflator² (chained, 2005=100)	Yearly Cost in Constant dollars¹ (million \$)	Discount Factors for 3%	Present Value of Costs - 3% (million \$)	Discount Factors for 7%	Present Value of Costs - 7% (million \$)
FY10	229.842	108.5	211.836	0.9709	205.666	0.9346	197.978
FY11	459.684	110.1	417.515	0.9426	393.548	0.8734	364.674
FY12	689.526	111.3	619.520	0.9151	566.949	0.8163	505.713
FY13	919.368	113.1	812.881	0.8885	722.234	0.7629	620.143
FY14	919.368	115.6	795.301	0.8626	686.034	0.7130	567.039
FY15	689.526	118.1	583.849	0.8375	488.965	0.6663	389.043
FY16	459.684	120.7	380.848	0.8131	309.665	0.6227	237.173
FY17	<u>229.842</u>	123.4	<u>186.258</u>	0.7894	<u>147.034</u>	0.5820	<u>108.404</u>
Total	4,596.840		4,008.008		3,520.093		2,990.166

¹Congress set a maximum acreage limit of 12,769,000 acres and a national average payment rate of \$18 per acre.

²USDA Agricultural Projections to 2019. Office of the Chief Economist, World Agricultural Outlook Board, U.S. Department of Agriculture. Prepared by the Interagency Agricultural Projections Committee. Long-term Projections Report OCE-2010-1, page 15.

The information in Table 1 highlights the cumulative impacts of four sign-ups and five-year contracts. Each sign-up creates a commitment of \$229.842 million for five years. Participants in the first sign-up receive payments through FY 2014; participants in the last sign-up receive payments through FY 2017. The largest outlays of program funds occur in FY 2013 and FY 2014 and then begin to taper off as contracts from the first and later sign-ups end.

¹An impact could be expected in cases where CSP funds activities that lead to large increases of certain environmental services and goods where those markets are beginning to get started.

² Given the wide set of possible initial resource conditions and conservation activities likely to be adopted, it is not possible to ascertain whether (or to what extent) CSP payments off-set expected costs to producers in adopting new activities or past activities.

Methodology Employed in this Study

Many conservation practices have been extensively studied, but similar studies have not been conducted pertaining to enhancement activities. Nor do we have sufficiently detailed, site-specific information on existing conservation practices and environmental outcomes. As a result, estimation of a true baseline of environmental conditions before and after CSP implementation is not possible.

The methodology employed in this final assessment is the same methodology applied in the interim CSP rule except that data from the first CSP sign-up and ranking period (fiscal year 2010) are substituted for the representative farm and environmental data used in the interim study. Although the representative data were instructive in identifying possible outcomes of different formulations of CSP, the actual enrollment and contract data are necessary to provide a fuller assessment of CSP outcomes. Results from the interim assessment and this final assessment were compared to identify differences between predicted and actual outcomes, determine why differences were observed, and make recommendations, when necessary, to improve CSP's cost effectiveness. This comparison should not be used beyond its stated purpose because of the different datasets in the two analyses.

CSP and the Conservation Measurement Tool

CSP is an extremely complex program given its purpose, statutory mandates, assessments of existing and future conservation activities and their associated conservation indices, allocation of program funds and acres across states, and price setting. In the first CSP sign-up, the procedures used in implementing CSP were the following:

- NRCS allocated acreage for enrollment across States according to each State's proportion of the nation's agricultural land base.
- NRCS identified eight resource concerns for CSP—soil erosion, soil quality, water quantity, water quality, air quality, plant resources, animal resources, and energy resources. State NRCS offices created ranking pools, selecting three to five of the eight national resource concerns as State priority resource concerns for every pool. States allocated acres and program dollars from the national office across the pools.
- A national team of NRCS cropland, pastureland, rangeland, and forestland specialists developed sets of questions by land use category to identify conservation activities already applied to the land and the associated level of stewardship by assigning conservation performance points. This team also identified additional enhancements for increasing stewardship and assigned conservation performance points to the enhancements. NRCS's Conservation Practice Physical Effects (CPPE) methodology was used in both of these instances to assign performance points. Conservation performance points earned by land use should be viewed as "environmental indices."
- NRCS developed a conservation measurement tool (CMT) to determine eligibility by verifying that minimum stewardship thresholds are met, estimate conservation performance from existing and additional activities, and rank applications.

- State NRCS staff field tested the questions and CMT and made suggestions that improved CMT's use.
- During the CSP sign-up, NRCS assisted producers in completing their resource inventories in CMT and determining program eligibility. Eligible applicants identified additional activities—enhancements and standard conservation practices—they were willing to adopt. Each applicant's resource inventory and additional activities recorded in CMT earned conservation performance points per acre by land use.
- Every application was ranked within a pool according to the sum of four equally weighted ranking factors. The maximum ranking score is 1,000; the minimum, zero. NRCS selected applications for enrollment beginning with the highest ranked application and worked down the ranked list until a pool's funding limit or acreage limit was reached. A fifth ranking factor came into play as a "tie breaker" when two or more applications were ranked equally. When this situation occurred, the application that minimized the cost to government was selected.³ The four equally weighted ranking factors were the following:
 - Ranking factor one (RF-1) measures the existing level of conservation stewardship for *priority* resource concerns at the time of enrollment.
 - Ranking factor two (RF-2) measures the *degree* that new conservation activities improve *priority* resource concern conditions.
 - Ranking factor three (RF-3) measures the *number* of *priority* resource concerns that the applicant agrees to meet during the contract period.
 - Ranking factor four (RF-4) measures the *degree* that new conservation activities improve *other* resource concern conditions.
- CSP payment per land use equals conservation performance points per acre multiplied by acres multiplied by the land use payment rate. Total payment per contract equals the sum of the individual land use payments.⁴
- Like the interim CEA study, the analysis conducted for the final rule looked at how this process—called policy option 1 (PO-1)—compares with four alternative policy options to identify tradeoffs among the policy options, especially changes in program acres, conservation performance points, program costs, and implications with respect to CSP's acreage and funding constraints.

Detailed descriptions of CSP, the conservation measurement tool, results from sign-up one, and the CEA analysis can be found in the main body of the report and the appendices.

Analysis

Results of this analysis show that CSP participation was high across the nation. As of December 1, 2009, NRCS had classified 15,015 applications as eligible. These applications involved

³ "...the Secretary shall rank applications based on...(E) the extent to which the actual and anticipated environmental benefits from the contract are provided at the least cost relative to other similarly beneficial contract offers."

⁴ For CSP sign-up one, payment rates are \$0.0605 for every cropland conservation performance point, \$0.0329 for pasture, \$0.0120 for rangeland, and \$0.0164 for non-industrial private forestland.

slightly more 20.8 million acres, close to double the 12.179 million acres⁵ initially allocated to states during this first ranking period.

In 250 of the 693 pools created for CSP, no applications were submitted. In 303 pools, all eligible applications were preapproved because allotted acreage and funding allocations were not fully committed. The remaining 140 pools accounted for slightly more than 86 percent of eligible acres, making them highly competitive.

Interestingly, at the time of application, more than 80 percent of the eligible applicants across all land uses were already meeting and frequently exceeding minimum stewardship levels on five of the eight resource concerns identified nationally. Applicants in the first CSP sign-up appear to be practicing stewardship at a fairly high level. As a result, one would expect to see conservation performance points earned for existing activities to be higher than performance points earned for additional activities. Summary data from preapproved applications in the initial ranking period confirm this expectation. Existing conservation performance points amounted to 61 percent of total points awarded nationally. This 61-39 percent split between existing and additional conservation performance points carried directly over into payments, with 63 percent of projected \$142.6 million in financial assistance tied to existing activities.

The policy options described and analyzed using representative farm and environmental data in the interim CSP rule indicated that CSP outcomes could be fine-tuned at the national level by changing the relative importance of the ranking factors. Based on that analysis, policy option 1 (four ranking factors were weighted equally) was selected and used for the first CSP sign-up. Because three of the four ranking factors are linked directly to additional activities, an equal weighting scenario places considerable importance on additional activities, including both enhancements and standard conservation practices, proposed to be applied over a five-year period. The expectation was that the highest ranked applications would include substantially more additional conservation activities than lower ranked applications. The assumption was that one of the other policy options might be used to influence the mix between existing and additional activities after reviewing actual CSP enrollment.

The five policy options and their reported acreage and program costs by land use are summarized in Table 2. Again, policy 1 (PO-1) represents the actual CSP sign-up where the ranking factors are equally weighted. Analyses conducted for policy option 2 (ranking factor 1 receives 5 times the weight – 62.5 percent – of the other ranking factors), policy option 3 (ranking factor 2 receives 5 times the weight – 62.5 percent – of the other ranking factors), policy option 4 (ranking factor 3 receives 5 times the weight – 62.5 percent – of the other ranking factors), and policy option 5 (ranking factor 4 receives 5 times the weight – 62.5 percent – of the other ranking factors) did not appreciably change the percentage splits between existing and additional performance points and funding. Though acres and costs shifted among the different land uses, the impact on total program costs and costs per acre suggests that policy options 2 through 5 did not substantially change the current distributions of funds and acres under PO-1, which was used for the first CSP sign-up.

⁵ To avoid enrolling too many acres or spending more than the \$230 million available for this first sign-up, NRCS initially allocated 95 percent of the 12.769 million acres. As enrollment progressed, NRCS allocated the remaining acres.

Table 2. Summary of Program Acreage and Costs by Land Use and Policy Options for CSP Sign-up One

Policy Option	Cost per Acre	Acres Funded in Program^a					Total Program Cost^b				
		<u>Crop land</u>	<u>Pasture</u>	<u>Range land</u>	<u>NIPF</u>	<u>Total²</u>	<u>Crop land</u>	<u>Pasture</u>	<u>Range land</u>	<u>NIPF</u>	<u>Total</u>
		<i>(millions of acres)</i>					<i>(\$ millions)</i>				
No CSP	N/A	0	0	0		0	0	0	0	0	0
PO-1	\$14.82	4.833	0.797	5.529	1.019	12.179	117.308	14.306	38.909	9.963	180.486
PO-2	\$14.79	4.570	0.792	5.568	0.985	11.914	112.988	14.332	39.162	9.687	176.169
PO-3	\$14.66	4.752	0.786	5.204	0.951	11.694	110.659	14.364	37.083	9.367	171.472
PO-4	\$14.88	4.726	0.773	5.452	1.004	11.955	115.581	13.988	38.415	9.866	177.850
PO-5	\$15.27	4.949	0.757	5.097	0.950	11.753	120.171	13.836	36.137	9.321	179.465

^a For this analysis, the CSP acreage cap is 12.179 million acres including the 10 percent allocated to NIPF. This was the initial allocation distributed to States shortly after closure of the first CSP sign-up.

^b Includes financial and technical assistance.

We did notice that some large operations fell just below the cutoff line in many of the pools for PO-1, the actual sign-up. These operations moved up the ranked list and effectively prevented the distribution of the full amount of acres under the other policy options. Their impact can be seen by examining total acres in Table 2.

In examining the summaries of conservation performance points and costs per point, we reached a similar conclusion regarding the effectiveness of policy options 2 through 5 in changing the emphasis of CSP between existing and additional activities (see Table 3). The relatively insignificant changes in total conservation performance points and dollars per point suggest that major changes in the ranking process yield few tangible results in practice. A closer examination of the applications show considerable shifting of the applications in terms of rankings, but few if any of the applications that were ranked low during the actual sign-up moving the list to impact results.

Table 3. Summary of Conservation Performance Points and Cost per Point for CSP Policy Options

				Dollars per Point	
	<u>Existing Activities</u>	<u>Additional Activities</u>	<u>Total Points</u>	<u>Additional Activities</u>	<u>All Activities</u>
	<i>(millions of conservation performance points)</i>			<i>(\$)</i>	
No CSP ^a	Indeterminate	N/A	N/A	N/A	N/A
PO-1	3,960	2,488	6,448	0.0573	0.0221
PO-2	3,964	2,368	6,332	0.0590	0.0220
PO-3	3,779	2,502	6,281	0.0564	0.0225
PO-4	3,920	2,398	6,319	0.0587	0.0223
PO-5	3,790	2,481	6,271	0.0576	0.0228

^a Assumes CSP is not available to landowners. Data are not available to assess this situation.

Other possible reasons were identified to explain why the ranking process produced such minor shifts in conservation performance points and funding between existing and additional activities. Applicants, for example, who were addressing a state's priority resource concerns, received more ranking points than applicants who chose to address fewer priority resource concerns. As part of the policy analysis though, it became apparent that RF-3 moved closely with RF-1. A recommendation in the conclusions and recommendations section breaks this relationship with RF-1, making it strictly a factor that awards ranking points based on proposed new activities that assist producers in meeting minimum stewardship levels of priority resource concerns.

A second possible reason is the conservation measurement tool and how activities and conservation performance points are assigned. A third reason is the ranking process itself. Modifications to account for these two reasons are detailed in the recommendations.

The results reported above and other secondary results from the analysis of eligible applications and preapproved contracts in CSP's initial ranking period substantiate many of the initial CEA findings reported in the interim rule. One primary finding was that: *"The policy constraints on the program posed serious challenges for the model developers. It is obvious that these constraints will pose similar challenges in implementing this program. In particular, achieving the national annual acreage enrollment goal at the designated average costs per acre mandated in legislation will be a challenge given the heterogeneity of producers' initial resource conditions and demand for enhancements."* This cautionary observation held true in the initial ranking period and appears to be a major concern in subsequent ranking periods.

Second, the annual contract limit of \$40,000 per contract imposed by the interim final rule influences program outcomes. CSP gains program acreage when large operations, 13.8 percent of the preapproved contracts in the first ranking period, hit the maximum annual payment limit and remain enrolled. Costs per acre for the program decrease because program funding is spread over more acres. As predicted though, CSP's acre constraint of 12.769 million acres becomes the controlling factor because of the acres linked to the large operations. Though OMB appropriated \$229,842,000, the financial assistance portion cannot be fully spent because the acreage constraint was met for CSP sign-up one given the data we analyzed. Furthermore, NRCS offices incur technical assistance costs associated with these additional acres, regardless if the acres are capped for payment.

Third, the policy options that were part of the CEA in the interim rule proved useful in the final assessment. The different policy scenarios reinforced the fact that CSP outcomes depend to a large extent on the applications submitted for enrollment. The policy scenarios also contributed to a better understanding of how the ranking factors were defined and implemented.

Finally, program design and adaptive program management are critical in satisfying the mandated constraints of this program. The model results of the CEA used in the interim rule showed that caution must be used in setting land use payment rates. This is due to the changing land use compositions and conservation performance outcomes that resulted under each alternative policy option. Such changes could be expected in subsequent sign-ups and alter the acreage and conservation performance points produced. Such changes would need to be

included in the calculation of appropriate land use payment rates that conform to the CSP statute, particularly the \$18 per acre national program cost constraint.

Conclusions and Recommendations

As part of the 2008 Farm Bill, Congress created the Conservation Stewardship Program and instructed the Secretary of Agriculture to develop a program that compensates a producer for *“...installing and adopting additional conservation activities; and improving, maintaining, and managing conservation activities in place at the operation of the producer at the time the contract offer is accepted by the Secretary.”* Producers must also meet minimum stewardship levels before they become eligible for CSP. Acreage, budget, a national average price of \$18 per acre, and a maximum annual payment of \$40,000 per contract also complicate program implementation.

The existing CSP program as currently implemented received more than enough applications to make it a competitive program. Of the 15,015 eligible applications, 10,743 were preapproved for enrollment, and those selected were the highest ranked eligible applications. The preapproved applications resulted in 61-39 percent split in conservation performance points and 63-37 percent split in program payments between existing and additional practices, respectively. The acreage constraint limited the ability of NRCS to distribute all the funds provided by Congress.

Although little guidance is given on a suitable split of financial assistance funds between existing and additional conservation activities, preliminary analysis indicates that the first CSP sign-up attracted practicing conservationists. Almost every applicant was meeting minimum eligibility requirements at time of application. More than 80 percent of the applicants were meeting 5 resource concerns at time of application.

Second, the \$40 thousand cap per contract and the requirement that all acres of an operation must be enrolled impacted CSP. The acreage constraint became the limiting factor because 1487 (13.8 percent) preapproved applications exceeded the cap, but their acres were counted, making it impossible for NRCS to distribute all the funds.

A total of five policy options were developed as candidates for improving CSP's overall cost effectiveness at the national level. These policy options are directly tied to CSP's ranking process. Under policy option one, the four ranking factors are equally weighted. In the remaining options, each ranking factor is separately weighted five times more important than the other factors. Based on the interim analysis, the ranking process recommended and implemented for the first CSP sign-up was policy option 1. This translated into an effective weighting scheme of 25 percent for existing activities and 75 percent for additional activities. It was suggested that the entire analysis completed in the interim report be repeated using actual sign-up data and all the policy options be considered again to improve CSP's cost effectiveness.

For the most part, these policy options exhibited their intended impacts. With each change in the weights assigned to the ranking factors, ranking scores changed, and applications moved up and down in ranking based on their mix of existing and additional conservation activities and whether priority resource concerns were being targeted. With five times the weight assigned to

ranking factor 1(Policy option 2), for example, we observed applications with many existing practices earning more ranking points than applications with fewer existing practices and applications with similar additional activities. When weights were assigned to ranking factors that captured additionality, we observed the opposite where applications with many additional activities ranked higher than applications with a similar complement of existing activities and applications with fewer additional activities. Overall, however, policy options two through five did not yield substantially different changes in conservation performance points and financial assistance between existing and additional activities. Analysis of the data suggests that this first CSP sign-up attracted practicing conservationists. We expect future sign-ups to be more representative of the larger agricultural sector as others learn about CSP and the remaining population of practicing conservationists yet to enroll declines with each sign-up.

At this juncture, there is insufficient evidence of improved cost effectiveness to replace policy option one with any of the other options. Prior to CSP sign-up two, NRCS will review key program components—eligibility requirements, minimum stewardship levels, conservation activities and conservation performance points, the conservation measurement tool, and ranking factor specifications—and make any necessary modifications. In addition, NRCS will investigate other ranking factor processes, additional ranking criteria, and separate prices for existing and additional conservation performance points. As data become available and are analyzed from each new sign-up, NRCS will make necessary changes to improve CSP’s cost effectiveness.

Final Cost-Effectiveness Analysis for the Conservation Stewardship Program

Background

Legislative Authority

Conservation Stewardship Program (CSP) assistance is authorized under the provisions of Title II, Subtitle D, of the Food, Conservation and Energy Act of 2008, Public Law 110-246 (2008 Farm Bill). Section 2301 amends Chapter 2, Subtitle D of Title XII of the Food Security Act of 1985 (16 U.S.C. 3830 et seq.) by inserting Subchapter B, Conservation Stewardship Program. The Secretary of Agriculture acting through the Chief of the Natural Resources Conservation Service (NRCS) administers the program.

Need for the Regulation and Rationale for the Rule

Based on past program experience, environmental benefits generated from conservation activities may be thought of as originating from various natural resource and environmental situations that can lead to a market failure. This market failure can create either of two outcomes. The first outcome would result in negative externalities or spillover effects in which agricultural production creates environmental damage for which the producer has no mitigation costs and is not otherwise held accountable. The second outcome would result in opportunities for environmental benefits from land use management changes in which private costs exceed private benefits (i.e., positive externalities, but public benefits exceed private costs).

CSP enables private landowners and society to realize benefits by addressing the second environmental outcome when markets fail to fully capture potential positive environmental outcomes. That is, activity payments provide the needed financial incentive to spur producers to take actions that generate positive net benefits for society although their private costs exceed any direct benefit realized by them. In such cases, government programs generally can produce positive net social welfare gains. Such efforts support NRCS's strategic foundation goals of high-quality, productive soils; clean and abundant water; and healthy plant and animal communities, along with the venture goals of clean air, an adequate energy supply, and working farm and ranch lands. CSP has the potential to address all resource concerns across the entire United States over the life of the program due to its diagnostic and holistic assessment of

resource concerns and its potential to address not just one of NRCS's strategic goals at a time, but many, if not all, of them.

CSP adds conservation activities to production units that already have conservation practices. One would expect that each additional conservation activity will generate fewer additional benefits. At some point, the additional costs of applying an activity will be greater than the additional benefits. When this situation occurs, it would be more cost-effective, in terms of overall benefit, to design programs that address more pressing resource concerns on land with lower conservation stewardship attainment where additional conservation efforts produce higher marginal returns for each additional conservation effort expended. This question is beyond the scope of this cost-effectiveness analysis, as the legislative intent of this rule is to provide a conservation-activity-centered program. However, this inherent physical feature—producers could reach the point where the additional costs exceed the additional benefits of applying an activity—should not be overlooked by policymakers.

CSP Description and Features

Program Purpose

The purpose of CSP is to encourage producers to address resource concerns in a comprehensive manner by undertaking additional conservation activities and by improving, maintaining, and managing existing conservation activities. In mitigating resource concerns, producers and society benefit from the increased flow of environmental benefits from working agricultural lands.

CSP is intended to offer producers the opportunity to apply additional conservation activities while maintaining and improving existing activities to achieve a higher level of stewardship on their entire agricultural operation. The Environmental Quality Incentives Program and other NRCS financial assistance programs provide basic conservation assistance. CSP adds to the foundation of conservation practices.

Program Overview

NRCS has overall leadership for CSP and is responsible for establishing policies, priorities, and guidelines for implementing it. CSP is a voluntary program that encourages producers on tribal and private working lands to address soil, water, air, plant, animal, and energy resource concerns at an increased level of conservation stewardship. Because CSP is voluntary, the program is not expected to impose any obligation or burden upon agricultural producers and non-industrial private forestland owners who choose not to participate.⁶

⁶An impact could be expected in cases where CSP funds activities that lead to large increases of certain environmental services and goods where those markets are beginning to get started.

Producers who practice good stewardship on their agricultural operations receive financial assistance and technical assistance to install and adopt additional conservation activities and to improve, maintain, and manage conservation activities already in place. Additional activities may be either enhancements or standard conservation practices. Enhancement activities increase the effectiveness of standard conservation practices in treating resource concerns beyond minimum practice standards. Enhancements help CSP participants achieve and exceed sustainability levels of resource concerns.

Eligible producers who own or control agricultural land, including non-industrial private forestland (NIPF), may participate by entering into a contract with USDA. Potential participants provide information about their current and proposed conservation stewardship activities on the land under consideration. The levels of existing and planned conservation activities determine the total number of conservation performance points generated by the operation. NRCS uses a conservation measurement tool (CMT) to determine existing and additional activities, assign conservation performance points, and check producer eligibility. Producers must meet the stewardship threshold for at least one resource concern at the beginning of the contract, and must meet or exceed the stewardship threshold for at least one priority resource concern by the end of the contract. NRCS identified eight resource concerns for CSP—soil erosion, soil quality, water quantity, water quality, air quality, plant resources, animal resources, and energy resources. Of these, States identify three to five as priority resource concerns

After conservation performance points are estimated, applications are scored and ranked using the following four legislatively mandated ranking factors: ranking factor 1 (RF-1), the benchmark performance level of existing activities with respect to CSP’s priority resource concerns at the time of application; ranking factor 2 (RF-2), the increase in conservation performance on priority resource concerns by the end of the contract; ranking factor 3 (RF-3), the number of additional priority resource concerns expected to meet or exceed the stewardship threshold by the end of the contract; and ranking factor 4 (RF-4), the increase in conservation performance on non-priority resource concerns by the end of the contract (see Table 1).

Table 1. Selected Characteristics of CSP Ranking Factors

Ranking Factor	Nature of Ranking Factor	Applies to:	At the time of:
RF-1	Benchmark performance	Priority Resource Concerns	Application
RF-2	Increase in conservation performance points	Priority Resource Concerns	End of contract
RF-3	Increase in number of priority resource concerns satisfying minimum stewardship levels	Priority Resource Concerns	End of contract
RF-4	Increase in conservation performance points	Non-priority Resource Concerns	End of contract

Note: Ranking factors RF-2, RF-3, and RF-4 are linked directly to additional activities.

Ranking factors reflect producers’ answers to CMT questions and choice of additional activities in four categories. A producer’s responses concerning initial resource conditions and

corresponding conservation activities that target priority resource concerns generate RF-1 ranking points. Proposing to apply additional activities that target *priority* resource concerns earns RF-2 ranking points, agreeing to apply additional activities that achieve a previously unmet stewardship threshold by the end of the contract earns RF-3 ranking points, and applying additional activities that mitigate non-priority resource concerns earns RF-4 ranking points.

Once all applications are scored, they are sorted in descending order within a pool. Beginning at the top of the ranked list, applications are preapproved within a pool until the pool's acreage or funding limitation is reached. When the ranking process results in a tie between two or more agricultural operations, a fifth ranking factor is used to break the tie; the application that costs less is selected.

CSP participants must maintain or establish conservation treatment to specific levels of natural resource conservation protection on their land, including non-industrial private forest land, in exchange for CSP payments. CSP payments to producers take into account implementation costs, maintenance costs, income foregone, and expected environmental benefits associated with existing and additional conservation activities. Producers may also receive CSP payments for adopting resource-conserving crop rotations and for conducting farm research or demonstrating new conservation techniques or activities.⁷

Congress authorized the enrollment of 12,769,000 acres for each fiscal year (FY) during the period October 1, 2008, through September 30, 2017. For fiscal years 2009 through 2012, CSP has been authorized 51,076,000 acres (four years multiplied by a 12,769,000 acre program cap per year).

Full participation is assumed for each of the 4 years CSP is offered, and the duration of each contract is five years. Total costs include only costs to government⁸. In current dollars, the cumulative cost of CSP is \$4.597 billion (see Appendix A, Table A.1). Cumulative program costs for four program sign-ups are estimated to be \$2.990 billion in constant 2005 dollars, discounted at 7 percent. At a 3 percent discount rate, program costs increase to \$3.520 billion in constant 2005 dollars.

Each sign-up creates a commitment of \$229.842 million for five years. Participants in the first sign-up receive payments through FY 2014; participants in the last sign-up receive payments through FY2017. The largest outlays of program funds occur in FY 2013 and FY 214 and then begin to taper off as contracts from the first and later sign-ups end.

The program is available to all eligible producers in the United States, the Caribbean, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands. It provides equitable access to benefits for all producers regardless of crops produced, size of operation, or geographic location. Producers already enrolled in CSP are eligible for renewal of

⁷ CSP encourages innovation and the use of new technologies.

⁸ Given the wide set of possible initial resource conditions and conservation activities likely to be adopted, it is not possible to ascertain whether (or to what extent) CSP payments off-set expected costs to producers in adopting new activities or past activities.

the agreement at the end of the first five-year contract if they complied with the terms of the existing contract and agree to adopt additional conservation activities. NRCS, or any other USDA-approved source, may provide technical assistance to enrolled producers for the required conservation activities.

CSP Statutory Requirements

In subtitle D, section 2301 of the Food, Conservation and Energy Act of 2008, Congress defined CSP, its purpose, producer and land eligibility requirements, processes and procedures, and contract and payment provisions. Specifically, Congress instructed the Secretary of Agriculture to:

- Establish a program that encourages producers to address resource concerns comprehensively by (1) applying additional conservation activities and (2) improving, maintaining, and managing conservation activities in place.
- Follow the terms, conservation activities, conservation measurement tools, conservation stewardship plan, and priority resource concerns defined in the statute.
- Include non-industrial private forestland that meets land eligibility requirements for possible enrollment in CSP. Total NIPF enrollment may not exceed 10 percent of the acres enrolled annually.
- Exclude land enrolled in other conservation programs and land not planted, considered planted, or devoted to crop production at least four of the last six years since passage of the 2008 Farm Act.
- Identify how contract offers will be evaluated in accordance with statutory guidelines.
- Detail contract and payment provisions in accordance with statutory timeframes and guidelines.
- Define the processes and procedures related to enrollment.
- Define criteria used in allocating CSP acres to States.
- Include statutory payment limitations.

CSP Discretionary Items

CSP discretionary items are broken into four groups: (I) program design elements, (II) program implementation elements, (III) administrative-centered elements, and (IV) other program elements. These items are described here as presented in the statute and as they are considered and incorporated into this analysis.

I. Program Design Elements

A. Definition of an eligible applicant

- (a) The regulation states that an eligible applicant must be the operator of an agricultural operation in the Farm Service Agency (FSA) farm record system, have documented

control of the land for the life of the contract, and be in compliance with the highly erodible land and wetland conservation (HEL-WC) provisions and the adjusted gross income (AGI) provisions.

The use of this definition most likely has a marginal impact on the number of producers who are eligible to participate in CSP, as all evidence suggests that most producers can meet the FSA farm record system requirements. Even operations having highly erodible land (HEL) and converted wetlands would most likely have participated in commodity programs and, as a result, be in the FSA system. For example, recent data indicate that 83 percent of HEL cropland acres receive some form of Government payment (disaster, conservation, or commodity).⁹ This same data source indicates that 92 and 75 percent of the land subject to wind and water erosion, respectively, also receives some form of government program payments. Although income tax records are not available on all farm households, most industry observers have commented that only a negligible percent of farms and ranches would likely be restricted from applying due to the AGI requirement.

- (b) The use of an alternative definition for an eligible applicant was not explored in this analysis.

B. Extent of an agricultural operation

- (a) To participate in CSP, the applicant must enroll the entire agricultural operation, based on the applicant's FSA farm records. The entire agricultural operation must meet the stewardship threshold requirement to be eligible for CSP. The agricultural operation must include all land owned or operated by the applicant that is substantially separate from other agricultural operations (this differs from the 2004 Conservation Security Program, which allowed applicants to enroll only a portion of their agricultural operation). NIPF acres must be delineated and evaluated separately from the other portions of the agricultural operation.
- (b) Environmental benefits derived from the whole farm, versus only a portion of the farm, is a key feature of CSP, as intended by Congress. Any farm or ranch operation that does not agree to address resource concerns over the entire operation is not eligible. No alternative criteria were explored in the analysis in this regard.

C. Incidental forestland versus non-industrial private forestland

- (a) Applicants have the option to enroll their forestland as incidental forestland or as NIPF. Incidental forestland (less than 10 acres) is evaluated as part of the agricultural operation, and annual payments are not allowed on these acres. For forestland greater than 10 acres, applicants have two options. They can instruct NRCS to classify it as incidental forestland or as NIPF. As an NIPF operation, which is substantially separate from the current operation, an applicant can submit a separate CSP application or choose not to apply.
- (b) The entire NIPF operation must be enrolled if an application is submitted.
- (c) NIPF is included in the analysis and treated as a separate land use.

⁹Also, the use of no-till and the new generation of herbicides have enabled farmers to cultivate HEL areas more safely than in the past.

D. Allocation of acreage among States

- (a) NRCS allocates potential program acreage based on each State's proportion of eligible acres to the total number of eligible acres in all States. The total possible U.S. acreage level is first reduced by 10 percent to account for the acreage allocation for NIPF. The NIPF potential program acreage is then similarly allocated to States based on their NIPF acreage in proportion to the total U.S. NIPF acreage.
- (b) Each State is given an acreage allocation (Appendix A, Table A.2) based on data from the National Agricultural Statistics Service (NASS) and the United States Forest Service (USFS) for the total U.S. acreage level and each State's total (adjusted for NIPF acreage). The method by which eligible acreage is distributed across the United States affects CSP's distribution of payments and the subsequent levels of benefits and costs (due to different land use types and agricultural operation types across the United States).
- (c) No alternative methods were explored.

E. Specificity of resource concerns

- (a) The CSP statute defines a "resource concern" as a specific natural resource problem that is likely to be addressed successfully through the implementation of conservation activities by producers. "Priority resource concerns" are at least three and no more than five resource concerns identified by the State Conservationist, in consultation with the State Technical Committee, as a priority for the State or a specific geographic region within the State. The resource concerns that States may select are soil quality, soil erosion, water quality, water quantity, air quality, plant resources, animal resources, and energy resources (see Appendix B).
- (b) Additional resource concerns were not considered in this analysis.

F. Fiscal year enrollment and national average payment rate

- (a) NRCS gives each State its initial allocation of acres with caps placed on the number of acres allowed for enrollment in ranking pools for agricultural land, NIPF, beginning farmers and ranchers, and socially disadvantaged farmers and ranchers. These acreage caps put a limit on the maximum level of expected CSP participation that is possible.
- (b) Full program participation is expected each year during the period authorized by the 2008 Farm Bill. .
- (c) No alternative method to allocate program acreage across the nation was investigated.

G. Non-industrial private forest land and 10 percent cap

- (a) NIPF applications have a separate set of pools. States receive a separate allocation based on the proportion of national NIPF acres in their States.
- (b) The inclusion of NIPF has the potential to allow landowners who have not traditionally participated in NRCS programs to participate in CSP.
- (c) By expanding the eligible acreage to a land type not typically enrolled in federal conservation programs, the NIPF allocation cap of 10 percent indirectly limits

participation for cropland, pasture, and rangeland and could affect the regional distribution of benefits and costs associated with CSP.

- (d) Changes in the NIPF allocation were not considered in this analysis.

H. Meeting or exceeding the stewardship thresholds for priority resource concerns

- (a) The contract applicant must meet the stewardship threshold for at least one resource concern at the time of application and, at a minimum, must meet or exceed the stewardship threshold for at least one priority resource concern by the end of the CSP contract. If the stewardship thresholds of two priority resource concerns are met or exceeded at the time of application, this eligibility requirement has been met. No additional performance will be required to meet eligibility.
- (b) Conservation performance levels resulting from adoption of conservation activities paid by CSP to bring participants up to minimal stewardship threshold levels are considered “additional” conservation activities.
- (c) Changes in this requirement were not considered in this analysis.

I. Compensation for additional and existing conservation activities

- (a) An annual CSP payment is provided for generating conservation performance points. Points broadly represent environmental benefits generated by installing/adopting additional conservation activities on enrolled land by land use, adopting needed conservation practices, and maintaining existing conservation activities. When enrolling in CSP, participants are required to maintain the existing conservation for the life of the contract.
- (b) The payment mechanism in this analysis is based on the number of conservation performance points generated by each CSP participant. Payment prices are currently set by land use and are used nationally.
- (c) Other payment mechanisms (e.g., the Environmental Quality Incentives Program) were not considered in this analysis.

J. Determining CSP compensation rates

- (a) The national average per acre compensation rate for CSP may not exceed \$18 per acre.
- (b) Payment rates for conservation performance points are determined by land use. Information about existing and proposed activities from the preapproved applications is used to estimate total implementation costs using NRCS’s payment schedules. Estimated total costs, total conservation performance points from the preapproved applications, and funding and acreage constraints are used to establish payment rates.
- (c) Payment prices are scaled to not exceed available financial assistance.
- (d) Alternative methods for setting payment rates were not considered in this analysis.

II. Program Implementation Elements

A. Ranking CSP applications

- (a) The ranking of CSP applications is based on conservation performance points generated by existing conservation activities on all priority resource concerns across land uses, additional conservation practices to be applied that mitigate priority and non-priority resource concerns, and the number of additional priority resource concerns that are projected to be brought up to minimum stewardship threshold levels by the end of the contract. The CMT was developed to identify existing and additional activities and to assign conservation performance points (see Appendix C).
- (b) An algorithm in the CMT calculates each application's ranking score.
- (c) The relative weight placed on each of the four legislatively mandated ranking factors is a key focus of the policy options examined in this analysis.

B. Level at which ranking occurs

- (a) State Conservationists establish ranking pools within their States based on similar production, geographic, and environmental characteristics. In addition to establishing separate general ranking pools for agricultural land and non-industrial private forestland, States establish additional, separate ranking pools for socially disadvantaged farmers and ranchers and for beginning farmers and ranchers, for a minimum total of six ranking pools per State. .
- (b) All ranking occurs within pools.
- (c) For States that do not fully utilize their allocation, acres will be redistributed to States that have additional acres eligible for funding above their initial allocation.
- (d) No other ranking specifications were examined in this analysis.

III. Administrative-Centered Elements

A. Verifying conservation system information certified by producers

- (a) The verification of conservation system information certified by producers is a programmatic role and has little to no influence on the cost and benefits related to CSP.
- (b) Alternative processes related to this item were not examined in this analysis.

B. Managing technical assistance to stay within payment limit

- (a) A maximum of \$3.11per acre in technical assistance has been set for the first and second CSP sign-ups.
- (b) Small adjustments in technical assistance will not substantially change results of the analysis. Other rates were not considered.

C. Maintaining detailed and segmented data on contracts and payments

- (a) Maintaining detailed and segmented data on contracts and payments is important in understanding how CSP is implemented and tracking impacts. The importance of such

data is critical in certain program designs, such as cases in which CSP payments are based on CMT information collected in States and tabulated at the national level to determine appropriate per acre payment rates.

- (b) The data management system does not directly affect the analysis. Other data management schemes are not considered in the analysis.

IV. Other Program Elements

A. Resource-conserving crop rotations

- (a) Payments for the resource-conserving crop rotation are a supplemental payment based on a participant agreeing to adopt and maintain a beneficial resource-conserving crop rotation. This payment is separate from the annual payment and is based on adopting a resource-conserving crop rotation, as identified by the State Conservationist.
- (b) A participant's ability and willingness to adopt a resource-conserving crop rotation depends on a number of factors, including the availability of markets for the new crop; the knowledge, skills, and abilities of the producer; and the ability to access needed equipment.
- (c) Payment rate for a resource-conserving crop rotation has been set at \$16 per acre.
- (d) Other payment levels and definitions of resource-conserving crop rotations were not considered in this analysis.

B. On-farm research and demonstrations and pilot testing

- (a) On-farm research and demonstrations, as well as pilot testing, are considered State-specific enhancements based on an identified resource need within a State.
- (b) On-farm research and demonstrations and pilot testing are not considered in the analysis at this time.

C. Initiating organic certification

- (a) Through the CSP rulemaking process, producers are allowed to fully participate in CSP while seeking organic certification. It is unclear how many producers in the United States are considering converting to organic agriculture or are in the process of obtaining certification.
- (b) No attempt is made in the analysis to capture the costs and benefits associated directly with organic production as a subset of CSP participants.
- (c) Due to the lack of data, these producers are included only indirectly in the analysis.

CSP Results from the FY 2009 Ranking Period

CSP program constraints limit participation to no more than 12.769 million acres and \$229,842,000. To minimize the possibility of violating these two statutory constraints and adjust to any unforeseen circumstances, NRCS initially allocated 12.179 million acres and \$219.2 million to the States for financial assistance and technical assistance in sign-up one. As the sign-

up progressed, NRCS allocated the remaining acres and financial assistance. The results reported below are based on the eligible and preapproved applications and payment prices by land use directly linked to these two lower constraints¹⁰ (12.179 million acres and \$219.2 million).

NRCS conducted the first CSP sign-up between August 10, 2009, and September 30, 2009. Although producers only knew that payments per operation could not exceed \$40,000 annually and that the national average payment per acre could not exceed \$18 annually, they submitted 15,015 eligible applications covering 20,827,742 acres.

In each pool, eligible applications were preapproved based on their ranking score until the pool's allotted acres were committed. A total of 10,743 applications were preapproved given the 12.179 million acreage constraint. The existing and additional activities, NRCS practice costs, and the conservation performance points generated by all the preapproved applications were then used to establish payment prices per conservation performance point by land use; these are reported in Table 2. Using these prices

and the total number of conservation performance points generated by the existing and additional activities in the preapproved applications, we estimated \$208.7 million in financial assistance. At \$3.11 per acre for technical assistance, total program costs for the preapproved applications equaled \$246.6 million (\$208.7 million in financial assistance and \$37.9 million in technical assistance).

Table 2. Payment Schedule by Land Use^a

	Payment per conservation performance point
Cropland	\$0.0605
Pasture	\$0.0329
Rangeland	\$0.0120
Forestland	\$0.0164

^a December 1, 2009 data.

Ranking Pools

Pools are used to account for agricultural and non-industrial private forestland, various types of producers, and other characteristics such as distinctly different production regions or unique ecological areas. The number of pools per State ranged between the minimum six pools (agriculture and non-industrial private forestland, each with separate pools for general applicants, beginning farmers and ranchers, and socially disadvantaged producers) and 33 pools (Appendix A, Table A.3). Altogether, States created 693 pools. As shown in Table 3, 250 pools had no applications and 303 pools had all applications in the pool preapproved; the remaining 140 pools accounted for 86 percent of total eligible acres. In these 140 pools, the ranking of applications played an important role in preapproving applications with the most conservation performance points per acre.

¹⁰ A second analysis should be conducted after the last contract is signed and compared to the results reported here to determine whether CSP changed significantly between the initial selection of preapproved applications and the final set of signed contracts.

Table 3. Ranking Pools, Applications, and Eligible Acres in CSP Sign-up One^a

	<u>Number</u>	<u>Acres</u>
Total pools	693	20,827,742
Inactive pools (no applications received)	250	0
Active pools (applications received)	443	20,827,742
<i>Of which:</i>		
All applications preapproved	303 (68%)	3,010,826 (14%)
Applications preapproved but additional eligible applications remaining	140 (32%)	17,816,916 (86%)

^a Eligible acres as of December 1, 2009.

Pools and Priority Resource Concerns

States were given the authority to tailor CSP to mitigate high-priority local resource concerns. They did this by identifying three to five of the eight national resource concerns as priority resource concerns. The eight national resource concerns are soil erosion, soil quality, water quantity, water quality, air quality, plant resources, animal resources, and energy. A detailed description of CSP resource concerns and the “micro” resource concerns listed under them can be found in Appendix B.

Priority resource concerns figure prominently in the ranking process. Existing activities and additional activities that mitigate priority resource concerns earn ranking points. Currently, three of the four ranking criteria are based on priority resource concerns. Table 4 shows the number and percent of pools with three, four, and five priority resource concerns. Of the 693 pools created across the nation, States identified five of the eight nationally designated resource concerns in 60 percent of the pools.

Table 4. Priority Resource Concern Pools

<u>Priority Resource Concern (PRC) Pools</u>	<u>Number of Pools</u>	<u>Percent of Pools</u>
3-PRC pools	117	17%
4-PRC pools	159	23%
5-PRC pools	417	60%
All pools	693	100%

Table 5 shows the frequency with which States chose the eight national resource concerns as priority resource concerns for their State ranking pools in the first CSP sign-up. Water quality is the top priority resource concern (included in 89 percent of pools) followed by plant resources (85 percent) and animal resources (77 percent). Soil erosion and soil quality are priority resource concerns in more than 60 percent of the pools. The remaining resource concerns, though important, are identified in 28 percent or fewer pools. From a national perspective, the

frequency of the priority resource concerns identified in the pools broadly captures the issues identified in other reports and by stakeholders.

Resource Concerns at Time of Application

A key eligibility requirement of CSP is that producers must meet the stewardship level of least one resource concern at the time of application and must meet or exceed the stewardship threshold of a priority resource concern by the end of the contract. This eligibility requirement reinforces the notion that CSP is for producers who have begun to address resource concerns and want to treat them more comprehensively.

For CSP sign-up one, eligible applicants met and exceeded the minimum stewardship eligibility requirement at the time of application by a considerable amount (Table 6). Eligible applicants met or exceeded minimum threshold requirement at time of application for two of the eight resource concerns 99 percent of the time. More than 80 percent of these applicants met or exceeded minimum threshold requirements for five of the eight resource concerns selected nationally. Thus most eligible applicants who applied during CSP's first sign-up practice stewardship at levels substantially above a typical producer.

Table 5. Priority Resource Concerns in State Ranking Pools in CSP Sign-up One

	Number of Pools	Percent of Pools
Water Quality	617	89
Plant Resources	590	85
Animal Resources	531	77
Soil Erosion	467	67
Soil Quality	430	62
Water Quantity	197	28
Energy Resources	139	20
Air Quality	101	15

Table 6. Percent of Eligible Applicants Meeting Resource Concerns at Time of Application

Number of Resource Concerns	<u>Cropland</u>	<u>Rangeland</u>	<u>Pastureland</u>	<u>NIPE</u>
	<i>(cumulative percent)</i>			
1	100%	100%	100%	100%
2	99%	99%	99%	99%
3	97%	98%	97%	96%
4	93%	98%	92%	90%
5	89%	95%	88%	82%
6	83%	89%	82%	70%
7	75%	67%	73%	51%
8	60%	41%	35%	19%

NRCS has formed a team to investigate the current set of questions used to assess existing activities and the current stewardship thresholds. County NRCS offices are also conducting field verifications that may be useful in determining whether the questions in CMT contributed to an overestimation of existing activities and whether producers' responses to the questions resulted in overreporting of existing activities. Any discrepancies found by either effort will be

documented and corrected prior to the second CSP sign-up. Across-the-board increases in minimum stewardship levels without supporting information or increases in minimum eligibility requirements at time of application are not being considered at this time because higher requirements would shrink the available pool of eligible applicants, effectively reducing the program's competitiveness.

CSP and Size of Operation

The distributions of eligible and preapproved applications by size of operation are shown in Table 7. Eligible applications consisting of more than 1,000 acres accounted for 29 percent of total applications and 84 percent of eligible acres. Applications from operations with 1,000 acres or less accounted for the remaining 71 percent of applications and 16 percent of the acres. The subset of preapproved applications did not substantially change the percentage distribution of contracts across operation size.

Table 7. Distribution of Eligible and Preapproved Applications by Operation Size

Operation Size (Acres)	Eligible Applications			Preapproved Applications		
	Number	Total Acres ^a	Average Acres/ Application	Number	Total Acres ^b	Average Acres/ Application
<100	2,629 (18%)	145,759 (1%)	55	2,055 (19%)	112,833 (1%)	55
100 to 500	5,581 (37%)	1,440,993 (7%)	258	4,247 (40%)	1,083,007 (9%)	255
501 to 1,000	2,409 (16%)	1,743,056 (8%)	724	1,722 (16%)	1,245,128 (10%)	723
1,001 to 5,000	3,610 (24%)	7,667,612 (37%)	2,124	2,300 (21%)	4,768,041 (39%)	2,073
>5,000	786 (5%)	9,830,322 (47%)	12,507	419 (4%)	4,970,000 (41%)	11,862
Total	15,015	20,827,742	1,387	10,743	12,179,008	1,134

^a Eligible acres as of December 1, 2009.

^b Preapproved acres as of December 1, 2009.

Regionally, producers in the central States submitted two-thirds of the applications, and those applications accounted for 51 percent of total eligible acres (Table 8). Row crop production dominates the landscape in the central states. The relatively small proportion of eligible applications submitted by the western states is offset by their relatively large size. The distributions of eligible and preapproved applications and acres changed somewhat among regions. Overall, the preapproved applications were smaller in terms of acres than the larger eligible pool. For preapproved applications, the proportions of total acres in the central and East regions increased at the expense of the Western region.

Table 8. Distribution of Eligible and Preapproved Applications by Region

	Eligible Applications			Preapproved Applications		
	<u>Number</u>	<u>Total Acres^a</u>	<u>Average Acres/ Application</u>	<u>Number</u>	<u>Total Acres^b</u>	<u>Average Acres/ Application</u>
Central	9,971 (66%)	10,564,962 (51%)	1,060	6,965 (65%)	6,865,465 (56%)	986
East	2,787 (19%)	1,329,787 (6%)	477	2,500 (25%)	1,167,063 (10%)	467
West	2,257 (15%)	8,932,993 (43%)	3,958	1,278 (12%)	4,146,480 (34%)	3,245
Total	15,015	20,827,742	1,387	10,743	12,179,000	1,134

^a Eligible acres as of December 1, 2009.

^b Preapproved acres as of December 1, 2009.

CSP and Land Use

The distributions of eligible acres and conservation performance points by land use show clearly the dominance of cropland and rangeland in CSP's first sign-up (Table 9). Of the 20.828 million acres in the eligible applications, rangeland and cropland accounted for 37 percent and 51 percent, respectively. Eligible applications generated 10.211 billion conservation performance points, of which cropland and rangeland accounted for 34 percent and 55 percent, respectively. Pastureland and non-industrial private forestland together accounted for the remaining eligible acres (12 percent) and conservation performance points (11 percent). Again, the subset of preapproved applications did not change the distributions of acres and conservation performance points appreciably.

Table 9. Distribution of Eligible and Preapproved Applications by Land Use

	Eligible Applications		Preapproved Applications	
	<u>Acres^a (million)</u>	<u>Performance Points (billion)</u>	<u>Acres^b (million)</u>	<u>Performance Points (billion)</u>
Cropland	7.7 (37%)	3.432 (34%)	4.833 (40%)	2.36 (37%)
Rangeland	10.5 (51%)	5.633 (55%)	5.529 (45%)	3.22 (50%)
Pasture	1.1 (5%)	0.521 (5%)	0.797 (7%)	0.42 (7%)
NIPF ^c	1.5 (7%)	0.625 (6%)	1.019 (8%)	0.45 (6%)
Total	20.8	10.211	12.179	6.45

^a Eligible acres as of December 1, 2009.

^b Preapproved acres as of December 1, 2009.

^c NIPF acres may not exceed 10 percent of total CSP acres for FY 2009.

Single and Multiple Land Uses

Producers must enroll their entire operations in CSP. This requirement along with the requirement that producers must meet one resource concern at time of application and an additional priority resource concern by the end of their contracts supports CSP's overall purpose of a comprehensive, holistic approach to sustainability.

Applications submitted by producers capture the diversity of agricultural operations throughout the United States. Of the 10,743 preapproved applications, 7,528 (70 percent) were single land use operations (Table 10). Trends already discussed such as the dominance of cropland and the size of rangeland applications are evident in this categorization of the data. The distributions between existing and additional performance points suggest that NRCS adjusted for biases across land uses. Average conservation performance points for all land uses were around 300 points for existing activities and slightly more than half that amount for additional activities.

Table 10. Single Land Use Preapproved Applications, Operation Size and Performance Points, by Land Use

	Preapproved Applications^a	Operation Size	Performance Points Existing Activities	Performance Points Additional Activities
	<u>(number)</u>	<u>(avg. acres)</u>	<u>(avg. pts./app./ac.)</u>	<u>(avg. pts./app./ac.)</u>
Cropland	3,941	784	301	168
Pasture	971	275	318	198
Rangeland	493	5,804	342	282
NIPF	2,123	480	280	118
Total	7,528	962	300	166

^a Preapproved applications as of December 1, 2009.

The remaining 3,215 (30 percent) preapproved applications consisted of multiple land uses. These applications are grouped by the largest land use of the operation in Table 11. Multiple land use operations tended to be smaller than single land use operations. Average conservation performance points for the multiple land use operations tended to be higher for existing activities and lower for additional activities compared to single use operations. Differences, however, are too small to be meaningful. Efforts to minimize large differences across land uses and between single and multiple land use operations appear to be working.

Table 11. Multiple Land Use Preapproved Applications, Operation Size and Performance Points, by Largest Land Use

	Applications by Largest Land Use ^a	Operation Size	Performance Points Existing Activities	Performance Points Additional Activities
	(number)	(avg. acres)	(avg.pts./app./ac.)	(avg.pts./app./ac.)
Cropland	1,773	593	322	128
Pasture	678	211	317	166
Rangeland	764	1,965	337	204
NIPF	N/A	N/A	N/A	N/A
Total	3,215	728	323	157

^a Preapproved applications as of December 1, 2009.

CSP Payments

Environmental benefits are generated by existing and additional activities. CSP uses the methodology underlying the NRCS Conservation Physical Practices Effects¹¹ matrix to create environmental indices and index the impacts of existing and additional activities using a scale of plus 5 to minus 5 across the 28 micro resource concerns by land use. The micro resource concerns are noted in Appendix B. Conservation activities—enhancements and conservation practices—are described in Appendix D. The index assessments by activity and micro resource concern for every land use can be found at the CSP Web site (http://www.nrcs.usda.gov/programs/new_csp/csp.html) and in Appendix E.

After producers answer questions and indicate which activities they agree to apply before the end of the contract period, algorithms in the conservation measurement tool calculate cumulative index scores by micro resource concern for the existing and additional activities identified using the tables in Appendix E. Cumulative scores for the existing and additional activities by micro resource concern are divided by each column's maximum potential score to estimate performance. Each performance level is multiplied by 100 and summed across columns to obtain separate conservation performance point totals for existing and additional activities by land use for every application. Total conservation performance points by land use equal the sum of existing and additional performance points multiplied by land use acres. Total conservation performance points for an application equal the sum of conservation performance points for all land uses identified in the application. Appendix C contains a more detailed description of CMT.

¹¹Conservation Practices Physical Effects (CPPE) information can be found at <http://www.nrcs.usda.gov/technical/standards/nhcp.html> and in each State's electronic Field Office Technical Guide (FOTG), <http://www.nrcs.usda.gov/technical/efotg/>.

Table 12 shows the conservation performance points generated by the preapproved applications. Rangeland generated the highest number of conservation performance points (over 3.2 billion) followed by cropland (nearly 2.4 billion). Pasture and non-industrial private forestland preapproved applications each generated fewer than 7 percent of total conservation performance points.

Table 12. Conservation Performance Points for Preapproved Applications in CSP Sign-up One, by Land Use^a

	<u>Cropland</u>	<u>Pasture</u>	<u>Rangeland</u>	<u>NIPF</u>	<u>Total</u>
<i>(conservation performance points)</i>					
Existing Activities	1,488,755,755	252,960,617	1,906,645,760	311,450,014	3,959,812,146
Additional Activities	872,106,665	165,893,264	1,316,941,520	133,498,372	2,488,439,822
Total	2,360,862,420	418,853,881	3,223,587,280	444,948,386	6,448,251,967
<i>(percent)</i>					
Existing Activities	63%	60%	59%	70%	61%
Additional Activities	37%	40%	41%	30%	39%
Total	100%	100%	100%	100%	100%

^a Preapproved applications as of December 1, 2009.

Just as important is the split of conservation performance points between existing and additional activities. Congress instructed the Secretary of Agriculture to establish a program that encourages producers to address resource concerns comprehensively by applying additional conservation activities and improving, maintaining, and managing conservation activities already in place. Table 12 highlights the dual nature of CSP, with additional activities accounting for 39 percent, and existing activities accounting for 61 percent of total conservation performance points estimated for preapproved applications.

CSP payments across land uses equal total conservation performance points multiplied by each land use's payment rate. Table 13 shows payments for existing and additional activities by land use both before and after imposition of the \$40,000 cap per contract. Before the cap is imposed, payments for the existing and additional activities listed in the preapproved applications equaled \$208.7 million, substantially above the \$181.3 million¹² allowed for financial assistance. Before imposition of the cap, 61 percent (\$126.4 million) and 39 percent (\$76.2 million of additional activities plus \$6.1million in resource-conserving crop rotation payments) of estimated funds would be allocated to existing activities and additional activities, respectively. After the annual \$40,000 cap per application is imposed, total financial assistance outlays equal \$142.6 million,

¹² Maximum dollar amount for financial assistance given the initial distribution of 12,179,008 acres and the \$14.89 per acre average for financial assistance (12,179,008 x \$14.89 = \$181,345,429).

with 63 percent (\$89.2 million) and 37 percent (\$53.4 million¹³) of actual program funds allocated to existing activities and additional activities, respectively.

Table 13. Program Payments for CSP Sign-up One, by Land Use^a

	<u>Cropland</u>	<u>Pasture</u>	<u>Rangeland</u>	<u>NIFE</u>	<u>Total</u>
Existing Activities	\$90,069,723	\$8,322,404	\$22,879,749	\$5,107,780	\$126,379,657
Additional Activities	\$52,762,453	\$5,457,888	\$15,803,298	\$2,189,373	\$76,213,013
Resource-conserving crop rotation					\$6,102,478 ^b
Total	\$142,832,176	\$13,780,293	\$38,683,047	\$7,297,154	\$208,695,148
Projected Payments after Cap Adjustments (\$40,000 per preapproved application)					
Outlays	\$102,276,202	\$11,826,359	\$21,713,262	\$6,793,634	\$142,609,457
Cap Lim Adj.	71.61%	85.82%	56.13%	93.10%	68.33%
Existing Activities	\$64,495,196	\$7,142,354	\$12,842,680	\$4,755,331	\$89,235,562
Additional Activities	\$37,781,006	\$4,684,004	\$8,870,582	\$2,038,301	\$53,373,893
Grand Total	\$102,276,202	\$11,826,358	\$21,713,262	\$6,793,633	\$142,609,457

^a Preapproved applications as of December 1, 2009.

^b Resource-conserving crop rotation is a separate payment of \$16 per acre.

Although the annual \$40,000 per contract cap did not significantly change the distribution of total financial assistance between existing and additional activities, payments dropped considerably for rangeland and cropland. Because all acres of an operation must be enrolled regardless of the \$40,000 cap, the 12.179 million acres became the limiting constraint.

Existing Activities

Information already discussed above, such as the number of resource concerns met at time of application (more than 80 percent of the preapproved applicants met minimum threshold requirements for five resource concerns) and 61 percent of total conservation performance points generated by existing activities, suggests that CSP attracted active stewards or conservationists. Additional information gleaned from the questions used to assess existing activities corroborates this assessment. In general, this first applicant group controls erosion through conservation tillage or other soil-conserving activities, applies nutrients and pesticides using management plans, and applies or will apply conservation activities to mitigate resource concerns on adjacent lands and water bodies.

¹³ For those applications where financial assistance exceeded the \$40 thousand cap, each application's total financial assistance was changed to \$40 thousand without trying to decide how to allocate the reduction between existing activities, additional activities, and RCCR payments.

Additional Activities

CSP provides producers who are actively applying conservation activities on one or more resource concerns, the opportunity to apply additional conservation activities, thus achieving higher levels of stewardship. Many of these additional activities are called “enhancements.”

Enhancements are installed at a level of management intensity that exceeds the *sustainable level* for a given *resource concern*. Every enhancement is directly related to a *practice standard* and is applied in a manner that *exceeds the minimum treatment requirements* of the standard. Stated another way, enhancements complement standard conservation practices, thus moving beyond minimum requirements and “enhancing” the environmental outcomes of traditional conservation practices. Society benefits from these enhancement activities because of the increased flows of environmental benefits from lands enrolled in CSP.

For CSP sign-up one, NRCS approved 89 enhancement activities. Spread across four land uses, these enhancements amounted to 169 “land use specific” enhancements (Table 14; see detailed list of the enhancements in Appendix A, Tables A.4 through A.7). The largest number of enhancement activities (37 percent) were offered for cropland; the fewest for non-industrial private forestland.

Table 14. CSP Enhancements Offered in Sign-up One, by Land Use

	<u>Number</u>	<u>Percent</u>
Cropland	62	37%
Pastureland	49	29%
Rangeland	31	18%
NIPF	27	16%
Total	169	100%

In addition, CSP offered 33 standard conservation practices. Consistent with CSP’s purpose, additional activities—both enhancements and standard conservation practices—enable producers to treat their resource concerns comprehensively. Appendix A Tables A.8 through A.11 show how many preapproved applications selected individual practices. Appendix D contains complete descriptions of the enhancements and standard conservation practices and the resource concerns addressed by them. Altogether, the preapproved applications proposed to undertake more than 41 thousand enhancements and more than 2,500 standard conservation practices (Table 15). This amounts to slightly more than 3.8 enhancements and almost 0.2 conservation practices per preapproved application.

Table 15. Enhancements and Standard Conservation Practices Proposed in Preapproved Applications, by Land Use

	<u>Number of Preapproved Applications</u> ^a	<u>Enhancements</u>	<u>Standard Conservation Practices</u>
Cropland	6,852	21,820	649
Pastureland	3,427	8,886	470
Rangeland	1,838	5,917	301
NIPF	2,123	4,471	1,138
Total		41,094	2,558

^a Preapproved applications as of December 1, 2009, that included the specified land use. Some applications had multiple land uses.

Analysis

The methodology applied in the interim rule is also used in this analysis to assess the cost effectiveness of CSP in achieving its purpose of encouraging producers to address resource concerns comprehensively “... (1) *by undertaking additional conservation activities, and (2) by improving, maintaining and managing existing conservation activities.*” The key difference between the earlier analysis reported in the interim final rule and the current one is that this analysis uses actual CSP application information and NRCS national activity cost schedules for the representative farm production, environmental, and representative cost data. Much of everything else remained the same. The conservation measurement tool is used to determine program eligibility of actual agricultural operations, assign conservation performance points based on the assessed levels of existing activities and additional activities, and rank applications in every pool. The only program costs considered are the financial assistance payments to producers accepted into CSP and technical assistance costs.

As before, the baseline (pre-statute) condition is pre-CSP, and program costs are zero. Unfortunately, not enough information is available to estimate this baseline condition. Nor is it possible to justify the use of assessed activities from the first CSP sign-up as the baseline condition because the subset of applications from the sign-up or any of the other policy options may not be representative of the larger U.S. population of agricultural producers. The analysis discusses the implications of each policy and comparisons of policies in a relative framework rather than an absolute one.

CSP’s numerous constraints—ranking pools, distribution of 12.769 million acres to States according to each State’s proportion of the nation’s agricultural lands, distribution of the program’s almost \$230 million across land uses according to the costs of the existing and proposed additional activities, a national average payment of \$18 per acre or less, and mandated ranking criteria—carry over and shape overall outcomes such as producer participation by land use, region, level of conservation as measured by conservation performance points, and costs. From a societal view, these constraints reflect society’s many objectives. In terms of this analysis, which examines activity-specific conservation performance and costs, these constraints reduce overall program efficiency.

Finally, CSP differs from other working lands conservation programs in one key aspect. Financial assistance is tied more closely to environmental performance than to activity costs. Producers who accept enrollment in CSP have made the determination that they can supply the environmental benefits broadly represented by conservation performance points and satisfy their profit and other non-monetary goals. Producers who decide to withdraw do not perceive a net gain in monetary or other personal objectives. Because CSP payments are tied to conservation performance, low-cost suppliers of conservation benefits are more likely to enroll than high-cost suppliers. This market-based aspect of CSP does not change across policy options. Producers decide to enroll or not based on their perceived net benefits.

Policy Options

As stated in the legislation, applications are ranked using a process that includes five ranking factors. Once eligible applications are scored and ranked from the highest to the lowest, applications are preapproved beginning with the highest ranked one, the second highest, and so on until a pool's funding limit or acreage limit is reached.

Currently, an application's ranking score is computed using the following equation.

$$\text{Ranking score} = \text{RF-1} \times 0.25 + \text{RF-2} \times 0.25 + \text{RF-3} \times 0.25 + \text{RF-4} \times 0.25$$

where

Ranking factor one (RF-1) measures the existing level of conservation stewardship for priority resource concerns at the time of enrollment.

Ranking factor two (RF-2) measures the degree that new conservation activities improve priority resource concern conditions.

Ranking factor three (RF-3) measures the number of priority resource concerns that the applicant agrees to meet during the contract period.

Ranking factor four (RF-4) measures the degree that new conservation activities improve other resource concern conditions.

The fifth ranking factor comes into play as a "tie breaker" if two applications are ranked equally. When this situation occurs, the application that minimizes the cost to government is selected.¹⁴

This analysis assessed five policy options. Under policy option one (PO-1), the four major ranking factors are weighted equally. For policy options two through five, the relative importance of one of the ranking factors is increased five-fold (see Table 16). By placing a weight of five times on any one other ranking factor, total ranking scores for all eligible applications change. Applications within pools move up and down in ranking, thus changing the preapproved list of applications. Ranking does not change an application's conservation performance points. Conservation performance points and payments change because the pool of preapproved applications changes under each policy option.

¹⁴ "...the Secretary shall rank applications based on...(E) the extent to which the actual and anticipated environmental benefits from the contract are provided at the least cost relative to other similarly beneficial contract offer."

Table 16. Assumptions Concerning Ranking Factors for the Policy Options

	Weight of Ranking Factor 1	Weight of Ranking Factor 2	Weight of Ranking Factor 3	Weight of Ranking Factor 4
Policy Option 1	25%	25%	25%	25%
Policy Option 2	62.5%	12.5%	12.5%	12.5%
Policy Option 3	12.5%	62.5%	12.5%	12.5%
Policy Option 4	12.5%	12.5%	62.5%	12.5%
Policy Option 5	12.5%	12.5%	12.5%	62.5%

Policy Option 1(PO-1)

Participation and Program Costs: PO-1

For policy option 1, the ranking factors are equally weighted. This was the policy option recommended in the interim final rule, and it was used in the first CSP sign-up. Results indicate that of the 12.179 million acres in preapproved applications in sign-up one, 4.8 million are cropland (irrigated and non-irrigated), accounting for 40 percent. Pasture, with 0.8 million acres, accounts for 7 percent; rangeland (5.5 million acres), 45 percent; and non-industrial private forestland (1.0 million acres), 8 percent (Table 17). Financial assistance, however, is quite different across land uses. Cropland's share equals 72 percent of available funds. Rangeland follows with 15 percent. Pasture and non-industrial private forestland together receive the remaining 13 percent.

Table 17. PO-1: CSP Acres and Program Costs by Land Use, Preapproved Applications

	No. of Acres Preapproved ^a		Financial Assistance Cost		Technical Assistance Cost ^b	Total Assistance Cost	Average Cost Per Acre
	(mil.)	(%)	(\$ millions)	(%)	(\$ millions)	(\$ millions)	(\$)
Cropland	4.833	40	102.276	71.7	15.032	117.308	24.27
Pasture	0.797	7	11.826	8.3	2.479	14.306	17.94
Rangeland	5.529	45	21.713	15.2	17.196	38.909	7.04
NIPF	1.019	8	6.794	4.8	3.170	9.963	9.78
Totals	12.179	100	142.609	100	37.877	180.486	14.82

^aAs of December 1, 2009.

^bTechnical assistance costs equal \$3.11 per acre.

Although cropland and rangeland have comparable acres (40 percent and 45 percent), the difference in financial assistance is due to different rates of compensation across land uses. The payment rate per conservation payment point for cropland is \$0.0605, whereas for rangeland it is

\$0.012. This difference reflects the costs, income foregone, and maintenance associated with conservation practices and activities applied to cropland.

The national average cost for all land uses is below the legislatively mandated \$18 per acre average even though the average costs for cropland and pasture are both above the national average.¹⁵ Low per acre costs for rangeland and NIPF partially offset the higher costs of cropland and pasture. The program's \$40,000 annual cap per contract also contributes to a national average cost below the \$18 per acre, especially in rangeland and cropland. All acres of an operation must be enrolled even though financial assistance is capped at \$40,000 per contract annually. The acres from these large operations drive down per acre costs that in turn reduce per acre costs nationally.

Environmental and Economic Effects: PO-1

Total conservation performance points equaled almost 6.5 billion for the applications preapproved in CSP sign-up one (Table 18). The most conservation performance points were generated by the rangeland applications and cropland applications, 50 percent and 37 percent, respectively. A comparison between existing and additional conservation performance points across all land uses and by land use yields an interesting result. For CSP sign-up one, existing activities accounted for 61 percent of total conservation performance points. The individual land use distributions did not vary much from this 61-39 percent split between existing and additional activities except for non-industrial private forestland, which was even more pronounced toward existing activities (70-30).

Table 18. PO-1: Conservation Performance Points by Land Use, Preapproved Applications^a

	<u>Existing Activities</u>	<u>Additional Activities</u>	<u>Total</u>	<u>Existing Activities</u>	<u>Additional Activities</u>	<u>Total</u>	<u>Total Financial Assistance^b</u>
	(millions of conservation performance points)			(percent)			(\$ millions)
Cropland	1,489	872	2,361	63	37	37	102.276
Pasture	253	166	419	60	40	06	11.826
Rangeland	1,907	1,317	3,224	59	41	50	21.713
NIPF	311	133	445	70	30	07	6.794
Total	3,960	2,488	6,448	61	39	100	142.609

^aPreapproved applications as of December 1, 2009.

^bTotal financial assistance dollars after the \$40,000 cap is imposed.

CSP applicants earn conservation performance points for the environmental benefits that flow from existing and additional practices. Table 19 shows dollars paid per conservation point for additional activities and for all activities (existing plus additional). Given 6.448 billion points and \$142.609 million in financial assistance, dollars per point are slightly more than two cents

¹⁵ According to statute, the average cost per acre under CSP may not exceed \$18 for financial and technical assistance combined. Based on past experiences running previous conservation programs, NRCS allocated \$3.11 per acre for technical assistance and \$14.89 per acre for financial assistance.

per point on average for all land uses (\$0.0221). By individual land use, dollars per point are highest for cropland (\$0.0433) followed by pasture, NIPF, and rangeland (\$0.0067). These prices are below CSP's payment rates because of the \$40,000 cap.¹⁶

Table 19. Dollars per Conservation Activity Point^a in CSP Sign-up One: Additional Activities and All Activities

	<u>Additional Activities</u>	<u>All Activities</u>
Cropland	\$0.1173	\$0.0433
Pasture	\$0.0713	\$0.0282
Rangeland	\$0.0165	\$0.0067
NIPF	\$0.0509	\$0.0153
Total	\$0.0573	\$0.0221

^aRepresents payment after \$40,000 cap.

As noted, the first CSP sign-up attracted practicing conservationists. Across all land uses, slightly more than three-fifths of conservation performance points were earned from existing practices. Thus the dollar per point value increases substantially when looking at additional activities. Overall, dollars per point for additional conservation performance points almost triple, from \$0.0221 to \$0.0573. By land use, dollars per point for each additional conservation performance point more than double for cropland, pastureland, and rangeland. For non-industrial private forestland, dollars per point for additional conservation performance points more than triple, from \$0.0153 to \$0.0509.

The distributions of conservation performance points between existing and additional conservation activities carry over directly to CSP financial assistance payments across all land uses and individual land uses. Existing activities account for slightly more than three-fifths of annual CSP payments (Table 20). Moreover, the impact of the \$40,000 cap per contract is evident in that only \$142.609 million of the \$181.345 million¹⁷ is committed because the limiting constraint is the 12.179 million program acres allocated for the first group of preapproved applications.

¹⁶ The payment rates set for CSP signup-one are \$0.605 for cropland, \$0.0329 for pastureland, \$0.0120 for rangeland, and \$0.0164 for non-industrial private forestland.

¹⁷ Maximum dollar amount for financial assistance given 12,179,008 acres (12,179,008 x \$14.89).

Table 20. PO-1: Cap-adjusted Conservation Payments by Land Use, Preapproved Applications^a

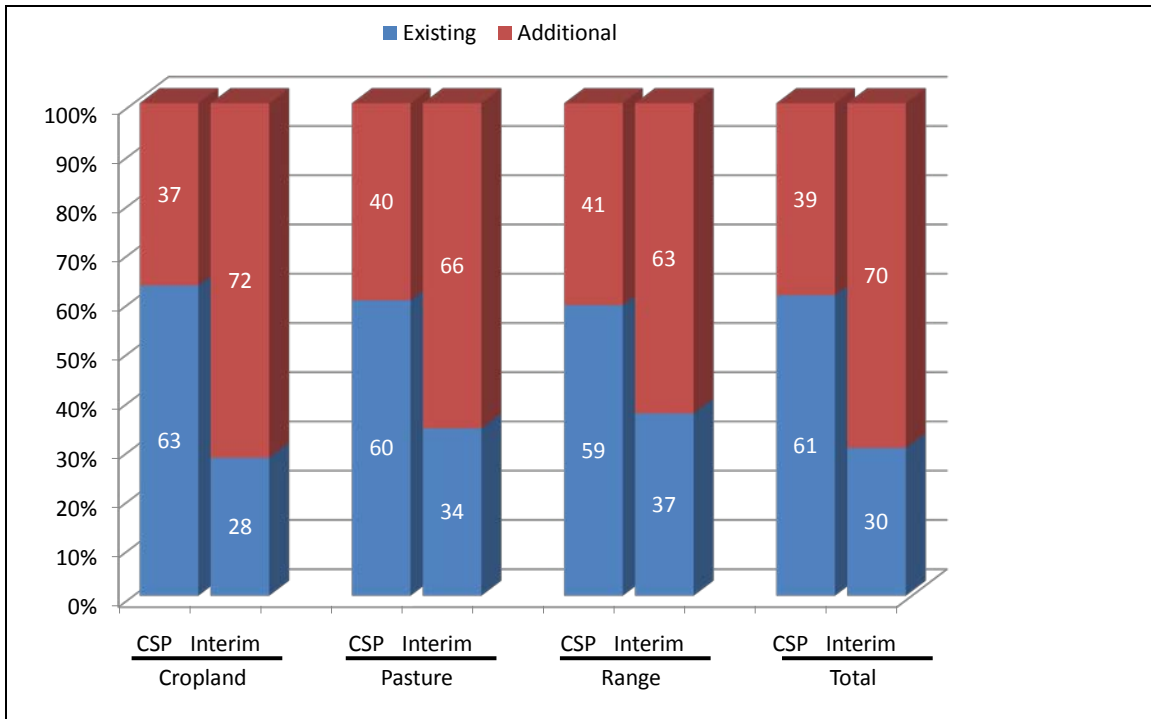
	Existing Activities		Additional Activities		Total Activities		Share of Total
	(\$ mil.)	(%)	(\$ mil)	(%)	(\$ mil.)	(%)	(%)
Cropland	64.495	63%	37.781	37%	102.276	100%	72%
Pasture	7.142	60%	4.684	40%	11.826	100%	8%
Rangeland	12.843	59%	8.871	41%	21.713	100%	15%
NIPF	4.755	70%	2.038	30%	6.794	100%	5%
Totals	89.236	63%	53.374	37%	142.609	100%	100%

Note: For CSP sign-up one, payment rates are \$0.0605 for every cropland conservation performance point, \$0.0329 for pasture, \$0.0120 for rangeland, and \$0.0164 for non-industrial private forestland. An annual contract payment may not exceed \$40,000 per year.

^a Preapproved applications as of December 1, 2009.

Although results of policy option 1 under the interim analysis and this final analysis cannot be compared directly because data sources, prices, and magnitudes of the numbers are not the same, it is a useful exercise to determine whether directions and trends are similar between the two analyses, and if not, why. A comparison of the percentage distributions of existing and additional activity conservation performance points is especially useful. Figure 1 compares the actual distribution of conservation performance points under sign-up one with points under the assumptions in the interim final rule analysis. In general, the percentage distributions of existing

Figure 1. PO-1 Comparison of Distributions of Conservation Performance Points between CSP Sign-up One and the Interim Final Rule



and additional points between the interim final rule and the first CSP sign-up are almost opposite of each other. One explanation for these differences is the distribution of stewardship for the representative farm operations. In the interim analysis, representative operations were divided into three levels of likely participation using the three tiers in the older Conservation Security Program and three levels of management intensity. Most of the representative farms identified as potential participants fell into the midlevel of stewardship (60 percent) rather than the highest category of stewardship (20 percent).

If the methodology to assess and assign conservation performance points accurately captures the current level of conservation, the first CSP sign-up attracted producers who align more closely with the highest level of stewardship (e.g., 20 percent in the interim final rule). Preliminary evidence such as the percentage of producers meeting minimum stewardship thresholds at time of application reinforces this conclusion. If this is the case, the distributions of future sign-ups might move toward the results reported from the simulation as the pool of producers already treating their resource concerns comprehensively shrinks. In that case, one or more of the other policy options become relevant as a means of possibly shifting program emphasis more toward additional activities if more immediate action is desired.

Policy Option 2(PO-2)

Participation and Program Costs: PO-2

Under policy option 2 (PO-2), ranking factor 1 is weighted five times (62.5 percent) more heavily than any other ranking factor. Ranking points earned for actively mitigating one or more of a State's priority resource concerns with existing practices are now five times more important

than other ranking points earned by adding additional activities. Under this option, one would expect to see producers addressing priority resource concerns when they apply to CSP ranked higher than producers comprehensively addressing non-priority resource concerns and producers willing to match the stewardship levels of existing stewards by applying additional conservation activities.

The reordering of eligible applications caused by PO-2 yields little change in acres, total program costs, and total program costs per acre (Table 21). Acreage may not be more than 12.179 million acres because pools may not exceed their cap. The fact that PO-2 comes close to the 12.179 million acres suggests that compared with actual sign-up (PO-1) few eligible applications move up in rank or push preapproved applications down the ranked lists of the pools.

Table 21. PO-2: CSP Acres and Program Costs in Sign-up One, Preapproved Applications

	No. of Acres Preapproved^a	Financial Assistance Cost	Technical Assistance Cost^b	Total Assistance Cost	Average Cost Per Acre
	(millions)	(\$ millions)	(\$ millions)	(\$ millions)	(\$)
Cropland	4.570	98.774	14.214	112.988	24.72
Pasture	0.792	11.870	2.462	14.332	18.10
Rangeland	5.568	21.847	17.315	39.162	7.03
NIPF	0.985	6.624	3.063	9.687	9.84
Total	11.914	139.115	37.054	176.169	14.79

^a As of December 1, 2009.

^b Technical assistance costs equal \$3.11 per acre.

Environmental and Economic Effects: PO-2

As expected, the total number of conservation performance points for existing activities increases compared to PO-1, but two factors contribute to keeping this increase minimal (Table 22). First, the increase in conservation performance points for existing conservation activities is more than off-set by the reduction in conservation performance points generated by additional conservation activities relative to PO-1. In effect, PO-2 weighs conservation actions already taken by producers more heavily than those same actions proposed for implementation.

Second, in PO-2, operators who are limited in adopting new activities but are “good” conservation stewards due to prior activities are more competitive in ranking. Placing more weight on existing levels of conservation performance versus new benefits due to implementation of additional activities lowers the number of conservation performance points generated. Although not as noticeable as in other policy options, the inability to distribute all acres confounds the analysis. The marginal cost of an additional conservation performance point increases slightly compared to PO-1, but overall, total costs per point are almost the same.

Table 22. PO-2: Conservation Performance Points by Land Use, Preapproved Applications^a

	<u>Existing Activities</u>	<u>Additional Activities</u>	<u>Total</u>	<u>Total Financial Assistance</u>	<u>Dollars per Point^b</u>	
	(<i>millions of conservation performance points</i>)			(<i>\$ mil.</i>)	<u>Additional Activities</u>	<u>All Activities</u>
					(<i>\$</i>)	
Cropland	1,448	796	2,244	98.774	0.124	0.044
Pasture	258	163	421	11.870	0.073	0.028
Rangeland	1,949	1,285	3,233	21.847	0.017	0.007
NIPF	310	124	434	6.624	0.053	0.015
Total	3,964	2,368	6,332	139.115	0.059	0.022

^a Preapproved applications as of December 1, 2009.

^b Total financial assistance dollars only.

Policy Option 3 (PO-3)

Participation and Program Costs: PO-3

For policy option 3 (PO-3), ranking factor 2 (additional activities to treat priority resource concerns) are weighted more heavily and therefore receive more ranking points. Eligible applications are reordered and applications with additional activities that target priority resource concerns move up while other applications move down the ranked list. Total acres decrease, total costs decrease, and average costs per acre decrease. It is hard to differentiate whether the policy option contributed to the downward movement in all these factors due to the significant decline to 11.694 million acres (Table 23) compared to PO-1 (12.179 million acres). In many pools, some large operations just miss being approved during the first CSP sign-up. For this policy option and PO-5 (both of which place heavy emphasis on additional activities), these large operations move up enough to affect overall results. In many cases, they would be preapproved if a pool’s acreage limit was higher. Instead, acres are left unused.

Table 23. PO-3: CSP Acres and Program Costs, Preapproved Applications

	<u>No. of Acres Preapproved^a</u>	<u>Financial Assistance Cost</u>	<u>Technical Assistance Cost^b</u>	<u>Total Assistance Cost</u>	<u>Average Cost Per Acre</u>
	(<i>millions</i>)	(<i>\$ millions</i>)	(<i>\$ millions</i>)	(<i>\$ millions</i>)	(<i>\$</i>)
Cropland	4.752	95.879	14.779	110.659	23.29

Pasture	0.786	11.918	2.446	14.364	18.27
Rangeland	5.204	20.898	16.185	37.083	7.13
NIPF	0.951	6.408	2.959	9.367	9.84
Total	11.694	135.103	36.369	171.472	14.66

^aPreapproved applications as of December 1, 2009.
^b Technical assistance costs equal \$3.11 per acre.

Environmental and Economic Effects: PO-3

The effect of PO-3 is to weigh more heavily applications where the proposed additional activities target priority resource concerns. One would expect this group of preapproved applications to have a greater proportion of additional activity points and a smaller proportion of existing activity conservation performance points compared to PO-1. As predicted, the number of conservation performance points associated with additional activities increases compared to PO-1. Overall, dollars per additional conservation performance point decrease because of the slight increase in the percentage of additional conservation performance points as part of total conservation performance points (Table 24).

Table 24. PO-3: Conservation Performance Points by Land Use, Preapproved Applications^a

	<u>Existing Activities</u>	<u>Additional Activities</u>	<u>Total</u>	<u>Total Financial Assistance</u>	<u>Dollars per Point^b</u>	
	(millions of conservation performance points)			(\$ mil.)	<u>Additional Activities</u>	<u>All Activities</u>
					(\$)	
Cropland	1,446	888	2,334	95.879	0.1147	0.0436
Pasture	252	173	424	11.918	0.0690	0.0281
Rangeland	1,795	1,304	3,099	20.898	0.0160	0.0067
NIPF	286	137	423	6.408	0.0466	0.0151
Total	3,779	2,502	6,281	135.103	0.0564	0.0225

^a Preapproved applications as of December 1, 2009.

^b Total financial assistance dollars only.

Policy Option 4 (PO-4)

Participation and Program Costs: PO-4

For policy option 4 (PO-4), ranking factor 3 (that is, the number of additional priority resource concerns expected to meet or exceed the stewardship threshold by the end of the contract) is weighted most heavily and therefore receives more ranking points. As before, eligible applications are reordered and applications with additional activities that target priority resource concerns move up while other applications move down the ranked list. Table 25 summarizes total costs and average per acre costs under this option.

Interestingly, PO-4 tracks closely with PO-1, which was used in the first CSP sign-up. Acres, total costs, and average total costs per acre decrease compared to PO-1, but this may again be due to the inability to allocate all the available acres because the acres of the last application that could be preapproved exceed the amount available.

It was expected that PO-4 would track more closely with PO-3 and PO-5 because of its emphasis on additional activities. Instead, it tracks most closely with PO-1. An analysis of the data and ranking process reveals two things. First, ranking factor 3 is a binary switch. Once a stewardship threshold is achieved for a priority resource concern, a set number of ranking points are earned. Second, ranking factor 3 currently gives credit for stewardship levels met at the beginning of a contract plus stewardship levels met by the end of the contract. Given that many stewardship levels were met at the beginning of the contract, ranking factor 3 moves very closely with ranking factor 1, which awards ranking points for existing practices.

Table 25. PO-4: CSP Acres and Program Costs, Preapproved Applications

	No. of Acres Preapproved ^a	Financial Assistance Cost	Technical Assistance Cost ^b	Total Assistance Cost	Average Cost Per Acre
	(millions)	(\$ millions)	(\$ millions)	(million \$)	(\$)
Cropland	4.726	100.884	14.697	115.581	24.46
Pasture	0.773	11.583	2.405	13.988	18.09
Rangeland	5.452	21.461	16.954	38.415	7.05
NIPF	1.004	6.743	3.123	9.866	9.82
Total	11.955	140.670	37.180	177.850	14.88

^a As of December 1, 2009.

^b Technical assistance costs equal \$3.11 per acre.

Environmental and Economic Effects: PO-4

Total conservation performance points as well as the division of conservation performance points between existing and additional activities and dollars per point under PO-4 (Table 26) are closer to PO-1 numbers than all the other policy options. Any differences could be attributed to slightly fewer acres. Although this policy option moves applications up and down in the ranking lists of the pools, very few eligible applications not preapproved under PO-1 are preapproved under PO-4.

Table 26. PO-4: Conservation Performance Points by Land Use, Preapproved Applications^a

	Existing Activities	Additional Activities	Total	Total Financial Assistance	Dollars per Point ^b	
	(millions of conservation performance points)			(\$ mil.)	Additional Activities	All Activities
					(\$)	
Cropland	1,470	822	2,292	100.884	0.1227	0.0440
Pasture	250	158	408	11.583	0.0732	0.0284
Rangeland	1,890	1,286	3,177	21.461	0.0167	0.0068
NIPF	310	132	442	6.743	0.0511	0.0153
Total	3,920	2,398	6,319	140.670	0.0587	0.0223

^a Preapproved applications as of December 1, 2009.

^b Total financial assistance dollars only.

Policy Option 5 (PO-5)

Participation and Program Costs: PO-5

Under policy option 5 (PO-5), ranking factor 4 is weighted five times (62.5 percent) more heavily than any other ranking factors. Ranking points earned for actively mitigating one or more of a State's non-priority resource concerns with additional practices in this option are five times more important than other ranking points earned.

One would expect PO-5 to act similarly to PO-3, which heavily weights additional activities that target priority resource concerns; total costs decrease, but average total program costs increase. Too many variables interacting, however, limit our ability to draw any major conclusions with respect to PO-5, summarized in Table 27.

Under PO-5, the problem of large operations that miss the cutoff under PO-1 reappears and prevents the allocation of a percentage of many pools' allotted acreage. It appears that PO-3 and PO-5 change ranking points just enough to cause some substitution of preapproved applications from PO-1 near the cutoff line between preapproved and simply eligible.

Table 27. PO-5: CSP Acres and Program Costs in Sign-up One, Preapproved Applications

	No. of Acres Preapproved ^a	Financial Assistance Cost	Technical Assistance Cost ^b	Total Cost	Average Cost Per Acre
	(millions)	(\$ millions)	(\$ millions)	(\$ millions)	(\$)
Cropland	4.949	104.780	15.391	120.171	24.28
Pasture	0.757	11.483	2.354	13.836	18.28
Rangeland	5.097	20.286	15.851	36.137	7.09
NIPF	0.950	6.365	2.956	9.321	9.81
Total	11.753	142.914	36.552	179.465	15.27

^a As of December 1, 2009.

^b Technical assistance costs equal \$3.11 per acre.

Environmental and Economic Effects: PO-5

Policy option 5 produces a slightly lower conservation performance point total (Table 28) than PO-1. Compared to PO-1, the distributions of conservation performance points between existing and additional activities look very similar. Dollars per point for additional conservation

performance points and total conservation performance points are higher than the same numbers under PO-1. The combination of fewer acres and fewer conservation performance points contributes to these results.

Table 28. PO-5: Conservation Performance Points by Land Use, Preapproved Applications^a

	<u>Existing Activities</u>	<u>Additional Activities</u>	<u>Total</u>	<u>Total Financial Assistance</u>	<u>Dollars per Point^b</u>	
					<u>Additional Activities</u>	<u>All Activities</u>
	<i>(millions of conservation performance points)</i>			<i>(\$ mil.)</i>	<i>(\$)</i>	
Cropland	1,504	918	2,422	104.780	0.1141	0.0433
Pasture	243	165	408	11.483	0.0695	0.0281
Rangeland	1,758	1,261	3,019	20.286	0.0161	0.0067
NIPF	285	136	421	6.365	0.0467	0.0151
Total	3,790	2,481	6,271	142.914	0.0576	0.0228

^a Preapproved applications as of December 1, 2009.

^b Total financial assistance dollars only.

Comparison of Alternative Policy Options

The analysis completed for the interim rule included summaries of changes in program acres, total costs, costs per acre, total conservation performance points, and payment rates across the land uses and policy options. Also included was the impact of the program's key constraints, specifically 12.769 million acres, \$18 per acre national average, and \$230 million combined financial and technical assistance.

An actual sign-up limits our ability to compare policy options and results from the two analyses for a number of reasons. First, the pool of eligible applicants may not necessarily represent the larger agricultural population, which appears to be the case for this first sign-up. Second, payment prices are set, and these prices do not change from one policy option to the next. Third, estimated conservation performance points between the two analyses are not directly comparable.

Although these reasons limit direct comparisons, other approaches are available. Table 29 ranks the policy options with respect to acres, costs, and total conservation performance points in both the interim final rule and the CSP sign-up one analyses. Policies are ranked from one through five where 1 is the most preferred and 5 is the least preferred. The first conclusion based on this summary of the two analyses is that no policy option dominates another option in the interim analysis. In this CSP analysis, PO-5 can be eliminated because it is ranked lower than PO-2 and PO-4 across acres, costs, and points. Additional information is needed regarding objectives before a preferred choice can be made among these options. For example, PO-1 in the CSP analysis ranks first in acres and conservation performance points, making it a suitable candidate until one considers costs, where it is rated the most costly of all the options.

Table 29. Ranking of Policy Options under the Interim Rule and the CSP Sign-up Analyses: Maximum Acreage, Lowest Cost, Greatest Conservation Benefit

	Interim Rule Analysis			CSP Sign-up Analysis		
	<u>Acres</u>	<u>Costs</u>	<u>Points</u>	<u>Acres</u>	<u>Costs</u>	<u>Points</u>
PO-1 (25/25/25/25)	2 ^a	3	3	1	5	1
PO-2 (62.5/12.5/12.5/12.5)	5	1	5	3	2	2
PO-3 (12.5/62.5/12.5/12.5)	3 ^b	4	2	5	1	4
PO-4 (12.5/12.5/62.5/12.5)	1 ^{a,b}	5	1	2	3	3
PO-5 (12.5/12.5/12.5/62.5)	3	2	4	4	4	5

^aExceeds CSP's acreage cap of 11.492 million acres (12.769 x .90) after removing the 10 percent allocated to NIPF.

^bAverage cost per acre exceeds the mandated average annual \$18 per acre.

Comparison: Participation and Program Costs

The five policy options and their reported acreage and program costs by land use are summarized in Table 30. Again, PO-1 represents the actual CSP sign-up. In general, policy options 2 and 4 track closely with CSP results because PO-2 emphasizes existing activities as does PO-4 as it is currently defined. Although acres and costs shifted among the different land uses, the impact on total program costs and costs per acre suggests that none of the policy options contributed to significant changes in the current distributions of financial assistance and acres.

Some large operations fell just below the cutoff line in many of the pools for PO-1, the actual sign-up. These operations moved up the ranked list and effectively prevented the distribution of the full amount of acres. Their impact can be seen by examining total acres in Table 30.

Table 30. Summary of Program Acreage and Costs by Land Use and Policy Options for CSP Sign-up One

<u>Policy Option</u>	<u>Cost per Acre</u>	<u>Acres Funded in Program^a</u>					<u>Total Program Cost^b</u>				
		<u>Crop land</u>	<u>Pasture</u>	<u>Range land</u>	<u>NIPF</u>	<u>Total²</u>	<u>Crop land</u>	<u>Pasture</u>	<u>Range land</u>	<u>NIPF</u>	<u>Total</u>
		<i>(millions of acres)</i>					<i>(\$ millions)</i>				
No CSP	N/A	0	0	0		0	0	0	0	0	0
PO-1	\$14.82	4.833	0.797	5.529	1.019	12.179	117.308	14.306	38.909	9.963	180.486
PO-2	\$14.79	4.570	0.792	5.568	0.985	11.914	112.988	14.332	39.162	9.687	176.169
PO-3	\$14.66	4.752	0.786	5.204	0.951	11.694	110.659	14.364	37.083	9.367	171.472
PO-4	\$14.88	4.726	0.773	5.452	1.004	11.955	115.581	13.988	38.415	9.866	177.850
PO-5	\$15.27	4.949	0.757	5.097	0.950	11.753	120.171	13.836	36.137	9.321	179.465

^a For this analysis, the CSP acreage cap is 12.179 million acres including the 10 percent allocated to NIPF. This was the initial

allocation distributed to States shortly after closure of the first CSP sign-up.

^b Includes financial and technical assistance.

Comparison: Environmental and Economic Effects

The summary of CSP conservation performance points and costs per point suggests that policy options 2 through 5 would result in little change in emphasis between existing and additional activities (Table 31). The relatively insignificant changes in total conservation performance points and dollars per point suggest that significant changes in the ranking process yield few tangible results for the first CSP sign-up. A closer examination of the applications shows considerable shifting of the applications in terms of rankings, but only a few applications that were ranked low during the actual sign-up replacing preapproved applications.

Table 31. Summary of Conservation Performance Points and Cost per Point for CSP Policy Options

				Dollars per Point	
	<u>Existing</u>	<u>Additional</u>	<u>Total</u>	<u>Additional</u>	<u>All</u>
	<u>Activities</u>	<u>Activities</u>	<u>Points</u>	<u>Activities</u>	<u>Activities</u>
	(millions of conservation performance points)			(\$)	
No CSP ^a	Indeterminate	N/A	N/A	N/A	N/A
PO-1	3,960	2,488	6,448	0.0573	0.0221
PO-2	3,964	2,368	6,332	0.0590	0.0220
PO-3	3,779	2,502	6,281	0.0564	0.0225
PO-4	3,920	2,398	6,319	0.0587	0.0223
PO-5	3,790	2,481	6,271	0.0576	0.0228

^a Assumes CSP is not available to landowners. Data are not available to assess this situation.

Conclusions and Recommendations

When comparing policy options based on the level of conservation performance points, one must keep in mind that the types of resource concerns addressed across alternative policy options and improvements assessed using conservation performance points cannot be used to compare improvements across concerns (that is, a conservation performance point generated by an improvement in wildlife habitat is equal to a point generated by a soil quality improvement). Furthermore, there is no differentiation between conservation performance points generated by existing activities and points generated by additional activities.

CSP as currently implemented receive more than enough applications in sign-up one to make it a competitive program. Of the 15,015 eligible applications, 10,743 were preapproved for enrollment, and those selected were the highest ranked eligible applications. The preapproved applications resulted in a 61-39 percent split in conservation performance points and a 63-37 percent split in financial assistance payments between existing and additional practices, respectively. Although little guidance is given on a suitable split of financial assistance funds between existing and additional conservation activities, preliminary analysis indicates that the first CSP sign-up attracted practicing conservationists. Almost every applicant was meeting

minimum stewardship levels at time of application. More than 80 percent of the applicants were meeting five resource concerns at time of application.

Second, the \$40,000 cap per contract and the requirement that all acres of an operation must be enrolled impacted CSP. The acreage constraint became the limiting factor because 1,487 preapproved applications exceeded the cap, but their acres were counted, making it impossible for NRCS to distribute all the funds

A total of five policy options were developed as candidates for improving CSP's overall cost effectiveness at the national level. These policy options are directly tied to CSP's ranking process. Under policy option 1, the four ranking factors are equally weighted. In the remaining options, each ranking factor is separately weighted five times more important than the other factors. Based on the interim analysis, the ranking process recommended and implemented for the first CSP sign-up was policy option 1, equal weighting of the four ranking factors. This translated into an effective weighting scheme of 25 percent for existing activities and 75 percent for additional activities. To examine CSP's cost-effectiveness, the entire analysis completed in the interim report was repeated in this analysis using actual sign-up data and all the policy options were considered again.

For the most part, these policy options exhibited their intended impacts. With each change in the weights assigned to the ranking factors, ranking scores changed, and applications moved up and down in ranking based on their mix of existing and additional conservation activities and whether priority resource concerns were targeted. With five times the weight assigned to ranking factor 1(PO-2), for example, we observed applications with many existing practices earned more ranking points than both applications with fewer existing practices or applications with a similar number of additional activities. When increased weight was assigned to ranking factors that captured benefits from additional activities (i.e., ranking factors 2, 3, and 4), we observed the opposite— applications with many additional activities ranked higher than both applications with a similar complement of existing activities and applications with fewer additional activities. Overall, policy options two through five did not yield substantially different changes in conservation performance points and financial assistance between existing and additional activities because only a small percentage of PO-1 preapproved applications were replaced by eligible applications that did not make the initial cut under PO-1. Analysis of the data suggests that this first CSP sign-up attracted practicing conservationists. We expect future sign-ups to be more representative of the larger agricultural sector as others learn about CSP and the number of practicing conservationists available to enroll declines with each sign-up.

At this juncture, there is insufficient evidence of improved cost effectiveness to replace policy option 1 with any of the other options. Prior to CSP sign-up two, NRCS will review key program components—eligibility requirements, minimum stewardship levels, conservation activities and conservation performance points, the conservation measurement tool, and ranking factor specifications—in order to make any necessary modifications. In addition, NRCS will investigate other ranking factor processes, additional ranking criteria, and separate prices for existing and additional conservation performance points. As data become available and are analyzed from each new sign-up, NRCS will make necessary changes to improve CSP's cost effectiveness.

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With valuable assistance from the CSP team.

Appendix A: CSP Supporting Information and Results

Table A.1. Total Program Costs of CSP, FY 2010 to FY 2017

	Yearly Cost¹ (million \$)	GDP Price Deflator² (chained, 2005=100)	Yearly Cost in Constant dollars¹ (million \$)	Discount Factors for 3%	Present Value of Costs - 3% (million \$)	Discount Factors for 7%	Present Value of Costs - 7% (million \$)
FY10	229.842	108.5	211.836	0.9709	205.666	0.9346	197.978
FY11	459.684	110.1	417.515	0.9426	393.548	0.8734	364.674
FY12	689.526	111.3	619.520	0.9151	566.949	0.8163	505.713
FY13	919.368	113.1	812.881	0.8885	722.234	0.7629	620.143
FY14	919.368	115.6	795.301	0.8626	686.034	0.7130	567.039
FY15	689.526	118.1	583.849	0.8375	488.965	0.6663	389.043
FY16	459.684	120.7	380.848	0.8131	309.665	0.6227	237.173
FY17	<u>229.842</u>	123.4	<u>186.258</u>	0.7894	<u>147.034</u>	0.5820	<u>108.404</u>
Total	4596.840		4008.008		3520.093		2990.166

¹Congress set a maximum acreage limit of 12,769,000 acres and a national average payment rate of \$18 per acre.

²USDA Agricultural Projections to 2019. Office of the Chief Economist, World Agricultural Outlook Board, U.S. Department of Agriculture. Prepared by the Interagency Agricultural Projections Committee. Long-term Projections Report OCE-2010-1, page 15.

Table A.2. CSP Acre Allocations by State

State	Agricultural Land	NIPF
Alabama	49,751	135,366
Alaska	3,246	154,185
Arizona	502,280	39,843
Arkansas	193,905	25,285
California	389,849	54,526
Colorado	515,412	1,898
Connecticut	691	1,489
Delaware	7,253	513
Florida	42,787	4,351
Georgia	61,137	62,199
Guam	0	0
Hawaii	6,790	75
Idaho	106,158	7,703

Illinois	202,242	4,430
Indiana	114,140	3,160
Iowa	412,100	3,839
Kansas	568,407	232
Kentucky	40,239	17,309
Louisiana	120,288	28,364
Maine	7,879	50,591
Maryland	12,367	1,587
Massachusetts	413	1,498
Michigan	86,221	32,156
Minnesota	372,744	34,909
Mississippi	78,710	34,422
Missouri	368,951	66,040
Montana	827,591	29,311
Nebraska	671,505	5,434
Nevada	17,610	0
New Hampshire	1,701	2,104
New Jersey	0	0
New Mexico	630,086	34,175
New York	77,502	16,532
North Carolina	22,539	12,899
North Dakota	547,951	80
Ohio	84,801	8,992
Oklahoma	476,433	15,390
Oregon	224,063	37,624
Pennsylvania	61,756	19,549
Puerto Rico	1,375	47
Rhode Island	302	891
South Carolina	52,255	52,426
South Dakota	620,877	126
Tennessee	48,832	30,605
Texas	1,712,471	70,153
Utah	116,483	0
Vermont	450	85
Virginia	33,695	32,770
Washington	202,824	3,495
West Virginia	10,099	10,795
Wisconsin	162,303	23,452
Wyoming	<u>464,644</u>	<u>2,562</u>
Total	11,334,108	1,175,467

Table A.3. States and Ranking Pools*

	Number of Pools per State									Total
	<u>6</u>	<u>9</u>	<u>12</u>	<u>15</u>	<u>18</u>	<u>24</u>	<u>27</u>	<u>30</u>	<u>33</u>	
Number of States with that no. of pools	19 ^a	1 ^b	11 ^c	4 ^d	7 ^e	3 ^f	1 ^g	4 ^h	1 ⁱ	51
Total	114	9	132	60	126	72	27	120	33	693

*Each State had at least six ranking pools, consisting of general, beginning, and socially disadvantaged producer pools for both agricultural land and non-industrial private forestland. Across the United States, a total of 693 ranking pools were established.

^a Alabama, Alaska, Arizona, Arkansas, Caribbean, Connecticut, Delaware, Florida, Hawaii, Indiana, Iowa, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, Rhode Island, Vermont.

^b Idaho.

^c California, Georgia, Kansas, Kentucky, Michigan, North Dakota, Oklahoma, Oregon, South Dakota, Tennessee, West Virginia.

^d Montana, Nebraska, Virginia, Washington.

^e New Mexico, New York, Ohio, South Carolina, Utah, Wisconsin, Wyoming.

^f Minnesota, Mississippi, Missouri.

^g Pennsylvania.

^h Illinois, Louisiana, North Carolina, Texas.

ⁱ Colorado.

Table A.4. Cropland Conservation Enhancements Selected in Preapproved Applications^a

Enhancement Activity	Code	Frequency Selected		Percent of Total Cropland Activities Selected
		no. of applications	% of applications	
Recycle 100% of farm lubricants	ENR04	3,029	44.21%	13.88%
Use drift reducing nozzles, low pressures, lower boom height, and adjuvants to reduce pesticide drift.	AIR04	2,544	37.13%	11.66%
Plant tissue tests and analysis to improve nitrogen management	WQL04	1,389	20.27%	6.37%
GPS, targeted spray application (SmartSprayer) or other chemical application electronic control technology	AIR07	1,348	19.67%	6.18%
Harvest hay in a manner that allows wildlife to flush and escape	ANM10	1,055	15.40%	4.84%
Nitrogen stabilizers for air emissions control	AIR02	842	12.29%	3.86%
Resource-conserving crop rotation	CCR99	833	12.16%	3.82%
Split nitrogen applications, 50% after crop emergence	WQL07	789	11.51%	3.62%
Apply nutrients no more than 30 days prior to planned planting date	WQL05	695	10.14%	3.19%
High-level integrated pest management to reduce pesticide environmental risk	WQL13	627	9.15%	2.87%
Precision application technology to apply nutrients	WQL11	561	8.19%	2.57%
Apply controlled-release nitrogen fertilizer	WQL06	537	7.84%	2.46%
Apply phosphorus fertilizer below the soil surface	WQL09	472	6.89%	2.16%
Use of cover crop mixes	SQL04	439	6.41%	2.01%
Continuous no till	SOE01	436	6.36%	2.00%
Use of deep-rooted crops to break up soil compaction	SQL05	409	5.97%	1.87%
Improve the plant diversity and structure of non-cropped areas for wildlife food and habitat	ANM08	369	5.39%	1.69%
Fuel use reduction for field operations	ENR01	357	5.21%	1.64%
Regional weather networks for irrigation scheduling	WQT04	325	4.74%	1.49%
Plant an annual grass-type cover crop that will scavenge residual nitrogen	WQL10	309	4.51%	1.42%
Establish pollinator habitat	PLT01	302	4.41%	1.38%
Controlled traffic system	SQL01	287	4.19%	1.32%
Locally grown and marketed farm products	ENR05	259	3.78%	1.19%
Continuous cover crops	SQL02	252	3.68%	1.15%
Irrigation pumping plant evaluation	WQT03	246	3.59%	1.13%
Injecting or incorporating manure	AIR01	242	3.53%	1.11%
Renovation of a windbreak or shelter belt for	PLT06	213	3.11%	0.98%

wildlife habitat				
Extend existing filter strips for water quality protection and wildlife habitat	ANM04	189	2.76%	0.87%
Apply split applications of nitrogen based on a pre-sidedress nitrogen test on cropland	WQL08	171	2.50%	0.78%
Use of non-chemical methods to kill cover crops	WQL17	165	2.41%	0.76%
Use of legume cover crops as a nitrogen source	WQL16	147	2.15%	0.67%
Conversion of cropped land to grass-based agriculture for biomass or forage production and wildlife habitat	SQL06	141	2.06%	0.65%
Drainage water management for seasonal wildlife habitat	ANM01	124	1.81%	0.57%
Land application of treated manure	WQL14	120	1.75%	0.55%
Extending existing field borders for water quality protection and wildlife habitat	ANM07	114	1.66%	0.52%
Replace burning of prunings, removals, and other crop residues with non-burning alternatives (chipping, grinding, shredding, mowing, or composting)	AIR03	111	1.62%	0.51%
Remote monitoring and notification of irrigation pumping plant operation	WQT05	107	1.56%	0.49%
Wildlife corridors	ANM19	97	1.42%	0.44%
Harvesting crops using a stripper header	ANM16	95	1.39%	0.44%
Reduce the concentration of nutrients on farm by limiting the amount of feed and fertilizer brought on livestock farms	WQL15	95	1.39%	0.44%
Dust control on unpaved roads and surfaces	AIR05	89	1.30%	0.41%
Shallow water habitat	ANM12	88	1.28%	0.40%
Habitat development for beneficial insects for pest management	PLT08	85	1.24%	0.39%
On-farm research and demonstrations	FRD01	71	1.04%	0.33%
Integrated pest management for organic farming	WQL21	65	0.95%	0.30%
Drainage water management for nutrient, pathogen, or pesticide reduction	SQL03	58	0.85%	0.27%
Irrigation system automation	WQT01	49	0.72%	0.22%
Defer crop production on temporary and seasonal wetlands	ANM02	48	0.70%	0.22%
Extending existing riparian herbaceous cover for water quality protection and wildlife habitat	ANM06	43	0.63%	0.20%
Pumping plant powered by renewable energy	ENR03	42	0.61%	0.19%
Riparian forest buffer, terrestrial and aquatic wildlife	ANM14	40	0.58%	0.18%
Multi-species native perennials for biomass/wildlife habitat	ANM23	40	0.58%	0.18%
Mulching for moisture conservation	WQT02	40	0.58%	0.18%
Restoration and management of rare or declining habitats	ANM22	35	0.51%	0.16%
On-farm pilot projects	FPP02	33	0.48%	0.15%
Transition to organic cropping systems	WQL20	30	0.44%	0.14%
Non-forested riparian zone enhancement for fish and wildlife	ANM13	29	0.42%	0.13%

Extending riparian forest buffers for water quality protection and wildlife habitat	ANM05	26	0.38%	0.12%
Prairie restoration for grazing and wildlife habitat	ANM21	26	0.38%	0.12%
Protection of cultural resources	SOE02	18	0.26%	0.08%
Continuous no -till organic system	SOE03	16	0.23%	0.07%
Replacing oil- and wood-fired heaters in orchards and vineyards	AIR06	7	0.10%	0.03%
Total		21,820		100%
^a Cropland was listed in 6,852 preapproved applications (December 1, 2009).				

Table A.5. Pasture Conservation Enhancement Activities Selected in Preapproved Applications^a

Enhancement Activity	Code	Frequency Selected		Percent of Total Pasture Activities Selected
		no. of applications	% of applications	
Rotation of supplement and feeding areas	WQL03	1,425	41.58%	16.04%
Recycle 100% of farm lubricants	ENR04	1,251	36.50%	14.08%
Monitor key grazing areas to improve grazing management	PLT02	921	26.87%	10.36%
Retrofit watering facility for wildlife escape	ANM18	693	20.22%	7.80%
Incorporate native grasses and/or legumes into 15% or more of the forage base	ANM03	547	15.96%	6.16%
Solar-powered electric fence charging systems	ENR02	507	14.79%	5.71%
Use drift reducing nozzles, low pressures, lower boom height, and adjuvants to reduce pesticide drift	AIR04	360	10.50%	4.05%
Intensive management of rotational grazing	PLT10	348	10.15%	3.92%
Grazing management to improve wildlife habitat	ANM09	258	7.53%	2.90%
Locally grown and marketed farm products	ENR05	216	6.30%	2.43%
Managing livestock access to water bodies/courses	WQL12	213	6.22%	2.40%
Biological suppression and other non-chemical techniques to manage herbaceous weeds	WQL02	201	5.87%	2.26%
Biological suppression and other non-chemical techniques to manage brush	WQL01	155	4.52%	1.74%
Improve the plant diversity and structure of non-cropped areas for wildlife food and habitat	ANM08	148	4.32%	1.67%
Monitoring nutritional status of livestock using the NUTBAL PRO system	ANM17	124	3.62%	1.40%
Apply controlled-release nitrogen fertilizer	WQL06	119	3.47%	1.34%
Patch-burning to enhance wildlife habitat	ANM11	112	3.27%	1.26%
Establish pollinator habitat	PLT01	104	3.03%	1.17%
Nitrogen stabilizers for air emissions control	AIR02	102	2.98%	1.15%
High-level integrated pest management to reduce pesticide environmental risk	WQL13	98	2.86%	1.10%
GPS, targeted spray application (SmartSprayer), or other chemical application electronic control technology	AIR07	94	2.74%	1.06%
Non-chemical pest control for livestock	WQL18	94	2.74%	1.06%
Reduce the concentration of nutrients on farm by limiting the amount of feed and fertilizer brought on livestock farms	WQL15	68	1.98%	0.77%
Shallow water habitat	ANM12	60	1.75%	0.68%
Riparian forest buffer, terrestrial and aquatic wildlife habitat	ANM14	59	1.72%	0.66%
Pumping plant powered by renewable energy	ENR03	58	1.69%	0.65%

Renovation of a windbreak or shelter belt for wildlife habitat	PLT06	53	1.55%	0.60%
Land application of treated manure	WQL14	47	1.37%	0.53%
Non-forested riparian zone enhancement for fish and wildlife	ANM13	43	1.25%	0.48%
Wildlife corridors	ANM19	39	1.14%	0.44%
On-farm research and demonstrations	FRD01	34	0.99%	0.38%
Precision application technology to apply nutrients	WQL11	31	0.90%	0.35%
Extend existing filter strips for water quality protection and wildlife habitat	ANM04	26	0.76%	0.29%
Regional weather networks for irrigation scheduling	WQT04	26	0.76%	0.29%
Dust control on unpaved roads and surfaces	AIR05	25	0.73%	0.28%
Extending riparian forest buffers for water quality protection and wildlife habitat	ANM05	25	0.73%	0.28%
Integrated pest management for organic farming	WQL21	25	0.73%	0.28%
Irrigation pumping plant evaluation	WQT03	25	0.73%	0.28%
Extending existing riparian herbaceous cover for water quality protection and wildlife habitat	ANM06	22	0.64%	0.25%
Silvopasture for wildlife habitat	ANM20	20	0.58%	0.23%
Restoration and management of rare or declining habitats	ANM22	19	0.55%	0.21%
Transition to organic grazing systems	WQL19	19	0.55%	0.21%
On-farm pilot projects	FPP02	18	0.53%	0.20%
Prairie restoration for grazing and wildlife habitat	ANM21	15	0.44%	0.17%
Extending existing field borders for water quality protection and wildlife habitat	ANM07	13	0.38%	0.15%
Protection of cultural resources	SOE02	10	0.29%	0.11%
Multi-species native perennials for biomass/wildlife habitat	ANM23	9	0.26%	0.10%
Irrigation system automation	WQT01	5	0.15%	0.06%
Remote monitoring and notification of irrigation pumping plant operation	WQT05	2	0.06%	0.02%
Total		8,886		100 %

^a Pastureland was listed in 3,427 preapproved applications (December 1, 2009).

Table A.6. Rangeland Conservation Enhancement Activities Selected in Preapproved Applications^a

Enhancement Activity	Code	Frequency Selected		Percent of Total Rangeland Activities Selected
		no. of applications	% of applications	
Rotation of supplement and feeding areas	WQL03	1,150	62.57%	19.44%
Retrofit watering facility for wildlife escape	ANM18	980	53.32%	16.56%
Monitor key grazing areas to improve grazing management	PLT02	878	47.77%	14.84%
Recycle 100% of farm lubricants	ENR04	506	27.53%	8.55%
Grazing management to improve wildlife habitat	ANM09	463	25.19%	7.82%
Solar-powered electric fence charging systems	ENR02	300	16.32%	5.07%
Monitoring nutritional status of livestock using the NUTBAL PRO system	ANM17	222	12.08%	3.75%
Biological suppression and other non-chemical techniques to manage herbaceous weeds	WQL02	153	8.32%	2.59%
Biological suppression and other non-chemical techniques to manage brush	WQL01	137	7.45%	2.32%
Patch-burning to enhance wildlife habitat	ANM11	134	7.29%	2.26%
Pumping plant powered by renewable energy	ENR03	130	7.07%	2.20%
Managing livestock access to water bodies/courses	WQL12	126	6.86%	2.13%
Intensive management of rotational grazing	PLT10	122	6.64%	2.06%
Locally grown and marketed farm products	ENR05	88	4.79%	1.49%
Shallow water habitat	ANM12	83	4.52%	1.40%
High-level integrated pest management to reduce pesticide environmental risk	WQL13	65	3.54%	1.10%
GPS, targeted spray application (SmartSprayer), or other chemical application electronic control technology	AIR07	49	2.67%	0.83%
Non-chemical pest control for livestock	WQL18	46	2.50%	0.78%
Wildlife corridors	ANM19	41	2.23%	0.69%
Non-forested riparian zone enhancement for fish and wildlife	ANM13	39	2.12%	0.66%
Prairie restoration for grazing and wildlife habitat	ANM21	34	1.85%	0.57%
Establish pollinator habitat	PLT01	31	1.69%	0.52%
Riparian forest buffer, terrestrial and aquatic wildlife habitat	ANM14	28	1.52%	0.47%
Restoration and management of rare or declining habitats	ANM22	23	1.25%	0.39%
Protection of cultural resources	SOE02	21	1.14%	0.35%

Multi-species native perennials for biomass/wildlife habitat	ANM23	14	0.76%	0.24%
On-farm research and demonstrations	FRD01	14	0.76%	0.24%
Dust control on unpaved roads and surfaces	AIR05	11	0.60%	0.19%
Transition to organic grazing systems	WQL19	11	0.60%	0.19%
Integrated pest management for organic farming	WQL21	10	0.54%	0.17%
On-farm pilot projects	FPP02	8	0.44%	0.14%
Total		5,917		100%
^a Rangeland was listed in 1,838 preapproved applications (December 1, 2009).				

Table A.7. NIPF Conservation Enhancement Activities Selected in Preapproved Applications^a				
Enhancement Activity	Code	Frequency Selected		Percent of Total Forestland Activities Selected
		<u>no. of applications</u>	<u>% of applications</u>	
Recycle 100% of farm lubricants	ENR04	966	45.50%	21.61%
Forest stand improvement for habitat and soil quality	ANM15	873	41.12%	19.53%
Hardwood crop tree release	PLT07	363	17.10%	8.12%
Prescribed burning	PLT04	340	16.02%	7.60%
Riparian forest buffer, terrestrial and aquatic wildlife habitat	ANM14	319	15.03%	7.13%
Establish pollinator habitat	PLT01	218	10.27%	4.88%
Shallow water habitat	ANM12	172	8.10%	3.85%
Locally grown and marketed farm products	ENR05	136	6.41%	3.04%
Patch-burning to enhance wildlife habitat	ANM11	127	5.98%	2.84%
Wildlife corridors	ANM19	110	5.18%	2.46%
Forest stand improvement pre-treating vegetation and fuels	PLT03	106	4.99%	2.37%
Restoration and management of rare or declining habitats	ANM22	100	4.71%	2.24%
Multi-story cropping, sustainable management of Non-timber forest plants	PLT05	95	4.47%	2.12%
High-level integrated pest management to reduce pesticide environmental risk	WQL13	94	4.43%	2.10%
Retrofit watering facility for wildlife escape	ANM18	70	3.30%	1.57%
Rotation of supplement and feeding areas	WQL03	62	2.92%	1.39%
Silvopasture for wildlife habitat	ANM20	55	2.59%	1.23%
Solar-powered electric fence charging systems	ENR02	54	2.54%	1.21%
GPS, targeted spray application (SmartSprayer), or other chemical application electronic control technology	AIR07	43	2.03%	0.96%
Monitor key grazing areas to improve grazing management	PLT02	41	1.93%	0.92%
Dust control on unpaved roads and surfaces	AIR05	31	1.46%	0.69%
On-farm research and demonstrations	FRD01	28	1.32%	0.63%
Managing livestock access to water bodies/courses	WQL12	24	1.13%	0.54%
Protection of cultural resources	SOE02	19	0.89%	0.42%
On-farm pilot projects	FPP02	17	0.80%	0.38%
Non-chemical pest control for livestock	WQL18	6	0.28%	0.13%
Transition to organic grazing systems	WQL19	2	0.09%	0.04%
Total		4,471		100%

^a Non-industrial Private Forestland (NIPF) was listed in 2,123 preapproved applications (December 1, 2009).

Table A.8. Cropland Conservation Practices Selected in Preapproved Applications^a

Practice Name	Code	Frequency Selected		Percent of Total Cropland Practices Selected
		no. of applications	% of applications	
Irrigation water management	449	107	1.56%	16.49%
Conservation crop rotation	328	88	1.28%	13.56%
Residue and tillage management, no-till/strip till/direct seed	329	73	1.07%	11.25%
Residue management, seasonal	344	72	1.05%	11.09%
Cover crop	340	58	0.85%	8.94%
Residue and tillage management, mulch till	345	56	0.82%	8.63%
Field border	386	43	0.63%	6.63%
Upland wildlife habitat management	645	40	0.58%	6.16%
Critical area planting	342	34	0.50%	5.24%
Filter strip	393	20	0.29%	3.08%
Wetland wildlife habitat management	644	15	0.22%	2.31%
Windbreak/shelterbelt establishment	380	15	0.22%	2.31%
Early successional habitat development/management	647	11	0.16%	1.69%
Windbreak/shelterbelt renovation	650	7	0.10%	1.08%
Riparian herbaceous cover	390	6	0.09%	0.92%
Stream habitat improvement/management	395	3	0.04%	0.46%
Residue and tillage management, ridge till	346	1	0.01%	0.15%
Brush management	314	0	0.00%	0.00%
Prescribed burning	338	0	0.00%	0.00%
Fuelbreak	383	0	0.00%	0.00%
Forest slash treatment	384	0	0.00%	0.00%
Riparian forest buffer	391	0	0.00%	0.00%
Firebreak	394	0	0.00%	0.00%
Forage harvest management	511	0	0.00%	0.00%
Pasture and hay planting	512	0	0.00%	0.00%
Prescribed grazing	528	0	0.00%	0.00%
Range planting	550	0	0.00%	0.00%
Tree/shrub establishment	612	0	0.00%	0.00%
Restoration and management of rare and declining habitats	643	0	0.00%	0.00%
Road/trail/landing closure and treatment	654	0	0.00%	0.00%
Forest trails and landings	655	0	0.00%	0.00%
Tree/shrub pruning	660	0	0.00%	0.00%
Forest stand improvement	666	0	0.00%	0.00%
Total		649		100%

^a Cropland was listed in 6,852 preapproved applications (December 1, 2009).

Table A.9. Pasture Conservation Practices Selected in Preapproved Applications^a

Practice Name	Code	Frequency Selected		Percent of Total Pasture Practices Selected
		no. of applications	% of applications	
Prescribed grazing	528	144	4.20%	30.64%
Pasture and hay planting	512	61	1.78%	12.98%
Brush management	314	56	1.63%	11.91%
Forage harvest management	511	55	1.60%	11.70%
Irrigation water management	449	32	0.93%	6.81%
Upland wildlife habitat management	645	31	0.90%	6.60%
Prescribed burning	338	17	0.50%	3.62%
Wetland wildlife habitat management	644	16	0.47%	3.40%
Windbreak/shelterbelt establishment	380	15	0.44%	3.19%
Riparian herbaceous cover	390	8	0.23%	1.70%
Firebreak	394	8	0.23%	1.70%
Critical area planting	342	7	0.20%	1.49%
Windbreak/shelterbelt renovation	650	5	0.15%	1.06%
Stream habitat improvement/management	395	4	0.12%	0.85%
Riparian forest buffer	391	4	0.12%	0.85%
Early successional habitat development/management	647	4	0.12%	0.85%
Fuelbreak	383	2	0.06%	0.43%
Restoration and management of rare and declining habitats	643	1	0.03%	0.21%
Conservation crop rotation	328	0	0.00%	0.00%
Residue and tillage management, no-till/strip till/direct seed	329	0	0.00%	0.00%
Cover crop	340	0	0.00%	0.00%
Residue management, seasonal	344	0	0.00%	0.00%
Residue and tillage management, mulch till	345	0	0.00%	0.00%
Residue and tillage management, ridge till	346	0	0.00%	0.00%
Forest slash treatment	384	0	0.00%	0.00%
Field border	386	0	0.00%	0.00%
Filter strip	393	0	0.00%	0.00%
Range planting	550	0	0.00%	0.00%
Tree/shrub establishment	612	0	0.00%	0.00%
Road/trail/landing closure and treatment	654	0	0.00%	0.00%
Forest trails and landings	655	0	0.00%	0.00%
Tree/shrub pruning	660	0	0.00%	0.00%
Forest stand improvement	666	0	0.00%	0.00%
Total		470		100%

^aPastureland was listed in 3,427 preapproved applications (December 1, 2009).

Table A.10. Rangeland Conservation Practices Selected in Preapproved Applications^a

Practice Name	Code	Frequency Selected		Percent of Total Rangeland Practices Selected
		no. of applications	% of applications	
Prescribed grazing	528	90	4.90%	29.90%
Brush management	314	53	2.88%	17.61%
Upland wildlife habitat management	645	41	2.23%	13.62%
Prescribed burning	338	24	1.31%	7.97%
Range planting	550	20	1.09%	6.64%
Windbreak/shelterbelt establishment	380	13	0.71%	4.32%
Critical area planting	342	12	0.65%	3.99%
Fuelbreak	383	11	0.60%	3.65%
Firebreak	394	10	0.54%	3.32%
Riparian herbaceous cover	390	8	0.44%	2.66%
Wetland wildlife habitat management	644	6	0.33%	1.99%
Stream habitat improvement/management	395	5	0.27%	1.66%
Restoration and management of rare and declining habitats	643	3	0.16%	1.00%
Early successional habitat development/management	647	3	0.16%	1.00%
Windbreak/shelterbelt renovation	650	2	0.11%	0.66%
Conservation crop rotation	328	0	0.00%	0.00%
Residue and tillage management, no-till/strip till/direct seed	329	0	0.00%	0.00%
Cover crop	340	0	0.00%	0.00%
Residue management, seasonal	344	0	0.00%	0.00%
Residue and tillage management, mulch till	345	0	0.00%	0.00%
Residue and tillage management, ridge till	346	0	0.00%	0.00%
Forest slash treatment	384	0	0.00%	0.00%
Field border	386	0	0.00%	0.00%
Riparian forest buffer	391	0	0.00%	0.00%
Filter strip	393	0	0.00%	0.00%
Irrigation water management	449	0	0.00%	0.00%
Forage harvest management	511	0	0.00%	0.00%
Pasture and hay planting	512	0	0.00%	0.00%
Tree/shrub establishment	612	0	0.00%	0.00%
Road/trail/landing closure and treatment	654	0	0.00%	0.00%
Forest Trails and landings	655	0	0.00%	0.00%
Tree/shrub pruning	660	0	0.00%	0.00%
Forest stand improvement	666	0	0.00%	0.00%
Total		301		100%

^aRangeland was listed in 1,838 preapproved applications (December 1, 2009).

Table A.11. NIPF Conservation Practices Selected in Preapproved Applications^a

Practice Name	Code	Frequency Selected		Percent of Total Forestland Practices Selected
		no. of applications	% of applications	
Upland wildlife habitat management	645	174	8.20%	15.29%
Forest stand improvement	666	171	8.05%	15.03%
Firebreak	394	155	7.30%	13.62%
Prescribed burning	338	118	5.56%	10.37%
Tree/shrub establishment	612	116	5.46%	10.19%
Brush management	314	76	3.58%	6.68%
Forest trails and landings	655	54	2.54%	4.75%
Wetland wildlife habitat management	644	53	2.50%	4.66%
Tree/shrub pruning	660	44	2.07%	3.87%
Early successional habitat development/management	647	41	1.93%	3.60%
Forest slash treatment	384	30	1.41%	2.64%
Critical area planting	342	28	1.32%	2.46%
Stream habitat improvement/management	395	23	1.08%	2.02%
Fuelbreak	383	22	1.04%	1.93%
Restoration and management of rare and declining habitats	643	19	0.89%	1.67%
Prescribed grazing	528	14	0.66%	1.23%
Conservation crop rotation	328	0	0.00%	0.00%
Residue and tillage management, no-till/strip till/direct seed	329	0	0.00%	0.00%
Cover crop	340	0	0.00%	0.00%
Residue management, seasonal	344	0	0.00%	0.00%
Residue and tillage management, mulch till	345	0	0.00%	0.00%
Residue and tillage management, ridge till	346	0	0.00%	0.00%
Windbreak/shelterbelt establishment	380	0	0.00%	0.00%
Field border	386	0	0.00%	0.00%
Riparian herbaceous cover	390	0	0.00%	0.00%
Riparian forest buffer	391	0	0.00%	0.00%
Filter strip	393	0	0.00%	0.00%
Irrigation water management	449	0	0.00%	0.00%
Forage harvest management	511	0	0.00%	0.00%
Pasture and hay planting	512	0	0.00%	0.00%
Range planting	550	0	0.00%	0.00%
Windbreak/shelterbelt renovation	650	0	0.00%	0.00%
Road/trail/landing closure and treatment	654	0	0.00%	0.00%
Total		1,138		100%

^a Forestland was listed in 2,123 preapproved applications (December 1, 2009).

Appendix B: CSP Resource Concerns and Micro Resource Concerns

NRCS conducts conservation planning based upon a comprehensive set of resource concerns that address a wide variety of environmental issues. For CSP, NRCS chose a subset of these resource concerns that address the most common and widespread environmental issues faced by agriculture. The CSP resource concerns are: soil quality, soil erosion, water quality, water quantity, air, plant resources, animal resources, and energy resources. Each of these major resource concerns is further broken into micro resource concerns. CSP uses the resource concerns and the associated 28 micro resource concerns as the basis for the environmental evaluation of applicants. All of the questions in the conservation measurement tool (CMT) relating to enhancements and practices are evaluated based on these resource concerns. Each question in the CMT and each enhancement and each practice offered by CSP is given a score from -5 to +5 for each applicable micro resource concern. These scores are added up, normalized, and weighted to give each applicant a score that determines their eligibility and ranking with other applicants.

Soil Erosion: For the purposes of CSP, the micro resource concerns associated with soil erosion concerns include sheet, rill, wind, and irrigation erosion; ephemeral or gully erosion; erosion of stream banks and shorelines; and erosion on road banks and at construction sites. The enhancement activities that may be offered through CSP to address these concerns above the stewardship threshold include but are not limited to:

- Residue management, such as continuous no till/strip till/direct seeding, and
- Cover crops.

Soil Quality: The micro resource concerns associated with soil quality in this analysis include organic matter depletion, organic matter oxidation, salinity, nutrient cycling, and compaction. The enhancement activities that could be offered through CSP to address these concerns above the stewardship threshold, include, but are not limited to:

- Nutrient management activities,
- Residue management, such as continuous no till/strip till/direct seeding,
- Controlled traffic,
- Cover crop,; and
- Irrigation water management activities.

Water Quantity: For the purposes of CSP, the micro resource concerns associated with water quantity include excess water, insufficient water, and inefficient use of irrigation water. For irrigated land (crop or grazing), issues dealing with the efficient use of water are addressed by applying irrigation water management (IWM) activities to help properly manage an irrigation system to efficiently use available water supplies. These enhancements include:

- Irrigation system automation,
- Pumping plant evaluation, and
- Uses of regional water system data.

Water Quality: For the purposes of CSP, the micro resource concerns associated with water quality include sediment, nutrients, pesticides, pathogens, and salinity. The enhancement activities offered through CSP to address these concerns above the stewardship threshold include but are not limited to:

- Extending buffer practice;
- Rotating salt, mineral, and supplemental feeding locations;
- Nutrient management activities;
- High-level integrated pest management; and
- Cover crops.

Air Quality: For the purposes of CSP, the micro resource concerns associated with air include airborne soil particles, greenhouse and ozone gases, chemical spray drift, and odors. The enhancements being offered through CSP to address these concerns above the stewardship threshold include but are not limited to:

- Nutrient management activities,
- Pest management activities, and
- Reduction in burning and burning heaters in orchards.

Plant Resources: For the purposes of CSP, the micro resource concerns associated with plants include quantity, diversity, health, and vigor; and declining populations of threatened and endangered species. The enhancements being offered through CSP to address these concerns above the stewardship threshold include but are not limited to:

- Establishing pollinator habitat,
- Improved grazing practices,
- Forest stand improvement,
- Prescribed burning, and
- Management of buffer areas.

Many plant resource issues can be addressed on grazing land. Private grazing lands are the single largest watershed vegetative cover type in the country and are the cornerstone for environmental quality. Vast amounts of precipitation fall on these lands each year. On well-managed grazing land, more of this water infiltrates into the soil and is used for plant growth, is stored in underground aquifers, or flows through the soil to replenish streams, riparian areas, wetlands, and lakes. People use this water for agricultural, domestic, and industrial purposes. Society benefits from this supply of food and fiber, clean air, healthy wildlife populations and habitat, improved fisheries and aquatic systems, and healthy riparian areas. Grazing lands are the foundation of many rural communities and the core of social and economic stability for sustaining long-term economic viability in many rural areas. In turn, the beneficial products and services from these lands help sustain the urban population centers.

Animal Resources: For the purposes of CSP, the micro resource concerns associated with animals include domestic livestock cover, food, and water; terrestrial wildlife cover, food, connectivity, and water; aquatic wildlife structure, food, and water temperature; and declining

populations of threatened and endangered species. The enhancements through CSP to address these concerns above the stewardship threshold include but are not limited to:

- Drainage water management,
- Haying and grazing management activities,
- Wildlife friendly watering facilities,
- Establishment/management of wildlife habitat,
- Managing riparian zones, and
- Extending buffer practices.

Energy Resources: For the purposes of CSP, energy conservation is the micro resource concern associated with addressing the energy resource concerns. Although many enhancement activities have a positive impact on the energy consumption of an operation, the following enhancements are focused on energy conservation:

- Reduction in field operations,
- Powering pumping plants with renewable energy,
- Recycling all farm lubricants, and

Locally produced and marketed farm products.

Appendix C: The Conservation Measurement Tool

The conservation measurement tool (CMT) is utilized to evaluate CSP applications using a point-based system for environmental benefits. The tool evaluates existing and proposed additional activities. The tool treats all applicants fairly, scoring current and planned environmental performance and generating conservation performance points that are then used for ranking and payment purposes. The key CMT scoring principals are the following:

- All scoring of the relative environmental impact of questions, enhancements, and conservation practices is based on Conservation Practice Physical Effects scoring tables, in which scores range from -5 through +5.
- Each question, enhancement, and practice is scored against NRCS's 8 nationally identified resource concerns – soil erosion, soil quality, water quantity, water quality, air quality, plant resources, animal resources, and energy – that are further subdivided into 28 CSP-specific micro resource concerns.
- The tool is size neutral. All operations have the potential to score a similar number of points regardless of size.
- Each land use is evaluated separately. For applications with multiple land uses, scores have been normalized among land uses.

The following is an explanation of the scoring process used in CMT.

A. Annual Payment - Conservation Performance Payment Points

- Conservation performance points for each land use are determined by adding the total existing activity points and total additional activity points together and then multiplying by acres.
- If an applicant has chosen to implement a resource-conserving crop rotation, the points associated with this activity are subtracted from the conservation performance points for cropland because this activity has a separate payment structure.
- After all applications are received for the first ranking period, a dollars per point value is calculated based on available funding, the acres of applications in different land uses, and statutory payment limits per acre for the program.

Below is an explanation of variables that impact the outcomes from applying CMT.

1. Existing Activity Points

- *Weighting*
 - Cropland and pastureland micro resource concern totals for each rotation or mixture are weighted based on the acreage that each rotation or mixture makes up of the total

- acres for that land use.
 - Rangeland is weighted just on the acres of land use since it is not divided into rotations or mixtures.
 - Forest land is treated separately. Total conservation performance points are simply totaled up by micro resource concern for existing and additional activities and then multiplied by the number of acres in the operation.
 - Air quality and energy conservation performance points are distributed across land uses and then weighted by the acres of each land use.
 - Water conservation performance points are distributed across land uses that have water and then weighted by the acres of each land use.
- *Size Neutral Normalization*
 - For applications that have multiple land uses, total conservation performance points by land use are multiplied by each land use's percentage of total acres of the operation.
 - Forest land is totaled up separately as it is evaluated independently from any other land use.
- *Adjusted by the Potential Maximum Points*
 - Existing activity points are adjusted by the potential maximum points that are available to an applicant. If an applicant answers "No" to the questions that are filtered, the points associated with these questions are removed from the potential maximum score for the relevant land use(s). The total existing activity points for each resource concern is determined by dividing the existing activity points by the potential number of points then multiplying the result by 100.
- *Stewardship Threshold*
 - The points earned by micro resource concern are totaled for each resource concern by each land use to determine whether an applicant meets the minimum level of eligibility for the program. This is done by comparing the application's resource concern total points to threshold values established for each resource concern by land use. The stewardship thresholds were established by using the CMT on a number of sample farms that had been evaluated by professional conservationists for the level of conservation on the farm. The threshold values were matched to farms that were judged to be meeting a minimum level of conservation stewardship.

2. Additional Activity Points (enhancements, conservation practices, research and demonstrations, pilot projects, and resource-conserving crop rotations)

- *Normalization*
 - The points are normalized so that the maximum number of points earned for any additional activity is about 20.
 - Since it is impossible to predict exactly what on-farm research and

demonstrations or pilots will be undertaken by applicants, the average points from all enhancements were chosen to represent the points for these two activities.

- *Calculated by Years of Benefits Generated*
 - The points for each additional activity are determined by the number of years it is scheduled and the percentage of the total applicable amount that is scheduled. Applicants may schedule additional conservation practices to start during years one through five of their contract period. Enhancements, research and demonstration, pilot projects, and resource-conserving crop rotations may only be scheduled during the first, second, and third years of a five-year contract. Applicants may phase in these activities over the three-year period or apply them in a particular year. The earlier in the contract period and the greater the amount of the additional activity they schedule, the greater the number of conservation performance points they accrue.
- *Adjusted by the Potential Maximum Points*
 - The potential number of points available from additional activities is based on the average of the points for all additional activities times a multiplier for each land use. The multipliers are used to account for the different number of activities available for each land use. The total additional activity points for each resource concern are calculated by dividing the additional activity points accrued by the potential points multiplied by 100.

B. Conservation Performance Ranking Score

An applicant's conservation performance ranking score is used to determine who is offered enrollment and CSP funds. A maximum of 1000 ranking points can be earned. In every application pool, the highest ranked applicant is offered enrollment, followed by the next highest ranked application and so on until a pool's allotted acres or financial assistance is committed.

The performance ranking score is based on four factors:

1. The level of conservation treatment on priority resource concerns at the time of application.
2. The degree to which treatment on priority resource concerns increases conservation performance.
3. The number of priority resource concerns to be treated to meet or exceed stewardship thresholds by the end of the contract.
4. The extent to which additional activities treat other resource concerns.

Ranking factor 1 is determined by the following process:

A = The sum of the existing activity points for all priority resource concerns for all land uses in the application.

B = The sum of all potential existing activity points for all priority resource concerns for all land uses in the application.

$$\text{Factor 1 score} = (A/B) \times 1000$$

Ranking factor 2 is determined by the following process:

C = The sum of all additional activity points for all priority resource concerns for all land uses in the application.

D = The sum of all potential additional activity points for all priority resource concerns for all land uses in the application.

$$\text{Factor 2 score} = (C/D) \times 1000$$

Ranking factor 3 is determined by the following process:

E = The sum of the number of previously unmet priority resource concerns that the applicant agrees to meet during the contract period.

F = The total number of priority resource concerns (3 to 5) specified in the applicant's CSP pool.

$$\text{Factor 3 score} = (E/F) \times 1000$$

Ranking factor 4 is determined by the following process for each land use:

G = For non-priority resource concerns that are met at time of application or the applicant agrees to meet during the contract period, sum of all additional activity points.

H = For non-priority resource concerns that are met at time of application or the applicant agrees to meet during the contract period, sum of all potential additional activity points.

$$\text{Factor 4 score} = (G/H) \times 1000$$

Each ranking score factor is multiplied by a weighting factor. The weighting factors are currently set at 25 percent for each factor based on the policy analyses from the interim and final rules.

The final ranking score is the sum of the weighted factors for 1, 2, 3, and 4.

The conservation performance point matrices for existing activities, additional activities, and conservation practices may be viewed at the CSP website

(http://www.nrcs.usda.gov/programs/new_csp/csp.html). Scroll down the page until you see the following documents:

- CMT Tool Existing Questions Scores
- Enhancement List with Scores
- Practice List with Scores

Appendix D: Conservation Activities (Enhancements and Practices) Available for CSP

The Conservation Stewardship Program (CSP) encourages agricultural producers to improve conservation systems by undertaking additional conservation activities and improving, maintaining, and managing existing conservation activities. This appendix lists the conservation activities eligible for CSP assistance, including both enhancements and standard conservation practices.

NRCS has developed network effects diagrams to understand better the potential direct, indirect, and cumulative effects of traditional conservation practices and has also summarized general effects in the Conservation Practice Physical Effects (CPPE).¹⁸ The network effects diagrams depict the chain of natural resource effects, including both beneficial and adverse impacts, resulting from the application of each conservation practice. All available network effects diagrams can be viewed at the following Web site:

http://www.nrcs.usda.gov/programs/Env_Assess/networkdiagram.html. Each diagram first identifies the typical setting to which the practice is applied, including the predominating land use type and the environmental resource concerns that trigger use of the conservation practice. The diagrams then identify the conservation practice used to mitigate or address the resource concerns.

The diagrams also describe the physical activities carried out to implement the practice and depict potential direct, indirect, and cumulative effects of the practice. Effects are qualified with a plus or a minus symbol, which qualitatively denote an increase ("+") or decrease ("-") in the effect. Plus and minus symbols do not equate to good and bad or positive and negative. Impacts are characterized in this manner due to the fact that site-specific conditions can influence the degree or intensity of the potential environmental impact. Only the general effects considered most important from a national perspective are illustrated.

Additional information on the process used to develop the network effects diagrams is available in the NRCS Watershed Science Institute Report CED-WSSI-2002-2, "Analyzing Effects of Conservation Practices – A Prototypical Method for Complying with National Environmental Policy Act (NEPA) Requirements for Farm Bill Implementation." This document is included in the NRCS National Environmental Compliance Handbook and is available through the NRCS online directives system at <http://directives.nrcs.usda.gov/17091.wba>.

¹⁸Conservation Practices Physical Effects (CPPE) information can be found at <http://www.nrcs.usda.gov/technical/standards/nhcp.html> and in each State's electronic Field Office Technical Guide (FOTG), <http://www.nrcs.usda.gov/technical/efotg/>.

Conservation Stewardship Program Conservation Activity List

The Conservation Stewardship Program (CSP) encourages agricultural producers to improve conservation systems by undertaking additional conservation activities and improving, maintaining, and managing existing conservation activities. Conservation activities include enhancements and conservation practices.

Enhancements – Conservation activities selected by producers that are used to treat natural resources and improve conservation performance.

Practices – Conservation practices are used in CSP for the purpose of encouraging producers to meet additional stewardship thresholds. During the application process, an applicant may identify resource concern stewardship thresholds by land use that they are not meeting with existing activities, and agree to meet them by installing new conservation practices. The new conservation practices that need to be installed will be identified by NRCS during the application process. During on-site field verification for approved applicants, NRCS will determine the required practices using the conservation planning process.

Conservation Activity List					
NRCS Code	Eligible Land Use				Enhancement/Practice Criteria
AIR01	Crop				Injecting or incorporating manure
					Injecting manure 2 inches or more below soil surface or incorporating applied manure within 24 hours to keep nutrients in place and manage odors.
AIR02	Crop	Pasture			Nitrogen stabilizers for air emissions control
					The use of a nitrogen stabilizer with either urea or ammonium fertilizers to control the rate of ammonia and ammonium conversion. For this enhancement, “nitrogen stabilizers” includes nitrification inhibitors and urease inhibitors.
AIR03	Crop				Replace burning of prunings, removals and other crop residues with non-burning alternatives
					Use of non-burning alternatives to dispose of prunings, removals and other crop residues from orchards, vineyards and other crops. Non-burning alternatives would include chipping, grinding, shredding, mowing or composting these materials.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
AIR04	Crop	Pasture			Use drift reducing nozzles, low pressures, lower boom height, and adjuvants to reduce pesticide drift	Use chemical drift reduction technologies to reduce drift of applied agricultural chemicals from the intended target. Drift reduction reduces damage to non-target desirable plants and animal habitats and reduces pollution of water bodies. Reducing chemical drift may improve air quality by decreasing particulate matter in the air, and in some cases reduce the potential for release of volatile organic compounds (ozone precursors) into the air.
AIR05	Crop	Pasture	Range	Forest	Dust control on unpaved roads and surfaces	Use of a dust palliative on unpaved roads and other surfaces to keep road material in form of aggregates which are large enough to prevent entrainment into the air.
AIR06	Crop				Replacing oil- and wood-fired heaters in orchards and vineyards	Replace oil- and wood-fired heaters in orchards and vineyards to manage particulate matter emissions from frost protection.
AIR07	Crop	Pasture	Range	Forest	GPS, targeted spray application (SmartSprayer), or other chemical application electronic control technology	Utilize electronically-controlled or managed chemical spray application technology to more precisely apply agricultural pesticides to intended targets, which can reduce the total amount of chemical applied, and reduces the potential for chemical drift.
ANM01	Crop				Drainage water management for seasonal wildlife habitat	Managing soil and/or surface water levels during the off-season to provide seasonal wildlife habitat.
ANM02	Crop				Defer crop production on temporary and seasonal wetlands	Deferring crop production on temporary and/or seasonal wetlands until after spring migratory bird season to promote early successional wetland habitat.
ANM03		Pasture			Incorporate native grasses and/or legumes into 15% or more of the forage base	Incorporate native grasses and/or legumes into 15% or more of the forage base (by weight) using adapted species and varieties, appropriate seeding rates, and timing of seeding.
ANM04	Crop	Pasture			Extend existing filter strips for water quality protection and wildlife habitat	Extend existing filter strips to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals. Wider filter strips provide more effective habitat for terrestrial animals and provide more inputs to benefit in-stream habitats.
ANM05	Crop	Pasture			Extending riparian forest buffers for water quality protection and wildlife habitat	Extend existing buffers to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals. Wider buffers provide more effective riparian habitat for terrestrial animals and provide more inputs to benefit in-stream habitats.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
ANM06	Crop	Pasture			Extending existing riparian herbaceous cover for water quality protection and wildlife habitat	Extend existing buffers to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals. Wider buffers provide more effective riparian habitat for terrestrial animals and provide more inputs to benefit in-stream habitats.
ANM07	Crop	Pasture			Extending existing field borders for water quality protection and wildlife habitat	Extend existing field borders to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals. Wider field borders provide more effective habitat for terrestrial animals.
ANM08	Crop	Pasture			Improve the plant diversity and structure of non-cropped areas for wildlife food and habitat	Improve plant diversity and structure of non-cropped areas for wildlife food and habitat through the planting and/or management of native plant species.
ANM09		Pasture	Range		Grazing management to improve wildlife habitat	Implement a grazing management plan that allows for rest periods to provide adequate residue for nesting and fawning cover and increase diversity of vegetation structure to benefit a variety of wildlife species.
ANM10	Crop				Harvest hay in a manner that allows wildlife to flush and escape	Harvest hay using conservation measures that allow wildlife to flush and escape. Includes timed haying to avoid periods when upland wildlife are nesting or fawning, idling paddocks or pastures and idling hay land during the nesting or fawning period, leaving a residual forage height conducive to wildlife nesting and fawning for the following year, and applying haying techniques that reduce mortality to wildlife.
ANM11		Pasture	Range	Forest	Patch-burning to enhance wildlife habitat	Use prescribed burning to create patches of different vegetation structure and species composition for the benefit of wildlife.
ANM12	Crop	Pasture	Range	Forest	Shallow water habitat	Construct, manage or renovate small, shallow wetland sites to encourage water to remain seasonally, often from late winter through early summer (e.g., vernal pools).
ANM13	Crop	Pasture	Range		Non-forested riparian zone enhancement for fish and wildlife	Utilizing select conservation measures such as relocating equipment operations, trails, or livestock; establishing diverse native vegetation and controlling invasive species; fencing; and extending the width of the riparian zone to enhance wildlife habitat adjacent to riparian zones of streams, ponds, lakes, or wetlands.
ANM14	Crop	Pasture	Range	Forest	Riparian forest buffer, terrestrial and aquatic wildlife habitat	Managing forested riparian zones to achieve streamside cover and vegetative diversity and structure to improve terrestrial and aquatic wildlife habitat.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
ANM15				Forest	Forest stand improvement for habitat and soil quality	Creating snags, den trees, and coarse woody debris on the forest floor to a level optimum for native wildlife usage and long-term forest soil health. May be implemented separately or during thinning or harvesting.
ANM16	Crop				Harvesting crops using a stripper header	Harvesting crops using a combine with a stripper header so residue of a minimum of 18 inches high remains in the field.
ANM17		Pasture	Range		Monitoring nutritional status of livestock using the NUTBAL PRO system	Use of the NUTBAL PRO software to determine if current diet meets livestock nutritional needs. Requires collection and laboratory analysis of forage or fecal samples to determine the nutritional value of grazing forages.
ANM18		Pasture	Range	Forest	Retrofit watering facility for wildlife escape	Retrofit existing watering facilities (troughs, tanks, etc.) to allow for escape of wildlife that becomes trapped while trying to drink.
ANM19	Crop	Pasture	Range	Forest	Wildlife corridors	Participants will establish corridors with vegetation suited to the natural site conditions and appropriate for the kinds of wildlife present.
ANM20		Pasture		Forest	Silvopasture for wildlife habitat	Manage silvopastures to promote plant diversity for wildlife habitat.
ANM21	Crop	Pasture	Range		Prairie restoration for grazing and wildlife habitat	This activity consists of restoring/renovating prairie habitat by establishing native vegetation and managing the restored plant community.
ANM22	Crop	Pasture	Range	Forest	Restoration and management of rare or declining habitats	This enhancement consists of restoring habitats recognized as rare or declining.
ANM23	Crop	Pasture	Range		Multi-species native perennials for biomass/wildlife habitat	This enhancement consists of establishing native perennial vegetation for biomass production and wildlife habitat.
ENR01	Crop				Fuel use reduction for field operations	Fuel savings of 20% or greater achieved by a reduction in field operations.
ENR02		Pasture	Range	Forest	Solar-powered electric fence charging systems	Replacement of electric fence charging systems with solar-powered systems.
ENR03	Crop	Pasture	Range		Pumping plant powered by renewable energy	Requires the use of renewable energy—solar or wind—to power pumping plants for irrigation, drainage, livestock, or wildlife.
ENR04	Crop	Pasture	Range	Forest	Recycle 100% of farm lubricants	Recycle all lubricants used on the farm at an approved petroleum recycling center.
ENR05	Crop	Pasture	Range	Forest	Locally grown and marketed farm products	At least 85% of the nutrients and/or feed needed for crops and/or livestock come from sources within 100 miles of the farm. Products from the farm are retail marketed within 400 miles of the farm.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
PLT01	Crop	Pasture	Range	Forest	Establish pollinator habitat	Establish nectar and pollen-producing plants in non-cropped areas such as field borders, vegetative barriers, contour buffer strips, waterways, shelterbelts, windbreaks, conservation cover, and riparian forest and herbaceous buffers.
PLT02		Pasture	Range	Forest	Monitor key grazing areas to improve grazing management	Monitor key grazing areas on pastureland and rangeland to determine if current grazing management meets management goals and objectives. A key grazing area is a small area of a pasture that is identified as being representative of the entire pasture.
PLT03				Forest	Forest stand improvement pre-treating vegetation and fuels	Manage vegetation and fuels in a forested area with mechanical/manual methods to facilitate future treatment with prescribed fire to restore native forest condition.
PLT04				Forest	Forest stand improvement, prescribed burning	Prescribed use of fire in a forest to restore native forest conditions with a focus on improving the condition of fire-adapted plants and wildlife habitat and reducing the risk of damage from intense, severe wildfires.
PLT05				Forest	Multi-story cropping, sustainable management of non-timber forest plants	Manipulation of forest species composition, structure, and canopy cover to achieve or maintain a desired native plant community to facilitate the sustainable management of native non-timber forest plant(s) (e.g., goldenseal, ramps, mushrooms, ginseng, ferns, "sugarbush", etc.).
PLT06	Crop	Pasture			Renovation of a windbreak, shelter Belt, or hedgerow for wildlife habitat	Renovate a windbreak, shelter belt, or hedgerow to add diversity for wildlife habitat. Replace plants threatened by invasive pests such as the emerald ash borer.
PLT07				Forest	Hardwood crop tree release	Hardwood crop tree release (CTR) in hardwood stands is a silvicultural technique used to enhance the performance of individual trees, while improving other objectives such as wildlife management, recreation, timber value, and aesthetics.
PLT08	Crop				Habitat development for beneficial insects for pest management	Establishment of habitat to attract and support populations of beneficial insects that provide natural suppress of undesirable insects or other pests. Beneficial insects used for pest management include insect arthropod, predators and parasitoids. Habitat requirements include shelter and food that attract and support beneficial insects. These can include trap crops and insectary strips (both permanent and annual.)
PLT10		Pasture	Range		Intensive management of rotational grazing	This enhancement is the intensive management of livestock and grazing forages to improve vegetation quality in the pasture and the health of livestock.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
SOE01	Crop				Continuous no till with high residue	Utilize continuous no-till/strip till/direct seed in the rotation in combination with high and low residue producing crops or cover crops to maintain a high level of residue cover through critical erosion periods.
SOE02	Crop	Pasture	Range	Forest	Protection of cultural resources	Protect cultural resources by establishing conservation cover on culturally significant sites.
SOE03	Crop				Continuous no till organic system	This enhancement is for using a continuous no-till, strip till or direct seeding method of planting throughout the planned rotation on an organic farm. High residue levels are maintained by including high residue-producing crops, or by low residue crops followed by a cover crop in the rotation. Termination of all cover crops is accomplished using non-chemical methods, such as flail mowing, roller crimper and frost kill. No herbicides are used for weed control.
SQL01	Crop				Controlled traffic system	Confines heavy traffic from tractor drive wheels/tracks, combine wheels, fertilizer or manure spreaders and grain carts to specific lanes through crop fields year after year.
SQL02	Crop				Continuous cover crops	Growing continuous seasonal cover crops of grasses, legumes or forbs following all annual crops during all the non-crop production periods of the rotation. Continuous cover cropping is applicable to conventional, specialty and organic crop production systems.
SQL03	Crop				Drainage water management for nutrient, pathogen, or pesticide reduction	Managing soil and/or surface water levels during the off season to reduce nutrients, pathogens, or pesticides leaving the field through drainage systems and flowing into downstream receiving waters. This enhancement may also be utilized to reduce the oxidation of organic matter in the soil and/or reduce wind erosion or particulate matter (dust) emissions.
SQL04	Crop				Use of cover crop mixes	Use of cover crop mixes that contain two (2) or more different species of cover crops.
SQL05	Crop				Use deep-rooted crops to breakup soil compaction	Use deep rooted crops to break up pans in the soil to improve internal drainage.
SQL06	Crop				Conversion of cropped land to grass-based agriculture for biomass or forage production and wildlife habitat	Conversion of cropped land to grass-based agriculture for biomass or forage production and wildlife habitat supports establishment and management of a mixture of high biomass producing perennial species on cropland where annually-seeded cash crops have been grown in monocultures.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
WQL01		Pasture	Range		Biological suppression and other Non-chemical techniques to manage brush and invasive species	This enhancement is for the reduction of invasive species and/or woody brush using physical and or biological control methods. Physical methods include pulling, hoeing, mowing, mulching or other similar methods. Biological methods include use of natural enemies either introduced or augmented. Use of chemicals is prohibited with this enhancement.
WQL02		Pasture	Range		Biological suppression and other non-chemical techniques to manage herbaceous weeds and invasive species	This enhancement is for the reduction of invasive species and/or herbaceous weed using physical and or biological control methods. Physical methods include pulling, hoeing, mowing, mulching or other similar methods. Biological methods include use of natural enemies either introduced or augmented. Use of chemicals is prohibited with this enhancement.
WQL03		Pasture	Range	Forest	Rotation of supplement and feeding areas	Rotation of Supplementation and Feeding Areas to manage areas of concentrated livestock use to improve livestock distribution and reduce localized areas of disturbances.
WQL04	Crop				Plant tissue tests and analysis to improve nitrogen management	Use plant tissue tests to adjust nitrogen application rates.
WQL05	Crop				Apply nutrients no more than 30 days prior to planned planting date	Apply nutrients (fertilizer, manure, etc.) no more than 30 days prior to the planned planting date of the crop.
WQL06	Crop	Pasture			Apply controlled-release nitrogen fertilizer	Apply only slow-release or controlled release formulations of nitrogen fertilizer.
WQL07	Crop				Split nitrogen applications, 50% after crop emergence	Apply 50% or more of the total nitrogen needs after crop emergence.
WQL08	Crop				Apply split applications of nitrogen based on a pre-sidedress nitrogen test on cropland	Use of a pre-sidedress nitrogen test (PSNT) to determine the need and/or rate of additional nitrogen to be applied during a sidedress application.
WQL09	Crop				Apply phosphorus fertilizer below soil surface	Apply all phosphorus fertilizer at least 3 inches deep and/or as a 2X2 row starter.
WQL10	Crop				Plant an annual grass-type cover crop that will scavenge residual nitrogen	Plant a cover crop that will scavenge nitrogen left in the soil after the harvest of a previous crop.
WQL11	Crop	Pasture			Precision application technology to apply nutrients	Use of precision agriculture technologies to apply nutrients to fit the variation in site-specific conditions found within fields.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
WQL12		Pasture	Range	Forest	Managing livestock access to water bodies/courses	Install structures or implement grazing management actions that assist in managing livestock access to water bodies and water courses.
WQL13	Crop	Pasture	Range	Forest	High-level integrated pest management to reduce pesticide environmental risk	Utilize advanced integrated pest management (IPM) prevention, avoidance, monitoring, and suppression techniques, and only apply the lowest risk pesticides available in an environmentally sound manner when monitoring indicates that an economic pest threshold has been exceeded. Pesticide applications must follow all label requirements.
WQL14	Crop	Pasture			Land application of treated manure	Field apply only manure that has been treated to stabilize nutrients and reduce odors and pathogens. Acceptable treatment alternatives are composting, anaerobic digesters or storage in a composting barn.
WQL15	Crop	Pasture			Reduce the concentration of nutrients on farm by limiting the amount of feed and fertilizer brought on livestock farms	Grow at least 75% of feed for livestock on the farm and use manure from the livestock to supply at least 50% of N, 90% of P and 90% K for crops grown on the farm.
WQL16	Crop				Use of legume cover crops as a nitrogen source	Produce at least 70% of the operation's nitrogen needs through the use of cover crops or the utilization of manure.
WQL17	Crop				Use of non-chemical methods to kill cover crops	Where cover crops are grown, eliminate herbicide use by using a roller crimper to kill the cover crop or use a cool season crop that will die back naturally as summer crops grow.
WQL18		Pasture	Range	Forest	Non-chemical pest control for livestock	Non-chemical livestock pest management addresses control of external pests and internal parasites of livestock without using chemical pesticides. Control techniques include grazing management, use of beneficial plants, other biological control methods, and mechanical control devices such as vacuums and traps. Monitoring of both pest levels and effectiveness of management application is an integral part of this enhancement. All techniques also address the necessary basic considerations to reduce the life cycle opportunities of the target pest(s).
WQL19		Pasture	Range	Forest	Transition to organic grazing systems	Transition to organic grazing systems supports the conversion of a conventional to an organic livestock grazing system.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
WQL20	Crop				Transition to organic cropping systems	Transition to organic cropping systems supports the conversion of a conventional to an organic cropping system. Key to the enhancement is the inclusion of management activities that improve soil and water quality in an “organic system plan” that adheres to the National Organic Program (NOP).
WQL21	Crop	Pasture	Range		Integrated pest management for organic farming	Managing pests on an organic farm, including farms transitioning to organic, with a high level integrated pest management (IPM) system that is based on an understanding of pest ecology. This system utilizes the IPM principles of prevention, avoidance, monitoring, and suppression, while excluding the use of synthetic pesticides.
WQT01	Crop	Pasture			Irrigation system automation	Using GPS guided variable rate irrigation or other innovative technologies that allow irrigation water application based on variable site conditions within a field.
WQT02	Crop				Mulching for moisture conservation	Using plastic or fiber mulch to reduce irrigation evaporation losses from bare soil surfaces.
WQT03	Crop	Pasture			Irrigation pumping plant evaluation	Evaluate existing pumping plant and identify and implement maintenance items needed to improve efficiency.
WQT04	Crop	Pasture			Regional weather networks for irrigation scheduling	Use data from a regional weather network to improve irrigation scheduling.
WQT05	Crop	Pasture			Remote monitoring and notification of irrigation pumping plant operation	Soil moisture monitoring with remote access to download soil moisture data.
CCR99	Crop				Resource-conserving crop rotation	The rotation shall cover at least 3 years of the CSP contract. The rotation is considered adopted when the resource-conserving crop is planted on at least 1/3 of the rotation acres. The resource-conserving crop must be adopted by the third year of the contract and planted on all rotation acres by the fifth year of the contract.
FRD01	Crop	Pasture	Range	Forest	On-farm research and demonstration	On-farm research and demonstration consists of the implementation of applied research projects on working farms to gather information and demonstrate the efficacy of the activity. The projects must fit within identified state priority topic areas.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
FPP02	Crop	Pasture	Range	Forest	On-farm pilot project	On-farm pilots consist of the installation, monitoring and publicizing of projects that fit within the identified state priority areas. Pilots should be practices, components, or management techniques that have shown environmental benefits through research but are not used by farmers in the project area. Practices, components, or management techniques must be implemented, monitored and publicized according protocols developed specifically for the project.
314		Pasture	Range	Forest	Brush management	Removal, reduction or manipulation of non-herbaceous plants on rangeland, native or naturalized pasture, pasture, hay land and forest lands where removal or reduction of excessive woody (non-herbaceous) plants is desired.
328	Crop				Conservation crop rotation	Growing crops in a recurring sequence on the same field to control erosion, improve soil organic matter, balance nutrients, improve water use efficiency, manage saline seeps, manage pests and/or provide food and cover for wildlife
329	Crop				Residue and tillage management, no-till/strip till/direct seed	Managing the amount, orientation and distribution of crop and other plant residue on the soil surface year round while limiting soil-disturbing activities to only those necessary to place nutrients, condition residue and plant crops.
338		Pasture	Range	Forest	Prescribed burning	Controlled fire applied to a predetermined area to maintain or enhance fire dependent ecologies.
340	Crop				Cover crop	The planting of crops such as grasses, legumes and forbs to provide seasonal cover that will reduce erosion, improve soil organic matter, promote efficient nutrient cycling, fix nitrogen in the soil, suppress weeds, increase biodiversity and/or provide food and cover for wildlife.
342	Crop	Pasture	Range	Forest	Critical area planting	Establishment of permanent vegetation on sites that have or are expected to have high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.
344	Crop				Residue management, seasonal	Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface during a specified period of the year, while planting annual crops on a clean-tilled seedbed, or when growing biennial or perennial seed crops.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
345	Crop				Residue and tillage management, mulch till	Managing the amount, orientation and distribution of crop and other plant residue on the soil surface year round while limiting the soil-disturbing activities used to grow crops in systems where the entire field surface is tilled prior to planting.
346	Crop				Residue and tillage management, ridge till	Managing the amount, orientation, and distribution of crop and other plant residues on the soil surface year-round, while growing crops on pre-formed ridges alternated with furrows protected by crop residue.
380	Crop	Pasture	Range		Windbreak/shelterbelt establishment	Windbreaks or shelterbelts are single or multiple rows of trees or shrubs in linear configurations to reduce surface wind speeds in order to control wind erosion, manage snow deposition, reduce the spread of odors, reduce pesticide spray drift and/or provide wildlife food and cover.
383		Pasture	Range	Forest	Fuelbreak	A strip or block of land on which the vegetation, debris and detritus have been reduced and/or modified to control or diminish the risk of the spread of fire crossing the strip or block of land.
384				Forest	Forest slash treatment	Treating woody plant residues created during forestry, agroforestry and horticultural activities to reduce fire hazards, insect infestations and/or improve the site for natural regeneration.
386	Crop				Field border	A strip of permanent vegetation established at the edge or around the perimeter of a field to provide a buffer between cropland and non-cropped areas to reduce cropland impacts and provide wildlife food and cover.
390	Crop	Pasture	Range		Riparian herbaceous cover	Grasses, grass-like plants and forbs that are tolerant of intermittent flooding or saturated soils and that are established or managed in the transitional zone between terrestrial and aquatic habitats to provide a buffer between agricultural areas and riparian areas and to enhance riparian zone functions.
391	Crop	Pasture			Riparian forest buffer	An area predominantly trees and/or shrubs that are tolerant of intermittent flooding or saturated soils and that are established or managed in the transitional zone between terrestrial and aquatic habitats to provide a buffer between agricultural areas and riparian areas and to enhance riparian zone functions.
393	Crop				Filter strip	A strip or area of herbaceous vegetation established on cropland that removes contaminants from overland flow.
394		Pasture	Range	Forest	Firebreak	A permanent or temporary strip of bare or vegetated land established to retard the movement of fire.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
395	Crop	Pasture	Range	Forest	Stream habitat improvement and management	Maintain, improve or restore physical, chemical and biological functions of a stream, and its associated riparian zone, necessary for meeting the life history requirements of desired aquatic species.
449	Crop	Pasture			Irrigation water management	The process of determining and controlling the volume, frequency and application rate of irrigation water in a planned, efficient manner.
511		Pasture			Forage harvest management	The timely cutting and removal of forages from the field as hay, green-chop or ensilage.
512		Pasture			Pasture and hay planting	Establishing native or introduced forage species.
528		Pasture	Range	Forest	Prescribed grazing	Managing the harvest of vegetation with grazing and/or browsing animals in order to enhance or maintain good forage production and provide wildlife food and cover.
550			Range		Range planting	Establishment of adapted perennial vegetation such as grasses, forbs, legumes, shrubs and trees in order to establish a function range ecology.
612				Forest	Tree/shrub establishment	Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.
643	Crop	Pasture	Range	Forest	Restoration and management of rare and declining habitats	Restoring and managing rare and declining habitats and their associated wildlife species to conserve biodiversity.
644	Crop	Pasture	Range	Forest	Wetland wildlife habitat management	Retaining, developing or managing wetland habitat for wetland wildlife.
645	Crop	Pasture	Range	Forest	Upland wildlife habitat management	Provide and manage upland habitats and connectivity within the landscape for wildlife.
647	Crop	Pasture	Range	Forest	Early successional habitat development/management	Manage early plant succession to benefit desired wildlife or natural communities by increasing plant community diversity.
650	Crop	Pasture	Range		Windbreak/shelterbelt renovation	Replacing, releasing and/or removing selected trees and shrubs or rows within an existing windbreak or shelterbelt, adding rows to the windbreak or shelterbelt or removing selected tree and shrub branches.
654				Forest	Road/trail/landing closure and treatment	The closure, decommissioning, or abandonment of roads, trails, and/or landings and associated treatment to enhance forest functions.
655				Forest	Forest trails and landings	A temporary or infrequently used route, path or cleared area within a forest established to provide access to the forest while limiting damage to the forest.

Conservation Activity List

NRCS Code	Eligible Land Use				Enhancement/Practice Name	Enhancement/Practice Criteria
660				Forest	Tree/shrub pruning	The removal of all or part of selected branches, leaders or roots from trees and shrubs to improve forest health and functions.
666				Forest	Forest stand improvement	The manipulation of species composition, stand structure and stocking by cutting or killing selected trees and understory vegetation to enhance forest health and functions.

For more information on each enhancement, visit the NRCS Web site at <http://www.nrcs.usda.gov/programs> or contact your local NRCS office.

Appendix E: Conservation Performance Point Questions and Matrices

To see the CMT questions, resource concerns, micro resource concerns, and conservation performance points for existing practices used in CSP Sign-up One, go to:

http://www.nrcs.usda.gov/programs/new_csp/cmt_scoring_pdfs/CMT_Tool_existing_questions_scores.pdf.

To see the conservation performance points awarded for specific enhancements in CSP Sign-up One, go to:

http://www.nrcs.usda.gov/programs/new_csp/cmt_scoring_pdfs/Enhancement_list_with_scores.pdf

To see the conservation performance points awarded for standard conservation practices in CSP Sign-up One, go to:

http://www.nrcs.usda.gov/programs/new_csp/cmt_scoring_pdfs/Practice_list_with_scores.pdf