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WORKING LAND CONSERVATION: CONSERVATION SECURITY PROGRAM AND ENVIRONMENTAL QUALITY INCENTIVES PROGRAM

HEARING

BEFORE THE

COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

UNITED STATES SENATE

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WORKING LAND CONSERVATION: CONSERVATION SECURITY PROGRAM AND ENVIRONMENTAL QUALITY INCENTIVES PROGRAM

Wednesday, January 17, 2007

U.S. SENATE,
COMMITTEE ON AGRICULTURE,
NUTRITION, AND FORESTRY,
Washington, DC

The Committee met, pursuant to notice, at 9:30 a.m., in room SR–328, Russell Senate Office Building, Hon. Tom Harkin, Chairman of the Committee, presiding.

Present or submitting a statement: Senators Harkin, Leahy, Nelson, Salazar, Brown, Casey, Klobuchar, Chambliss, Crapo, and Thune.

STATEMENT OF HON. TOM HARKIN, A U.S. SENATOR FROM IOWA, CHAIRMAN, COMMITTEE ON AGRICULTURE, NUTRITION AND FORESTRY

Chairman HARKIN. The Senate Committee on Agriculture, Nutrition, and Forestry will come to order.

Today's hearing covers the implementation of two programs that promote conservation on lands that are in agricultural production, the Conservation Security Program and the Environmental Quality Incentives Program, otherwise known as CSP and EQIP.

This hearing will examine the choices that have been made in implementing these programs and whether they are working as intended and delivering maximum environmental benefits.

The Conservation Security Program was one of my initiatives in the 2002 Farm Bill. Now, the objective is to pay farmers and ranchers for the environmental goods they produce; to pay them not for what they grow but for the benefits of how they grow it. Conservation and environmental benefits produced from land in production have value to society just like commodities do.

On the positive side, CSP is up and running in all 50 States with a high level of producer interest. On the other hand, CSP has been compromised in at least two ways. Dedicated funding has been taken away in appropriations and budget reconciliation bills, and USDA regulations, I believe, have distorted what we enacted in a way that excludes many of the producers we intended the program to benefit and fails to maximize the conservation benefits that CSP has the potential to provide.

For the first time ever in 2003, Congress offset the cost of a natural disaster. I want to repeat that. For the first time ever in 2003,

Congress offset the cost of a natural disaster by cutting a mandatory program in the Farm Bill. Never been done before.

We would never consider telling Louisiana that the cost of recovery for New Orleans would come out of their State's highway funds, or tell California that rebuilding after an earthquake would mean we just reduce other Federal spending in their State.

We must never accept taking conservation funds to pay for disaster assistance. A disaster is a disaster, whether it is a hurricane, a tornado, an earthquake, a fire, a flood, a drought, and it should be paid for out of the overall budget of the Federal Government just like we pay for every disaster and we always have until 2003.

So rather than the nationwide program that we enacted, the program has been limited to just 12.6 percent of the watersheds in the continental United States. Even in those watersheds, many producers who would be willing to adopt better conservation practices are largely excluded.

NRCS has chosen to give priority to farmers who have already adopted conserving practices and exclude those who need cost share and transitional funding in order to adopt those practices. And we will have more discussion about that with Mr. Lancaster.

This hearing will examine whether these choices by NRCS are consistent with the program created in the 2002 Farm Bill, and whether they are the best way to achieve the maximum conservation benefits for the available funds for the program.

We will also examine the Environmental Quality Incentives Program, EQIP, which provides cost-share and incentive payments for conservation.

A September 2006 report by GAO identified significant questions about the funding allocation formula used to allocate the annual funding to the States, particularly whether the factors in the allocation formula are closely tied to the program objectives, which are improving conservation on land in agricultural production and also supported by the best available data.

It is important that these EQIP funds are allocated to match the conservation needs that our country faces, yet the backlog of applications for this program varies widely from State to State.

In 2005, the last year for which figures are available, according to NRCS, the percentage of unfunded applications for EQIP varied from 7.4 percent in Hawaii to over 73 percent in New Jersey. In my own State of Iowa, 60 percent of all applications were turned down. Georgia had over 38 percent of all applications go unfunded.

To me this suggests that the problems identified with the allocation formula may be resulting in many good conservation projects going unfunded. So this hearing will consider the allocation issue and look at how both of these programs are functioning to promote good conservation practices on working lands.

I will reserve time for when the ranking member, when Senator Chambliss gets here for his opening statement. I will reserve that time for him. Before we turn to our first two witnesses, I would recognize the Senator from Vermont for the purposes of an introduction.

Senator LEAHY. Mr. Chairman, thank you very much for the opportunity to make a brief opening statement. The Judiciary Com-

mittee is about to begin an important hearing on prescription drug pricing, so I am going to have to leave for that.

I do want to congratulate the Chairman on his ascension to the Agriculture Committee Chair for the second time.

Actually, for the third time.

Wasn't there about 2 weeks in there somewhere?

Chairman HARKIN. Oh, that is right, we bounced up.

Senator LEAHY. Third time.

Chairman HARKIN. That is right. That is right.

Senator LEAHY. So I have been five or six times majority, five or six times a minority. They go back and forth.

Chairman HARKIN. Right.

Senator LEAHY. I say that as an encouragement to everybody here. I also pointed out to the new Majority Leader that he is the ninth Majority Leader I have served with, so those things change, too. I do like the artwork here in the Committee room, however.

[Laughter.]

Senator LEAHY. Sorry about that.

Mr. Chairman, under your leadership we wrote a tremendously successful Farm Bill in 2002. I look forward to working with you and Senator Chambliss on the 2007 Farm Bill.

I would like to briefly welcome Kathleen Merrigan back before the Committee. She is sitting back there. She will be testifying. She worked on my staff when I chaired this Committee. She has had a long and distinguished career.

I appreciate the work she gave me in helping me to write and pass the Organic Foods Production Act of 1990. And Senator Luger was ranking in that. We worked very closely, as did you, Mr. Chairman.

Chairman HARKIN. I remember we were there.

Senator LEAHY. One of the most successful laws enacted during that time, and we needed Kathleen's hard work to make it possible.

Today we are having a hearing on the Conservation Security Program, the Environmental Quality Incentive Program. I think those are going to be very important to this Committee as you write a new Farm Bill.

The boost in EQIP funding from the 2002 Farm Bill, the Regional Equity requirement has been particularly helpful to hundreds of Vermont dairies working to restore water quality in the Champlain Basin and elsewhere in Vermont. So if we can continue to provide additional funding for EQIP and expand the Regional Equity requirement this year, something that helps not just farmers but it helps everybody looking for clean water, looking for a clean environment.

The CSP has been underutilized in Vermont, but I look forward to testimony today on how to strengthen this innovative program during the re-authorization process.

We went a long way to pass this 2002 Farm Bill. I think it has made a real difference in rural America, but we have to continue these programs to help America's farmers and ranchers.

And again, Mr. Chairman, I thank you very much for your courtesy and the courtesy of my fellow members in letting me interject in here.

Chairman HARKIN. Well, Senator Leahy, thank you again for being such a great member of this Committee, and I was here and you were Chairman at the time when we passed a lot of that, and for always being a stalwart supporter of agriculture in all of its forms all over America. You have just been a great leader in this area. I know you have got to go do Judiciary Committee work.

Senator LEAHY. If you would indulge me just a tiny bit, the Committee has changed considerably since I first came here. I was telling Senator Casey of Pennsylvania the story about sitting down, Senator Lugar and I were the two most junior members way down where Ms. Shames and Mr. Lancaster are sitting. And Senator Talmadge, who is portrayed up there, was Chairman. He would sit here in a wreath of cigar smoke. And Senator Eastland, who would rarely ever come here, but as Chairman of the Senate Judiciary Committee would show up just when he had an amendment. He was the senior-most member of the Senate, President Pro Tem.

One day he comes in there and they mutter back and forth so nobody could understand it. It appeared that Senator Eastland hand a very large amendment, hands it to Chairman Talmadge, and Talmadge says, "Without objection, it is accepted."

And Lugar and I both say, "Well, wait a minute. Can we ask what is in that amendment?" They kind of look down. They try to figure who the hell we are. Talmadge takes the gavel and says, "We are adjourned." And on the way out, Senator Klobuchar, you should know that Senator Humphrey, Hubert Humphrey of your State turns to me and says, "Now do you understand the amendment?"

[Laughter.]

Chairman HARKIN. That is great history there. We will move on now with our two witnesses.

First we will recognize Arlen Lancaster, Head of the Natural Resources Conservation Service, the primary agency for voluntary conservation on working lands. Before joining NRCS, Mr. Lancaster served as USDA Deputy Assistant Secretary for Congressional Relations. We got to know him well there.

Previously, he worked for Congress in a variety of positions including Senior Policy Advisor for Senator Mike Crapo here, a valued member of our Committee and a good friend, Staff Director of the Senate Subcommittee on Forestry Conservation and Rural Revitalization, and also a staff member for Senator Robert Bennett, and was also very key in working on the Conversation Title in the 2002 Farm Bill.

Before I get to you, Mr. Lancaster, just a couple of notes. No. 1, we will recognize all the witnesses for 6–minute statements, hope you do not read them but just give us the highlights. And then we will engage in rounds of questions of 8 minutes each, for Senators for each round of 8 minutes each.

I will recognize our ranking member, our former Chairman, Senator Chambliss, for any statement he might want to make.

STATEMENT OF HON. SAXBY CHAMBLISS, A U.S. SENATOR FROM GEORGIA

Senator CHAMBLISS. Thank you very much, Mr. Chairman, and thank you for holding this hearing to continue the Committee's

oversight of two key conservation programs, Conservation Security Program and the Environmental Quality Incentives Program.

Last June the Committee held an oversight hearing on all of our conservation programs including these. At that time, our goal was to ensure the programs were working as effectively as possible. Today's hearing will allow us to dig a little deeper into CSP and EQIP.

Without a doubt, CSP has had a difficult time since 2002. Difficulties in implementation and lack of funding have kept it from becoming what it was intended. CSP raises questions such as, What is the WTO status, green or amber box? Should we pay producers for conservation they have already achieved? With limited conservation dollars and serious environmental challenges, shouldn't we be focusing on where we can make the biggest environmental gains?

While not the topic of this hearing, I look forward to discussing these issues as the Committee develops the 2007 Farm Bill.

EQIP may not be perfect as we will hear today from the Government Accountability Office, but it is doing an excellent job of helping to solve agriculture's environmental challenges, especially in my home State of Georgia. Perhaps I am biased, but my State truly is doing a great job of using Farm Bill programs to put conservation on the ground and keep producers on the land.

For those States having trouble with conservation, look to Georgia. It is a model of cooperation, science-based decision making, and tangible conservation results.

In large part, Georgia's success is due to the efforts of one of our witnesses today, Mr. Jim Ham, in his work in cooperation with our Natural Resource Conservation Service, State Conservationist, the Georgia Soil and Water Conservation Commission and the Georgia Department of Natural Resources.

Mr. Chairman, I would like to go ahead and just make an introduction of Jim right now as opposed to when he testifies.

Chairman HARKIN. Please.

Senator CHAMBLISS. Jim's family has been friends of mine for I guess about 30 or 35 years or so and I know them well and I am very proud that he is here.

Jim is a fifth-generation farmer from Monroe County, Georgia, and he operates a 300–head cattle operation with his brother on about 1,400 acres of pasture and forest land. Jim is a member of the Board of County Commissioners for Monroe County, the Towaliga Soil and Water Conservation District and the Georgia Association of Conservation District Supervisors. He has served as president of this association for the past 2 years.

This is Jim's second time testifying before the Committee. His first was at the Farm Bill field hearing last June in Albany, Georgia. As always, Jim, we appreciate your input as a farmer and conservationist.

And in closing, I would just like to thank all of our witnesses for appearing today and look forward to their testimony.

Chairman HARKIN. Thank you very much, Senator Chambliss. We will now recognize Mr. Lancaster before we go to Ms. Shames. Please proceed, and welcome again to the Committee.

STATEMENT OF ARLEN LANCASTER, CHIEF, NATURAL RESOURCES CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, DC

Mr. LANCASTER. Thank you, Mr. Chairman, and members of the Committee, thank you for the opportunity to be here today to discuss working lands conservation activities. My full testimony has been submitted for the record, and so I will summarize.

In my initial months as Chief of the Natural Resources Conservation Service, I have been fortunate to be able to get out into the field and view the conservation work the farmers and ranchers are achieving. I can attest that the conservation accomplishments taking place across the country are as important as they are diverse.

In a single year landowners with NRCS and our partners such as State agencies and conservation districts have planned conservation systems on 50 million acres, representing a 60 percent increase over 2001. We have reduced soil erosion by more than 75 million tons, created, restored and enhanced 318,000 acres of wetlands and improved irrigation water management on 1.1 million acres.

And that is just a sample of things that we and our partnership brought to the Nation in 1 year.

Mr. Chairman, these actions did not come about on their own. The focus of NRCS is centered on working lands and ensuring that these lands continue to produce valuable agricultural commodities and contribute to local economies.

If you visit any county in the U.S., you will likely find that the landowners have a relationship with our local NRCS staff founded on the technical knowledge and resources that are available through our field offices.

Everything that happens begins with our basic conservation technical assistance, and as producers decide to adopt specific plans or practices, they may build on that technical assistance by utilizing the financial assistance available from the suite of Farm Bill programs.

In turning to the two programs the Committee has interest in today, the Environmental Quality Incentives Program is the flagship of our portfolio. The increased funding for EQIP in the 2002 Farm Bill greatly expanded program availability including funding obligated between fiscal year 2002 and fiscal year 2006, almost 3.1 billion dollars. EQIP will benefit close to 185,000 participants.

Producer demand continues to be high for EQIP. In fiscal year 2002, the agency was able to fund one in every five requests. In fiscal year 2005, we funded one in every two requests for a total of 49,406 producers receiving contracts through this program.

While EQIP remains an extremely popular program, NRCS continues to make ongoing improvements to the program and the methodology by which EQIP resources are allocated. For example, the EQIP allocation formula is under review and potential update.

As part of its review process, NRCS has awarded a competitive contract for an independent review of all NRCS conservation program formulas, including the EQIP formula. We have also planned to reassess the EQIP financial assistance formula to take place after the results of that independent review is established.

As my written testimony describes, unfortunately, the merit-based resource allocation formula is not always allowed to function properly. Nevertheless, we believe that overall, EQIP is providing unparalleled conservation results, and the increased program flexibility and improved program features will continue to make EQIP one of the most popular and effective conservation programs of the Federal Government.

And while we have numerous other working lands conservation programs, I understand the Committee wants to focus on only one other effort this morning, the Conservation Security Program. CSP provides payments to producers who practice good stewardship on their agricultural lands with incentives for those who want to do more.

In its first 3 years, CSP has generated strong interest across our Nation among out Nation's producers.

The first sign-up was held in July of 2004 in 18 priority watersheds within 22 States. In 2005 and 2006, CSP was expanded and implemented in a total of 280 watersheds nationwide, including watersheds in every State as well as Puerto Rico and Guam.

Including the most recent sign-up, CSP has invested in the operations of nearly 19,400 stewards on 15.5 million acres of working agricultural land.

Regarding program financial management, NRCS has implemented a number of management measures to prioritize program spending primarily by delivering the program in priority watersheds, targeting enrollment to include good conservation stewards, and concentrating payments on conservation enhancement activities that generate additional resource benefits.

Additionally, NRCS has instituted several internal controls. I would note that out of more that 2,100 initial 2004 CSP contracts reviewed by the GAO, only 12 have been found to contain deficiencies. This is an outstanding record and a testimony to the ability NRCS field staff to implement a complex program with excellent results. We feel we have made significant improvements to CSP and are pleased with the results of the program thus far.

In closing, I am very proud of the accomplishments of NRCS and its partners on working lands conservation. While we have focused today on just a few of the working lands programs that NRCS offers, there is a broad portfolio of work happening out in the field. Under tight time constraints and given a multitude of demands and pressures, I believe our agency's implementation record is impressive.

Since 2002, NRCS has provided assistance to 1 million farmers and ranchers. Together we have applied conservation on more than 130 million acres of working farm and ranch land. We have also invested $6.6 billion of the taxpayers' funds directly with farmers and ranchers to produce environmental improvements that will benefit us all.

I believe we have conservation in the right order of priority beginning with sound conservation planning, allocating resources based on sound natural resources factors, enabling local leadership to set priorities and recognize that everything comes back to the voluntary decisions of farmers, ranchers and landowners. If this

process is allowed to work, there is no limit to what can be achieved in conservation for our natural resources.

Thank you again for this opportunity to appear here today, and I look forward to responding to any questions the members of the Committee might have.

[The prepared statement of Mr. Lancaster can be found on page 75 in the appendix.]

Chairman HARKIN. Thank you very much, Mr. Lancaster. Now we turn to Lisa Shames, Acting Director at GAO, responsible for GAO's work on food and agricultural issues.

I hope you have all gotten a copy of the GAO's testimony today on conservation. It should have been made available to you.

Ms. Shames, welcome to the Committee and please proceed.

STATEMENT OF LISA SHAMES, ACTING DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT, U.S. GOVERNMENT ACCOUNTABILITY OFFICE, WASHINGTON, DC

Ms. SHAMES. Thank you. Chairman Harkin, Senator Chambliss, and members of the Committee, I am pleased to be here today as part of your oversight of conservation programs to ensure that they promote environmental goals and benefit the agricultural sector.

GAO's full statement has been submitted for the record, so what I would like to do now is just highlight two of our reports that we have issued recently on EQIP and CSP.

These programs are substantial. In fiscal year 2006 alone, EQIP provided $1 billion and CSP $260 million in financial and technical assistance to farmers and ranchers. That is why it is critical that EQIP and CSP program benefits help address their intended environmental benefits.

Our work identified opportunities where NRCS can better demonstrate that this was happening. First, regarding EQIP's general financial assistance formula. NRCS has periodically modified the formula's, factors and weights that determine how much each State is to receive.

The most recent update was in fiscal year 2004 following passage of the Farm Bill; however, we found no documented rationale or explanatory information for the 31 factors. For example, the formula included a factor addressing impaired rivers and streams, but it was not clear whether or not this factor is based on general water quality concerns or specific concerns caused by agricultural production.

In addition, some data sources used to weight the factors were questionable or outdated. For example, of 29 data sources, we found that five were used more than once, six were not the most currently available, and ten could not be verified.

These factors and weights affect the amount of money each State receives. For example, we determined that if the weight for a given factor were increased by 1 percent, $6.5 million would have been allocated to one factor at the expense of another. Consequently, the financial assistance allocated to individual States would have been affected. We recommended that NRCS document the rationale for its choice of factors and weights and use accurate and current data.

Second, regarding EQIP's performance measures, NRCS has begun to develop long-term, outcome-oriented performance meas-

ures for EQIP along with numeric targets to be achieved by 2010. These measures can provide valuable performance information to NRCS on the progress being made toward these targets.

As a next step, NRCS can use this performance information to refine its assistance formula and link EQIP program payments to the most significant environmental concerns; however, while NRCS agreed that they might eventually make this link, at the time of our report they had no plans to do so. We recommended that NRCS continue to analyze and use performance information so this link can be made.

Third, regarding duplicate payments, as you know because of limited funding, duplicate payments may result in some producers not receiving program benefits for which they are entitled.

Our analysis found examples of duplicate payments, as Mr. Lancaster mentioned, between CSP and EQIP because of similar conservation actions these programs finance. For example, we found a producer received a CSP payment of over $9,000 and an EQIP payment for almost $800 for the same action, crop rotation.

While NRCS has the authority to recover duplicate payments, it did not have a comprehensive process to preclude or identify them. We recommended that NRCS develop such a process to review both incoming applications and existing contracts and take action to recover any duplicate payments that are found.

In conclusion, EQIP and CSP can play valuable roles to encourage farmers and ranchers to act as stewards of the Nation's natural resources; however, as you are well aware, the Nation is faced with a current deficit and long-term fiscal challenges.

Because we cannot continue business as usual, NRCS must be able to better demonstrate that EQIP and CSP payments are addressing the most significant environmental concerns and benefiting the agricultural sector.

Mr. Chairman, this concludes my statement. I will be pleased to respond to any questions that you or members of the Committee may have.

[The prepared statement of Ms. Shames can be found on page 100 in the appendix.]

Chairman HARKIN. Ms. Shames, thank you. We will now begin a round of 8 minutes each for Senators.

Mr. Lancaster, again, thank you and congratulations on your new position. I think you have got one of the best jobs there is in terms of environment, and I am sure, I am joined, I am sure, with your old boss here in wishing you the best in your new position.

I just want to take you through several aspects of the Conservation Security Program as implemented. I probably will not get them all through in my first 8 minutes, but I will finish in my second round.

NRCS has created a self-assessment workbook for prospective applicants. As I understand it, this workbook assesses the existing practices on the applicant's farm or ranch to determine whether they have achieved the, quote, "minimum treatment level" for their operation.

My question is: Does the self-assessment process allow producers willing to adopt conservation practices that would achieve the, quote, "minimum treatment level" to enroll in the program?

Does this assessment process that you have allow producers who are willing to adopt conservation practices to achieve the minimum treatment level that would allow them to enroll in the program?

Mr. LANCASTER. Mr. Chairman, as you know, clearly the CSP program is offered in three tiers. The first tier, that lowest bar requires that a producer meet at least two national priorities to the sustainable level. Based on that, they do have the opportunity to improve their other resource concerns to that sustainable level.

Given the nature of the funding for the program, as we prioritize and as we look at those applicants that are applying for the program, we have the Tier 3, which again is addressing all those resource concerns to the sustainable level.

Tier 2, which is addressing those and again with that option to or with that requirement that they increase their level of conservation on a national priority to a level of sustainability.

There is a tier available for producers who apply to the program, get in and intend to do more. With limited funding, we have focused on rewarding those producers who really have demonstrated that they are conservation producers and by that create the incentive for producers to increase their level of conservation.

Chairman HARKIN. Well, Okay. That is my point. You have this assessment, you have this workbook. Let's say a rancher fills it out and they want to adopt conservation practices that would get them to the minimum treatment level.

Under the rules of NRCS now is they are not allowed in the program. They are shifted and sent over to EQIP or some other, quote, "appropriate conservation program."

Now, again, there is a reason for my asking that question, and I think your answer elucidated a little bit there, and that is when we set this up for Tier 1, 2 and 3, it was really our expectation that in the initial years of this program that the bulk would be in Tier 1, getting everybody in, less in Tier 2, less in Tier 3 and that might shift over a period of time as you got more and more farmers enrolled.

It has sort of become topsy-turvy. I am quite surprised, as a matter of fact, at the bulk of those that are now in Tier 3, but not in Tier 1, which indicates to me that it is not quite working as intended.

The statute does not provide for the exclusion of farmers from eligibility for not having adopted practices without the program's incentive payments and cost share, does it?

There is a statute here, and it does not exclude any farmers or ranchers who have not adopted practices without the program's incentive payments and cost share. In other words, it does not say, "You have got to do all these things first, and then you get in the program."

The statute does not say that. So again, the reason I am pointing this out is that more and more it is becoming more and more difficult for farmers with limited means maybe to get into this program until they have first adopted some practices.

Now, basing eligibility on an assessment of the current conservation status of an operation rather than on the willingness of an applicant to commit to achieving a higher level of conservation performance than they currently have provides little incentive to pro-

ducers who need the program's cost share or enhancement payments to improve their conservation efforts.

I just want to know if you have a comment on that or not. I mean, do you understand the import of what I just said?

Mr. LANCASTER. Yes, Mr. Chairman. When I look at the needs of conservation producers or when I look at the needs of producers to reach their conservation goals, it is important that we have a suite of programs, different tools to help them reach their goals, cost-share programs like EQIP. And I also believe that a stewardship program like CSP is an important part of helping landowners reach their conservation goals.

As GAO indicated and as you have indicated, the funding for the CSP program has changed I think six times in the history of this program.

If you are going to have a program that would be available to everyone so that you can reach those producers who are not performing at those higher levels of conservation, that would be one thing. We have a program, though, that is capped, that is limited.

In looking at the suite of programs, we have a stewardship program, which I think has been effective in creating an incentive for folks to increase the level of conservation so that they can enter into the program. We also have a suite of programs that help producers meet their conservation goals, increase their level of conservation.

With limited funding, I think it is appropriate to divert those folks who have not reached that bar of being the best who are at that higher level of stewardship to a program that can help them get there.

And so with limited funds, Mr. Chairman, I think what NRCS has done in rewarding the best is the most effective use of that program.

Chairman HARKIN. That is just a value judgment that you are placing on it. I do not think the statute intended it to be that way. Now, you are right about the limitation on funds and stuff; Congress did that, you did not do that. And we have to get through that one, but even with these limitations, it seems to me a skewing of the program to just say that we are just going to take care of those who have already done these practices.

Now, again, and this will be my last question before my time runs out, a key feature of CSP is equitable treatment of those who have previously adopted conservation practices. They are to receive enough of an incentive so they continue those practices and are not placed at a competitive disadvantage versus those who later adopt the practice with assistance from the program. But CSP also specifically provides incentives for adopting new practices, delivering new conservation benefits.

In his written testimony, which I read last night, Craig Cox, who is on the next panel, asserts that CSP as currently structured is spending nearly all of its funding to reward producers for their, quote, "benchmark conservation practices"; that is, the conservation practices that were already in place on the farm or ranch for 2 years before the producer signed up for CSP.

Now, is Mr. Cox correct in this?

Mr. LANCASTER. I think when you look at the structure of payments, a big part of those payments are for activities that have occurred. Again, you are rewarding those producers who have proven that they are good stewards to create an incentive for other producers to enter into the program. But a large portion as well of the CSP program is for enhancements, which are those practices that are occurring above the sustainable level.

Chairman HARKIN. Well, my last statement is it is my understanding that NRCS will not compensate for any new practices in the initial CSP contract, but that payment for new practices can only happen after the producer signs a second modified contract. So I think you can see why some would question whether NRCS is getting the maximum environmental benefit out of the CSP regulations.

Now, these are regulations, not the law, so I will come back to that in my second round and my time is up and I would yield to my friend from Georgia, Senator Chambliss.

Senator CHAMBLISS. Thank you, Mr. Chairman, and, Arlen, it is good to have you back up here. I guess the third hat you have worn on the Hill here in recent years. It is always a pleasure to have you, and I am pleased that you are in a position of NRCS Chief here.

Georgia farmers and conservationists continue to remind me of the need for technical assistance. You addressed that somewhat in your opening comments. But what is NRCS doing to ensure that it is available even as funding for it declines and does Congress need to address technical assistance as it develops the 2007 Farm Bill?

Mr. LANCASTER. Mr. Chairman, I appreciate that question. When you look at technical assistance, I really believe that that is the backbone of our conservation delivery system. In this country, we have many producers and what they are seeking is that technical assistance, and the financial assistance is an added benefit to their efforts.

When you look at technical assistance, as an agency, I don not believe NRCS can do it alone. We work closely with our partners, State agencies, with conservation districts and with RC&D Councils to deliver this technical assistance to landowners.

And as you look at our discretionary account, I think a growing percentage of our conservation operations, our conservation technical assistance account, it is earmarked, and so those dollars are not going directly to our personnel to deliver technical assistance in the field. Many of that is going through pass-through projects or in directed activities.

As you look at the next Farm Bill, we do have the ability to deliver technical assistance through our financial assistance programs.

The Committee held a hearing on TSPs recently, or last year, and that is an opportunity I think again to increase the level of technical assistance that is available to landowners.

But I think you hit it right on the head that the focus of our agency is on that technical assistance. That is the key part of the delivery of these conservation programs. And as Congress looks at these programs and they look at our discretionary accounts, I cer-

tainly believe that that is the key to effectively delivering these conservation programs is to have landowners who have sound technical assistance, who have given the effort to develop a conservation plan so that these other programs fit within the context of their goals that they have outlined.

Senator CHAMBLISS. Does the 2002 Farm Bill's prohibition on bidding down make it more difficult for NRCS to optimize environmental benefits as required by EQIP?

Mr. LANCASTER. In 2002 when Congress looked at the bid-down authorities, the concern was the impact to limited resource producers, that if you allow individuals to bid down to get into the program, you are going to disadvantage those who do not have the financial resources to pay a higher percentage of the cost share in those practices.

As an agency, when you look at EQIP, I think the increased funding has reduced the backlog that we have in the program, but we are also able to create separate pools of funding for different producers.

To answer your question directly, I think that there are opportunities to look at price discovery that may not necessarily require producers to compete with one another on what percentage cost share that they are willing to accept for a program. If you have better price discovery on what those payments are, we are able to address those TA needs without necessarily going to a bid-down system.

Senator CHAMBLISS. What does the Administration believe it costs to fully implement CSP per year?

Mr. LANCASTER. There are a lot of assumptions when you look at CSP in total funding, but if you do a quick, back-of- the-envelope penciling out of the program, with 930 million acres of non-forested agricultural land, if you assume 50 percent of that land was to enroll in the program, our average cost per acre is running $17, $20. So you take 450 million acres, $20 per acre, you are about $9 billion a year for the program.

Senator CHAMBLISS. Ms. Shames, are there any legislative impediments to NRCS implementing your recommendations for EQIP?

Ms. SHAMES. No, Senator, there are no legislative impediments. What we have recommended are management improvements that can help NRCS better demonstrate how its program payments are achieving the environmental outcomes.

Senator CHAMBLISS. I am pleased with NRCS' efforts to better understand and quantify the benefits from conservation programs. Many others in this room, including Craig Cox, who will testify on the second panel, have aided in this effort.

Optimizing environmental benefits or quantifying environmental effects of conservation programs are not as easy as it might seem.

Has GAO done any work on the difficult but important task of assessing the environmental benefits of conservation programs, and does GAO have any insight or advice on this issue?

Ms. SHAMES. What I can tell you based on the work that we have seen Government-wide is that outcomes that take a long time, including conservation improvement. So setting outcome-oriented

goals is a good step to becoming more results oriented. We do rely on the subject matter expertise of the agencies.

When GAO looks at programs such as EQIP or CSP, we are really looking at the management to make sure that what they are doing is as efficient and as effective as possible.

Senator CHAMBLISS. Arlen, I continue to be concerned about the looming deadline of July 31 for livestock operations to have the necessary permits and nutrient management plans as required by the Concentrated Animal Feeding Operation Regulation.

EPA estimates there are about 18,800 large CAFOs that must have a nutrient management plan in place by that date. By NRCS' figures, 14,300 plans have been applied.

What is NRCS doing to ensure the others are prepared for that deadline?

Mr. LANCASTER. Mr. Chairman, Comprehensive Nutrient Management Plans are, like conservation plans, an important, integral base part of an operation.

We are currently looking at our TSP program, and, as you recall from the hearing earlier, there have been questions about the effectiveness of that program.

As we look at our not-to-exceed rates and how we really pay an effective and accurate cost share for those TSPs, it is important to recognize, one, that the not-to-exceed rates are not the maximum that a producer could pay a TSP to carry out that work. But the point is we are looking at our TSP program to make sure that it is as effective as possible so that that is a tool that landowners can utilize to address to reach their CNMPs.

Additionally, Congress has given us the authority, and it is something I am pursuing, to pay for CNMPs out of the financial assistance program within EQIP. So we recognize that deadline as well, and we are working closing with industries to develop those programs that can address the need for Comprehensive Nutrient Management Plans.

Senator CHAMBLISS. Thank you, Mr. Chairman.

Chairman HARKIN. Thank you very much, Senator Chambliss.

Now I will recognize in order, we will go like this: Senator Crapo, Senator Casey, Senator Klobuchar, Senator Nelson, Senator Brown and Senator Thune. Senator Crapo.

Senator CRAPO. Thank you very much, Mr. Chairman, and I welcome this opportunity to welcome Arlen Lancaster here before the Committee. As has already been said, he is a tremendous hard worker. He has been on my staff and did super work there. We hated to lose him, and now he is doing great work for the NRCS, and we are looking forward to working with him.

I also want to indicate that we have a mark-up in the Finance Committee on the minimum wage bill that I am going to have to leave to momentarily so I will probably have to cut my questions short. I apologize for that.

I did have two questions I wanted to try to get in, and Arlen, the first one was for you. As you know, an issue that I have been interested in is how the Farm Bill conservation programs can work in conjunction with Endangered Species Act objectives in terms of recovering species.

And we need to use the protection and promotion of species as a recovery objective, in my opinion, for Farm Bill programs as much as possible without violating or leaving the original objectives of those programs.

In your testimony, you mention that NRCS' efforts have been engaged in addressing species recovery in some context, including sage-grouse habitat in Idaho and in other western States. Could you tell us just quickly what work the NRCS is involved in that is helping to improve and utilize land conservation programs to address threatened and endangered species?

Mr. LANCASTER. Mr. Chairman, as you talk about reaching goals for species conservation and wildlife, we cannot miss the fact that the majority of this country is in private landownership, and it is those private landowners and their conservation efforts that will really address wildlife needs and habitat.

And as an agency that works with those landowners across the suite of our programs from CSP to EQIP to the Wildlife Habitat Incentives Improvement Program, we are addressing those needs of landowners to implement habitat needs.

Specific to the Sage Grouse, I think that that is a demonstration how effectively private landowners with the help of NRCS can work with State agencies, can work with cooperators to demonstrate the habitat improvements they are making to address the need for the Fish & Wildlife Service to look at a potential listing of species.

We work very closely with the Fish & Wildlife Service on our programs. I have worked closely with the Director of the Fish & Wildlife Service as we try and get some programmatic agreements on our practices.

When we are implementing practices that provide a net benefit to species, we can work closely with the Agency, with the Fish & Wildlife Agency to streamline that process so that we can get those practices on the ground and those habitat improvements implemented.

And so I think to answer your question, it is hard to pin down one thing because when I look at wildlife habitat and I look at our programs and as we focus on water quality and water quantity and soil quality and air quality, all of those measures to improve those resource concerns directly benefit species.

But we are also able to I think target our programs within States toward specific species. In Idaho, we have worked closely with the State to address Sage-Grouse, to address Bull Trout and other issues. In Montana, I know we have worked on the Grayling.

Other parts of the country we have worked on species specific by utilizing our State Technical Committee in how we target those resources.

Senator CRAPO. And that can be done without abandoning the original objectives of the various conservation programs?

Mr. LANCASTER. Absolutely. Again, I think as you optimize the environmental benefits, you are providing a direct benefit to wildlife.

Senator CRAPO. Well, thank you. I do have a number of other questions. I might just submit those to you because of my time constraints. But, Ms. Shames, I did have one question I wanted to ask you. In your testimony you indicated that there was identification

of eight cases of duplicate payments between CSP and other programs that was in violation of the law. And the recommendation I believe is that a very strong new program to identify these overpayments be adopted by NRCS, and I certainly agree with that objective.

The question I have is this: As I do the math, it appears that, depending on how you interpret the numbers that you have come up with, NRCS is about 96 to 97 percent effective in avoiding those duplicate payments, which I think is a pretty good record, and we are talking about how to get that last 3 to 4 percent. Even if you make all the assumptions in favor of that, it might even be down to maybe 1 percent of payments that are duplicate stopped.

And the question that obviously comes to my mind is how costly will it be to put a program in place to find that last couple of percentage points versus what we are losing in the current system even given the fact that the NRCS has indicated they have even added additional programs now to try to address this? Did you study that?

Ms. SHAMES. There is always a tradeoff between what a program is going to cost and what the outcome is going to be. What we recommended, in fact, was that there be an automated system put in place for NRCS to better identify incoming applications that may potentially have duplicate payments and also to review existing contracts. So we are talking about building a management tool to help NRCS do that.

Senator CRAPO. And you think that can be done without a significant increase in administrative cost?

Ms. SHAMES. We did not examine the administrative costs, but surely that is one of the factors that should be considered.

Senator CRAPO. All right. Thank you. I apologize, Mr. Chairman, I am going to have to run to that Finance Committee meeting, but thank you for holding this hearing.

Chairman HARKIN. You have set an example; you are yielding back 2 minutes of your time.

Senator CRAPO. I am yielding back 2 minutes. Can I get it some other time in another hearing?

[Laughter.]

Chairman HARKIN. Right, exactly, bank it. Thank you very much, Senator Crapo.

Now we welcome a new member of our Committee, the Senator from the great Keystone State of Pennsylvania, Senator Casey. Welcome to our Committee, Senator Casey, and please proceed.

Senator CASEY. Thank you, Mr. Chairman. I appreciate this opportunity to question these witnesses, and I appreciate your leadership of this Committee and we are honored to be here.

I was somewhat surprised that Senator Leahy told in a public setting the story that he told me in private about Senators from long ago, but I appreciate his openness on that.

Just a couple of questions, and I may reserve some time for later, but the interaction between the two of you, and we appreciate your testimony and the expertise you bring to these issues. It reminds a great deal about the work I did in State Government.

I spent 10 years there, eight of those ten as the Auditor General of Pennsylvania, kind of a GAO-type public official in that sense.

And I was always struck by in State Government, and I think it has application to what we do in the Federal Government, as to what happens when a report like this is submitted, what happens on the end of the scale where the GAO is focused on an issue and provides recommendations and findings, but also what the Government does in response to that.

And I guess my first question was more along the lines of the process in terms of how that benefits taxpayers, and I guess my first question is this, and I guess, Ms. Shames, this would be addressed to you: How does this normally transpire if GAO, as it is done here, and I guess your report is dated today, I guess. What happens from here after you have submitted your report after the Government agency has a chance to respond, what is the timeframe there in terms of how they respond and how you deal with that and how that is made part of the public record?

Ms. SHAMES. Agencies are to provide a letter within 60 days in terms of how they are going to follow up with GAO recommendations. That letter is what we use then as a basis for whether or not agencies have been responsive to what we have suggested.

GAO has its own tracking process, so we do follow recommendations to see, in fact, if they have been taken care of, and if they have, we do write that up as an Accomplishment Report.

We have found based on tracking these recommendations over the years that if agencies have not implemented the recommendation within 4 years, that it is not likely that the recommendation will ever been implemented.

Senator CASEY. How quickly between the time you have reported and the time that you have a sense of implementation or at least a process to begin implementation, what is the timeframe within which the public would know that? In other words, do you do a 6–month review or a 1–year review or how does that——

Ms. SHAMES. We do an ongoing review in terms of the recommendations, and ultimately that does become part of the public record. When we have decided that the recommendation has been followed, there is an Accomplishment Report. That is publicly available.

Senator CASEY. It is called an Accomplishment Report?

Ms. SHAMES. Yes.

Senator CASEY. Mr. Lancaster, one question I had because it was cited early in the report about performance measures, would you just tell us a little bit about that in terms of even apart from what GAO is reporting on today, how do you and the team you work with monitor and keep track of and try to be cognizant of performance measures with regard to CSP or really any other program that you administer?

Mr. LANCASTER. As was alluded to, when you are talking about conservation practices and deriving the actual outcomes of those practices, it can often be difficult. You are talking about resonance times of nutrients in the soils, you are talking about measures that are oftentimes difficult to capture.

We have a process underway, the Conservation Effects Assessment Project, to really to determine the outcomes of those programs.

But specific to performance of our programs and how we are implementing them, we have included within our business lines and within our strategic plan outcome-based goals for our programs so that we can measure those things that are easily quantifiable in terms of numbers of acres with conservation plans applied or numbers of acres with irrigation practices applied or acre feet that we are addressing through specific practices.

Again, we are building that into our business alliances as an agency, and so we do measure ourselves against that performance level. It is something that I closely look at throughout the course of the year to see where we are at in reaching those goals.

In terms of GAO, I find their reports constructive, and what we have done with these recommendations in many cases has been to implement them. There are some points that we may disagree on, but those that we agree on we implement.

One of their recommendations was to take those outcome-based measures, those performance measures and integrate them into our factors of our allocations. That is something we intend to do once we have good confidence in those numbers and that data as well as understand the effects of that on that allocation process.

Senator CASEY. I know I am almost out of time, but I guess my last question, I may reserve some time, would be when you look at these findings today in this report and you hear some of the dialog and the question and the answer today, where do you believe there is the most significant conflict between what GAO is saying today and what you believe to be the case in terms of how you measure your performance?

I realize you may agree in some areas, what area or what finding creates the most conflict between what you believe you are doing and what GAO is finding, if you can?

Mr. LANCASTER. The point that we would disagree with is that we are not optimizing the benefits of the EQIP program. I think if you look at our factors, those are resource-based factors so we are addressing those resource concerns, as well as the entire process for distribution of those dollars.

I do not think GAO is saying that the projects that are being funded are not optimized, that we are not addressing those resource concerns within a State. So when you look at the allocation formulas to the States, the State evaluation and ranking process, the State Technical Committee in their role in making recommendations on how we rank and look at those projects, I think the projects that are occurring, the landowners that are getting funded, we really are optimizing the program and we are addressing the program purposes.

Senator CASEY. Thank you. I may reserve some time, but I will move one.

Chairman HARKIN. This is great. This is setting great examples here. Next was Senator Leahy, who has gone, Senator Klobuchar, who is not here, and Senator Nelson. Senator Nelson.

Senator NELSON. Thank you, Mr. Chairman. With the concurrence of the Chair, I would like to make an introduction of someone who is going to be in the next panel from Nebraska because my schedule is not going to permit me to be here.

It is really a pleasure for me to introduce Duane Hovorka from Elmwood, Nebraska. He is the Farm Bill Outreach Coordinator for the National Wildlife Federation. He also serves on the NRCS State Technical Committee for Nebraska and on the University of Nebraska Center for Grassland Studies Advisory Board.

He has been involved in the analysis and development of Farm Bill proposals dating back to the 1990 Farm Bill. Today he will be testifying on behalf of the National Wildlife Federation, the Sustainable Agriculture Coalition and the Isaac Walton League of America.

Duane has 25 years of experience in public policy analysis, and he recently joined the National Wildlife Action Federation after 10 years as a consultant doing public policy work for wildlife and agricultural organizations including the National Wildlife Federation, the Sustainable Agriculture Coalition, the Center for Rural Affairs, which is located in Nebraska and the Nebraska Wildlife Federation. So it is my pleasure. I am sorry that I will not be able to be here for his presentation, but I know I am looking forward to reading it.

Mr. Lancaster, is it possible for two farms in the same eligible watershed to receive the same grade or ranking on their CSP applications but have one of them not receive a contract based solely on the lack of funding for all eligible farms in the watershed?

In other words, were any farms eligible for CSP contracts but not awarded a contract for no other reason than inadequate funding, and if that is the case, is it fair, and what should we be doing to achieve the goals for CSP? Is there a way to prorate funding or what are your suggestions?

Mr. LANCASTER. If there are two equal operations——

Senator NELSON. Equal opportunities.

Mr. LANCASTER [continuing] Equal rankings, they would be included in the program. The difficulty we have is when you have operations that are not equal, again with limited funds, and certainly, when you are looking at fairness in the program, one of the criticisms I have heard across the country is folks are saying, "It is a have or have not program, that I would otherwise be eligible, I have met the criteria when you look at the Self-Assessment but there is not funding available to me."

In our ability to go with a strict ranking system like we do in the EQIP program prohibits our ability to give someone a clear delineation of who would be in and who would be out of the program. But if all things are equal, those individuals would be in the program.

Senator NELSON. Both at the same level?

Mr. LANCASTER. At the same level.

Senator NELSON. You would not have one kicked out because you did not have enough money and you could not prorate, right?

Mr. LANCASTER. If the resource concerns are similar or if they are addressing the same resource concerns, if they have the same score in their assessments and if they have the same score on their SEI and those resource concerns, Senator, I believe they would be in the program.

Senator NELSON. All right. I think we may have an example where that was not the case, which we will bring to you with follow-up correspondence.

Now, recently I learned that a Nebraska farmer failed to achieve a funded level because he was told that he, quote, "performed one too many tillage operations" on his ridge-planted land, even though ridge planting has long been the conservation standard for gravity irrigated in flat land farming and it has allowed him to use half the residual corn herbicide in his crop rotation.

It is my understanding there are no credits given in the grading for using less pesticide, and is that in fact accurate and what would be the explanation?

Mr. LANCASTER. In trying to implement the program as equitably as possible, we are trying to find scientifically valid standards that we can measure against. And in many cases, that is your Soil Conditioning Index, and a big part of that is the tillage that occurs.

Again, in some cases folks my disagree whether or not it is fair, but what we need to do is we need to have a criteria that we can measure applicants against that are apples to apples.

Senator NELSON. Well, you can have it for fairness, but doesn't it have to be valid?

Mr. LANCASTER. Yes. And I believe when you look at our tools, our erosion tools and our Soil Conditioning Index, those are scientifically based tools that when you look at what is out there and what has been proven, those are programs and tools, models with a long track record.

Senator NELSON. Will you take a look at this, because it seems to me that one of the valuable things that you would want to achieve is less chemicals.

Mr. LANCASTER. That certainly is a factor. I would be happy to sit down with you and take a look at this. But again, when you look at the program, a lot of those measurements are on the soil quality and there are a lot of other issues in addition to chemical use that we want to try and address.

Senator NELSON. I think they all ought to be considered and the ranking of them should be clearly considered.

Ms. Shames, you testified that GAO found instances where producers received duplicate payments from EQIP and CSP for similar related conservation actions, and you noted the number of producers that may have received duplicate payments, but do you or GAO or Mr. Lancaster have an estimate of the dollar amount as opposed to just the number of instances that was paid out under these programs that would be duplicate payments?

Ms. SHAMES. We do not have an aggregate figure for either the total dollar value for the duplicate payments nor the number of cases. When we asked NRCS, they could not provide an aggregate figure either.

So while we do not know what the total is, we do know that the possibility exists and that duplicate payments have happened and we also note that the possibility can increase as CSP is extended to other watersheds and also the possibility can increase because the contracts are multiple years, so the duplicate payment would happen not only in the first year but in successive years.

Senator NELSON. Now, does GAO recommend that this be taken care of or does GAO in recommending that it be taken care of provide a management tool for the department to avoid having it happen in the future?

Ms. SHAMES. We recommended that NRCS put in such a management tool that you are referring to, an automated process that eventually would be able to help identify incoming applications for possible duplicate payments as well as review existing contracts and then to take follow-up action.

Senator NELSON. Mr. Lancaster, do you have some idea of what kind of money we are talking about here? Are we talking millions or are we talking hundreds of thousands or is there any way of knowing?

Mr. LANCASTER. Senator, we have introduced in our contract management software tools that will prevent those duplicate payments between our contracts. We have created a bright-line distinction between practices that we may get some push back on because that is there. Based on that, we can address those prospective payments.

When you look at previous payments, we are undertaking an effort to review duplicate payments, based on those 12 found in 2004, we are really talking about tens of thousands of dollars rather than hundred thousands or millions of dollars, and we are going back to get that number.

Senator NELSON. I commend you for doing that. I think that it is important that we not have any waste of taxpayers' funds but we do not want to make a mountain out of a molehill in the process either. We just need to have a process in place to correct it and avoid it in the future. So thank you, Mr. Chairman.

Chairman HARKIN. Thank you, Senator Nelson. Senator Brown.

Senator BROWN. Thank you, Mr. Chairman. I first want to follow up on Senator Casey's questions on not so much process but you talked about optimizing programs, setting priorities, all of that.

In Ohio in the last 10 years, maybe 20 years but especially 10 years, an acceleration of the number of factory farms in Ohio, and would you sort of talk to us, if you would. It seems to me that EQIP is disproportionately reaching factory farms to the exclusion of smaller family farms.

Could you talk about any data you could give us about that and which farms are most likely and if you have by size or if you see any trends there? I am understanding the factory farms have more needs by definition of their size, but if you could shed some light on that for us.

Ms. SHAMES. Addressed to GAO, Senator?

Senator BROWN. Addressed to either of you actually, probably Mr. Lancaster.

Mr. LANCASTER. Senator, I can respond to you in writing or afterwards. We do keep data on the type of applications or the type of projects that are funded.

I can tell you anecdotally when we look at the projects, when you look at how we are distributing those funds, it is based on resource concern. How are we addressing those resource concerns in a given watershed? Where is the impact?

This is one issue when we look at our factors in terms of water quality, agriculture can make a contribution to improving our water quality, our wildlife habitat, our air quality, and so when we look at those funds, we target those concerns. And so I have not seen that distinction necessarily between again whether or not we are excluding small farmers to the benefit of large farmers, but I can get that data for you.

Senator BROWN. Ms. Shames, do you have any thoughts on that that you have been able to see from GAO?

Ms. SHAMES. We did not review that data.

Senator BROWN. The second question, and I am new to this Committee, obviously, and new to some of these issues, and we just did sort of a cursory survey of watersheds in Ohio and from what we could find, there are 300–plus watersheds and there was only one, Sandusky in northern Ohio, not far from Lake Erie, that was funded that was at least added to the mix recently.

What should that tell me that others were added to the mix earlier and ongoing, Sandusky is just now, or that a lower proportion of these watersheds are getting into the program?

Mr. LANCASTER. I think when you look at the selection of our watersheds, we have a two-tiered system essentially. We have a system within the State to look at our national criteria for the program to see which watersheds would most benefit from the program being in those watersheds.

At the national level, based on limited amount of funding, we need to determine how best can we get regional diversity, nationwide diversity, crop diversity as well as reach the largest number of producers in that selection process.

If a watershed was recently added, it is a process of where do those watersheds stand relative to need versus others.

Senator BROWN. Does that number of 1 out of 300, should that concern me? I mean, when Sandusky was added to the mix, many of those others are already in the mix at an earlier time in an ongoing way?

Mr. LANCASTER. When you look at our programs, and I do not have the number in front of me, but there is a limited number of watersheds overall that have entered in the program.

The Greater Miami Watershed from last year was the largest to date in terms of enrollment in the program. But again, with limited funds, what we are trying to do is stretch those dollars so that we can address diversity across the Nation, across program crops, and get as many folks into the program as possible.

Senator BROWN. And partly following Senator Nelson's question, there are criteria that are met with no real, I mean, I know it is not an "entitlement program," so-called, but if the point levels or however the criteria are met, that gets you admission into the program without other kinds of factors typically?

Mr. LANCASTER. The difficulty we have is again the bar for the program is such that there are a number of folks who are eligible but with limited funding we cannot possibly reach all those producers that might otherwise be eligible for Tier 1, Tier 2 or Tier 3, and therefore we need to prioritize how we are going to enroll those individuals.

I would be happy to share with you as well a map on the program scope of the watersheds that are involved in the CSP program.

Senator BROWN. Okay.

Mr. LANCASTER. It appears there are couple of others within Ohio that have pretty good coverage.

Senator BROWN. When you hear those numbers in Ohio, is that unusual, are you surprised by that that it is that relative small number?

Mr. LANCASTER. If that were the case and depending on the size of the watershed, clearly there would be concern, but the map I am looking at, Ohio actually has relatively large coverage within the State.

Senator BROWN. Okay. Thank you. Thank you, Mr. Chairman.

Chairman HARKIN. Senator Thune.

Senator THUNE. Thank you, Mr. Chairman, and I want to commend you for holding this hearing and also note that this is going to be an important subject in the next Farm Bill debate, and I look forward to working with my colleagues to ensure that we get producers the tools they need to achieve economic success at the same time that they are achieving critical conservation measures.

I think the challenge for us is going to be how do we strike that balance between making sure that we have got the food and fiber and homegrown renewable energy demands of the country met at the same time that we are seeing that the most vulnerable lands are protected from erosion and that we are promoting and strengthening wildlife habitat.

I know that any Farm Bill is a balance that we have to strike and this certainly will not be any exception, and also at the same time looking at what we can do to strike the balance between retirement of land as well as conservation of working lands.

In the 2002 Farm Bill we made an effort, I think a much stronger effort, in the Conservation Title, and as a member of the House at that time, I actually was the author of the CSP program that the Chairman authored over here in the Senate, and like you have been disappointed that it has not been implemented or has not achieved the level of application that we had hoped it would when it was initially proposed and adopted back in 2002.

But I think the challenge before us now is to figure out how do we best achieve those results and further the development of working lands conservation programs, including the EQIP program, which I think has been a big success.

I know it is not the subject of this hearing, but the conservation programs that have achieved a high level of success in my State include CRP, WRP, some of the set aside programs, and in many respects have made South Dakota the envy of other States like Iowa when it comes to pheasant production. That has become a very big part of our economic success in South Dakota, and more and more producers have put lands aside and been able to benefit from the commercial benefit that comes with pheasant operations.

So that is another subject that I am very interested in this whole debate and how do we continue to promote that type of wildlife production and everything that is attendant to it. So I suspect we will get into the CRP discussion of that program as well at some point.

But I do have a couple of questions with regard to the subject of the hearing today, primarily dealing with the EQIP program. And I know that in the 2002 Farm Bill, that was always one of the big successes. EQIP was one of the big winners in the 2002 Farm Bill in terms of the additional funding that went into the program.

But I would like to have our panelists, if they would, comment on the issue of some of the backlog in EQIP applications because that was originally the issue was we do not have enough funding. We put more funding into it and I am interested in knowing what can be done in the next Farm Bill in addition to funding to help streamline the application approval process and increase the success rate of EQIP applications.

Mr. LANCASTER. Senator, one of my goals in looking at our programs is to make conservation easier. I truly believe that landowners when given the information, given the resources want to make good decisions on those lands. I mean, after all they are there to pass those operations on to future generations.

So as I look at the EQIP program, we have reduced the backlog from 5 to 1 to about 2 to 1 in terms of applicants into the program, which is great success but it also demonstrates based on the almost tenfold increase in the program that there is great demand for the EQIP program in the Nation.

I think as we make the process easier, as we make the applications easier, as we look at opportunities for potential price discovery we can make those dollars stretch. One of the things that I do is look at our cost share rates within the program.

Within our regional equity States, many of those cost-share rates are up near the cap. They are near 75 percent. Other States, the cost-share rate again is dipping down to 50 percent or more.

There are many instances where producers would accept a lower level of cost share to implement those practices and we can allow those dollars to stretch further as well.

Senator THUNE. Well, even if let's assume it is down and you get 50 percent of the applications are accepted and the remaining 50 percent go unfunded, what you are saying though with the cost-share issue that this still is an issue of funding, or are a lot of these folks who are applying into the EQIP program, how many of them just do not meet the eligibility requirements?

Mr. LANCASTER. I cannot give you that.

Senator THUNE. I know you have reduced the backlog, but that still seems like when you are only getting 1 out of 2 who are applying to the program that are actually getting funded, that does not seem like a real good rate of success.

Mr. LANCASTER. I cannot give you the specific number on how many of those would otherwise be eligible for the program or if that entire amount is eligible for the program.

But when you look at these programs, I think there will always be more demand than there is available. We have 930 million acres of non-forested agricultural land where producers, I think given the tools, would want to access those funds, and so in many cases it is a matter of prioritizing what resource concerns are you trying to address.

As you look at those land ownership patterns, you look at those watersheds, I think every State has areas of specific concern to the

State and others where one operation may not make a difference in that stream quality or other issues.

So as we look at the program, I think it is important to again look at that prioritization of funds and whether or not EQIP is a program that everyone is entitled to 50 percent of implementing conservation practices, or if it is one where we need to target those resource concerns that are most concerned to those within a State.

Senator THUNE. In the 2002 Bill there were some sub-programs created within EQIP focusing on particular regions or specific environmental concerns, and I know there are some groups who are advocating additional subgroups. Does that make sense in terms of your notion of targeting?

Mr. LANCASTER. I will say even within the EQIP program there is a carve-out for the Klamath Basin. The application backlog exists within that program as well, and so it is one of those that I think you could create a number of sub-parts, but you will probably always have that backlog. Because with that 130 million acres of eligible land, not to mention forest land, and if you really are trying to address resource concerns, every acre counts, there will always be a backlog within those programs.

Senator THUNE. It is the one program in the Farm Bill that livestock producers can benefit from. They never have wanted really to be in the other parts of the farm program, so it is the one thing that we can do that gives them access to a source of funding that can help them with their operations. So I want to make sure we have got the best program possible that is available to livestock producers.

One final question very quickly and it is a little bit back to the whole question of CRP but it could become a working lands issue.

If CRP acres are put into grasses that might be used for energy production, native grasses, bluestems, switchgrass, that sort of thing, can that accomplish the wildlife production, conservation, all the things that we want to see that are benefits in addition to being used or harvested for energy production? Can all those things compliment each other?

Mr. LANCASTER. First, let me say in terms of EQIP, it is our most flexible program. It is kind of the flagship for our programs, and I agree with you with the need to include a program that has that flexibility to address livestock producers, crop producers and others.

In terms of CRP, NRCS provides technical assistance to landowners engaged in that program through the Farm Service Agency. When you look at perennials and the ability to harvest those, I think a lot of the wildlife benefit would be in those management systems of when you are harvesting, how you are harvesting those perennials.

Senator THUNE. But those objectives are not mutually exclusive. You could accomplish an energy production objective as well as continue to promote conservation, wildlife production, all those things.

Mr. LANCASTER. Based on the data I have seen, I think that that is an accurate statement. I would reserve the right to talk with our technical staff to talk about what really could be done there and what those impacts are. But based on the data that I have seen

in the literature I have read, I do not believe it is mutually exclusive.

Senator THUNE. Thank you, Mr. Chairman.

Chairman HARKIN. Thank you, Senator Thune. I look forward to working with you. I thought that last question you asked was very probative.

That is as we are going to try to use the Farm Bill to move more incentives for cellulosic production for ethanol biomass production, what programs do we have out there that would enable farmers to switch to do that and still give them the incentives so that they are not losing their productive capacity and not losing payments that they would normally get on a program crop or something like that.

I just think you have hit on something that we really are going to have to spend some time and examine here in this next Farm Bill. I do not know which program would be the best. There is the grasslands program, there is CRP, CSP, figure out which is the best one or a combination that we can use together, so I look forward to working with you on that.

It has got to be a big part of this Farm Bill, some way to moving to more cellulosic production for energy production for energy use. So I thought that was a very probative question and I appreciate it very much. And I will follow up on that with more questions about energy production some other time.

Mr. Lancaster, my friend from Georgia had asked you about how much this would cost, CSP would cost, and you said, and I wrote this down, back-of-the-envelope is 930 million acres, 50 percent enrollment, average cost 20 an acre, $9 billion a year.

How much has OMB estimated the cost of this program if uncapped?

Mr. LANCASTER. I do not know that answer, Senator. I can certainly sit down with them. Part of the issue is that the program is capped and——

Chairman HARKIN. Yes, but I think it is about one-ninth of that, to tell you the truth, so I think that $9 billion is really a bogus number. I saw all the reporters writing very furiously when you mentioned that number there.

I mean, first of all, 450 million acres, some of that is in the Grassland Reserve Program, some of that is in CRP. I do not know if you were counting CRP or not. Some of that is in EQIP. So right away you have got to start thinking about all these other programs, and we do not want to have duplication, so you have to carve that out.

Second, I do not know how you assume 50 percent. What has been your history in the watersheds? As far as I know, you have not had 50 percent signed up in the watersheds. Have you?

Mr. LANCASTER. No, Senator.

Chairman HARKIN. No.

Mr. LANCASTER. Certainly, when you look at the program, you are talking about 930 million acres of land and so you would back out the 36 million of CRP land, you would back out the EQIP lands.

As you have indicated a preference to have a program that allows folks to enter into the program with the intent to increase their level of conservation so that they would benefit from the pro-

gram, you are really lowering that bar so that regardless of what level of conservation is currently on your farm, you can get into the program and we would then help you reach that higher level of conservation.

Currently, the bar is set higher than that for entry into the program and so I do not know if you can say, "What is your percentage of acceptance into the program now within a watershed," and extrapolate that to what an estimate might be of the program.

Chairman HARKIN. I do believe that you need more Tier 1 involvement, and I do not think that you are getting that right now. Again, this is a balancing thing. One of the reasons we did CSP the way we did was I am sure that every one of us at this table, all the Senators who are here or Congressmen on the other side have heard more than once from farmers who say, "You know, I have been a good steward. I have practiced good conservation. My neighbor down the road, he plants up and down the hillside, does not do anything, and then they get the money."

Or they have had some land they had to go out and plow it up in order to qualify for a conservation program. So we have heard these stories for years. So one of the things was to say to those farmers who had been good stewards, "You can get in this program."

You know that "reward the best, incentivize the rest," I do not mind that as far as that goes, but if you are just going to reward the best and keep people out who need the incentive to get into Tier 1 so you can build them up to Tier 3, that was the whole idea of it. So there has to be a balance, and I think, quite frankly, it has gotten out of balance.

Mr. LANCASTER. Senator, I believe the CSP is a good program. I think again, as you are looking at conservation needs of landowners, you need to have a variety of tools, a stewardship tool and a cost-share tool like we have with EQIP.

When you are talking about building up, I have seen an increased level of applicants for Tier 3 over the course of the program, and part of what that is telling me is that landowners recognize the benefit to being in the program. They are increasing their level of conservation so that they can get into the program, and therefore this policy of rewarding the best really is motivating other producers to increase their level of conservation because we are looking at those producers who have been good stewards, who have addressed their resource concerns. If they are in the program it is creating incentive.

I have seen that across the country where folks are increasing their level of conservation because they anticipate the availability of the program someday coming to their watershed so that they will be prepared to enter into the program.

I think the CSP program has been a success from that perspective.

Chairman HARKIN. I agree with you on that. I agree with you except that yes and no. The watershed-based program, of course, I cannot find it anywhere in the statute that we set up a watershed-based program, so we have some anomalies out there.

We have a watershed, for example, where you have a farmer that is in the watershed and they are doing certain conservation prac-

tices. They are eligible for CSP. A farmer five miles down the road outside the watershed doing equally as good, if not better, conservation practices cannot get in. That is having a depressing effect on people.

And the fact that if you are in a watershed and you are eligible and you do get in the program on the first round, and then you say, "Well, Okay, I want to then do better conservation practices, when is the next time around that that watershed will come around?" Something like 90 years?

I do not know what it is, but it is something that is so far that not in their lifetime will they ever be able to get back in the program, so I cannot see that that is any kind of an incentive. Do you see what I mean?

Mr. LANCASTER. Mr. Chairman, those members that are in the program or those participants that are in the program have the opportunity to modify their contracts and increase their level of conservation.

Chairman HARKIN. That are in the program. I am talking about people in the watershed who did not get in the program because they did not quite meet it. Now they say, "Oh, I see my neighbor is doing this. I want to get in that program. I will increase my conservation." But the next time that that watershed will be eligible, how many years?

I was told it was 8 years, but I think it is much, much longer than that.

Mr. LANCASTER. Chairman, our original plan was an 8–year rotation again with a capped program and with that percentage of TA, we really needed to find a way to offer the program. I think that the watershed approach was an attempt to allow for a program that would have nationwide reach.

Certainly, what I have seen for producers that are not in the program, they do recognize, "My neighbor is in the program, I see some benefits, I am going to increase my level of conservation so that when I have the opportunity to enroll, I will be eligible." And I am seeing that across the country.

Chairman HARKIN. Well, maybe. I would like to know more about that, because what I have heard is that people in a watershed who did not qualify say, "Well, gosh, I will not be eligible." I said 90 years. I do not know where I picked that figure up, but it is a long time. It is more than 8 years now, maybe double that.

They say, "Well, I will do something else." So I do not know that that is much of an incentive. But this is not your problem. That is our problem because we capped the program. I do not say me, but Congress did.

And that is why this program was designed as an uncapped entitlement program. CSP is just like a commodity program, just like corn and cotton and wheat and beans and rice and everything else, it was a commodity program.

Because conservation should be looked up as having a value, a producing value, a value to society. All of the programs in conservation in the past have always been dealing with how you get land out of production but for the EQIP program. They have been good programs, but we needed to do some environmental stuff on producing lands and put a value on that.

It was wrong to take money out of the program for disaster payments. As I mentioned in my opening statement, that has never been done before. Hopefully, it will never be done again. And then to cap the program as was capped, there would be a howl from around the country if we capped a commodity program.

We say, "Okay. You are eligible for a target price, loan rate, deficiency payments, LDPs, but there is only so much money available," and first come first serve or you set up some kind of a scheme to reward farmers.

That was the intention of this CSP was to make it like that so that if you did certain things and met certain things and you were eligible, you got in the program.

But again, that is more of a problem for Congress overcome, not yours. In fact, I would just say publicly, Mr. Lancaster, that with the constraints that we have had on it, you have done a great job in implementing the program, so I do not want you to misinterpret what I am saying here. I am just trying to for the public's benefit and for the hearing benefit is to point out that the CSP is not operating as was envisioned in the law as was set down in statute. Now, again, part of that is because we capped it. Then when you cap it and you limit it, then you are forced to do certain things to make it try to work.

Our job I think in the Farm Bill is going to be to see how we can modify that and perhaps make it a little better and more fair. One of the things I think is going to big is what Senator Thune just mentioned and how we couple that with providing incentives for energy production in a conserving way. Because most of these energy crops that we are talking about are very conserving in nature, and so this seems to me a great place to look for that kind of an incentive.

Mr. LANCASTER. Mr. Chairman, I would share I absolutely agree with you one hundred percent that conservation has value, and I think there are opportunities in the marketplace to reward that value.

We have entered into a memoranda agreement with the Environmental Protection Agency on a water quality credit trading opportunity. We are looking at similar agreements with the Fish & Wildlife Service on habitat credit trading agreements and that is a market-based incentive, market-based opportunity to inject private capital into conservation.

Even with the Conservation Security Program, I have seen Tier 3 producers who are marketing their product as a Tier–3–grown commodity, and they are getting a premium in the marketplace for again placing a value on conservation.

Chairman HARKIN. You are absolutely right. One last thing before I yield to Ms. Shames is I want to follow up on Senator Nelson's point.

Now, I have heard from a lot of organic farmers who practice good conservation. They have no runoff, they do their ridge tilling, they plow back in manure in the ground, they do it in an environmentally sound way, they cannot get in the program.

Now, again at the outset I want to say perhaps my history is one of being a very strong supporter of no-till farming. I believe in that without exception. Well, not without exceptions, maybe there are

exceptions, and that is for certain organic farmers, for certain people who have an environmentally sound practice but do not put on herbicides, pesticides, things like that, so we need to examine how we change this so that they are eligible.

And I am open for any suggestions that you might have from your agency what we might do in the Farm Bill to accomplish that.

Mr. LANCASTER. I would be happy to share thoughts with you. When I do look at organic producers and I do look at how they are qualifying, they are qualifying in similar ratios to other producers in the watersheds.

Because you are an organic producer does not necessarily mean that you are farming in a conservation-oriented manner in terms of tillage. In many cases, you have to till, which disturbs the soil, and you have to apply some type of manure or fertilizer for that opportunity. But, again, I want to make conservation easier. I want to look at our programs to see how we can make sure that we are not disadvantaging any one sector. Because agricultural in this County is very diverse. We need to have opportunities for organic producers, for row-crop producers, for livestock producers, all to participate in our conservation programs.

Because again, I believe they have a built-in incentive to operate in a sustainable manner, and we want to find the tools to help them do that.

Chairman HARKIN. I appreciate that. Last, just keep in mind that as we proceed in this Farm Bill and as we try to build in incentives for the production of energy crops, cellulosic crops, we can marry that up with conservation I think in a very, very beneficial way for farmers and for our national security.

Ms. Shames, I have not asked you anything, but the only thing I ask is both of you on this idea of duplicate payments, we do need to know what is happening out there and as I have heard, we do not really know. We know it is happening, but we do not really have a handle on it.

Do I have your assurance, Mr. Lancaster, that we are going to try to implement the recommendations that the GAO gave you on that?

Mr. LANCASTER. Mr. Chairman, we have already begun implementation of those recommendations.

Chairman HARKIN. Then I would like to follow up on that. Let me know what you have done on that down the pike.

Mr. LANCASTER. Absolutely.

Chairman HARKIN. Senator Chambliss.

Senator CHAMBLISS. Just one question, Mr. Chairman. Arlen, is there any general consensus within the Administration as to which box the CSP program falls in within the WTO?

Mr. LANCASTER. Chairman, there are a number of different payments within the CSP program. I do not think that there has been any final determination on where each of those payments would fall in terms of WTO. I can certainly look into that and get back to you.

Mr. Chairman, we have a number of programs or a number of payment structures within the CSP program, the stewardship payment, the enhancement payment, the incentive payment. Each of those would have to face its own review in terms of whether or not

that would meet tests in terms of WTO and which box that might be placed in.

So I do not believe that we have looked closely at those programs individually or those payments individually to see where that would be categorized.

Senator CHAMBLISS. As we move forward with the consideration of the Farm Bill, we are going to need some guidance on that because that is obviously going to be critical to us in our deliberations, so we will look forward to staying in touch with you on that issue. Thank you.

Chairman HARKIN. A very good point. Thank you, Senator Chambliss. I thank this panel. Is there any last thing before I dismiss you and bring up the second panel?

Mr. LANCASTER. Senator Chambliss, the staff notifies me we are currently notifying WTO, so we are working with them on which categories those would be in.

Chairman HARKIN. Thank you again, Mr. Lancaster. Thank you, Ms. Shames. Thank you both for appearing here, and we will follow up on some of these things with both of you. Thank you, Mr. Lancaster.

Now we will call our second panel. Mr. Craig Cox, the Executive Vice President of the Soil & Water Conservation Society; Ms. Kathleen Merrigan, Director of the Agriculture Food and Environment Program for the Center for Agriculture Food and Environment in Winchester, Massachusetts; Mr. Duane Hovorka, Farm Bill Outreach Coordinator of the National Wildlife Federation from Nebraska; Mr. James Ham, President of the Georgia Association of Conservation District Supervisors from Smarr, Georgia.

We welcome our second panel, and again, 6–minute statements each. If you can cut them shorter than that, we would be most appreciative, and then we will open it up for 8–minute round questions.

First we have Mr. Craig Cox, Executive Director of the Soil & Water Conservation Society. Mr. Cox, welcome again to the Committee and we look forward to your testimony.

STATEMENT OF CRAIG COX, EXECUTIVE DIRECTOR, SOIL AND WATER CONSERVATION SERVICE, ANKENY, IOWA

Mr. COX. Thank you, Mr. Chairman, Senator Chambliss, members of the Committee, for the opportunity to appear here today.

I would like to applaud you for holding this hearing on working land conservation. It is imperative that we have an effective working land conservation effort on our Nation's working lands. In many respects, the viability of agriculture, the health of our resources and the quality of our environment depends on the effectiveness of that effort.

I would first like to echo comments that have been made already about the importance of technical assistance to our working land conservation effort. I have no doubt that the administrative tasks of writing contracts and cutting checks to get money out the door will in fact be accomplished in both EQIP and the Conservation Security Program, but I have serious and growing doubts about whether the scientific and technical support will be there to make those checks meaningful for both producers and the environment.

At the end of the day, it is the skills, knowledge, creativity and commitment of people, both our producers and the professionals that they work with, that will determine whether we achieve the goals of working land conservation or not.

In 2002 this Committee and Congress took important steps to strengthen our technical assistance network. In my testimony, I outline additional steps I would recommend, but at the end of the day I truly believe the most fundamental Federal role in working lands conservation is to build and support the technical assistance network that we need. I think in the long term that effort will be more important than EQIP or CSP in driving effective working lands conservation.

Now, about EQIP. EQIP has emerged as the most important financial assistance program in our working lands conservation effort. Overall, our past and ongoing assessments of EQIP have indicated mixed results in terms of the performance of EQIP, but with reasons for optimism that the program is performing effectively.

I have outlined a number of opportunities in my written statement that I think would ramp up the performance of EQIP. Let me just mention one, which I think is far and away the most promising opportunity and this is to focus more of EQIP's resources through special projects.

Now, let me be clear about what I am saying here. What I am not recommending is going back to the bad old days where we drew arbitrary lines on maps and told people you were in or out depending on which side of the line you are on.

What I am talking about is focusing technical and financial resources on projects like, Mr. Chairman, Lake Rathbun in Iowa that are designed to strategically and effectively address conservation issues of great importance to local communities. The scientific, the technical, the political advantages of this kind of focus on high value resources through special projects is remarkable.

And if you think about it, we could mandate 30 percent of EQIP dollars be spent on special projects, either alone or through a strengthened partnership and cooperation section of the 2002 Bill, and still leave us the capability to operate a base program in every county of this country at funding levels that are unprecedented in recent history.

I think striking a better balance between special projects and a more diffuse allocation of dollars is far and away the biggest opportunity we confront in EQIP.

I have reserved CSP for the last not because it is least important but just the opposite. I was going to start my remarks on CSP by trying to make the case that urgent action is required to fully realize the promise of CSP, but frankly, the earlier session has, I think, made that case more compellingly and more articulately than I could have done.

So let me just skip to the two big issues I think we confront, both of which have been raised already in the previous session, and those are money and environmental performance.

As has already been discussed, the statute envisions a stewardship entitlement, but the reality has been strict funding caps. Trying to match vision to reality has created a number of compromises

in the implementation of the program that have created serious criticism, much of which has been echoed today.

The problem we face is we cannot fix those problems, we cannot reverse those compromises, without a substantial increase in funding. In fact, CSP has to grow in funding every year just to maintain the current limited program. Whatever we come out with in 2007, we either have to adjust the vision to the funding or make sure the funding matches the vision. We simply cannot go forward in the current situation without doing serious damage to the program.

On environmental performance, the biggest concern of conservationists is: how much money can we afford to pay to reward the status quo when we so desperately need to change the status quo?

As I mention in my written statement, most of CSP funds to date are going to benchmark payments that reward the status quo. We simply have to strike a better balance between rewarding the status quo and changing the status quo. If we can deal with the funding and deal with this balance, I think we can recover the promise of CSP, and, frankly, we must accomplish that.

So thank you very much for the opportunity to be here, and I look forward to working with the Committee.

[The prepared statement of Mr. Cox can be found on page 53 in the appendix.]

Chairman HARKIN. Thank you very much, Mr. Cox. Now we turn to Kathleen Merrigan, who was earlier introduced by Senator Leahy. Again, Ms. Merrigan has worked as Administrator of USDA Agriculture Marketing Service, prior to that was Senior Analyst at the Henry A. Wallace Institute for Alternative Agriculture. She holds a BA from Williams College, a Master's in Public Affairs from the LBJ School in Texas, and a Ph.D. in Environmental Planning and Policy from MIT.

Ms. Merrigan, welcome to the Committee. Please proceed.

STATEMENT OF KATHLEEN A. MERRIGAN, DIRECTOR AND ASSISTANT PROFESSOR, AGRICULTURE, FOOD AND ENVIRONMENT PROGRAM, TUFTS UNIVERSITY, BOSTON, MASSACHUSETTS

Ms. MERRIGAN. Thank you, Mr. Chairman. Thank you all. It is an honor to be here and a pleasure to see so many old friends and colleagues.

Let me first say behind every successful professor stands dedicated hard working graduate students, many of whom are here today. This is a group effort that I am presenting on in which we studied farms in New England. We asked the question: Does CSP work for farmers in our region?

Although based upon a small number of case studies, our study nevertheless revealed several interesting things. I want to highlight eight recommendations from our report here today.

First, the funding issue: previous speakers have covered this. We need more money. The program is not living up to what we would hoped it would be, because of insufficient resources.

Second, all the bureaucracy that has been created by NRCS necessarily because of the limited funds has made the program less than farmer-friendly, to say in the least.

Third, NRCS does great fieldwork and our farmers want and need more of it. The cap on technical assistance is making this program unworkable. We need more technical assistance.

Fourth, there is an over-reliance on this program in using the Soil Conditioning Index as a threshold criterion for eligibility of the program. It is fundamentally flawed not so much that it should be thrown out all together but it should only be one tool in a toolbox for NRCS assessments.

Fifth, the effort for small farmers and for NRCS staff to put together CSP contracts is significant. We recommend that there be a minimum payment for small farmers of the amount of $500 a year for farms 50 acres or less, $1,000 for farms greater in size so that it makes it worthwhile to participate in the program.

Sixth, one-stop shopping always has great appeal. We heard from a number of NRCS agents and farmers that they would like to see a universal application for all NRCS programs. They would not have to go through this paperwork and that paperwork but they could sit down and do whole farm planning with NRCS through a universal application.

Seventh, new practice payments under this program are confusing. Do they really exist? They are there on paper, but they do not seem to be offered, at least in our region, and there are questions that our study raises about the complementary with the EQIP program and the program payments there, which are much more sizable.

Finally, the question some farmers face is to plant or to apply. The timing of the money coming through the program and when the sign-ups are has had an unfortunate collision with planting times for farmers making it difficult for them to go through the program.

So those are some issues that I get into more depth in my testimony. We have also provided full copies of our study for the Committee's review.

We think Green payments are the way to go. We think the CSP program is exciting. It does work. It can work much better with some serious fine tuning, and I appreciate all the Committee's work and attention to this program that is the future of farm policy in this country. Thank you.

[The prepared statement of Ms. Merrigan can be found on page 89 in the appendix.]

Chairman HARKIN. Thank you very much, Ms. Merrigan, and we will definitely have some questions for you but great testimony.

Duane Hovorka from Elmwood, Nebraska, the Farm Bill Outreach Coordinator for the National Wildlife Federation, and today Duane is testifying on behalf of the National Wildlife Federation, the Sustainable Agriculture Coalition and the Izaak Walton League of America. Mr. Hovorka, welcome.

STATEMENT OF DUANE HOVORKA, FARM BILL OUTREACH COORDINATOR, NATIONAL WILDLIFE FEDERATION, ON BEHALF OF THE NATIONAL WILDLIFE FEDERATION, SUSTAINABLE AGRICULTURE COALITION, AND IZAAK WALTON LEAGUE OF AMERICA, ELMWOOD, NEBRASKA

Mr. HOVORKA. Thank you and good morning. Over the past, year I coordinated a project sponsored by those three organizations to try to better understand the USDA Conservation Security Program and the benefits for fish and wildlife.

We interviewed a variety of State and Federal officials, nonprofit organizations and others who have on-the-ground experience and knowledge about the program. USDA also gave us summary data about contracts that resulted from the 2006 sign-up for enhancement practices that appear to us to provide either direct wildlife habitat benefits or that reduce pesticide use in ways that should benefit some wildlife.

That data is reflected in the State case studies that are included in the report that you should have before you which is, "Hidden Treasures: the Conservation Security Program and Wildlife."

Our analysis focused on the enhancement payments because as USDA has implemented the program, those have represented about four-fifths of all the payments that have actually gone to farmers.

So here are our key findings: First, the Conservation Security Program does provide substantial benefits for wildlife. Based on our analysis of the USDA data, it appears roughly one-half of all program payments that resulted from that 2006 sign-up are for practices that either provide wildlife habitat benefits or that will reduce pesticide use in ways that should benefit some wildlife.

In most cases, we are buying those wildlife benefits with practices that deliver multiple benefits for multiple resources, such as grazing management, pest and nutrient management. Only a small portion of the payments are actually for practices that are designed primarily as wildlife habitat management practices.

Second, the program benefits for wildlife vary considerably from State to State. In Missouri, about 88 percent of the CSP payments from those 2006 contracts sign-ups are for practices that benefit wildlife. In Nebraska, just 26 percent of payments resulting from those 2006 contracts met that same test, and it appears some States are even lower than that.

Third, the Conservation Security Program could provide even greater wildlife benefits, and here is how: We offer eight recommendations in the report that taken together would substantially boost the wildlife value and the wildlife benefits provided by the program, and we think improve the program overall.

Three of those are things Congress can and should do as it considers the 2007 Farm Bill and as it looks at appropriations bills this year.

One, Congress should substantially increase funding for the Conservation Security Program so that farmers and ranchers on a nationwide basis have timely enrollment opportunities, and I think you have heard that again and again today.

Two, Congress should direct USDA to provide cost share for new practices under the Conservation Security Program at the same rate as provided for other USDA programs. USDA is authorized to

provide cost share to install new practices under current law, but as you have heard, they have not used that authority very often.

And, three, Congress should require that all Tier 2 and Tier 3 contracts address wildlife habitat as a resource of concern and the emphasis on wildlife should be increased in Tier 1 contracts. Currently, just Tier 3 contracts require that wildlife be addressed as a resource.

Our recommendations for USDA: One, USDA should expand the number and variety of wildlife conservation practices available to farmers in each watershed, and they should continue to find new wildlife-related practices.

Two, USDA should encourage, not discourage, wildlife professionals from helping landowners who are contemplating a CSP contract by getting out there early in the process and helping them understand their options.

Three, USDA should continue to review enhancement payment rates to ensure that they are fair both for farmers and ranchers and for taxpayers.

No. 4, USDA should ensure that all NRCS State Conservationists set standards at the State level that provide a consistently high level of wildlife benefits.

And, five, USDA working with partners should establish a more robust monitoring and evaluation program to measure the actual outcomes of those conservation practices, and Congress should fund that initiative.

With these important changes, we believe the Conservation Security Program could and should play an even bigger role in the future in ensuring high quality wildlife habitat and bountiful fish and wildlife populations on America's privately owned farms and ranches.

Thank you for the opportunity to be here today.

[The prepared statement of Mr. Hovorka can be found on page 67 in the appendix.]

Chairman HARKIN. Thank you very much, Mr. Hovorka, for your very concise recommendations. Very good.

Next we turn to Mr. Jim Ham on behalf of the Georgia Association of Conservation District Supervisors and the National Association of Conservation Districts. Mr. Ham, welcome to the Committee.

STATEMENT OF JIM HAM, PRESIDENT, GEORGIA ASSOCIATION OF CONSERVATION DISTRICT SUPERVISORS, ON BEHALF OF GEORGIA ASSOCIATION OF CONSERVATION DISTRICT SUPERVISORS, AND THE NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS, SMARR, GEORGIA

Mr. HAM. Thank you, Mr. Chairman, for having me. Good morning. I am Jim Ham, a middle Georgia farmer, a County Commissioner, President of the Georgia Association of Conservation Districts, recently elected Farm Bureau Director for the State of Georgia and a charter member of the Two Rivers RC&D Council.

That is a lot, but the one thing I want you to pick up on is full-time farmer, Mr. Chairman. I think I am the only full-time farmer to speak today, so I think I am where the rubber meets the road, if you will.

I farm in an area that is changing. The rural/urban interface is outside of my front door. I also have an EQIP conservation contract that has allowed me to cross-fence pastures, better utilize my grass, fence out ponds and streams to protect water quality, install stream crossings and renovate heavy-use areas to prevent soil erosion and manage animal waste.

According to the 2002 census in Georgia, while the number of farms is about the same as in 1997, the number of acres in farming has decreased by about 500,000 acres. Changes in land use such as fragmentation due to new friends from the city moving into the country adds pressure to farms and services that conservation districts and NRCS personnel provide through conservation programs.

In many ways, conservation programs and policies help keep me on the farm while I get other support from commodity programs. The conservation tools, both technical and financial, have helped me and many others avoid regulations and allow me to continue farming in an ever-changing environment.

Today we are discussing the needs and updates or additions to EQIP and the CSP Programs as well as all the programs in the Conservation Title. We hope the Committee will look into increasing access to EQIP and other programs, evaluate whether consolidation of numerous conservation programs makes sense or streamlining the application process provides for smoother, more efficient program participation on the ground.

We do, however, hope that any streamlining does not result in taking funding away from conservation programs. The next Farm Bill must balance programs focusing on land retirement with working land programs such as EQIP and CSP.

EQIP is a very popular program in Georgia. In the fiscal year 2004, we funded 1,175 contracts; in 2005, we funded 1,281 contracts; and in 2006, 1,084 contracts; all totaling over $42 million. For these 3 years, there were 3,619 unfunded contracts. I want to say that again: We had 3,619 unfunded contracts for these 3 years.

As you can see in Georgia with the EQIP program alone, there is a high demand and we only see that demand for conservation assistance increasing. EQIP funding in Georgia has been put to use supporting manure management, water quality and water quality issues.

Our growing poultry industry has utilized EQIP cost-share dollars to create stack houses to ensure that manure does not create a water quality problem in the local community. Without these cost-share dollars, these facilities would not have been built, resulting in inadequate storage.

There is also a growing need in Georgia for funding to address forestry concerns. Due to previous conservation programs, there is an overabundance of timber that needs to be thinned in order to keep the land productive and in order to improve wildlife habitat. EQIP dollars have been used in Georgia to meet some of these needs, but the needs outweigh the assistance currently available.

The CSP program that resulted from the 2002 Farm Bill is a little different than we expected. We hoped for a program that was easy for producers across the country to understand resulting in graduated support for increasing adoption of conservation prac-

tices. Unfortunately, the result was an extremely targeted program with complex implementation.

The program is too complicated both for general understanding of the program design and application complexity by the producer, coupled with limited watershed- based availability and lack of additional assistance on the ground needed to implement the program.

The watersheds selected in Georgia were very small with limited agricultural production, which has resulted in 37 contracts in 2004, 111 contracts in 2005, and 58 contracts in 2006, all totaling $62 million, if you consider the lifetime of the contract, the 10 year contract, if the contract was funded every year.

Although we only had 31 unfunded contracts, I feel with greater education and understanding of the recordkeeping requirements, we would have move applications for CSP programs.

The CSP self-assessment tool is a step in the right direction to further improve this program. Due to the complexity of the CSP application process, USDA should place some emphasis on educating producers about recordkeeping and information required prior to the application process beginning.

While CSP has been well-received in Georgia, EQIP continues to reach more landowners. This is perhaps due to EQIP being an established program and having the flexibility to meet the needs of landowners.

Conservation financial assistance provided through the Farm Bill programs is an important component in achieving agricultural sustainability, both economically and environmentally. But in addition to talking about EQIP and CSP, I must stress the importance of technical assistance. Technical assistance allows the NRCS staff at the local level to work with districts, we do a lot of work with districts in Georgia, landowners and State and local agencies to address local resource concerns.

Technical assistance is utilized to work with landowners on conservation plans. Funding for technical assistance allow NRCS employees to meet face-to-face with landowners, visit their operation and help them design strategies for the resource needs of individual agricultural operations.

Technical assistance must continue to be a fundamental element of the next Farm Bill, both as a stand-alone program and built into the delivery of every individual conservation program.

We all have a great opportunity in this 2007 Farm Bill to build on the good programs and policies that were advanced in 2002. Georgia Conservation Districts and those across the country want to be a constructive and active player in the development of the 2007 Farm Bill.

We want to work with the Committee to make sure the next Conservation Title provides meaningful assistance to producers and results the taxpayers can also appreciate and enjoy.

In doing so, we believe that programs should balance efforts to achieve soil, water, air, plant, animal and wildlife goals necessary to address the Nation's agricultural and natural resource needs.

Thank you, Mr. Chairman, for bearing with me.

[The prepared statement of Mr. Ham can be found on page 63 in the appendix.]

Chairman HARKIN. All right, Mr. Ham, thank you very much for a great testimony.

I think one thing I got through every one of your testimonies is that we need more technical assistance, No. 1, and No. 2, we need to reduce the complexity of the program. Both of those came through in all of your testimonies, and in your written testimonies, which I had read previously, that CSP does hold great promise for the future.

I will start with Mr. Cox. Again, getting to the technical assistance, I am encouraged by your support for strengthening the partnerships in cooperation section. I believe this section has great promise for increasing the reach of our conservation efforts. It would also fit well with this Administration's stated desire to foster cooperative conservation efforts, so my specific question is related to both of these topics.

If Congress were to do as you suggest and strengthen and clarify the partners in cooperation section, would doing so provide any opportunities to address the shortfall in technical assistance?

Mr. COX. Mr. Chairman, I believe the answer to that is yes. As you well know, the notion behind the partnerships in cooperation section was to provide the opportunity to integrate Federal, State, and local programs at the local level in an effective way to get at important conservation programs at the local level.

If the partnerships in cooperation section allowed us to use Federal program funding including the technical assistance dollars that flow with EQIP and CSP and other programs as part of those Partnership in Cooperation agreements, then I think I does provide an opportunity to build a more dense infrastructure at that project level.

Chairman HARKIN. Let me ask Mr. Ham. I was reading your final statement and you said that the "CSP program did not work out like we expected it to." Join the chorus here. Being the author of it, it never turned out like we intended it either.

But through all of your testimony, it seems to me you are saying that we need to get off of this watershed basis that we are on because it is inequitable, it is unfair, it is not what we intended, it was never in the legislation in the statute.

And all of you seem to indicate that there should be a better system. It should be like a nationwide-type sign-up system. I guess my question is: Is it possible to have a nationwide sign-up system but with limited funding?

I mean, I am a realist. I see what we have got out there, and I do not know how long this limited funding is going to last, but if we have the limited funding, is it possible to have something other than this watershed basis on a national sign-up that would be simpler, more transparent, more clear-cut? Is that possible, and if so, how?

So I am just opening it to anyone who grabs a mic down there if you have got any ideas about this. Ms. Merrigan, you talked a lot about that in your statement about the complexity; of course, Mr. Ham did too.

Ms. MERRIGAN. And certainly we saw farmers in New England where their farm might be in three different watersheds at the same time, and so the watershed approach is different from the

traditional NRCS program approach, which means then you have to rely more upon NRCS staff to walk you through what to do. You are eligible if the majority of your farm, whatever watershed that is in, but it does add another layer of confusion.

But without more resources, Mr. Chairman, I am not sure what NRCS is to do. Much of the program complexity, and that was the No. 1 complaint certainly that we heard from farmers in our work, layers have been put on to have a program that meets the financial constraints that they are working with.

Chairman HARKIN. But even with those financial constraints, Mr. Hovorka, again, is there a system where we could have a national system without having it watershed- based with limited funding, any thoughts on that?

Mr. HOVORKA. I do think it is going to be extremely difficult to do that with the current funding base. So if you increase the funding base, even if you do not provide all the money that we hope will be available, that would certainly help a lot.

I do think there are some things that NRCS could do to simplify the program, but I think the key to the farmer is knowing that it is coming around. Even if you do not get it this year, if you know that within say the next 3 years it is coming to your watershed so you can plan ahead on it so you can get up to speed, do your recordkeeping and be ready when it comes. But you have that certainty that it is coming soon and not that certainty that it could be 15 or 20 years before they get around to you.

Because I think that is a problem for farmers is knowing that it is coming and knowing when it is coming and having some reasonable certainty that it is coming soon.

Chairman HARKIN. Yes. Again for your benefit, I am sure you probably already know this figure, and I think one of you mentioned it in your testimony, we are now $4.3 billion less in the CSP program than what was passed in law and the funding that was supposed to be allocated to this Committee.

Again, I say this only for the record again that when we passed the Farm Bill in 2002, we met all the budgetary guidelines. We met the budgetary guidelines. Within those guidelines, it was envisioned that so much would be spent on CSP. Out of that we have lost $4.3 billion.

So I can only say what do you think the program might look like had we had that extra $4.3 billion in there? So again, you are all correct in talking about the funding aspect of it.

Mr. COX. Mr. Chairman?

Chairman HARKIN. Yes.

Mr. COX. Could I try to answer your question?

Chairman HARKIN. On?

Mr. COX. On how to touch more producers under funding caps.

Chairman HARKIN. Sure. Go ahead.

Mr. COX. I think there are two possible opportunities I would suggest. One is that if we focus the program on rewarding and incentivizing what I would call management-intensive conservation systems rather than capital-intensive conservation systems. By that I mean grazing management, nutrient management, soil management, irrigation water management, where the real issues are risk and knowledge. Those systems can produce tremendous envi-

ronmental benefits at relatively low cost. And if we focus CSP in that fashion, we could touch more producers even under existing funding caps.

And sort of a subset of that approach, it seems to me that there is a tremendous opportunity in 2007 and beyond to focus CSP on sustainable biomass production systems for biofuels and other alternative energies.

As you well know, biomass production for energy can have tremendous conservation and environmental benefits, but there is also significant risk involved in intensifying that production.

I think there is a tremendous opportunity to create a real niche for CSP as the program that is focused on developing, testing, demonstrating, implementing innovative, sustainable approaches to producing biomass to help us reach our energy independence goals.

Chairman HARKIN. So the two approaches, one is to use a management-based rather than a capital-based program?

Mr. COX. Correct.

Chairman HARKIN. Second, looking at biomass production?

Mr. COX. Correct.

Chairman HARKIN. Of course, that fits in a lot with energy production, too, obviously.

Mr. COX. Correct.

Chairman HARKIN. Those are good recommendations. Use those as a basis maybe for allocating or for deciding who falls where on the scale, and you could do that nationwide because obviously the management base is applicable to any State, any region.

Biomass production, I assume that is applicable to most every State, too, I guess. It might be different kinds of crops.

Mr. COX. Correct.

Chairman HARKIN. Different kinds of practices, but it would still be biomass production. That is a good suggestion. We are going to have to follow up on that, and if you have any more insight into that, I would like to know because that rings a bell with me, so I appreciate that.

One last thing. I have only got 29 seconds left. Ms. Merrigan, Soil Conditioning Index. We heard Senator Nelson talk about that with the earlier panel, and I am concerned about that also.

Are you familiar with the term "soil tilth"? We have a National Soil Tilth Laboratory in Ames, Iowa, at Iowa State, to measure the tilth of soil, the health of the soil, the bugs, the things that are in the soil that make it productive.

Might that be something used, could we use that? How do we get off the Soil Conditioning Index that we have been using for the CSP program?

Ms. MERRIGAN. It is a great question. Certainly, the Soil Conditioning Index is a tool, but it is a computer-based model. It is not actually going to the farm and seeing what is there and it only measures organic matter of the soil and there are other aspects of soil quality that are not being evaluated.

So we really need to look at that and deal with it because your earlier question about the organic farmers, they do till more.

Chairman HARKIN. Yes.

Ms. MERRIGAN. In our experience in New England, some organic farmers were knocked out because of little shifts in their Soil Con-

ditioning Index that made what NRCS agents and American Farmland Trust considered to be exemplary, conservation-oriented farms yet they were losing out on the Soil Conditioning Index. Crazy, really.

In New England where we have a farm that might be 200 acres, you could have so many different slopes and so many different kinds of fields that also it is a bureaucratic nightmare for NRCS to actually do the index appropriately for a farm.

One NRCS agent told us if you send 25 guys out to a particular field, you will get 25 different SCI measurements. So it is a tool that really needs to be reevaluated.

Chairman HARKIN. Thank you very much. I thank all the panel. I will yield now to my colleague from Georgia, Senator Chambliss.

Senator CHAMBLISS. Thank you, Mr. Chairman. I hear a common theme coming from all of you relative to funding. And it is not unusual to hear that in these days and times around Washington because we are running some significant deficits now as compared to the surpluses that we were in in 2002.

With that being the case, we are not going to have more money, we are going to have in all probability less money to work with. So we have got to figure out what the proper balance is not only between commodity, conservation, and nutrition programs, but within those respective titles, we have got to try to figure out what is the proper balance. So it is going to be a challenge for every member of this Committee to try to figure out what that balance ought to be and how we are going to be able to accomplish all the good things that you all have talked about.

The good news is that you do see some positive results of existing programs. We have just got to figure out a way to be able to manage those existing programs and hopefully expand them somehow.

Mr. Cox, why do you think that technical assistance has less support and funding even though it has been the foundation of our conservation programs, and what can we as policymakers do to change that course?

Mr. COX. A couple of comments, Senator Chambliss, and Senator, I think in some ways we have lost our way. We have forgotten that in the olden days, when I was actually working in the field some 30 years ago, the purpose of conservation was to enable producers to gain knowledge, understanding in the ability to themselves manage their farms and ranches in ways that protected resources and sustained the environment.

I think the advent of such large financial assistance programs has been in a sense a double-edged sword. It has given us money we never could have dreamed of 20 years ago when I was in the field.

But the financial assistance has tended to overshadow the fundamental importance of technical resources and science and technology and technical assistance and knowledge, and most of our policy attention has followed that focus toward talking about financial assistance programs.

I think that has been reinforced by the laudable switch of financial assistance programs to the CCC account, but that has also tended to distract attention from the all-important discretionary accounts that fund most of our technical assistance functions.

I think that you, Senator, and others are clearly trying to reverse that last five or 10 years of lack of attention to technical assistance and its value, and I think there are opportunities to do that.

One, which I suggest in my testimony, is why don't we allow producers to sign up for a technical-assistance-only contract under some of our financial assistance programs where we could really demonstrate the cost effectiveness of technical assistance alone. But that would be my contribution.

It is very frustrating to us because conservation science and technology has evolved at an incredibly rapid pace in the last five or 10 years, and we simply are using day to day much less than we know scientifically and technically about conservation, and as a result, we are missing opportunities on a daily basis, and it is extremely frustrating.

The payoff from relatively small investments in the technical services network would be tremendous if we could make that happen.

Senator CHAMBLISS. I am afraid as policymakers we tend to feel and react to that pressure from the farmer in the field from a financial perspective sometimes more so maybe, not that we should or should not, but that we ought to be paying more attention sometimes to those technical aspects than what we do, so I appreciate your comments.

Mr. Ham, the GAO provided testimony that the shortcomings in EQIP's funding allocation process hinder it from optimizing environmental benefits.

Please describe how we in Georgia allocate our EQIP funds, and do you believe that on the State level EQIP achieves the greatest environmental benefits and does it respond to our greatest environmental challenges?

Mr. HAM. Senator, in Georgia, we have our State Technical Committee, who is not an inactive committee. It is a very active committee. We meet often and we are able to make decisions. We also work with our districts, our local districts.

We have a new Conservationist in Georgia, James Tillman, who has been on the job about 2 years. And he believes very strongly and has brought some of the openness from, I think, Arkansas where he is from to share and move some of the responsibilities that others had to bring it back to the local level. I think this helps us put good practices on the ground that local directors can be happy with.

Senator CHAMBLISS. Are there changes that this Committee should make in the 2007 Farm Bill to improve conservation programs in the Southeast?

Mr. HAM. Are there changes that need to be made?

Senator CHAMBLISS. Right.

Mr. HAM. I think simplifying, especially with CSP, if it is going to stay around. To be able to qualify has got to be simplified. We talked a little bit about getting off river basins. I am not sure how I personally feel about that because I think that is a good idea to use river basins where that basin starts and where it comes through your State. We have 52 basis, as you know, in Georgia.

It is a pretty good idea because what is affecting that basin at the middle of the State comes all the way through the State, and

what is being done in the middle part of the State could have a dramatic effect in South Georgia, and I am not sure we need to get away from that totally.

That is a change that I am not sure we want to make so quick. We need to remember that CRP in Georgia is a lot different from CRP in the Midwest. When we signed up for CRP in 1985, it was really a 40–year program and not a 10 or 15–year program.

Once that land went into timber, Senator, even though we could get out in 15 years, it did not make sense to get out because that timber was finally approaching the size that we might see a little profit from.

Where in the Midwest, you can get out of CRP tomorrow. If you are out, you can set a fire, burn off and you are ready to till and have a crop. We cannot do that.

Please keep that in mind when you are working on the Farm Bill, when you are working on the biomass aspect of it, if there is a way to get some of this timber that is now just approaching chipping-saw size, if there is an incentive to move that timber out so it could be replanted to produce a pulp biomass.

Those are options and there are many more, and I will be glad to try to get you up a good long list, and I am sure that you will review it.

Senator CHAMBLISS. I am sure between you and David you all will do that.

Mr. HAM. Yes, sir.

Senator CHAMBLISS. Okay. Thank you. Thank you, Mr. Chairman.

Chairman HARKIN. Thank you, Senator Chambliss. Normally, I would recognize Senator Klobuchar but, Senator Salazar is expected on the floor. He has to go over to the floor right away and he asked if he could just have a minute prior to Senator Klobuchar. So I recognize Senator Salazar.

Senator SALAZAR. Thank you, Senator Klobuchar, and thank you, Chairman Harkin. I look very much forward working with you as chairman and, Senator Chambliss, I very much enjoyed our working relationship in the past and look forward to working on farm issues together this year.

I have just a very quick comment. First on the EQIP program, Senator Harkin, it has been a great program for Colorado. In the ten listening sessions that I had with Colorado farmers this last year around the State, there was tremendous support for the EQIP program.

We receive some $35 million and it is distributed throughout the State of Colorado. Very, very popular among our agricultural community.

And second, the CSP program, I want to commend you for your efforts and creativity and pushing that program forward. What I hear from my farmers in Colorado is that our problem is that we just do not have enough CSP, that we would like to be able to do a lot more and I know that that is a shared view from all the agricultural organizations. So I look forward to working with you to improve upon and see how we can expand both of these programs.

Thank you very much, Mr. Chairman, and thank you for yielding to me, Senator Klobuchar.

Chairman HARKIN. Thank you, Senator Salazar. Senator Klobuchar.

Senator KLOBUCHAR. Thank you and thank you, Mr. Chairman, for convening this hearing on this important topic and also for the work that you did to create the CSP in the last Farm Bill.

CSP has generated a lot of interest in Minnesota, and there are many producers eager to enroll and get involved; however, I have seen that interest turn to disappointment as Mr. Ham was talking about.

Mr. Ham, I have to note that you have one of the best names for a farmer that I have ever heard, and I was hoping that maybe, Chairman Harkin, if I can find Mr. Bacon in Minnesota that he could come testify.

[Laughter.]

Senator KLOBUCHAR. But in any case, it is very similar to some of the issues that raised how the program has been limited to a small fraction of the farmers and ranchers in our State.

The 2006 CSP sign-up added just one new watershed to Minnesota's eligible areas, for a total of seven watersheds. Roughly seven-eighths of the land in our State is not eligible for CSP enrollments and yet Minnesota is a leading agriculture State. It is the sixth in the Nation.

In 2006, there were just 712 CSP contracts in Minnesota and 206,000 acres of farmland enrolled in the program. Minnesota farmers received $6.25 million in CSP payments for their conservation practices.

And by contrast, 86 of our 87 counties are enrolled in EQIP, and Minnesota farmers were able to receive $26 million in payments under EQIP last year.

I actually looked into what was going on with our CSP applications, and in 2006, 73 percent of the eligible CSP applications in Minnesota were rejected. With EQIP in 2006, roughly one-third of eligible EQIP applications in Minnesota were rejected.

So my questions are along those lines. I guess I would first ask Dr. Merrigan. You talked about the complexity of CSP, in fact, all the witnesses did, and how that has deterred farmers from enrolling, and I just mentioned our disappointing sign-up in Minnesota.

What do you think would be in a little more detail in what would be the most valuable changes that NRCS could make to the way the program is administered to make it easier for farmers to enroll?

Ms. MERRIGAN. Thank you for that question. First of all, it is so frustrating for farmers to go through that self-assessment workbook and the whole application process and be deemed eligible, wait around to find out what the money game is and ultimately find out that they are in some sub-category of some tier. There are so many different caps and reduction rates that they do not know from the get-go whether all of their effort and the effort of the NRCS is going to be worth their while.

So we need to remove all of those caps on these different kinds of payments. That would go a long way to helping things out.

The second thing is because of the program complexity and all the kinds of information that needs to be inputted to come up with the CSP eligibility, NRCS understandably tends to favor farmers

who are already in the NRCS family, so to speak. People who are already beneficiaries of NRCS programs are more likely to be successful in CSP because the data is already there. And if you have the cap on technical assistance and you have to amass all this information on the farm, well, then we should expect that the winners will always be winners.

If we really want to have this program really penetrate into the farm community, have the kind of reach that the Committee hoped it would have in 2002, then we really need to remove that cap on technical assistance and we really want to consider the idea of a universal application.

Senator KLOBUCHAR. Okay. Thank you. And then, Dr. Cox, you were just talking about the questions from Senator Harkin about the biomass development and how this could be a major focus of the program, and our State is a leader, of course, in corn and soybean crops.

I wondered if you could elaborate on the kind of conservation practices you see as particularly suited to renewable fuels production?

Mr. COX. Thank you, Senator. Some of us think Iowa are leaders in corn and soybean production as well.

Senator KLOBUCHAR. I think they are one above us for soybeans, maybe two, maybe three.

Mr. COX. I have to amend that remark by saying that I grew up in Minnesota and my mother voted for you.

Senator KLOBUCHAR. Well, then, Dr. Cox, all my remaining questions will be for you.

[Laughter.]

Mr. COX. She will be thrilled to know that I actually met you.

I think intensification of corn production to feed ethanol plants could be, if poorly managed, a real negative for the environment for soil and water and wildlife. So I think the first thing we need to do is that intensification of corn production needs to go hand-in-hand with intensive working land conservation.

So a lot of our traditional practices that we already are trying to encourage, reduce tillage, diverse rotations, buffers, contour grass strips, I mean, a lot of what is basic in the conservation toolbox could be employed through CSP to make sure as we intensify corn production that we do it in a way that pays off for our soil and water and wildlife as well as for our energy budget.

Then in the longer term, there is a lot of really interesting work going on about incorporating additional crops into traditional corn and soybean rotations that increase biomass production overall, cover crops, nurse crops, strip cropping.

This is sort of a new and advancing field of conservation science and technology, and CSP could really be employed I think to expand that or to take that innovation from the lab to the field, and with really tremendous long-term promise for both dealing with the biomass production but also solving a lot of the soil and water problems we currently have with intensive row crop production.

So both the basics we understand today and the things that are emerging in universities could be promoted by CSP.

Senator KLOBUCHAR. Thank you. One last question for Dr. Hovorka. In your written testimony, you talked about how 85 per-

cent of Minnesota's CSP payments from 2006 enrollment are for practices that benefit wildlife either by providing habitat or reducing pesticide use.

Has your research found measurable benefits to wildlife populations in Minnesota or other States as a result of the CSP practices?

Mr. HOVORKA. That is a good question. Thanks for the compliment, but I am not a Doctor.

Senator KLOBUCHAR. That is fine. Did your mom vote for me though?

[Laughter.]

Mr. HOVORKA. She would have had she lived in Minnesota.

In fact, that is a really good question, and the answer is not yet. Because what we mostly measure is acres and dollars through USDA programs. And what USDA is trying to get better at and what we are encouraging to get much better at is measuring those actual outcomes.

So we can measure not only just the practices and how many acres we have, but what is the actual change in water quality in that stream, what is the actual change in populations in terms of wildlife.

So we cannot give you numbers and say, "We have created this many pheasants," but we think that USDA needs to move further toward measuring those outcomes not just on a local basis but also so at a program level we have a better understanding of what we are buying with the dollars.

Senator KLOBUCHAR. Thank you.

Chairman HARKIN. Senator Klobuchar, thank you, and thank you all very much to this panel and the previous panel. Great testimony, great written statements.

Again, I am going to follow up or our staff will with you for any ideas, suggestions you have on how we might do a ranking system or a national kind of a system not based on watersheds.

Mr. Cox gave us some ideas. Maybe some of you have other ideas from the standpoint of an actual hands-on farmer to others, but we need that kind of advice and input for that, and as we move ahead in the Farm Bill, we will look forward to your continued input, advice and consultation.

Thank you all very much. The Committee will stand adjourned.

[Whereupon, at 12:02 p.m., the Committee was adjourned.]

APPENDIX

JANUARY 17, 2007

Senator Thad Cochran 

Statement

Senate Committee on Agriculture, Nutrition, and Forestry

January 17, 2007

I want to thank Chairman Harkin for conducting these Farm Bill hearings to review issues important to this Nation's agriculture economy. I especially want to thank the Chief of the Natural Resources Conservation Service Arlen Lancaster and Acting Director Lisa Shames of the Government Accountability Office for their continued support and oversight of the many conservation programs that are vital to America's farmers and ranchers.

The Conservation Title of the 2002 Farm Bill was an important step forward in the partnership between the federal government and farmers and ranchers. Programs such as the Environmental Quality Incentives Program and the Conservation Security Program allow producers to continue to work their land in

a responsible manner while providing the opportunity to invest in the most efficient and conservation oriented agriculture practices.

The Environmental Quality Incentives Program is utilized by farmers and livestock producers throughout Mississippi. This program has provided cost share assistance to improve crop irrigation practices, erosion control ponds for livestock watering, and pasture planting of grasses best suited for grazing and erosion control. These are a few examples of the conservation practices the Environmental Quality Incentives Program has allowed Mississippi agriculture producers to implement. I look forward to supporting this program as this Committee begins consideration of the next farm bill.

Agriculture producers located in five watersheds in Mississippi have been able to participate in the Conservation Security Program since inclusion of the program in the 2002 Farm Bill. I have received positive feedback from those producers who qualified for this conservation program. The Conservation Security Program has been an important resource for those producers that have chosen to implement conservation tillage and water management programs in their operations. While this program compliments the other conservation and agriculture support programs in the 2002 Farm Bill, it does not replace the need for a strong income safety net for farmers.

Mr. Chairman, thank you again for holding this hearing and I look forward to the testimony of the panelists.

Testimony of
Craig Cox, Executive Director, Soil and Water Conservation Society

Senate Committee on Agriculture, Nutrition & Forestry Hearing on Working Land Conservation: Conservation Security Program and Environmental Quality Incentives Program.

Washington, DC January 17, 2007

Mr. Chairman, Senator Chambliss, members of the Committee, I want to thank you for the opportunity to appear before you today representing the Soil and Water Conservation Society (SWCS). My name is Craig Cox; I serve as Executive Director of the Soil and Water Conservation Society.

SWCS is an international, not-for-profit professional society, founded in 1943. Its mission is to foster the science and art of natural resource conservation. Our 6,000 members include professionals ranging from technicians who work one-on-one with landowners to researchers who seek to improve our basic understanding of conservation problems and solutions. Our members provide the scientific and technical foundation for implementing farm bill conservation programs. Agricultural policy and the farm bill, therefore, are critically important to our members.

Working Land Conservation

I would like to applaud you for holding this hearing on working land conservation. The most important and enduring contribution of the 2002 farm bill was to increase the emphasis on working land in our conservation portfolio. The environmental and conservation challenges agriculture faces today are daunting:

- Agriculture is the largest source of impairment in rivers and streams, affecting nearly half of stream and river miles with water quality problems.
- Agriculture is the source of more than 40 percent of impairments in lakes, including nutrients, siltation, and pesticides.
- According to the US Geologic Survey, 44 percent of the total phosphorus entering the Mississippi River drainage is from cropland sources, and another 33 percent from pastureland.
- Fertilizer used in agriculture and manure from livestock were estimated to account for 22 percent and 14 percent of total nitrogen and for 17 and 26 percent of total phosphorus that entered major river basins in the United States.
- On 102 million acres of cropland, soil erosion remains above tolerable levels.
- Of the 663 species listed as threatened or endangered under the Endangered Species Act, 412 are listed, at least in part, due to agricultural development, grazing, and use of agricultural chemicals.
- Invasive weeds have quadrupled their range from 1985 to 1995—currently 100 million acres of land moderately to heavily infested with invasive grasses.
- The first ever assessment of the biological condition of U.S. wadeable streams concluded that 42% of the U.S. stream miles are in poor condition compared to best

available reference sites in their ecological regions, 25% are in fair condition, and only 28% are in good condition.

The environmental challenges agriculture faces are so broad because agriculture controls most of the nation's landscape. Cropland, pasture and rangeland make up half of the U.S. land area. Adding private forest land brings the total to over 80 percent. That agriculture faces a compelling environmental challenge should not surprise us; in most of the United States agriculture *is* the environment.

Agriculture is not meeting today's environmental challenges. And tomorrow's challenges promise to be even greater than today's. Water, energy, and climate change—these three issues will create challenges for conservationists as great as, or greater than, the challenges we faced at the birth of the agricultural conservation movement during the Dust Bowl days of the 1930's Meeting accelerating demands for water and energy will put tremendous demands on our resources, ecosystems, and environment. Already 4 out of 10 people on the globe live in river basins experiencing water scarcity. By 2025 it is estimated that 3.5 billion people—nearly half the world's population will face shortages. Some are predicting that water will replace oil as the resource of greatest concern to the global community—there are alternative fuels, but there are no alternatives to water.

Agriculture will play a critical role in providing those alternative fuels as everyone on this Committee knows—and hopes. But meeting the energy challenge will require intensification of biomass production on agriculture and forest land to unprecedented levels. As anyone who experienced the fencerow to fencerow production of the late 1970's knows, intensification of production brings both risks and benefits. Biomass production in agricultural landscapes holds great promise for the environment, but that promise will not materialize on its own. Intensive conservation must go hand-in-hand with intensive biomass production or we are likely to find ourselves trading soil, water, and wildlife for oil. That would be a terribly unfortunate missed opportunity.

Climate change, moreover, will make our task much harder. The evidence is compelling that the climate is already more variable that it was in the past and that variability will grow in the future. We will be hotter, colder, wetter, *and/or* drier. The climate in the places we work will very likely be marked by more extreme storms and wider swings between wet, dry, hot, or cold periods. A report SWCS published in 2003 found that increases in precipitation intensity could increase erosion and runoff from cropland by as much as 90 percent.

Truly sustainable solutions to these challenges will require much more than simply minimizing effects on resources—we will have to meet demands for water and energy in ways that restore and enhance resources, ecosystems, and our environment. I think this task will be among the most compelling challenges of this new century—the "never-ending life work or our species" as Wendell Berry has written.

The 2007 farm bill comes at an auspicious moment in conservation history. Agriculture simply cannot meet today's, let alone tomorrow's, environmental challenges without an intensive, focused, and strategic conservation effort on working land. It is imperative that we use this moment to build a working land conservation effort that can meet those challenges. Conservation science and technology is advancing at a rapid pace. The 2002 farm bill provided unprecedented funding and authority to fuel a working land conservation effort. We have a strong foundation to build on and reason for optimism that we can meet the challenges we confront.

Technical Assistance

Technical assistance is not in the title of this hearing but technical assistance is the foundation of working land conservation. Let me be clear about what I mean by technical assistance. Technical assistance ***is*** about getting conservation on the ground; technical assistance ***is not*** about administering programs. Technical assistance **is** about translating science and professional judgment into action on farms and ranches that conserves resources, enhances the environment, and ensures the commercial viability of agriculture. Technical assistance ***is not*** about writing contracts and cutting checks.

I have no doubt that the administrative tasks required to "get the money out" to producers through conservation programs will be completed. I do have serious and growing doubts that the scientific and technical support will be there to make those programs really work for producers and taxpayers. Since 1985, inflation adjusted funding for financial assistance has nearly tripled while funding for technical assistance has been nearly flat. NRCS has fewer conservation professionals on board today than they did in 1985.

The technical know-how needed to drive effective working land conservation is great. Integrating state-of-the art soil, nutrient, pest, grazing, irrigation, and wildlife management into the production systems used on working farms and ranches requires sophisticated and ongoing technical assistance. Technical assistance can work alone, or in combination with financial assistance to conserve resources and enhance the environment. In many cases, the management-intensive, knowledge-based conservation systems so important to working land conservation may reduce input costs and provide other advantages to producers. In such cases, know-how and risk are bigger barriers than cost. Technical assistance can help producers get through the learning stages much faster and also reduce risk. The result is cost-effective conservation that tends to stay in place over the long-term because it has become part and parcel of the farm or ranch operation.

Technical assistance multiplies the benefits of financial assistance and financial assistance multiplies the benefits of technical assistance. Sometimes, technical assistance alone is enough. Sometimes technical assistance needs to be coupled with small and perhaps short-term incentive payments. In other cases, no change can occur

without substantial financial assistance. The key is to get the right mix. I am concerned we no longer have the right mix.

Congress recognized the importance of technical assistance in 2002 by mandating that the Secretary of Agriculture use funding from the Commodity Credit Corporation (CCC) for conservation programs to provide both financial *and* technical assistance to participants in those programs. Congress also provided for the certification of "third-party providers"—individuals and entities not employed by USDA with the technical expertise needed to help implement conservation practices funded by conservation programs. I urge this Committee to take additional steps in 2007 to shore up our technical assistance network:

- Remove arbitrary caps on use of CCC funds for technical assistance to implement financial assistance programs.
- Focus TSP provisions on umbrella contracts with organizations, firms, agencies, and other entities for ongoing work or work over a geographic area/resource concern; lower the match for contribution agreements. Ongoing agreements tap into more extensive support network, knowledge base, and the reputation of the organization. Ongoing agreements provide incentive for the organization to build their capacity to provide technical assistance.
- Allow producer's to sign-up for "technical assistance only" contracts under EQIP and other conservation programs to ensure they get the assistance needed to implement conservation practices and systems they are willing to invest their own time and money to put in place.
- Ramp up Conservation Innovation Grants to $100 million annually and focus those grants on accelerating the development, testing, and transfer of innovative conservation technology and conservation systems for working farms and ranches.

The actions recommended above will be very helpful, but it is clear those actions alone will not be enough to build the 21st century technical infrastructure producers and taxpayers need. We need a coordinated investment plan to build a technical infrastructure suitable for working land conservation—a plan that couples the new CCC-funding with strategic increases in discretionary funds for research, education and technical assistance and allocates those resources to federal, state, local government, NGOs, and private sector based on ability to deliver. Such a plan would have to reach well beyond the confines of a farm bill and would require sustained support from the Administration and Congress.

Conservation science and technology has advanced rapidly in the past decade and is providing tools and understanding I could only dream about, if I could imagine them at all when I started work 30 years ago. We are using much less than we know, however, because our technical assistance network is not up to the task of translating science into practice. As a result, we are missing critical opportunities every day to get more out of the taxpayers' and producers' investment in conservation. Given the challenges we face, we simply cannot afford to let those opportunities slip away. The most

fundamental federal role in working land conservation must be to build, maintain, and support the technical assistance network that, in the end, will determine whether we meet the environmental challenges agriculture faces.

Environmental Quality Incentives Program (EQIP)

The Environmental Quality Incentives Program (EQIP) has emerged as the most important USDA program providing financial assistance for conservation on working farms and ranches and—as measured by number of participants and the number of acres under contract—the largest financial assistance conservation program in the USDA toolbox. By the end of fiscal year 2006 there were 138, 993 active EQIP contracts covering 80,597,302 acres. If one includes completed EQIP contracts in the total, then EQIP has improved stewardship on over 125 million acres. Funding for EQIP increased five fold from 2002 to 2005 as a result of the 2002 farm bill—among the most important achievements of the 2002 farm bill.

EQIP coupled with the Conservation Technical Assistance Program is the centerpiece of the nation's conservation effort on working land. Given its importance, it is essential the program be deployed as effectively as possible to address the environmental challenges agriculture faces.

Over all, our ongoing assessments of EQIP to date have shown mixed results, but suggest reason for optimism. NRCS has devoted and continues to devote considerable attention to measures to improve the effectiveness of the program particularly at the farm and ranch level. NRCS conservationists deserve praise for their efforts at national, state, and local levels to make the program work—especially given the administrative burden created by such a large increase in funding. There are, however, major opportunities to make a good program much better.

By far the most promising opportunity to improve the effectiveness of EQIP is to focus more of its resources on special projects. Let me be clear. I'm am not talking about drawing arbitrary lines on maps and telling producers you are in or out of the program depending on which side of the line you are on. I am talking about focusing technical and financial resources on projects—like Lake Rathbun in Iowa—designed to strategically and effectively address conservation issues of great importance to local communities.

Special projects do two important things. First they get producers working together to achieve the critical mass needed in a particular location to really make a difference on the ground. Second, they allow us to take advantage of new science and new tools to focus our efforts where they will do the most good. At Lake Rathbun, for example, employing that new science has pinpointed the 17 percent of the watershed that is the source of nearly all of the sediment and nutrients that threaten the health of this critical drinking water and recreational resource. The EQIP special project funds are helping local conservationists and producers direct their effort at those critical acres and are already paying off with measurable improvements in water quality.

We at SWCS call this new combination of science, understanding, and technology "precision conservation"—getting the right practices, in the right places, at the right time and at the right scale. The potential of precision conservation to ramp up the effectiveness of working land conservation is remarkable. Using precision conservation to focus on that 17 percent of the cropland responsible for most of the pollution in Lake Rathbun will dramatically reduce the cost and increase the effectiveness of conservation efforts in the watershed.

And Lake Rathbun is not unique. In fact current science suggests it is the rule rather than the exception. At a recent SWCS conference—Managing Agricultural Landscapes for Environmental Quality—a keynote speaker stated "...there is irrefutable scientific evidence that some locations in the landscape have a high pollutant-generating potential (sensitive sites), can function especially effectively to intercept and treat pollutants, and /or have features that comprise critical habitat for wildlife." Study after study is showing the potential gains to be made by focusing effort through special projects to foster collaboration among landowners to make sure those most critical portions of the landscape get priority attention.

Those same studies, however, also point out the risk of not taking advantage of precision conservation in special projects. If 17 percent of the cropland in the Lake Rathbun produces most of the sediment and nutrient pollution, then treating as much as 83 percent of the watershed at great expense could produce negligible results—if they are the wrong acres.

The potential of special projects in EQIP could and should be multiplied by full implementation of the Partnerships and Cooperation Section of the 2002 farm bill—one of the most overlooked opportunities provided in that legislation. That provision—implemented as the Conservation Partnership Initiative—is only scratching the surface of the potential to help communities through this nation focus effort on environmental issues critical to their quality of life, and in many cases, central to their plans for local economic development. A stronger Partnerships and Cooperation Section should facilitate bringing the financial and technical resources of multiple USDA conservation programs and agencies together will other federal, state, local, and private sources of support to fuel a national network of community-driven cooperative conservation projects. The potential of such projects to accelerate progress and build meaningful local support for working land conservation is vast. EQIP special projects and the Conservation Partnership Initiative demonstrate the power of such projects.

One of the most important contributions the 2007 farm bill could make to working land conservation would be to mandate that at least 30 percent of EQIP funds be allocated to special projects—either alone or through a strengthened Partnerships and Cooperation Section. Given the funding in the conservation title for EQIP and all other conservation programs, we can make a major investment in special projects while still operating a base program in every county funded at levels unprecedented in recent history.

There are other important opportunities to enhance the performance of EQIP—most of which could be accomplished under current statutory authorities—although legislative encouragement to move in this direction would be very helpful. Briefly, those opportunities include:

- **Improving the criteria used to select program participants.** The criteria used by state and localities to select EQIP participants from among a pool of potential participants has the most direct influence on the ultimate environmental performance of the program. NRCS staff at national, state, and local levels, as well as members of state technical committees, have invested a great deal of effort, expertise, and time developing application ranking systems to select which producers will receive assistance under EQIP. We applaud NRCS for making such a concerted effort; we also think there are important opportunities to improve on the work that has already been done. Substantially increasing the emphasis on and rigor used to evaluate cost-effectiveness, explicitly rewarding higher levels of environmental performance, and improving the locational factors used in EQIP ranking systems hold great promise of both streamlining the implementation of EQIP and improving its effectiveness as a working land conservation program.

- **Ensuring fund allocation are based on environmental need and performance.** NRCS uses a formula based on 31 factors, each with its own factor weight, to allocate EQIP funding to states. The factors in that formula influence the ultimate environmental performance of EQIP. A recent report from the Government Accountability Office (GAO 06-969, September 2006) concluded that "NRCS's funding process is not clearly linked to EQIP's purpose of optimizing environmental benefits; as such, NRCS may not be directing EQIP funds to states with the most significant environmental concerns arising from agricultural production." A revised formula should heavily weight factors that are closely tied to the extent and magnitude of environmental challenges and opportunities in each state. Factors tied to the extent and magnitude of established national priorities should be weighted most heavily. In addition, NRCS should hold back as much as 20 percent of EQIP funds to use to reward higher performing state EQIP programs through the performance incentives established in the 2002 EQIP rule.

- **Placing more emphasis on incentive payments and management-intensive conservation systems.** EQIP is heavily weighted toward structural practices. Of the $786 million NRCS spent on practices in EQIP in contracts signed in 2005, just 18 percent was spent on incentive payments nationally. Some states, however, spent as much as 90 percent of their EQIP funds on cost share payments. Structural practices are important, but more emphasis should be placed on the management-intensive soil, nutrient, pest, water, and grazing management so critical to working land conservation. Incentive should be scaled to higher levels of management intensity within land management practices and EQIP should include a continuous sign up for selected management-intensive practices that are the most cost-effective means of achieving results in a particular location.

Conservation Security Program (CSP)

I have saved my comments on the Conservation Security Program (CSP) for the last not because they are of least importance but rather because CSP is the most challenging and I fear the most imperiled contribution the 2002 farm bill made to working land conservation.

SWCS, like many organizations, celebrated the appearance of CSP in the 2002 farm bill. We hoped CSP marked the beginning of a new approach to supporting agriculture and a new approach to encouraging conservation. As a conservation organization, we were particularly hopeful that CSP would spur widespread adoption of management-intensive conservation systems and innovative farming systems that hold great promise for improving soil, water, and wildlife habitat on our nation's working land.

CSP, however, has fallen far short of that promise. The program implemented to date is not providing an effective alternative to traditional, commodity-based forms of financial support to producers; neither is it spurring widespread adoption of new conservation effort on working farms and ranches. As a result, I fear CSP is caught in a no-man's-land and in danger of losing support from both agricultural and conservation interests. Urgent attention is needed to recover the promise of CSP and find a secure home for the program in agricultural policy.

We face two major challenges to creating that secure home for CSP. The first is money; the second is environmental performance.

The CSP statute envisioned an open-ended stewardship entitlement but the reality has been strict funding caps. Adjusting vision to reality has resulted in many compromises that have drawn intense criticism of CSP. Fixing these problems, however, will require substantial increases in funding. A back of the envelope calculation, for example, suggests an additional $900 million will be needed just to keep 2005 CSP participants at their 2005 payment levels and reverse the decline in enhancement payments anticipated over the life of their contracts under the current variable rate enhancement policy. Moreover, because all of the annual funding for CSP is used just to meet that year's contract obligations, level funding for CSP—absent the much criticized variable rate enhancement policy—means no new sign-ups and no contract modifications to reward greater conservation effort by current participants.

In short, the CSP we have today must grow in funding every year just to sustain the current limited program. The funding growth will have to be much larger if we are to reverse many of the much criticized compromises that have been made to the statutory vision of CSP. Serious questions are and will continue to be raised about fair treatment of producers in CSP if funding for CSP does not grow. Anecdotal reports indicate serious questions are already being asked about the fairness of large payments going to producers lucky enough to participate in CSP while other producers—already doing exactly the same things for conservation that current CSP participants are doing—must wait years to participate.

Achieving that kind of sustained and secure growth in funding every year will be a daunting task, at least given our current understanding of the fiscal constraints the Committee will face as you work on the 2007 farm bill. If our understanding of those fiscal constraints is correct, it would appear that the most likely way to achieve such sustained funding growth would be to transition current direct payments based on historical levels of commodity production to stewardship payments based on current and ongoing levels of conservation. The troubled budget history CSP has suffered through suggests there is limited support for such a transition—at least to date.

I fear we missed an important opportunity in 2002 to begin that transition. I hope we don't miss that opportunity again in 2007.

The reality of the magnitude of the growth in funding needed to sustain CSP over the long-term also raises an important, but uncomfortable question for conservationists about the environmental performance of CSP—how much can we afford to pay to reward the status quo when there is such an urgent need to change the status quo?

CSP, as currently structured, is spending nearly all of its funding to reward producers for their "benchmark" conservation practices, that is, the conservation practices that were already in place on the farm or ranch for two years before the producer signed up for CSP. Rewarding producers for their past investment in conservation and for the ongoing production of the environmental benefits they are already producing is one of the unique and important features CSP brings to the conservation portfolio. But it also means that, to date, taxpayers are largely paying for the environmental benefits they were already receiving. And the potential to spend large sums of CSP funds in the future to reward farmers for what they are already doing is large because most producers are undertaking at least minimal conservation efforts and some producers are making great conservation strides on their farmers and ranches.

Producers, for example, are using no-till conservation systems on about 62 million acres of U.S. cropland—nearly six times the acres enrolled in CSP at the end of 2005. Producers use split applications on nutrients on perhaps one-third of U.S. corn acres, or about 25 million acres—over twice as many acres enrolled in CSP for all land uses in 2005. But as I outlined earlier, this status quo level of conservation effort is not meeting today's environmental challenge, as outlined previously, and will clearly not be enough to meet tomorrow's challenges. The extent and intensity of conservation on working land must expand, and expand quickly. The ethical and practical justification for rewarding good actors is compelling. But conservationists are caught in a dilemma. Rewarding the status quo—even if the producers being rewarded are award-winning conservationists—is simply not sufficient to get us where we need to go. We must strike a better balance in CSP between rewarding the status quo and spurring new effort if we are to recover the promise of CSP as a conservation program.

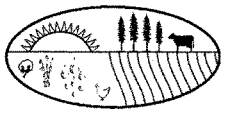
There are many ways in which CSP could be adjusted to increase its effectiveness as a tool to change the status quo and spur new effort by U.S. farmers and ranchers. We

could "raise the bar" by placing high priority on participation in Tier III or II and strengthen the conservation standards for those higher tiers. Alternatively, we could use stewardship payments as the means to reward producers for what they are already doing while focusing enhancement payments on rewarding new effort, above and beyond the benchmark practices and systems in place when producers enroll in CSP. There are multiple options that combine these two or other approaches to increase the effectiveness of CSP as a conservation program. We have and will continue to provide technical support to your staff and others working on the details of various options to enhance the performance of CSP.

It is both possible and urgent that we recover the promise of CSP in 2007. By far the most important outcome must be to get CSP out of the no-man's-land it finds itself in today and secure a sustainable home for CSP in agricultural policy. There are many ways to accomplish this goal. Our hope is that CSP find a secure niche in the conservation title, focusing on encouraging the use of management-intensive conservation systems and innovative farming systems. But in any case, it is essential that Congress ensure that funding for CSP is sufficient to match the vision of the CSP statute that emerges in the 2007 farm bill.

In Closing

Again, Mr. Chairman, Senator Chambliss, members of the Committee, I would like to thank you for the opportunity to appear before you today. The potential for the 2007 farm bill to build an effective working land conservation effort is great and the need for such an effort is urgent. We at SWCS will try help as best we can to make that potential a reality.



National Association of Conservation Districts
and
Georgia Association of Conservation District Supervisors

Testimony
of
Jim Ham
On behalf of the
Georgia Association of Conservation District Supervisors
And the
National Association of Conservation Districts
Before the
Senate Agriculture Committee
January 17, 2007

Good Morning. I am Jim Ham, a middle Georgia farmer, a county commissioner in Monroe County and president of the Georgia Association of Conservation District Supervisors. I am also a charter member of the Two Rivers RC&D Council and serve on the Executive Board.

Across the United States, nearly 3000 conservation districts -- almost one in every county -- are helping local people to conserve land, water, forests, wildlife and related natural resources. We share a single mission: to coordinate assistance from all available sources -- public and private, local, state and federal -- in an effort to develop locally driven solutions to natural resource concerns. More than 17,000 volunteers serve in elected or appointed positions on conservation districts' governing boards. Working directly with more than 2.3 million cooperating land managers nationwide, their efforts touch more than 778 million acres of private land.

The conservation title has grown over the last decade to now represent significant funding and meaningful technical assistance to farmers and ranchers across the country. This commitment allows farmers like me to not only protect my soil and water but also be a better neighbor and citizen. The 2002 Farm Bill has also resulted in new participants coming to the conservation "table" and has created new partnerships, both at the local and national level.

I farm in an area that is changing. Our friends from the city are moving out to enjoy our open spaces, fresh air and wildlife. While most do want to live in the country, many are not ready to be neighbors with a chicken farmer. Applying nutrients on my farm land can be a...well a not so pleasant activity some times. My neighbors understand this but are also pleased that I use the latest technologies and best management practices to complete the application process as well other activities such as spraying.

I have an EQIP conservation contract that has allowed me to cross fence pastures to better utilize my grass, fence out ponds and streams to protect water quality, install stream crossings, and renovate heavy use areas to prevent soil erosion and manage animal waste. Row crop producers in Georgia have benefited from such practices as conservation tillage, pest management, and irrigation management plans under the EQIP program, resulting in better management of land and other resources.

The districts believe that every acre of conservation counts, including row crop, range, forest or livestock operations, and the growing rural/urban interface. To meet the needs of all areas of agriculture, the committee should consider the impacts of the current regulations that restrict participation in conservation programs. The 2002 bill included new restrictions on participation that restricts applications based on adjusted gross income, regardless of their conservation needs.

According to the 2002 Census, while the number of farms in Georgia is about the same as 1997, the number of acres in farming has decreased by about 500,000 acres. Changes in land use such as fragmentation due to new friends from the city moving into the country adds pressure to farms and the services that conservation districts and the NRCS provide them through conservation programs. These new country residents do not have the same history with the land that I and other farmers do, and may require more assistance to understand the proper conservation practices and best management of their land.

The 2002 Farm Bill authorized increases in conservation funding that by 2007 will be double those of the last decade. About two-thirds of the new funds authorized in 2002 target programs emphasizing conservation on working lands that are still used for crop production and grazing, as opposed to conservation spending prior to 2002, in which the bulk of conservation spending was directed toward land retirement programs. We believe that a producer must have an economically viable farming operation to be able to make an investment in conservation practices on their operation. We appreciate the increasing awareness that there needs to be a balance of programs to address both lands that are in active production of food, feed and fiber as well as lands that are retired and protected. Landowners need and use both, and we hope Congress will continue to recognize that no one program meets the needs of all farmers and ranchers.

In many ways, conservation programs and policies help keep me on the farm. While I get other support from the commodity programs, the conservation tools, both technical and financial, have helped me and many others avoid regulation and allow me to continue farming in an ever changing environment.

We are discussing the need for updates or additions to EQIP and the CSP programs, as well as all of the programs in the conservation title. We hope the committee will look into increasing access to EQIP and other programs, evaluate whether consolidation of the numerous conservation programs makes sense, or if streamlining the application processes provides for smoother, more efficient program participation on the ground. We do, however, hope that any streamlining does not result in taking funding away from conservation programs. The next farm bill must balance programs focusing on land retirement with working lands programs, such as EQIP and CSP.

EQIP is very popular in Georgia, and in fiscal year 2004, we funded 1175 contracts; in 2005 1281 contracts and in 2006 1084 contracts – all totaling $42,705,562. For these three years there were 3619 unfunded contracts. As you can see in Georgia with the EQIP program alone there is high demand, and we only see that demand for conservation assistance increasing.

EQIP funding in Georgia has been put to use supporting manure management, water quality and water quantity issues. Our growing poultry industry has utilized EQIP cost-share dollars to create stackhouses to ensure that manure does not create a water quality problem in the local community. Without these cost share dollars, these facilities would not have been built, resulting in inadequate storage. There is also a growing need in Georgia for funding to address forestry concerns. Due to previous conservation programs, there is an over-abundance of timber that needs to be thinned in order to keep the land productive and in order to improve wildlife habitat. EQIP dollars have been used in Georgia to meet some of these needs, but the needs outweigh the assistance currently available.

The CSP program that resulted from the 2002 Farm Bill is a little different than we expected. We hoped for a program that was easy for producers across the country to understand, resulting in graduated support for increasing adoption of conservation practices. Unfortunately, the result was an extremely targeted program with complex implementation. The program is too complicated – both with general understanding of program design and application complexity by the producer, coupled with limited watershed-based availability and lack of additional assistance on the ground needed to implement the program. The watersheds selected in Georgia were very small with limited agricultural production, which has resulted in 37 contracts in 2004, 111 contracts in 2005 and 58 contracts in 2006 all totaling $62,202,358. For these three years there were just 31 unfunded contracts.

The CSP self assessment tool is a step in the right direction to further improve this program. Due to the complexity of the CSP application process, USDA should place emphasis on educating producers about the recordkeeping and information required prior to the application process beginning. With the correct information in hand, landowners will be better able to respond and use the CSP Program.

While CSP has been well received in Georgia, EQIP continues to reach more landowners. This is perhaps due to EQIP being an established program and having the flexibility to meet the needs of landowners.

Conservation financial assistance provided through the Farm Bill programs is an important component in achieving agricultural sustainability both economically and environmentally. But in addition to talking about EQIP and CSP, I must stress the importance of technical assistance. Technical assistance allows NRCS staff at the local level to work with districts, landowners and state and local agencies to address local resource concerns. Technical assistance is utilized to work with landowners on conservation plans from design, layout, implementation, maintenance, helping landowners understand proper management of highly erodible land and necessary compliance for participation in farm bill commodity programs.

Funding for technical assistance allows NRCS employees to meet face to face with landowners, visit their operation and help them design strategies to the resources needs of their individual agricultural operation. Through these discussions, a comprehensive conservation plan can be developed and then financial assistance programs if needed such as EQIP, CSP or any other program in the conservation "tool box" can be utilized to help meet the goals of the conservation plans. Technical assistance must continue to be a fundamental element of the next farm bill; both as a stand alone program, and built into the delivery of every individual conservation program.

We all have a great opportunity in the 2007 farm bill to build on the good programs and policies that were advanced in 2002. Georgia conservation districts and those across the country want to be a constructive and active player in the development of the 2007 farm bill. We want to work with the committee to make sure the next conservation title provides meaningful assistance to producers and results that taxpayers can also appreciate and enjoy. In so doing, we believe that programs should balance efforts to achieve soil, water, air, plant and animal/wildlife goals, necessary to address the nation's agricultural natural resource needs.

The Conservation Security Program and Wildlife

Testimony of Duane Hovorka

on behalf of the

National Wildlife Federation

Sustainable Agriculture Coalition

and

Izaak Walton League of America

before the

U.S. Senate Committee on Agriculture, Nutrition and Forestry

January 17, 2007

Good morning! My name is Duane Hovorka, from Elmwood, Nebraska. I am the Farm Bill Outreach Coordinator for National Wildlife Action, and I'm here today representing the National Wildlife Federation, Sustainable Agriculture Coalition, and Izaak Walton League of America.

The National Wildlife Federation (NWF) was founded in 1936 as the national voice of state and local conservation groups, and has since emerged as the nation's foremost grassroots conservation organization. NWF has a long history of work to help establish, expand and improve Farm Bill conservation programs. The Sustainable Agriculture Coalition (SAC) is an alliance of grassroots farm, rural, and conservation organizations from across the country that together advocate for federal policies and programs supporting the long term economic and environmental sustainability of agriculture, natural resources and rural communities. For 85 years, the Izaak Walton League of America has supported strong federal conservation policies on private lands, especially agricultural lands, to protect America's hunting, fishing, and outdoor heritage. These three organizations have collaborated many times, including in the development in the late 1980s of what was to become the farm bill's Wetlands Reserve Program.

My background is in public policy. For the past ten years, I have provided public policy and organizational consulting services to wildlife and agricultural organizations, including the National Wildlife Federation, Midwest Sustainable Agriculture Working Group, Center for Rural Affairs, Kansas Rural Center, Nebraska Sustainable Agriculture Society, and Nebraska Wildlife Federation (where I served as executive director). That experience followed four years as an aide in the Nebraska Legislature, and 11 years in corporate government affairs.

I serve on the USDA Natural Resources Conservation Service State Technical Committee for Nebraska, and the University of Nebraska Lincoln Center for Grassland Studies Advisory Board, and am active in the Nebraska Farm Bill Conservation Coalition. I have been involved in the analysis and development of Farm Bill proposals dating back to the 1990 Farm Bill. Over the past year, I have coordinated a project sponsored by the Sustainable Agriculture Coalition, National Wildlife Federation, and Izaak Walton League of America, to better understand the USDA Conservation Security Program and its benefits for fish and wildlife.

Congress enacted the Conservation Security Program in the 2002 Farm Bill to reward farmers and ranchers for providing a wide variety of natural resource and environmental benefits to society, including wildlife. Like other organizations, we have been asking: just what are we buying with Conservation Security Program contracts? How much is the program benefiting wildlife and wildlife habitat?

Background on the Report

To begin to answer those questions, I interviewed a variety of people, including state fish and wildlife agency employees, non-profit wildlife and agricultural organizations, local US Department of Agriculture employees, and others. I focused on the insight of people who had on-the-ground experience with the Conservation Security Program in their state.

The USDA also provided us with more detailed information than was previously available about contracts that resulted from the 2006 Conservation Security Program signup. Included was

information about payments for specific enhancement practices that appear to us to provide either wildlife habitat benefits, or that reduce pesticide use in ways that should benefit some wildlife.

Our analysis focused on Enhancement Payments provided under the program, because as USDA has implemented the program, those Enhancement Payments represent about four-fifths of all Conservation Security Program payments to farmers. Using the USDA's list of national and state enhancement practices, we sorted those into (1) practices that appear to provide substantial wildlife habitat benefits; (2) practices that would reduce pesticide use and thus benefit some wildlife; and (3) practices that primarily address other resources and do not appear to provide substantial wildlife benefits.

I would note that there are no "bright lines" between these three categories. We used our best professional judgment, using a fairly conservative screen, to highlight the practices that appear to provide substantial wildlife benefits. Working from the list we provided, USDA provided us with summary information from the 2006 Conservation Security Program signup, on the enhancement practices funded in our case study states. We analyzed that data, and that work is reflected in the state case studies that are included in the report that resulted from this work.

We provided Committee Members with a copy of that report, ***Hidden Treasures: The Conservation Security Program and Wildlife***, and we are also releasing it publicly today. The report is now available online at http://www.msawg.org/pdf/CSPWildlifeReport.pdf or at http://iwla.org/index.php?id=21.

Key Findings

Here are the key findings of our report:

First, the Conservation Security Program does provide substantial benefits for wildlife. Based on our analysis of the data provided by USDA, it appears that roughly one-half of all Conservation Security Program payments resulting from the 2006 signup are for practices that either provide wildlife habitat benefits, or will reduce pesticide use in ways that should benefit some wildlife.

About 20 percent of program payments are for base payments and maintenance payments, which we are not able to link to specific wildlife-friendly practices, but that are an important part of the package of payments that entice farmers and ranchers to sign up for the program. The remaining payments, roughly 30 percent of all CSP payments, pay for enhancement practices that do not appear to provide substantial benefits for wildlife.
Note that the wildlife benefits come through a variety of practices. In the case study watersheds we looked at, about 16% of projected CSP contract payments were for designated Habitat Management practices. The additional wildlife benefits we identified in these contracts came through grazing management, nutrient management, and pesticide reduction practices that also provide benefits for wildlife.

Second, Conservation Security Program benefits for wildlife vary considerably from state to state. In Missouri, 88 percent of CSP payments from 2006 contracts are for practices that either

provide wildlife habitat benefits, or reduce pesticide use in ways that benefit wildlife. Most of those wildlife-beneficial practices in Missouri were provided through incentives for improved grazing management. California (87 percent) and Minnesota (85 percent) had similarly high proportions with respect to practices that benefit wildlife.

However, there was considerable variation from case study to case study (see table). Of the states we examined, Nebraska had the smallest proportion, with 26 percent of payments resulting from 2006 contracts providing either wildlife habitat benefits, or providing pesticide reductions that should benefit some wildlife. A cursory look at information from other states indicates that some states appear to be even lower.

Case Study	Wildlife Habitat	Pesticide Reduction	Total
Missouri	73 %	15 %	88 %
California	38 %	49 %	87 %
Minnesota	57 %	28 %	85 %
Texas	67 %	13 %	80 %
Georgia	16 %	42 %	58 %
Chesapeake Bay	32 %	15 %	47 %
Nebraska	17 %	9 %	26 %

Third, the Conservation Security Program could provide even greater wildlife benefits. The considerable variation in our case studies makes it clear that there is considerable potential to boost the wildlife benefits of the program, especially in the states that ranked relatively low in the proportion of wildlife-friendly practices funded. In addition, nearly everyone we spoke with offered suggestions for changes -- either in the law itself or in USDA implementation of the program -- they believed would help increase the wildlife benefits provided by the program.

Recommendations from the Report

We offer eight recommendations in the report that, taken together, would substantially boost the wildlife benefits provided by the program, and improve the program overall. Three of those recommendations are actions that Congress can and should take to improve the Conservation Security Program as it writes the 2007 Farm Bill, four are recommendations that USDA can and should implement at an administrative level, and the final recommendation is for both the Department and Congress.

The recommendations for Congress are:

1. Congress should substantially increase Conservation Security Program funding so that farmers and ranchers on a nationwide basis have timely enrollment opportunities.

Three years into the program, signups have been held in just 12 percent of America's watersheds. Applicants in eligible watersheds are increasingly being turned away from the

program. In 2006, USDA reports that just 51 percent of eligible applicants were awarded a CSP contract. Right now, CSP participants who enrolled in 2005 and have proposed to undertake major new conservation efforts through the contract modification process are awaiting the outcome of the long-term continuing resolution being debated by the new Congress. If the continuing resolution makes an adjustment and follows the President's proposal and the Senate bill, those new practices will go into effect. Otherwise, those farmers will have the opportunity snatched away from them.

Between the multi-year caps placed on CSP in the budget reconciliation bill and the annual funding caps imposed on the program in past annual spending bills, Congress has reduced funding for the Conservation Security Program by $4.3 billion from the funding levels that would have been available under the terms of the 2002 Farm Bill. Under current conditions, it will take over a generation until the program reaches all watersheds. Simply put, a program which provides enrollment opportunities but once in a generation is not a viable program. Congress should remove the caps, restore the funding, and allow the program to proceed as intended by the 2002 Farm Bill.

2. Congress should direct USDA to provide cost-share for new practices under the Conservation Security Program and to do so at the same rate as provided by other USDA programs.

As we note in the report, USDA is authorized to provide cost-share to install new practices under the current law, but in most cases USDA has chosen not to use that authority. Where it has offered cost-share (to contract holders seeking to upgrade their contracts), USDA has typically offered lower cost-share rates than it does for the same practice through other programs.

By providing cost-share to applicants for the installation of new practices (e.g., planting buffer strips or installing fences for rotational grazing systems), and providing appropriate annual maintenance payments for those practices (e.g., controlled burning of buffer strips, and maintaining fences), we believe USDA could increase the number of new wildlife-friendly practices installed, while providing payments that more fairly reflect both the farmer's cost and the value of the practice for the public.

3. Congress should require that all Conservation Security Program Tier II and Tier III contracts address wildlife habitat as a resource of concern, and the emphasis on wildlife should be increased in Tier I contracts.

Currently, participants are only required to address wildlife concerns in Tier III contracts, where they must address every natural resource of concern on their farm. While many farmers choose to address wildlife habitat in Tier II contracts, they are not required to do so for Tier I or Tier II contracts.

USDA has determined that every Conservation Security Program contract will address soil conservation and water quality, because of the nation-wide interest and concern about those two resources. We believe that the national interest in wildlife resources, and the challenges faced in recovering populations of state and federally protected species, makes it important that USDA

increase the focus of the program on wildlife. That could be done by requiring that all Tier II contracts address wildlife, and by having USDA put more emphasis on wildlife benefits in Tier I contracts.

With these important changes, we believe the Conservation Security Program as enacted in the 2002 Farm Bill could and should play an even bigger role in the future, in ensuring high quality wildlife habitat and bountiful fish and wildlife populations on America's privately owned farms and ranches.

The recommendations for USDA are:

1. USDA should expand the number and variety of wildlife conservation practices available in each watershed, and should continue to define new wildlife-related practices, including practices that address high priority fish and wildlife species.

In implementing the program, USDA restricted the number of enhancement practices that state conservationists could offer in a watershed. The number and variety of wildlife-friendly practices that were offered were very limited, especially in areas where wildlife habitat was not deemed to be a priority. State wildlife officials told us USDA sometimes failed to offer the most appropriate wildlife habitat practice in some areas. USDA should offer a wider selection of wildlife-friendly practices in each watershed, and should work with wildlife agencies to ensure the most appropriate practices are offered.

USDA has also been working to increase the number of wildlife habitat practices that are included in its Field Office Technical Guide, which serves as the menu of practices available under the Conservation Security Program and all other farm bill conservation programs. USDA should continue to work with wildlife agencies to expand the selection of wildlife practices, especially those that could benefit state and federally protected species or that meet needs identified in state Wildlife Action Plans and Fish Habitat Action Plans.

2. USDA should provide for the involvement of wildlife agencies and organizations with landowners contemplating CSP enrollment early in the CSP application process.

Wildlife management is unfamiliar territory for many farmers and ranchers, and for most USDA field office staff. State wildlife agencies and organizations have stepped forward in many states to help farmers and ranchers weigh their alternatives and understand the benefits of different wildlife practices. However, in an effort to streamline the signup process USDA told field offices that no on-farm visits would occur before or during the 2006 Conservation Security Program signup. That decision should be reversed, and USDA should instead encourage its field staff and wildlife agencies and organizations to help landowners early in the application process, when many critical decisions are made.

3. USDA should continue to review of CSP enhancement payment rates to ensure both that farmers and ranchers are adequately rewarded for their wildlife conservation efforts, and that taxpayers are being asked to provide only fair compensation, not excessive payments.

We heard multiple reports of USDA payment rates for enhancement practices that far exceeded, or fell well short of, a farmer's cost or the benefits to society of a particular practice. In many cases, these problems were corrected in subsequent sign-ups. USDA should continue the review and revision of the payment rates for practices. Providing cost-share and maintenance payments, where they are more appropriate for a practice (as recommended above), could also help solve some of those problems. In some cases, USDA has revised payment rates for new contracts, but left open the option to farmers upgrading CSP contracts to obtain the higher (previous) payment rates. Revised payment rates should apply to all new CSP contracts or practices added to existing contracts.

4. USDA should ensure that all NRCS State Conservationists establish Conservation Security Program standards and resource criteria for wildlife that provide a consistently high level of wildlife benefits.

USDA has responded to the Government Accountability Office report that questioned wide variations in wildlife criteria betweens states, especially in the initial sign-up in 2004, by reviewing state-level wildlife resource criteria and issuing additional guidance to state conservationists. That appears to have helped resolve some of the problems identified in the 2004 signup with respect to enrollees obtaining Tier III contracts with only minimal attention to wildlife resource concerns. Our contacts expressed continued concern about this issue, however, and we believe USDA will need to continue to monitor results and adjust its policies as needed.

The recommendation for both USDA and Congress is:

USDA, working with organization and state agency partners, should establish a scientifically valid and robust monitoring and evaluation initiative to measure actual outcomes of the conservation practices it funds, and Congress should adequately and enthusiastically fund such an initiative.

In most cases, in other conservation programs as well as the Conservation Security Program, USDA continues to measure progress in acres, feet, and dollars, and is only beginning to refocus on the actual outcomes desired like improvements in water quality, or increases in wildlife populations. Congress provided for on-farm monitoring and evaluation payments, and USDA should encourage on-farm monitoring and evaluation as an enhancement practice to gain valuable information about the results of the program in real-world situations. The Land Stewardship Project has developed and tested an on-farm tool-kit that could serve as one model for how that could be accomplished.[1]

USDA also needs better program-level data on the actual impact of the various practices it funds with respect to wildlife and other natural resources. Better monitoring and evaluation would help USDA focus its funding on strategies with the highest return in conservation benefits, and would help Congress make better decisions as well. USDA, working with organizational and agency partners, should establish a robust monitoring and evaluation program that measures actual

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[1] *A Guide to the Art & Science of On-Farm Monitoring: The Monitoring Tool Kit*. On the Web at www.landstewardshipproject.org/resources-pubs.html.

outcomes of the conservation practices it funds, using scientifically valid methods. Congress should recognize the long-term importance of this endeavor and fund it adequately as part of the total farm bill conservation program implementation cost much in the same way it does for technical assistance currently.

Conclusion

We believe, based on our analysis of USDA data and our interviews with people throughout the country, that the Conservation Security Program already provides substantial benefits for wildlife. However, we are clearly missing opportunities to provide even more benefits. With the eight recommendations above, we believe the wildlife and other benefits provided by the Conservation Security Program would substantially increase. All three organizations I am representing today strongly support the CSP and urge you to greatly increase its funding base and to help make the program work even better for wildlife and for all other resource concerns.

Thank you for the opportunity to appear before you today. I would be happy to try to answer any questions you may have.

STATEMENT OF ARLEN LANCASTER, CHIEF
NATURAL RESOURCES CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE
BEFORE THE
SENATE COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

January 17, 2007

Mr. Chairman, and Members of the Committee, thank you for the opportunity to appear here today to discuss working lands conservation activities and accomplishments of the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS). In my initial months as Chief of the NRCS, I have been fortunate to be able to get out to the field and experience firsthand, some of the amazing conservation work that farmers, ranchers, and other private landowners are performing by working hand -in- hand with local NRCS staff and our many partners. From seeing firsthand the water conservation and wildlife habitat practices in Texas; examining community watershed concerns in the Chesapeake Bay Watershed; discussing the nutrient management concerns of livestock producers in Indiana; and recently building and spending a night in a snow cave in California as part of the agency's water supply and forecasting safety efforts, I can attest that the conservation achievements taking place across the countryside are as important as they are diverse.

The conservation accomplishments on private lands for FY 2006, alone are incredible: In a single year farmers and ranchers along with NRCS and its partners:

- Planned conservation systems and practices that cover more than 50 million acres—a 60 percent increase over 2001.
- Reduced soil erosion by more than 75 million tons.
- Created, restored, or enhanced 318,000 acres of wetlands; and
- Improved irrigation water management on 1.1 million acres, conserving 15.8 million-acre inches of water.

And that's just a sample of the good things we and our partnership brought to people and natural resources across our Nation and territories. More specific accomplishments are as follows:

Conservation Planning

- Developed conservation system plans on 16.5 million acres of cropland.
- Applied conservation systems plans on more than 12.9 million acres of cropland;
- Developed conservation system plans on 30 million acres of grazing land;
- Applied conservation systems on 26.5 million acres of grazing land;

Erosion Reduction

- Reduced the acreage of cropland soils damaged by erosion by 5.9 million acres.
- Reduced soil erosion by 75 million tons.

Habitat

- Preserved habitat and aided in Sage Grouse recovery;
- Improved 15.4 million acres of non-federal land for fish and wildlife habitat;
- Managed 3.6 million acres of non-federal land for protection and enhancement of habitat of species with declining populations;

Irrigation

- Improved irrigation efficiency, 15.8 million acre-inches of water conserved.

Soil Surveys

- Mapped or updated soil surveys on 23.3 million acres;
- Released 136 new or updated soil surveys for public use and made 331 soil surveys available in digital format;

Energy Savings

- Released three energy-saving tools for agriculture producers proven to save agriculture producers money and energy;
- Increased the ratio of bio-diesel fueled vehicles in our fleet thus renewing the commitment to reduce air pollution and increase demand for agricultural crops;

Nutrient Management Planning

- Developed 5,050 comprehensive nutrient management plans;
- Applied 6,049 comprehensive nutrient management plans;
- Applied nutrient management on 4.6 million acres;
- Applied pest management on nearly 5 million acres;

Forest Land

- Applied forest stand improvement and tree and shrub establishment on over 318,000 acres;

Conservation Security Program

- Enrolled 15.5 million acres of land in the Conservation Security Program (CSP) (includes FY 2004, FY 2005 and FY 2006);

Working Lands and Conservation Planning

The actions listed above did not come about on their own. The focus of NRCS's conservation efforts is squarely centered upon working lands and ensuring that these lands continue to produce valuable agriculture commodities and contribute to local economies, while at the same time protecting our national treasure of soil, water, and other related natural resources. For NRCS, this has always meant voluntary, incentives-based conservation activities. For more than 70 years, this approach has proven time and again that when given sound information, guidance, and technical assistance, farmers and ranchers voluntarily adopt, install, and maintain conservation practices. Locally-led conservation that is developed cooperatively with farmers and ranchers produces more effective, long-lasting, and economically viable results than regulation and other compulsory approaches.

Mr. Chairman, if you visit any one of 3,077 counties in the United States, you would likely find that landowners have a relationship with NRCS local staff founded upon the technical knowledge and resources that are available through the field office. Beginning with the foundation of county soil surveys and interpretation of soils maps, farmers and ranchers depend upon sound scientific information to reach production and conservation decisions. Building upon this foundation, NRCS field conservationists provide a wealth of knowledge and expertise on a broad array of topics from viability of certain species of plants, appropriate levels of nutrients needed for cropping, potential grazing rotations, water conservation improvements, and wildlife habitat needs – to name just a few.

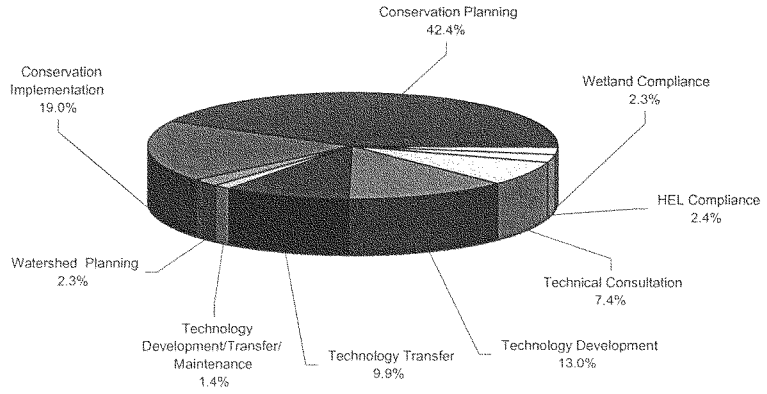
With the unique goals that a producer has for his/her operation as a starting point, NRCS conservationists assist producers to develop a plan that will match these goals with natural resource conservation goals. This conservation plan is the foundation of locally-led cooperative conservation. In essence, a producer's conservation plan is a roadmap for the future management of their operation. Specific actions are prescribed, but not mandated. And over time, producers select from options and choose to implement certain provisions of the conservation plan, which can also be modified as conditions change, or as the producers establish new production or conservation priorities. As individual farmers or ranchers decide to adopt specific conservation practices or systems, they may utilize assistance from the suite of cost-share, conservation use, or stewardship programs that NRCS offers through Farm Bill authorities. But everything that happens begins with the Conservation Technical Assistance (CTA) Program.

Conservation Technical Assistance and the Allocation of Resources

Mr. Chairman, a theme that you will see carried throughout NRCS conservation programs is a look toward conditions to guide the allocation of funding resources. The allocation of NRCS program resources is based upon a science-based, quantitative natural resource formula that accounts for natural resource conditions and trends. For Conservation Technical Assistance, NRCS instituted a resource-based allocation process for the CTA Program to ensure that dollars and efforts go where the conservation needs are greatest. This new methodology provides a more transparent allocation that addresses

the natural resource issues of greatest priority. The new allocation formula also aligns the new CTA Program policy with national priorities, and correlates with program performance measures that were developed in the Administration's Program Assessment Rating Tool (PART) evaluation process.

FY 2005 Conservation Technical Assistance (CTA)
Time Allocation By Activity
(Source: NRCS Conservation Information System)

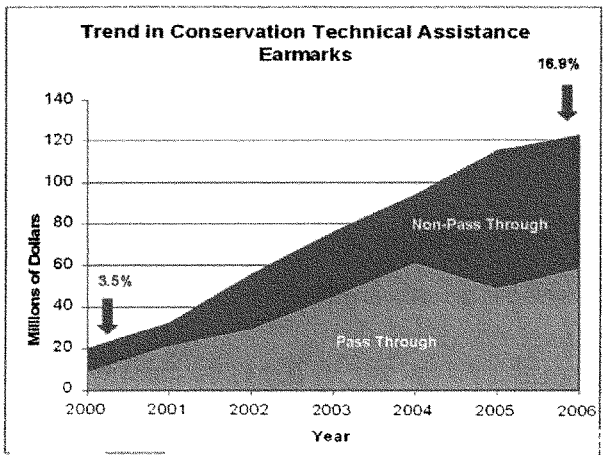


In order to ensure that the methodology utilized for each of our programs is as sound and equitable as possible, NRCS has recently commissioned an independent analysis of formulas used for allocating its conservation program funds. This evaluation is being conducted to continue improving Agency allocation formulas and data for more effective and efficient implementation of conservation programs. This analysis will provide a comprehensive evaluation of each program's allocation formula and will assess how allocation formulas relate to programmatic efficiency and annual/long-term performance measures. These improvements will ensure that the most pressing conservation needs on America's private lands are addressed and will help NRCS meet its Strategic Plan objectives and improve accountability.

The Challenge of Earmarks

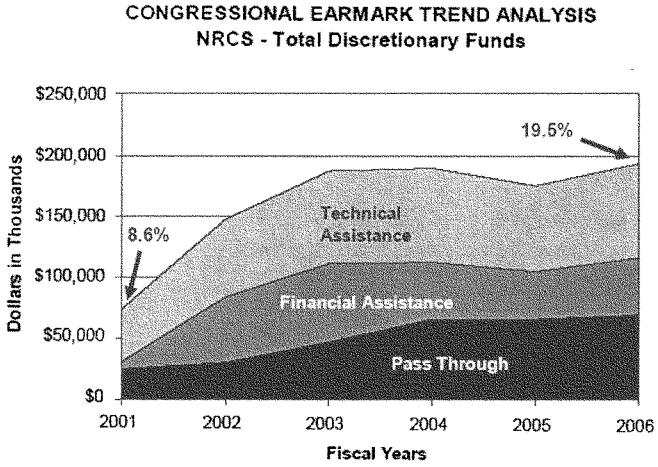
Mr. Chairman, another common theme throughout USDA conservation programs is that, even though merit-based allocation methodologies have been established, other factors sometimes come to bear that complicate this process. A prime example of this lies within the earmarking of technical assistance through the Congressional appropriations process. For example, in the past six years alone, NRCS has seen a nearly five-fold increase in

earmarks. As the graphic below (Figure 2) displays, earmarks have been on a steady upward trend.



Most troubling, the amount of pass-through earmarks that go toward outside institutions toward projects and activities that may be less aligned with program statutory purposes (i.e., businesses, research entities, non-governmental organizations) has also increased steadily.

Figure 3.



As figure 3 displays, the total amount of earmarks from discretionary programs reaches nearly 20 percent of the NRCS budget. As a result, these funds are not going to places where our natural resource-based formula would otherwise identify as a priority, and many of the funds are not going to support NRCS field staff and operations.

Working Lands Cost-share Programs

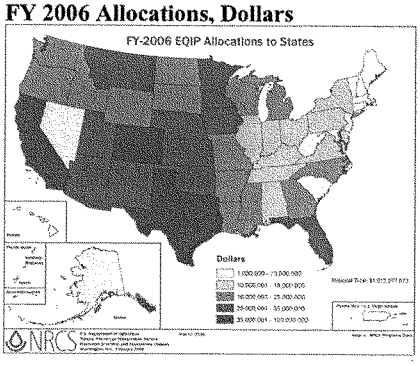
Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP) is the flagship of the working lands conservation program portfolio. EQIP provides flexible technical and financial assistance to landowners that face serious natural resource challenges on working lands that impact soil, water, and other natural resource concerns related to cropland, grazing lands, wetlands, and wildlife habitat. In addition, energy conservation as an element of a conservation practice or system for natural resources conservation is considered an appropriate use of EQIP funds.

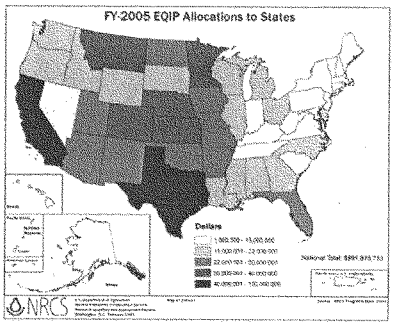
Benefits

The increased funding for EQIP in the 2002 Farm Bill greatly expanded program availability. Including funding obligated in FY 2002 through FY 2006, totaling almost $3.1 billion, EQIP will benefit close to 185,000 participants. In addition, EQIP leverages additional funding from landowner match requirements on individual practices (ranging from up to 90 percent for limited resource farmers, to up to 75 percent for others) and State and local cost-share programs.

FY 2006 Allocations, Dollars



FY 2005, Allocations

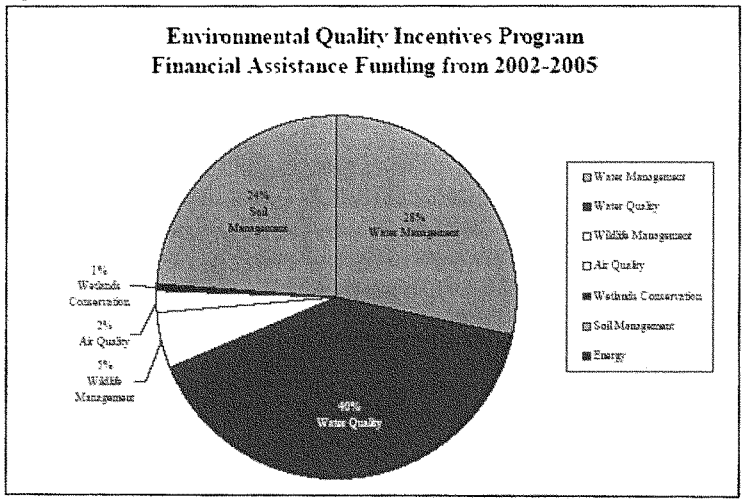


EQIP participation among American Indians, Alaska Natives and Indian tribes has increased from $6.8 million in FY 2002 to almost $20 million in FY 2005.

Producer demand continues to be high for EQIP assistance. NRCS has been able to address significantly more producers requesting assistance through EQIP since the passage of the 2002 Farm Bill. In FY 2002, the Agency was able to fund one in every five requests; in FY 2005, we funded one in every two requests for a total of 49,406 producers receiving a contract through this program.

We believe that the increased program flexibility and improved program features will continue to make EQIP one of the most popular and effective conservation efforts in the Federal Government. The Figure below demonstrates the broad range of natural resource issues that EQIP addresses.

Figure 4.



Cost Share Program Allocation Methodology

EQIP was one of the first programs to base the State allocation of funding upon a comprehensive natural resource formula. Under the EQIP process, financial assistance is allocated to the States and territories based on 31 factors which are relevant to addressing the EQIP statutory purpose, rule requirements, and national priorities. The source of the data is generally the National Resources Inventory (NRI) data, although some data are based on Environmental Protection Agency (EPA), Ag Census, Bureau of Indian Affairs (BIA), National Oceanic and Atmospheric Administration (NOAA) and the American Plant Food Control Officials reports.

Technical assistance (TA) needs are estimated by the Agency's costs of servicing program applications and contracts as calculated by the NRCS Cost-of-Programs Model. Throughout our working lands conservation cost-share programs, similar formulae are utilized for the allocation of funding and technical assistance. With the high demand for NRCS assistance, we feel this process is appropriately directing resources where they are needed most.

Mr. Chairman, I think it is important to note that the EQIP formula was never intended to be static, and continuous improvement of it is an Agency priority. EQIP's national priorities, established in the regulation, are integrated into the program in four key ways:

- The allocation of financial resources to the States.
- The use of financial resources within the States.
- The selection of conservation practices and the establishment of cost-share and incentive payment levels.
- The evaluation and ranking of individual applications for EQIP assistance.

As described earlier with respect to Conservation Technical Assistance Program, the EQIP allocation formula is under review and potential update. Factor weights, current accuracy of some data, and data sources are some aspects of the formula that are also under review. As part of its review process, NRCS has:

- Awarded a competitive contract for an independent review of all NRCS conservation program formulas, including the EQIP formula.
- Planned a reassessment of the EQIP financial assistance formula to take place after the results of the independent review are established.

Regional Equity Concerns

Section 1241 (D) of the Food Security Act of 1985 as amended by The Farm Security and Rural Investment Act of 2002 (2002 Farm Bill) requires that "*Before April 1* of each fiscal year, the Secretary *shall* give priority for funding under the conservation programs under subtitle D (excluding the conservation reserve program under subchapter B of chapter 1, the wetlands reserve program under subchapter C of chapter 1, and the conservation security program under subchapter A of chapter 2) *to approved applications* in any State that has not received, for the fiscal year, an aggregate amount of at least $12,000,000 for those conservation programs."

As a result of this language, more than $120 million in EQIP funding has been diverted from the natural resource state allocation formula process and directed to certain States. This movement of funds has occurred regardless of the relative natural resource need, producer interest and demand in programs, or local agency staff capacity. As figure 6 below demonstrates, a total of more than $215 million have been redirected since this language was enacted.

	Section 1241(D) Financial and Technical Assistance Diverted by Program, FY 2004-2007*							
Program	**FA 04**	**TA 04**	**FA 05**	**TA 05**	**FA 06**	**TA 06**	**FA 07 ***	**TA 07 ***
FRPP	$8,640,000	$360,000	$12,041,091	$458,909	$17,460,000	$540,000	$12,120,108	$368,691
EQIP	$31,476,600	$9,190,900	$25,500,000	$8,500,000	$18,744,000	$5,256,000	$17,201,485	$4,628,968
WHIP	$0	$0	$6,244,265	$2,255,735	$10,270,000	$2,730,000	$9,872,853	$2,509,554
GRP	$4,489,700	$1,510,300	$0	$2,712,500	$0	$0	$0	$0
Total	$44,606,300	$11,061,200	$43,785,356	$13,927,144	$46,474,000	$8,526,000	$39,194,446	$7,507,213

Mr. Chairman, in closing on this topic, I would like to reiterate that if states are experiencing a reduction in EQIP funding as compared to past years, they should look closely at the diversion of funds taking place as required by Section 1241(D).

Wildlife Habitat Incentives Program (WHIP). WHIP was re-authorized by Section 2502 of the 2002 Farm Bill. The program continues to develop habitat for upland wildlife, wetlands wildlife, threatened and endangered species, fish, and other wildlife.

Under WHIP, NRCS provides technical and financial assistance to landowners to improve wildlife habitat conditions on their property. NRCS enters into five- to 10-year cost-share agreements with landowners, providing up to 75 percent of the funds needed to implement wildlife habitat development practices. NRCS also can enter into less than 1-year wildlife emergency agreements in cases where a wildlife habitat is modified as a result of a catastrophic, natural, or man-made event to help landowners address the potential for dramatic declines in one or more wildlife populations.

The 2002 Act also authorizes NRCS to provide additional cost-share assistance to landowners who enter into 15-year agreements to develop essential plant and animal habitat.

Since passage of the 2002 Farm Bill, NRCS has utilized more than $165 million in financial and technical assistance to enter into nearly 9,500 agreements on over 1.4 million acres. NRCS reimbursed participants approximately $8,800 for each long-term agreement. The average agreement covers 148 acres. WHIP was originally authorized by Section 387 of the 1996 Farm Bill. Since launching the program in 1998, a total of 23,100 agreements have been signed covering more than 3.3 million acres. In FY 2006, NRCS allocated $43 million in financial and technical assistance to WHIP contracts with landowners.
WHIP is effective in serving landowners who want to help provide habitat for species in decline. Of all the cost-share programs, WHIP has the lowest backlog numbers. NRCS is working with landowners and partners to assist with habitat development projects for the Ivory-billed woodpecker, sage grouse, salmon, bog turtle, red-cockaded woodpecker, Klamath Basin Lost-River sucker, pacific salmon, and northern bobwhite quail.

Agricultural Management Assistance (AMA) Program. AMA provides financial assistance to producers to construct or improve water management or irrigation structures, plant trees for windbreaks, or improve water quality. The program also offers

financial assistance to mitigate crop failure risks through diversification or resource conservation practices.

The 2002 Farm Bill provides $20 million annually through 2007 for financial assistance in 15 States, in which participation in the Federal Crop Insurance Program is historically low as determined by the Secretary. The 15 States designated by the Farm Bill to participate in the program are Connecticut, Delaware, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, and Wyoming.

NRCS developed 2,682 contracts on 466,800 acres with $33.2 million obligated for implementing conservation practices during FY 2001 through FY 2006. In FY 2006, $5 million was provided through AMA.

Grassland Reserve Program (GRP). New in the 2002 Farm Bill, GRP assists landowners in restoring and protecting grassland by enrolling up to 2 million acres under easement or long-term rental agreements. Program participants can also enroll in restoration agreements to restore the functions and values of grassland. The 2002 Farm Bill authorized $254 million for implementation of this program during the period 2003 through 2007. This program is administered in cooperation with the Farm Service Agency (FSA).

In fiscal years 2003 through 2005, $178.5 million in financial assistance was allocated. Through fiscal year 2005, 3,003 landowners enrolled 909,000 acres in both rental and easement agreements. Approximately 380,000 acres were enrolled in easement projects, and 529,000 acres were enrolled as rental agreements. The program has now reached its funding cap.

In fiscal year 2004, NRCS provided $2 million in GRP financial assistance to four western States for Greater Sage Grouse conservation and recovery on lands identified by State wildlife agencies as containing critical sage grouse habitat. The funds supported GRP easements on private lands in Colorado, Idaho, Utah and Washington, with technical assistance and additional financial assistance provided by State and local partnerships. For example, in St. Anthony, Idaho, ranchers have learned ways to improve grazing operations while balancing wildlife habitat, and in Olympia, Washington, more than 200 acres of historic prairie land is being preserved. In FY 2005 and FY 2006, NRCS devoted $1 million in GRP funds each year for continued support of the sage grouse's recovery.

Farm and Ranch Lands Protection Program (FRPP). Section 2503 of the 2002 Farm Bill re-authorized the Farm and Ranch Lands Protection Program.

Through the FRPP, the Federal Government establishes partnerships with State, local or tribal government entities or nonprofit organizations to share the costs of acquiring

conservation easements or other interests to limit conversion of agricultural lands to non-agricultural uses. FRPP acquires perpetual conservation easements on a voluntary basis on lands with prime, unique, or other productive soil or that contains historical or archaeological resources. FRPP provides matching funds of no more than 50 percent of the purchase price for the acquired easements.

Prior to the 2002 Farm Bill, NRCS protected 540 farms covering 113,700 acres with $53 million. Since the 2002 Farm Bill, FRPP has enrolled nearly 449,177 acres.

Healthy Forests Reserve Program (HFRP). While not authorized in the Farm Bill, the HFRP was created by Congress with the enactment of the Healthy Forests Restoration Act of 2003, and has the potential to become an integral part of conservation efforts on private forest lands. HFRP is a voluntary program established to restore and enhance forest ecosystems to: 1) promote the recovery of threatened and endangered species; 2) improve biodiversity; and 3) enhance carbon sequestration.

The program is authorized through 2008. Restoring and protecting forests contributes positively to the economy of our Nation, provides biodiversity of plant and animal populations, and improves environmental quality. HFRP includes a safe harbor provision for landowners who enroll and agree, for a specified period, to restore or improve their land for threatened or endangered species habitat. In exchange, they avoid future regulatory restrictions on the use of that land protected under the Endangered Species Act.

On May 18, 2006, NRCS announced the availability of $2.3 million for the HFRP in selected forest ecosystems. In FY 2006, HFRP focused on habitat recovery for the endangered red-cockaded woodpecker in the Lower Ouachita River Flatwood region of Arkansas, the Canada lynx in the northern boreal forest of Maine, and the gopher tortoise in the longleaf pine ecosystem along the Gulf Coast in Mississippi. The work in the Lower Ouachita River area will also benefit the rare Ivory-billed woodpecker. In FY 2006, landowners enrolled 495,652 acres in 30 and 99-year HFRP easements and 10-year HFRP restoration agreements.

Conservation Stewardship

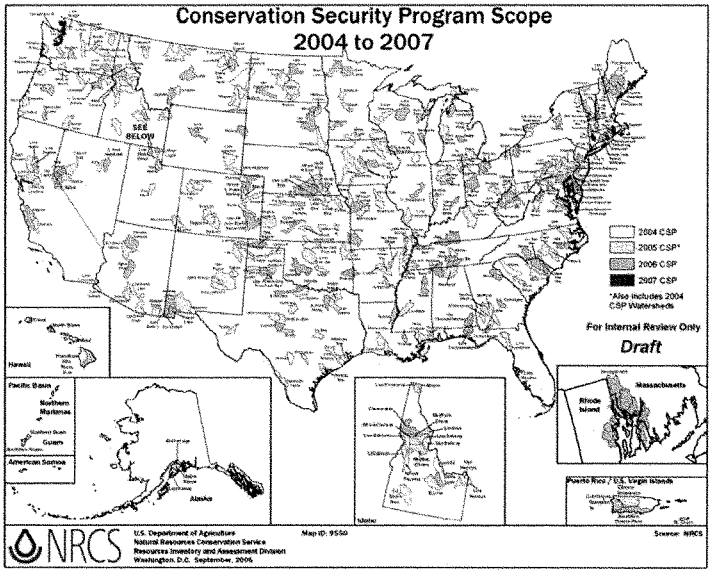
Conservation Security Program

The Conservation Security Program, authorized by the 2002 Farm Bill, provides payments to producers who practice good stewardship on their agricultural lands and incentives for those who want to do more. The program is voluntary and provides financial and technical assistance for the conservation, protection, and improvement of natural resources on tribal and private working lands.

In its first 3 years, CSP has generated much interest with our Nation's producers. The first CSP sign-up was held in July 2004, in 18 priority watersheds within 22 States. In 2005 and 2006, CSP was expanded and implemented in a total of 280 watersheds nationwide, including watersheds in every State, Puerto Rico and Guam. Including the most recent sign-up, CSP has invested in the operations of nearly 19,400 stewards on 15.5 million acres of working agricultural land with annual payments that average about $11,000, but range from less than $500 to $45,000.

Through the CSP enhancement provisions and the application of intensive management measures, producers are achieving even greater environmental performance and additional benefits for society. Several new conservation activities will enable producers to further enhance their operation and natural resources. For example, the energy component of CSP is rewarding farmers and ranchers for using renewable energy fuels, such as soy bio-diesel and ethanol. Because CSP enhancements go beyond the minimum requirements, innovative producers are pushing conservation technology to produce even greater conservation benefits.

The President's 2007 budget requests $342.2 million for CSP, an increase of $2 million over 2006 to continue expanding the program and rewarding excellent conservation stewards.



Most working agricultural land is eligible for CSP. Producers with cropland, orchards, vineyards, pasture and range may apply for the program, regardless of size, type of

operation, or crops produced. Our data show that CSP touches all sectors of agriculture from livestock operations to cropland, from orchards, vineyards and truck crops to sugar beets and cranberries.

The CSP sign-up offered in fiscal year 2006 ran from February 13th to March 31st in 60 priority watersheds. During the sign-up, over 8,570 CSP applicants completed their interviews resulting in 7,548 eligible applicants for about $99.2 million. Enrollment data show that approximately 24 percent of the land in those 60 watersheds signed up for CSP. This response indicates that some of the best conservationists are willing to do even more conservation through CSP. Environmental enhancement activities offered by applicants include improving soil quality, water quality, wildlife habitat management, nutrient and pest management, air quality management and on-farm energy management.

Over 4,400 applications were approved based on the available funding. These contracts, mostly in Tier III, the highest level of conservation stewardship, represent more than 3.75 million acres of cropland and grazing lands.

The CSP self-assessment and the new water quality tool helped producers identify whether their agricultural operation met sign-up requirements. Producers who were not eligible learned of other programs available to assist in achieving the high level of conservation necessary to qualify for CSP in the future.

CSP has provided opportunities to test new ideas in conservation technology and broken many barriers for conservation on working lands. One major contribution has been in the emerging area of energy conservation as a resource issue. CSP currently provides enhancements for energy management, energy conservation, energy creation and even recycling of oil products. It also provides cost-share payments for people who are interested in energy audits and in establishing a carbon baseline for credit trading through 1605b.

Regarding program financial management, NRCS has implemented a number of CSP measures to prioritize program spending primarily by delivering the program in priority watersheds, targeting enrollment to include good conservation stewards, and concentrating payments on conservation enhancement activities that generate additional resource benefits. Additionally, NRCS has instituted several internal control mechanisms since the audit was complete. Automation of producer eligibility and checking for potentially duplicative payments was completed and tested in the FY 2006 sign-up. NRCS has added staff to our data warehouse in Ft. Collins to assist States with quality control and technical questions. Direction to field employees regarding compliance reviews has been transmitted and those reviews are currently underway. The CSP manual has been updated to streamline the process of contract administration to conform to the other financial assistance programs and to clarify the State Conservationist's authority to make decisions regarding wildlife habitat criteria for CSP.

We feel we have made significant improvements to CSP, and are pleased with the results of the program thus far.

Conclusion

Mr. Chairman, in closing, I want to state that I am very proud of the accomplishments of NRCS and its partners on working lands conservation. While we have focused today on just a few of the working lands programs that NRCS offers, there is a broad portfolio of work happening out in the field everyday to benefit all natural resources. Under tight time constraints and given a multitude of demands and pressures, I believe our Agency's implementation record is very impressive. Since 2002, NRCS has provided assistance to one million farmers and ranchers. Together, we have applied conservation on more than 130 million acres of working farm and ranch land. We have also invested $6.6 billion of the taxpayers' funds directly with farmers and ranchers to produce environmental improvements that will benefit us all. In addition, since enactment of the 2002 Farm Bill, our conservation partner organizations (local Soil and Water Conservation Districts, Resource Conservation and Development Councils, State and local governments and other conservation organizations) have contributed over $2.8 billion to conservation programs, making the total investment under the 2002 Farm Bill through last year more than $9.4 billion.

I believe we have developed and are implementing conservation in the right order of priority–beginning with sound conservation planning, allocating resources based upon sound natural resource factors, enabling local leadership to set priorities, and recognizing that everything comes back to the voluntary decisions of farmers, ranchers, and other landowners. If this process is allowed to work, and our resources can be allocated based upon the principles of locally-led cooperative conservation, I believe there is no limit to what can be achieved in the conservation of America's natural resources.

Mr. Chairman, thank you again for the opportunity to appear today, and I look forward to responding to any questions that Members of the Committee might have.

TUFTS UNIVERSITY
GERALD J. AND DOROTHY R. FRIEDMAN
SCHOOL OF NUTRITION SCIENCE AND POLICY

The Conservation Security Program: Insight and Recommendations Based on the New England Experience

Testimony Before the
Committee on Agriculture, Nutrition, and Forestry
United States Senate
January 17, 2007

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The Bottom Line: CSP Works

Let me jump to my overarching conclusion: New England has and will continue to benefit from the Conservation Security Program. Green payments are the future of agricultural support and the CSP has succeeded in rewarding farmers for stewardship of working lands.

Many of the CSP challenges identified in our study, which I will discuss momentarily, are a function of insufficient funding that has lead to rules that deviate from the original statute and contorted bureaucratic efforts to distribute limited resources. As the Committee shapes the next farm bill, I urge you to be optimistic about the future of the CSP, to undertake a renewed effort to strengthen this innovative program, and to provide it full funding.

Our Study: A Window onto New England

Does CSP work for farmers in New England? That was the question put to us by American Farmland Trust (AFT) in 2005. With technical and financial support from AFT, and under my direction, four students devoted themselves to constructing revealing CSP case studies of farms in New England. Together we drew upon these cases to construct a picture of what works for our region and identify how CSP may be fine-tuned to better meet farmer needs. My testimony today is largely derived from our final report, released this spring: *The Conservation Security Program: Rewards and Challenges for New England Farmers*. I am pleased to introduce you to my coauthors and Master of Science degree recepients Britt Lundgren, Meaghan Donovan, and Christine Lee who were able to join me today. Missing teammate, Jody Biergiel, now working for California Certified Organic Farmers, is cheering us on from afar as is our close collaborator and AFT New England Director Cris Coffin.

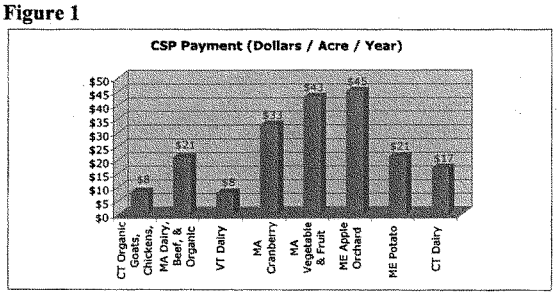
Our CSP study is built on case studies of farms in Connecticut, Massachusetts, Rhode Island, Maine, New Hampshire, and Vermont. Because farmers in New England were unable to sign up for CSP until 2005 and then, only 54 contracts were approved, we sought to make our sample more representative of New England farm types and crops by also working with farmers who had not yet applied to CSP but whose conservation efforts made them likely future CSP participants. As a result, our analysis is based on three farms with 2005 CSP contracts, and 5 farms with hypothetical CSP contracts. Farms studied ranged from 8 to 1,800 acres, and production types included dairy, potato, cranberry, apple, beef, and conventional and organic vegetables. Farmers with contracts were interviewed about the details of their contract and their experience with the sign-up process. Those without contracts participated in a mock sign-up process with the assistance of NRCS staff.

Show Me the Money: Real and Hypothetical Payments

Total CSP contract payments for farms in our study ranged widely, from a high of $152,308 over ten years for a cranberry farm to a low of $385 over ten years for an organic goat/chicken/vegetable farm. The per acre payment a farm can expect to receive appears to be affected by the number of conservation practices being done on a farm, whether the farm uses irrigation, and the size of the farm. Although the payment per acre may be higher for some

smaller farms than it is for some larger farms, larger farms can expect to receive a higher payment over the life of the contract. In comparing the farms based on a payment per acre per year basis, a Vermont dairy and a Connecticut organic goat/chicken/vegetable farm received the lowest payments of $8/acre/year while a Maine apple orchard received the highest payment, $45/acre/year. Figure 1 illustrates the payments per acre per year for each case study.

Figure 1

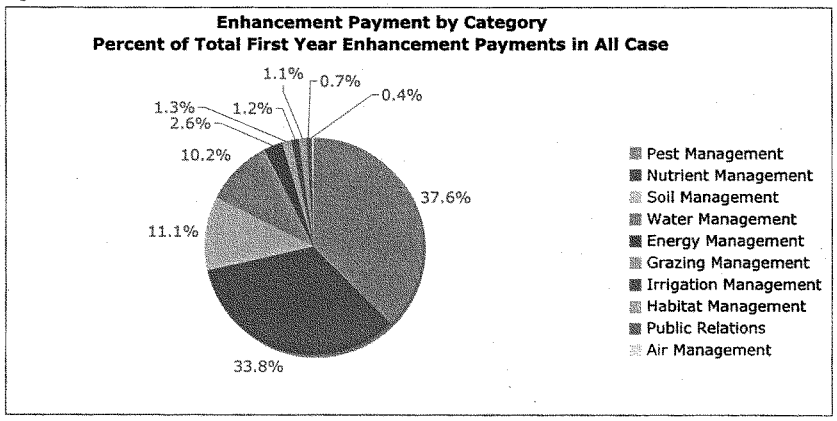


The use of irrigation greatly increases the payment per acre a farm can expect to receive. Stewardship payment rates are based on the average regional rental rate for farmland, and rental rates are significantly higher for irrigated farmland. In this study, the farms that received the highest per acre payment were the Massachusetts cranberry and Maine apple farm. Both of these farms use irrigation on the entire eligible portion of the farm.

Enhancement payments reflect the number of conservation activities in use on a farm and make up the bulk of the total CSP benefit; in our study enhancement payments accounted for a low of 48% of the total contract payment to over 80 percent. At the time of our study, 9 official categories of enhancement practice payments were available; a tenth category, public relations (e.g., farm noise reduction) was anticipated so we included it in our analysis. Figure 2 on the following page shows the distribution of enhancement payments by category for the first year of the contract. The pest management and nutrient management categories were the largest, each constituting slightly over a third of all enhancement payments. Soil and water management were in the range of 10-11% with all remaining categories less than 3% each.

The detailed case studies and 100+ page analysis can be found at the AFT website: **www.farmland.org/programs/states/documents/NECSP.pdf**. Additionally, I recommend our report be read in conjunction with a study by Heller et al: *Assessing and Developing the Opportunities for Green Payments Programs for Maryland's Farmers*. Published in 2005, this report similarly uses case study methodology to analyze the effectiveness of CSP in the Maryland area and the conclusions drawn are consistent with New England findings: http://www.agroecol.umd.edu/files/M.%20Heller%20Green%20Payments.pdf.

Figure 2



Based on our study, New England farmers—and likely farmers nationwide—would benefit from acting on seven opportunities to strengthen CSP, a program that should remain central in our national conservation strategy.

Opportunity #1:
Reward and Motivate Farmers by Funding CSP as Intended

CSP was created as an entitlement program, but inadequate funding has forced NRCS to severly limit CSP contracts. The Congressional Budget Office, for example, estimated that $282 million would be needed to implement CSP in FY05, yet Congress allocated just $202 million. The $80 million shortfall was addressed by limiting eligibility to a small number of watersheds, instituting various payment caps, and adjusting eligibility criteria: in short, eliminating many of the farms originally envisioned as core participants.

New England farms were not eligible for CSP until 2005 and even then, only those that fell within the 13 NRCS-designated watersheds were eligible for the 2005 sign up period. As a result, New England received just 0.4% of contracts nationwide—a total of $234,068 in CSP payments or 0.15% of funds distributed by USDA in that fiscal year. Certainly, as a region we hoped to do better.

CSP was designed to "reward the best and motivate the rest." While eligibility requirements draw a bold line between "the best" and "the rest" the reality is that it is oftentimes difficult to make a clear distinction. Certainly CSP participants are using advanced conservation practices.

But some farms are deemed ineligible despite significant conservation practices. In some cases, this is due to program quirks. The farms in this study were chosen because they are regarded as conservation-minded by NRCS staff and American Farmland Trust and we expected them all to be eligible. This was not the case. The Massachusetts dairy/beef/ vegetable farm could not enroll their organically managed vegetable acres, for example, because of a slightly low Soil Conditioning Index (SCI) score and despite the fact that the farm is already involved in EQIP, the Grassland Protection Program, Agricultural Management Assistance, and the Wildlife Habitat Incentives Program.

In all cases, CSP conservation and environmental standards should be maintained and possibly strengthened. But CSP could be made more farmer-friendly and consistent with the NRCS tradition of conservation planning if farmers were allowed to enroll in CSP before meeting all the eligibility requirements a priori and instead were required to meet the eligibility standards within the early years of the contract, as called for in the statute. This would allow greater attention to the "motivational" aspect of CSP and ultimately achieve higher environmental benefits from increased participation.

More often, farms cannot participate in CSP or receive payments for certain acres or practices solely because of budget constraints. The institution of enrollment categories in the 2005 sign up notice eliminated farmers who are doing less conservation work but could be motivated into doing more if allowed into the program. The declining variable enhancement rate and diminished payments caused our Connecticut dairy farmer to conclude that the CSP payments were unlikely high enough to cause him to make further changes to his conservation practices. The Maine potato grower said that he would consider changing his crop rotation if it would increase his SCI scores and allow him to enroll more acres in CSP, but only if he qualified for Tier III so that he would be adequately compensated.

Congress has yet to allocate funds for FY 07. In the last fiscal year, $259 million was allocated to CSP, an amount lower than President's budget request which caused NRCS to cut in half the number of anticipated new watersheds from the sign up (down to 60). The FY 07 request in the President's budget would allow for only 51 new watersheds in CSP. The Congress should maintain and improve environmental standards for CSP while at the same time, remove the multi-year budget caps put in place by the budget reconciliation bill and restore funding that has been cut via riders in the annual appropriations bills.

Opportunity #2:
Remove Caps to Reduce Complexity and Improve Transparency

Simultaneous expansion of the program, budget cuts, and limited technical assistance has forced NRCS to craft some cumbersome and confusing rules. Nearly all of the farmers in this study cited the complexity of CSP as their primary complaint.

For example, enrollment categories have been created because funds are not available to pay for all eligible contracts. CSP applicants are placed in one of 5 Enrollment Categories (labeled A - E). Category A is funded first in all three Tiers, followed by category B, etc. If there is not enough money to fund a category completely throughout all three tiers, then contracts are ranked

in 12 subcategories. Enrollment categories are further broken down by stewardship payment type: pastureland, cropland, rangeland, and irrigated cropland. In 2005, the NRCS was able to fund contracts in enrollment categories A, B, and C-1, leaving the rest of category C, and all of categories D and E, without funding. By these standards, the Maine potato farm and the Connecticut dairy in our study would not receive any funds.

NRCS has also chosen to cap the stewardship, new practice, and enhancement payments even though the statute only calls for the total payments to be capped for each Tier. Stewardship payments are reduced overall by two reduction factors, and then capped at different levels for each tier. The enhancement payments are paid at a variable rate that reduces the overall payment size by 60%, and are also capped at different levels for each tier. Additionally, the new practice payments are capped at $10,000 for all tiers. None of the payments (actual or hypothetical) in this study reached overall Tier caps.

The complexity is so great, that program administrators and field staff get confused. In our study we found discrepancies in the calculations made to determine payments for the 2005 contracts that we reviewed. One farm was given a Tier II contract even though their entire farm was not eligible for CSP. In another case, NRCS calculated enhancement payments in a contract using a multiplier that staff referred to as a "fudge factor". Enhancement practices that would be added by this farm in the second year of its contract were also calculated in at the variable enhancement rate, instead of at 100% as required by the rule.

All of these program complexities leave farmers unable to predict whether they will receive a CSP contract and if so, the extent of potential payments. This is a major deterrent to participation. NRCS should be instructed to remove payment caps on stewardship, enhancement, and new practice payments, and eliminate the variable enhancement payment rate. This will reduce program complexity—a major benefit for farmers and NRCS staff alike—and increase transparency for applicants.

Opportunity #3:
Increase Participation by Expanding Technical Assistance

The complexity of CSP might be less daunting to farmers if more technical assistance was available. As stated in the Interim Final Rule, "technical assistance may include, but is not limited to: assisting applicants during sign-up, processing and assessing applications, assisting the participant in developing the conservation stewardship plan; conservation practice survey, layout, design, installation, and certification; information, education, and training for producers; and quality assurance activities." Despite these wide-ranging responsibilities, language from the 2002 Farm Bill limits spending on technical assistance to 15 percent of the funds expended for the program overall.

The CSP Self Assessment workbook is an effective tool and helps farmers identify possible conservation needs on their farm. The Connecticut organic goat/chicken/ vegetable farmer, for example, said that in the process of completing the workbook, her NRCS agent convinced her to abandon plans to allow her goats to drink from a stream on her property. Yet it is important to

understand that all farmers who participated in this study required at least some assistance completing the so-called "*Self*" Assessment.

Experience working with NRCS is not a requirement for CSP enrollment, but in reality, lack of prior relationship with the agency puts farmers at significant disadvantage. Many of the farms interviewed for this study had a long history of involvement with NRCS, and thus much of the information needed to determine the farm's eligibility (data needed to determine SCI and WQ Tool scores, the delineation of the farms fields, etc.) was already in NRCS files. This makes it easier for NRCS to complete their portion of the CSP application and determine eligibility. Indeed, several NRCS employees admitted a preference for farms with a history with the agency because the money allotted to them for CSP is not enough to cover the costs of the labor required to survey fields and calculate the different indices required for the CSP application.

Opportunity #4:
Recognize the Limits of the Soil Conditioning Index

CSP uses quantitative indices for determining farm eligibility and, in some cases, for determing enhancement payment rates. Quantitative measures are attractive in that they provide a science-based, time-efficient approach and can set a "baseline" standard for participation. However, the northeastern region contains many diverse farm types and practices, rendering it nearly impossible to apply a "one-size-fits-all" approach to assessment. Each farm type has different strengths and weaknesses in terms of conservation, and problems of imprecision often arise when utilizing rigid, quantitative measures alone. To work well, quantitative measures must be balanced with more individualized, qualitative measures to assess eligibility.

The SCI is a quantitative measure in which a negative value predicts declining levels of soil organic matter. Land must have a positive SCI score in order to be eligible for CSP. The availability of a standardized, easy-to-use computer program must be popular to an already overburdened NRCS staff. However, one NRCS staff person noted that RUSLE2 (which is used to calculate the SCI score) is constantly being updated, making it difficult for staff members to stay abreast of changes. I would also like to emphasize that the SCI is not a complete soil quality indicator. It assesses only soil organic matter, which is a primary indicator of soil quality and carbon sequestration. Other important measures of soil quality not reflected in the SCI include the quality of organic matter, salinity, surface structure, nutrient management, soil biota, contaminants, runoff, and compaction.

Despite the appeal of a quantitative measure, bias and inconsistencies in judgment are still possible because it is easy for different NRCS agents to calculate different SCI scores for the same field. One NRCS agent commented, *"You could send 25 NRCS guys out to a field and get 25 different SCI scores."* When a field's SCI score is close to 0, small variations in field length or slope estimates used in calculations can produce a SCI score that is slightly positive or negative. It should be noted that the SCI was developed in Texas and was not subjected to rigorous analysis and recalibration in other parts of the country before it was put into use for CSP.

NRCS field staff are encouraged to group fields with similar characteristics (i.e. soil type, slope) together when calculating SCI scores for a farm. This is an effective strategy in the Midwest, where fields are large, slope variation is less, and soil types are more uniform. In New England, however, a 1000 acre farm could consist of over 100 scattered fields. Each of these fields is likely to have a different slope and many will have a different soil type. Grouping becomes difficult and highly inaccurate. The workload for calculating the SCI score for a large New England farm can become staggering. It almost invariably exceeds the technical assistance hours allotted for NRCS staff to implement this program.

The potato farm case study offers an example of this imprecision. Although the farmer uses the most up-to-date conservation technology, his fields are in continuous corn-potato rotation, and no time is allowed for fields to lie fallow. As a result, his SCI score was slightly negative on some fields. On other fields, the SCI score was slightly positive, but not high enough to receive an enhancement payment. Even though the farmer applies the same conservation practices on all fields, only some fields are eligible. This is largely due to factors beyond the farmer's control, such as small differences in slope and soil type, not because of any difference in conservation efforts.

The Massachusetts vegetable and fruit farm suggests other difficulties with SCI. SCI scores are positive for permanent and perennial crops, such as orchard crops and berries, in which tillage is rarely practiced. However, SCI scores are lower on annual vegetable crops, even those grown organically. According to the farmer, the area's premium land prices prohibit him from leaving fields fallow. In addition, the short growing season prevents him from using a no-till system (which typically produces a positive SCI score) because the soil doesn't warm up quickly enough for an early spring planting without tillage, and a delayed planting would result in lost markets. However, he is dedicated to using annual cover crops and is doubling the amount of acreage in organic production this year. The lower SCI scores for these fields do not reflect that this farmer uses as many or more conservation practices on his vegetable acres than he uses on the orchard and berry crops.

The Massachusetts cranberry farm case study provides a unique regional example of SCI challenges. The SCI was not designed to evaluate soil in cranberry bogs. Cranberry bogs are never tilled, and their soil consists of alternating layers of sand and decomposing organic matter. The bogs spend a significant portion of the year completely flooded. NRCS determined for this case study that cranberry bogs will typically earn a high SCI of approximately 0.6 due to the soil type, the permanence of the crop and the lack of any need for tillage. Thus, a cranberry farm is much more likely to be eligible to participate in CSP and receive enhancement payments for a higher SCI score, even though the farmer may not be putting nearly as much effort into soil conservation as other farm types.

Opportunity #5:
Support Small Farms by Establishing a Base Payment Minimum

CSP is open to any farm type in an eligible watershed, yet interviews show that different types of farms have different experiences and levels of success in enrolling in the program. Small farms receive very low payments. In one case, a farm will receive only $385 over 10 years, starting

with a payment of $88 in year one and ending with payments of $17 in years 7-10 (the decline due to the variable enhancement payment process added administratively by NRCS). This payment is hardly worth the hours that both the farmer and the NRCS spent on the application.

CSP payments are calculated per acre. This automatically means that a smaller farm will receive smaller payments for the same practices that a larger farm is doing. While this may seem fair initially, as larger farms incur greater expenses, it can reduce the incentive for small farms to apply. The team analyzing CSP experiences in Maryland found similar disincentives for small farm entry. Heller et al suggest fostering the participation of small farms in CSP by establishing a payment floor for the stewardship payment of $500 per year for farms with less than 50 acres and $1,000 for farms greater in size. Such a payment floor would make it more likely that even small farms in areas with low rental rates would see value in CSP participation.

Opportunity #6:
Create a Universal Application to Streamline the Bureaucracy

During the course of this study, several farmers observed that they could receive higher payments for certain activities, such as setting aside land or cost sharing for the installation of a new watering facility, through NRCS programs other than CSP.

The overlap between NRCS programs causes confusion for farmers and creates extra work for NRCS employees, who must offer the same assistance through several programs, each requiring a separate application. In many cases, NRCS programs are wonderfully complementary. The Vermont dairy, Connecticut dairy, and Massachusetts cranberry farm had all participated in EQIP prior to their participation (or hypothetical participation) in the CSP. In each case, the completion of the EQIP contract improved conservation efforts on the farm, and likely contributed to the farm's eligibility for a CSP contract.

But farmers are not allowed to receive payments for the same activity through two NRCS programs, so they must choose between them. The Maine potato farmer pointed out that he would receive more money per acre for the grassed waterways in his fields through the CRP than he would through the enhancement payments available through CSP. The same is true for riparian buffers, which would also receive a higher payment through the CRP than they would through the enhancement payments offered by CSP. Farmers could make the differences between the two programs work to their benefit by enrolling buffers, grassed waterways, and contour grass strips into the CRP, and then enrolling the rest of the farm into CSP.

A way to streamline the programs offered by NRCS and assist farmers in figuring out how best to apply the menu of programs to their needs, would be to develop a universal application for all NRCS programs. Several farmers and NRCS employees mentioned to us that they would like to see this, a concept that one farmer referred to as "one stop shopping". A universal application for all NRCS programs would simplify the process of providing assistance to farmers for environmental improvements and help NRCS staff identify which programs could be used to help each farmer. The NRCS could conduct a benchmark inventory of a farm at the beginning of the process, similar to the one currently conducted for CSP, and then use the results to determine which programs farmers could participate in.

Opportunity #7:
Enhance Conservation by Welcoming New Practices

We found several instances of NRCS field offices being instructed not to offer new practice payments. This is understood to be one solution to budget cuts. However, offering the payments in the literature but not in reality adds to farmer confusion.

Not surprisingly, none of the farmers in our study with 2005 CSP contracts signed up for any new practice payments. Practice payments must be rethought and recalculated if they are to be a meaningful part of CSP. Clearly EQIP offers a better cost share rate and more money for farmers. Despite identical farm bill statutory language, the CSP offers farmers a 50% cost share rate (65% for beginning or limited resource farmers) on a range of new practices, while EQIP offers farmers up to a 75% cost share rate (up to 90% for beginning or limited resource farmers). The CSP limits New Practice Payments for farmers to $10,000 per contract, while EQIP limits farmers to $450,000 in payments for the duration of the term of the Farm Bill.

Opportunity #8:
Lengthen the Sign-Up Period To Avoid Conflict with Farm Responsibilities

Farmers involved in this study frequently complained that the application process was poorly timed, too short, and conflicted with the planting season. Secretary Johanns partially addressed this criticism in his announcement of the 2006 sign up, held February 13 to March 31: "This year, we're providing applicants the ability to sign up prior to most planting decisions to encourage more conservation leaders." Yet the sign up was open for only a short window of time during peak spring planning months. A longer sign up period would eliminate this problem, and give the NRCS more time to reach out to new applicants and help them complete complicated applications.

Conclusion

I know my friends in the room are wondering if I could complete my testimony without specific reference to organic production. Of course not! I have been asked whether organic vegetable farmers, which are often thought of as conservation oriented, may be less likely to be eligible for CSP than conventional farms due to the SCI score requirement. In some cases, the answer is yes. Since organic farmers cannot use herbicides they rely on cultivation for weed control. This extra cultivation has a negative effect in the SCI score and potentially disqualifies organic land or lowers the enhancement payments. On the other hand, organic farms typically include production practices such as planting cover crops and incorporating compost or manure into their fields, all of which may help raise their SCI score to counteract the effect of the extra tillage. So, it is a mixed story but one which many organic advocates are following as CSP and organic should go hand in hand. Indeed, the national list of enhancement practice and new practice payments includes payments for organic production (an enhancement payment) or transitioning to organic production (a new practice payment). The only New England state to offer such payments for organic production is Vermont, which offered a new practice payment of $25/acre for transitioning to organic production.

Opportunity to increase CSP effectiveness can be obtained through greater funding allocations, administrative adjustments, and statutory change. Those of us at Tufts University and American Farmland Trust stand ready to assist the Committee in further analysis of this critical green payment program—the future of conservation in America.

While maintaining their confidentiality, I would like to conclude by acknowledging the farmers whose operations served as case studies for our report. They want this program to work, and to ensure that it does, they provided full access to their farms, thoughtful insights, and hours of time with our research team and NRCS staff. I only hope our work is just credit to their stewardship.

Thank you for the opportunity to share the New England experience.

United States Government Accountability Office

GAO

Testimony
Before the Committee on Agriculture, Nutrition, and Forestry, U.S. Senate

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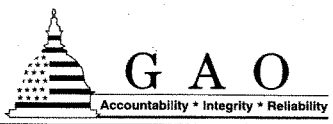
AGRICULTURAL CONSERVATION

USDA Should Improve Its Management of Key Conservation Programs to Ensure Payments Promote Environmental Goals

Statement of Lisa Shames, Acting Director
Natural Resources and Environment



GAO-07-370T

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Highlights

Highlights of GAO-07-370T, testimony before the Committee on Agriculture, Nutrition, and Forestry, U.S. Senate

Why GAO Did This Study

The Environmental Quality Incentives Program (EQIP) and the Conservation Security Program (CSP), administered by the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS), are designed to promote conservation goals. In recently issued reports on these programs, GAO assessed (1) NRCS's process for allocating EQIP funds to the states to optimize environmental benefits, (2) NRCS's measures to monitor EQIP's performance, and (3) the legislative and regulatory measures available to prevent duplication between CSP and other conservation programs, such as EQIP.

What GAO Recommends

GAO recommended that NRCS (1) ensure that the factors and weights used in EQIP's general financial assistance formula are documented and linked to program priorities, and data sources are accurate and current, (2) continue to analyze and use information from its performance measures to revise the financial assistance formula, and (3) develop a comprehensive process to preclude and identify duplicate payments between CSP and other conservation programs. USDA agreed that the EQIP financial assistance formula needed review and said it has improved oversight to cross-check payments to determine if duplicate payments have been made. USDA did not agree that the EQIP funding process lacked a clear link to the program's purpose.

www.gao.gov/cgi-bin/getrpt?GAO-07-370T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Lisa Shames, (202) 512-3841, ShamesL@gao.gov.

January 2007

AGRICULTURAL CONSERVATION

USDA Should Improve Its Management of Key Conservation Programs to Ensure Payments Promote Environmental Goals

What GAO Found

Because farmers and ranchers own and manage about 940 million acres, or about half of the continental United States' land area, they are among the most important stewards of our soil, water, and wildlife habitat. EQIP provides assistance to farmers and ranchers to take new actions aimed at addressing identified conservation problems, whereas CSP rewards farmers and ranchers who already meet very high standards of conservation and environmental management on their operations. In fiscal year 2006, EQIP and CSP provided about $1 billion and $260 million, respectively, in financial and technical assistance to farmers and ranchers. Efficient and effective management of these programs by NRCS is especially important in light of the nation's current deficit and growing long-term fiscal challenges. GAO found the following weaknesses in the management of EQIP and CSP:

- NRCS's process for providing EQIP funds to states is not clearly linked to the program's purpose of optimizing environmental benefits; as such, NRCS may not be directing funds to states with the most significant environmental concerns arising from agricultural production. To allocate most EQIP funds, NRCS uses a general financial assistance formula that consists of 31 factors and weights. However, NRCS does not have a documented rationale for how each factor contributes to accomplishing the program's purpose. In addition, some data that NRCS uses in applying the formula are questionable or outdated.

- NRCS has begun to develop long-term, outcome-oriented performance measures for EQIP. Such measures can provide information to better gauge program performance and also help NRCS refine its process for allocating funds to the states by directing funds to areas of the country that need the most improvement. However, NRCS did not have plans to link these measures to the EQIP funding allocation process.

- Despite legislative and regulatory provisions, it is still possible for producers to receive duplicate payments through CSP and other USDA conservation programs because of similarities in the conservation actions financed through these programs. However, NRCS did not have a comprehensive process to preclude or identify such duplicate payments. In reviewing NRCS's payments data, GAO found a number of examples of duplicate payments.

Ensuring the integrity and equity of existing farm programs is a key area needing enhanced congressional oversight. Such oversight can help ensure that conservation programs, such as EQIP and CSP, benefit the agricultural sector as intended and protect rural areas from land degradation, diminished water and air quality, and loss of wildlife habitat.

Mr. Chairman and Members of the Committee:

I am pleased to be here today to discuss the U.S. Department of Agriculture's (USDA) management of two of its agricultural conservation programs—the Environmental Quality Incentives Program (EQIP) and the Conservation Security Program (CSP). Because farmers and ranchers own and manage about 940 million acres, or about half of the continental United States' land area, they are among the most important stewards of our soil, water, and wildlife habitat. EQIP and CSP, administered by USDA's Natural Resources Conservation Service (NRCS), are designed to encourage and reward activities that promote conservation goals. EQIP provides assistance to farmers and ranchers to take new actions aimed at addressing identified conservation problems, whereas CSP rewards farmers and ranchers who already meet very high standards of conservation and environmental management in their operations.

We at GAO are anxious to assist the 110th Congress in meeting its oversight agenda. To that end, we have recommended that ensuring the integrity and equity of existing farm programs is a key area needing congressional oversight.[1] The Farm Security and Rural Investment Act of 2002[2] (2002 farm bill) authorized funding for several agricultural conservation programs, among them EQIP and CSP, estimated by the Congressional Budget Office to be $20.8 billion for fiscal years 2002 through 2007. In fiscal year 2006 alone, EQIP and CSP provided about $1 billion and $260 million, respectively, in financial and technical assistance to farmers and ranchers. Given the size and significance of these programs in protecting rural areas from land degradation, diminished water and air quality, and loss of wildlife habitat, it is essential that they be managed effectively and efficiently. Appendix I provides information on authorized funding for these and other key USDA conservation programs.

My testimony today is based on our recent reports evaluating NRCS's implementation of EQIP[3] and CSP.[4] I will focus on three primary issues

[1]GAO, *Suggested Areas for Oversight for the 110th Congress*, GAO-07-235R (Washington, D.C.: Nov. 17, 2006).

[2]Pub. L. No. 107-171, 116 Stat. 134 (2002).

[3]GAO, *Agricultural Conservation: USDA Should Improve Its Process for Allocating Funds to States for the Environmental Quality Incentives Program*, GAO-06-969 (Washington, D.C.: Sept. 22, 2006).

discussed in these two reports: (1) NRCS's process for allocating EQIP funds to the states to optimize environmental benefits, (2) NRCS's measures to monitor EQIP performance, and (3) the legislative and regulatory measures available to prevent duplication between CSP and other USDA conservation programs and the duplication that has occurred. To perform this work, we reviewed relevant statutory provisions, NRCS regulations, program documentation, and guidelines for implementing EQIP and CSP and spoke with NRCS officials. Our work was conducted in accordance with generally accepted government auditing standards.

In summary, we reported that NRCS's process for allocating EQIP funds to the states does not clearly link to the program's purpose of optimizing environmental benefits; as such, NRCS may not be directing EQIP funds to states with the most significant environmental concerns arising from agricultural production. We also reported that NRCS has developed long-term, outcome-oriented measures to assess changes to the environment resulting from EQIP practices as part of its 2005 strategic planning effort. These measures could help the agency refine its process for allocating funds to the states through its financial assistance formula by directing funds toward areas of the country that need the most improvement. However, at the time of our report, NRCS had not yet done so. Finally, with respect to CSP, we reported that despite provisions in the 2002 farm bill and NRCS regulations and procedures designed to reduce the potential for duplication between CSP and other conservation programs, duplicate payments for the same conservation practice or activity on the same land have occurred. On the basis of these findings, we made recommendations to improve USDA's process for allocating EQIP funds to the states and to develop a process to preclude and identify duplicate payments between CSP and other conservation programs.

[4]GAO, *Conservation Security Program: Despite Cost Controls, Improved USDA Management Is Needed to Ensure Proper Payments and Reduce Duplication with Other Programs*, GAO-06-312 (Washington, D.C.: April 28, 2006).

NRCS's Process for Allocating EQIP Funds to the States Does Not Link to the Program's Purpose of Optimizing Environmental Benefits

NRCS's process for providing EQIP funds to the states is not clearly linked to the program's purpose of optimizing environmental benefits. In particular, NRCS's general financial assistance formula, which accounts for approximately two-thirds of funding provided to the states, does not have a documented rationale for each of the formula's factors and weights, which are used to determine the allocation of funds to the states to address environmental issues. Thus, it is not always clear whether the formula factors and weights direct funds to the states as effectively as possible. In addition, the financial assistance formula relies on some questionable and outdated data. As a result, NRCS may not be directing EQIP funds to states with the most significant environmental concerns arising from agricultural production.

NRCS Does Not Have A Documented Rationale for Formula Factors and Weights

In fiscal year 2006, approximately 65 percent of EQIP funds were considered general financial assistance—funds for installing conservation practices—and were allocated using a general financial assistance formula. This formula contains 31 factors related to the availability of natural resources and the presence of environmental concerns or problems. For example, factors in the formula measure acres of wetlands and at-risk species habitat, pesticide and nitrogen runoff, and the ratio of commercial fertilizers to cropland. NRCS assigns each of the formula's factors a weight that determines the funds to be allocated to states based on that factor. For example, factors with the highest weights include acres of highly erodible cropland, acres of fair and poor rangeland, the quantity of livestock, and the quantity of animal waste generated. A state's total allocation is composed of the funds it receives for each of the 31 factors.

NRCS has periodically modified factors and weights to emphasize different national priorities, most recently in fiscal year 2004, following the passage of the 2002 farm bill. However, NRCS has not documented the basis for its decisions regarding the formula factors and weights nor explained how they achieve the program's purpose of optimizing environmental benefits. Thus, it is not always clear whether the formula factors and weights help direct funds to the states as effectively as possible.

For example, NRCS has not demonstrated that it has the most appropriate water quality factors in its formula. Specifically, the formula includes a factor addressing impaired rivers and streams but no factor for impaired lakes and other bodies of water. Moreover, it is not certain whether the impaired rivers and streams factor results in funds being awarded on the basis of general water quality concerns or water pollution specifically

caused by agricultural production. As a result, it was not certain whether the formula allocates funds as effectively as possible to states with water quality concerns arising from agricultural production.

While the factors in the EQIP general financial assistance formula determine what resource and environmental characteristics are considered when allocating funds, the weights associated with the factors directly affect how much total funding is provided for each factor and, thus, the amount of money each state receives. Small differences in the factor weights can shift the amount of financial assistance directed at a particular resource concern. For example, in 2006, if the weight of any of the 31 factors had increased by 1 percent, $6.5 million would have been allocated on the basis of that factor at the expense of one or more other factors. Such a shift could affect the amount of financial assistance received by each state. The potential for the weights to significantly affect the amount of funding a state receives underscores the importance of having a well-founded rationale for assigning them.

Some stakeholders we spoke with questioned NRCS's assignment of weights to certain factors in the financial assistance formula because they did not believe NRCS's formula adequately reflected the states' environmental priorities. For example, the formula allocates 6.3 percent of EQIP funds to the states on the basis of factors specifically associated with animal feeding operations. However, states have spent more than 6.3 percent of their EQIP funding on conservation practices related to animal feeding operations. For example, in fiscal year 2005, states spent a total of 11 percent of EQIP financial assistance, or $91.1 million, on just one such practice—the construction of animal waste storage facilities. This discrepancy suggests that the weights in the formula may not reflect states' priorities.

Financial Assistance Formula Relies on Some Questionable and Outdated Data

Weaknesses in the financial assistance formula are compounded by NRCS's use of questionable and outdated data as they apply to the formula. Accurate data are key to ensuring that funds are distributed to states as intended. However, we identified several methodological weaknesses in the data sources: (1) data that were used more than once in the formula, (2) data sources whose accuracy could not be verified, and (3) data that were not as current as possible.

First, 5 of the 29 data sources in the financial assistance formula were used more than once for separate factors, potentially causing NRCS to overemphasize some environmental concerns at the expense of others.

For example, NRCS uses the same data—data estimating the potential for pesticide and nitrogen runoff from agricultural land—for two factors in the formula intended to represent unique environmental concerns. Using the same data for multiple factors may result in more emphasis being placed on certain environmental concerns than intended. Furthermore, using data created for one factor for a second factor also makes the formula less transparent and potentially less reliable for allocating state funding.

Second, NRCS could not confirm the source of data used in 10 factors in the formula; as such, we could not determine the accuracy of the data, verify how NRCS generated the data, or fully understand the basis on which the agency allocates funding. For example, we could not verify how NRCS generated data for factors measuring the quantities of livestock and animal waste. NRCS said it had not retained documentation on how the data for these factors were calculated. As a result, it was uncertain whether NRCS had chosen the most appropriate data as its basis for allocating funds to states with pollution problems from livestock or whether the data were accurately calculated.

Third, NRCS does not use the most current data for six factors in the formula. For example, according to NRCS, the source of data on the ratio of commercial fertilizers to cropland was a 1995 report by the Association of American Plant Food Control Officials. We found a 2005 version of the same report with more current data. The absence of the most recent data for these six factors raises questions about whether the formula allocates funds to areas of the country that currently have the greatest environmental needs, because recent changes in a state's agricultural or environmental status may not be reflected.

Because of our concerns about the general financial assistance formula, we recommended that NRCS ensure its rationale for the factors and weights was documented and addressed program priorities, and the data sources used in the formula were accurate and current. In responding to our report, USDA agreed that the EQIP formula needed review but did not agree with our assessment that NRCS's funding process lacked a clear link to the program's purpose of optimizing environmental benefits. We continue to believe, however, that the weaknesses we identified in the general financial assistance formula lessen its ability to optimize environmental benefits. Additional information describing its reasons for including or excluding factors in the formula would help ensure that EQIP's purpose of optimizing environmental benefits is more evident.

NRCS Has Begun to Develop More Outcome-Oriented Performance Measures for EQIP, but Has Not Yet Linked Them to the Funding Allocation Process

NRCS has begun to develop more long-term, outcome-oriented performance measures to assess changes to the environment resulting from EQIP practices. In addition to providing information to better gauge program performance, these measures could also help NRCS refine its funding allocation process to the states by directing funds to areas of the country that need the most improvement. However, at the time of our report, NRCS did not yet have any plans to link these performance measures to the EQIP funding allocation process.

In 2000, we reported that performance measures tied to outcomes would better communicate the results NRCS intended its conservation programs to achieve and would be more useful in judging NRCS's performance in carrying out its mission.[5] In 2002, NRCS established annual performance measures for EQIP. However, they were primarily program outputs—the number and type of conservation practices installed—and as such provided limited information for decision makers.

Subsequently, as part of its 2005 strategic planning effort, NRCS developed long-term, outcome-oriented performance measures to assess changes to the environment resulting from the installation of EQIP conservation practices. These measures include such things as reducing sediment runoff from farms, improving soil condition on working cropland, and increasing water conservation. They also include proposed targets for each measure to be achieved by 2010, such as reducing sediment runoff by 18.5 million tons annually. According to NRCS, it has developed baselines for these performance measures, and plans to assess and report on them once computer models and other data collection methods that estimate environmental change are completed.

According to the Director of NRCS's Strategic Planning and Performance Division, NRCS expects to assess and report on the status of all measures by 2010 but will be able to assess the results of some measures sooner, such as improved soil condition on working cropland. In the meantime, the agency will continue to use its existing annual measures to assess performance. The director acknowledged that the outcome-oriented measures were not as comprehensive as needed but represented measures

[5]GAO, *Natural Resources Conservation Service: Additional Actions Needed to Strengthen Program and Financial Accountability*, GAO/RCED-00-83 (Washington, D.C.: April 7, 2000).

NRCS could reasonably assess using modeling and data collection methods that would soon become available. NRCS plans to continue to improve its performance measures.

Although we did not assess the comprehensiveness of the EQIP performance measures, the additional information they provide about the results of EQIP outcomes should allow NRCS to better gauge program performance. As a next step, such information could also help the agency refine its process for allocating funds to the states through its general financial assistance formula by directing funds toward practices that address unrealized performance targets and areas of the country that need the most improvement. The Chief of NRCS's Environmental Improvement Programs Branch agreed that information about program performance might eventually be linked to the EQIP funding allocation process. However, at the time of our report, the agency did not have plans to make this linkage.

We recommended that the Secretary of Agriculture direct NRCS to continue to analyze current and newly developed outcome-oriented performance measures for EQIP and use this information to make any further revisions to the financial assistance formula to ensure funds are directed to areas of highest priority. In its response, NRCS stated that the current measures have been revised to reflect the most recent results of its effort to track and report program performance.

Legislative and Regulatory Measures Reduce the Potential for Duplication between CSP and Other Programs, but the Potential Remains for Duplicate Payments, and Such Payments Have Occurred

A number of legislative and regulatory actions have been taken that reduce the potential for duplication between CSP and other USDA conservation programs, such as EQIP. For example, the 2002 farm bill provides that CSP may reward producers for maintaining conservation practices that they have already undertaken, whereas other programs generally provide assistance to encourage producers to take new actions to address conservation problems on working lands or to idle or retire environmentally sensitive land from agricultural production. In addition, the 2002 farm bill explicitly prohibits duplicate payments under CSP and other conservation programs for the same practice on the same land. It also prohibits CSP payments for certain activities that can be funded under other conservation programs, such as the construction or maintenance of animal waste storage or treatment facilities.

In addition, CSP regulations, promulgated by USDA, were designed to prevent duplication between CSP and other conservation programs. For example, the regulations establish higher minimum eligibility standards for

CSP than for other programs, which help to differentiate the applicant pool for CSP from the potential applicants for these other programs. The regulations also encourage CSP participants to implement conservation actions, known as enhancements, to achieve a level of treatment that generally exceeds the level required by other USDA conservation programs.

Despite these actions, the potential for duplicate payments still exists because of similarities in conservation actions financed through CSP and other programs, and our analysis has revealed that duplicate payments have occurred. Our analysis of 2004 payments data showed that 172 (or 8 percent) of the 2,180 producers who received a CSP payment in 2004 also received an EQIP payment that year. Among the 172 producers, we identified 72 who received a total of 121 payments that appeared to be for similar or related conservation actions. We then selected 11 of these producers, who received a total of 12 payments under each program, for more detailed analysis and found that in 8 cases duplicate payments had occurred. For example, four of these duplicate payments were made to producers who received a CSP enhancement payment and an EQIP payment for conservation actions that appeared to be similar. In one of these cases, a producer received a CSP pest management enhancement payment of $9,160 for conservation crop rotation and, on the same parcel of land, an EQIP payment of $795 for the same conservation action—conservation crop rotation.

NRCS state officials agreed that the payments made in these four cases were duplicates. They stated that they were unaware that such duplication was occurring and that they would inform their district offices of it. NRCS headquarters officials stated that the agency lacks a comprehensive process to either preclude duplicate payments or identify them after a contract has been awarded. Instead, these officials said, as a guard against potential duplication, NRCS relies on the institutional knowledge of its field staff and the records they keep.

NRCS has the authority to recover duplicate payments. CSP contracts, by way of reference, include a clause stating that CSP participants cannot receive duplicate payments. Under a CSP contract, as required in the 2002 farm bill, a producer agrees that on violation of any term or condition of the contract to refund payments and forfeit all rights to receive payments or to refund or accept adjustments to payments, depending on whether the Secretary of Agriculture determines that termination of the contract is or is not warranted, respectively.

Duplicate payments reduce program effectiveness and, because of limited funding, may result in some producers not receiving program benefits for which they are otherwise eligible. For these reasons, we recommended that the Secretary of Agriculture direct the Chief of NRCS to (1) develop a comprehensive process, such as an automated system, to review CSP contract applications to ensure that CSP payments, if awarded, would not duplicate payments made by other USDA conservation programs; and (2) develop a process to efficiently review existing CSP contracts to identify cases where CSP payments duplicate payments made under other programs and take action to recover appropriate amounts and to ensure that these duplicate payments are not repeated in fiscal year 2006 and beyond.

Regarding the first recommendation, in July 2006, NRCS said it had created an automated system within its contracting software to conduct a comparison between existing contracts for EQIP and other conservation programs and new CSP applications to reveal potential areas of overlapping practices. In addition, NRCS indicated that for the fiscal year 2006 CSP sign-up, it would require applicants to complete a form that asks an applicant to certify whether or not they are receiving payments from another conservation program on any of the land being offered for enrollment in CSP. These actions appear to be steps in the right direction, but we have not assessed their effectiveness. Regarding the second recommendation, NRCS indicated that all identified duplicate payments would be dealt with according to the NRCS contracting manual. We do not know the extent to which NRCS has identified and recovered duplicate payments.

In conclusion, EQIP and CSP are key agricultural conservation programs that can play an invaluable role in encouraging farmers and ranchers to act as stewards of the nation's natural resources. However, the weaknesses we identified in the management of EQIP and CSP funds may lessen these programs' effectiveness. Refining the EQIP allocation formula to ensure funds are provided to states in a manner that optimizes environmental benefits, continuing to develop outcome-oriented performance measures to help refine its funding allocation process, and developing processes designed to eliminate duplicate payments between CSP and other programs would enhance the programs' ability to effectively promote conservation among U.S. agricultural producers. Furthermore, oversight of these programs, such as today's hearing, helps ensure funds are spent as economically, efficiently and effectively as possible and benefit the

agricultural sector as intended. Such oversight is especially critical in light of the nation's current deficit and growing long-term fiscal challenges.

Mr. Chairman, this concludes my prepared statement. I would be pleased to respond to any questions that you or other Members of the Committee may have.

Contact and Staff Acknowledgments

Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. For further information about this testimony, please contact Lisa Shames, Acting Director, Natural Resources and Environment, (202) 512-3841 or ShamesL@gao.gov. Key contributors to this statement were James R. Jones, Jr., Assistant Director; Gary Brown; Thomas Cook; Paige Gilbreath; and Carol Herrnstadt Shulman.

Appendix I: Description of Key USDA Conservation Programs

Dollars in millions

Program	Description	Total authorization, fiscal years 2002 through 2007
Conservation Reserve Program	Provides annual rental payments and cost-share and technical assistance to establish permanent vegetative land cover in exchange for taking environmentally sensitive cropland out of production for 10 to 15 years. Most program lands are enrolled through the use of contracts and competitive bidding during designated sign-ups. Some economic uses of enrolled land are allowed with a reduction of annual rental payments, such as the installation of wind turbines and managed haying and grazing. Up to 39.2 million acres may be enrolled at any one time.	$11,118
Conservation Security Program	Offers various payments and technical assistance to support ongoing stewardship of agricultural land through 5- to 10-year contracts to promote conservation and the improvement of soil, water, air, energy, and plant and animal life on private and tribal agricultural lands. Unlike other USDA conservation programs that provide assistance to take new actions aimed at addressing identified conservation problems, CSP rewards farmers and ranchers who already meet very high standards of conservation and environmental management in their operations.	[a]
Environmental Quality Incentives Program	Offers incentive and cost-share payments and technical assistance through 1- to 10-year contracts to implement structural and land management practices or to develop a comprehensive nutrient management plan. At least 60 percent of annual funds made available for cost-share and incentive payments are required to be targeted at practices relating to livestock production.	5,800
Farmland Protection Program	Purchases easements or other interests in eligible land (up to 50 percent of fair market value) for the purpose of protecting topsoil by limiting nonagricultural uses of the land. Eligible land means land on a farm or ranch that is subject to a pending offer for purchase from an eligible entity and that has prime, unique, or other productive soil or that contains historical or archeological resources. Eligible land includes cropland, rangeland, grassland, pastureland, and forestland that is an incidental part of the agricultural operation.	597
Grassland Reserve Program	Offers permanent and 30-year easements and 10- to 30-year rental agreements to grassland owners to assist owners in restoring and conserving eligible land.[b] Up to 2 million acres may be enrolled.	254
Wetlands Reserve Program	Targets restoration of prior-converted and farmed wetlands to a wetland condition. Acreage can be enrolled in the program through the use of permanent easements, 30-year easements, and restoration cost-share agreements. Program lands may be used for compatible economic uses such as hunting, fishing, or limited timber harvests. Up to 2.275 million acres may be enrolled.	1,506
Wildlife Habitat Incentives Program	Offers cost-share payments through 5- to 10-year agreements to develop and protect and restore wildlife habitat. Allows up to 15 percent of funds each year to be used for increased cost-share assistance to producers who enter into 15-year agreements.	360

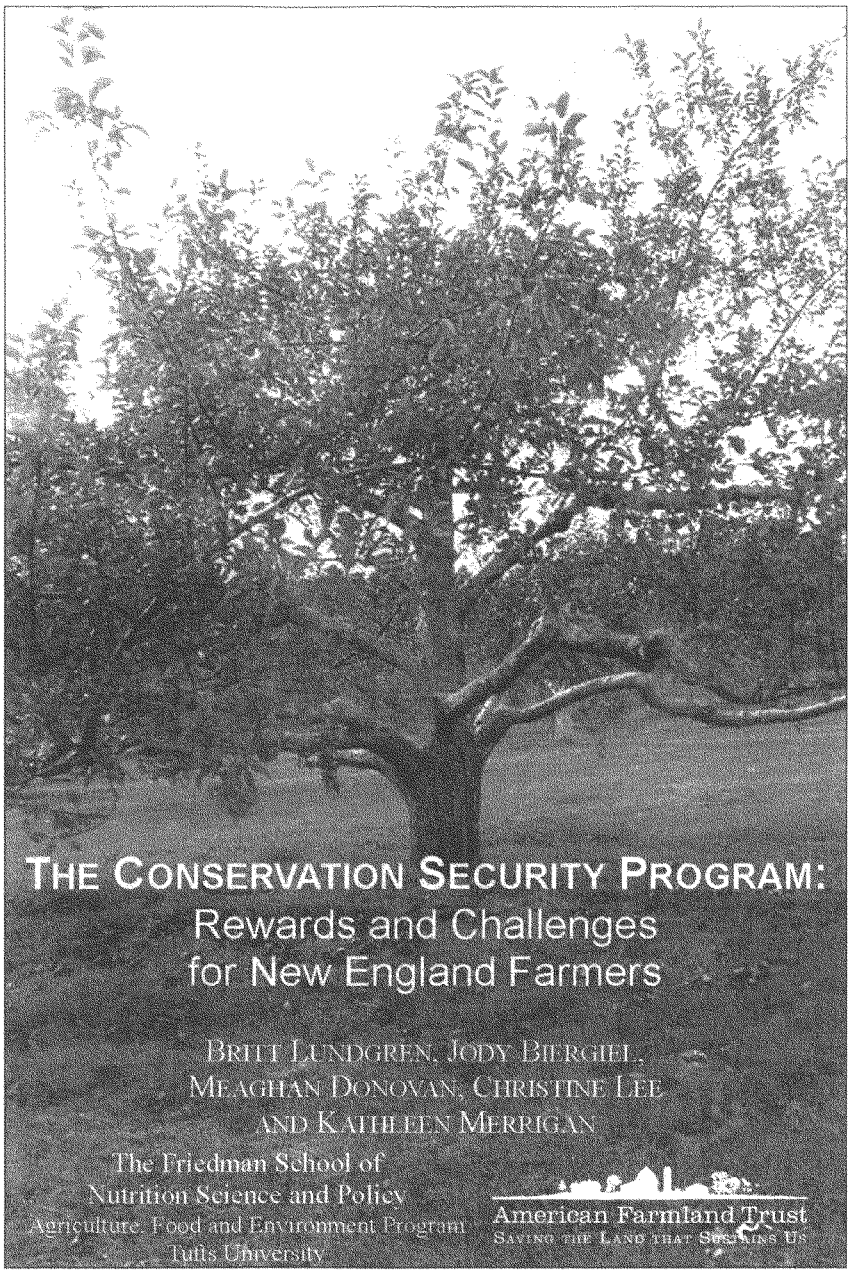
Sources: GAO analysis of U.S. Department of Agriculture and Congressional Budget Office information and the 2002 farm bill.

[a]Congress authorized the Conservation Security Program without placing limits on either its funding or the number of acres enrolled, although at times Congress has capped its funding in other legislation.

[b]In states that impose a maximum duration for easements, the Secretary of Agriculture can use an easement for the maximum duration allowed under state law.

DOCUMENTS SUBMITTED FOR THE RECORD

JANUARY 17, 2007


THE CONSERVATION SECURITY PROGRAM:
Rewards and Challenges
for New England Farmers
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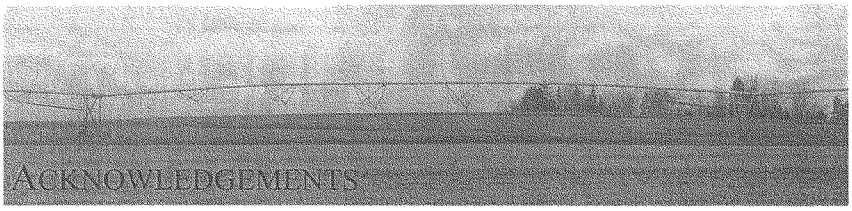
SAVING THE LAND THAT SUSTAINS US



ACKNOWLEDGEMENTS

The success of our work hinged on the willingness of others to generously share their time, expertise and candid assessments of the Conservation Security Program.

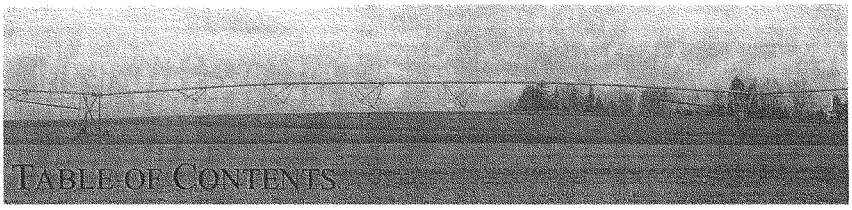
While maintaining their confidentiality we would like to acknowledge the substantial contributions of the farmers whose operations served as case studies for this report. They provided full access to their farms, thoughtful insights into the CSP, and spent hours with us and NRCS staff pouring over calculations and records necessary to help us analyze and construct CSP contracts, without the incentive of additional contract payments -- or even any payments at all.

Similarly, numerous NRCS staff in both district and state offices were willing and essential partners throughout our study. Their assistance in assessing farm practices, calculating SCI scores and understanding the enrollment process was integral to our work.

Jeff LaFleur, Cranberry Growers Association and Ferd Hoefner of the Sustainable Agriculture Coalition contributed their expertise.

We also thank Colleen Matts for providing essential assistance with the design and formatting of this document.

Finally, this report was inspired by and done in collaboration with the New England Field Office of American Farmland Trust (AFT). AFT approached us with the idea for this study and provided our team valuable financial and technical support. Our case study methodology was shaped by a 2004 AFT case study that explored the impact of the initial proposed CSP rule on a typical New England dairy farm. In particular, we are deeply grateful for the guidance and insights of AFT field staff Cris Coffin and Jesse Robertson-Dubois. Cris and Jesse recommended farms to study, helped arrange interviews, aggregated data on 2005 CSP contracts, and counseled us throughout our work.



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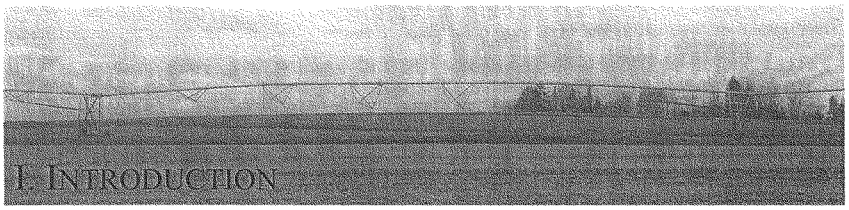

I. INTRODUCTION

The Conservation Security Program is a new stewardship program designed to reward farmers who are using good conservation practices and create an incentive for other farmers to use better conservation practices. It may have the potential to become an important source of income support for farmers who are eligible to participate. CSP is particularly important because it is the USDA's first comprehensive "green payment" program, a support program intended to reward stewardship. The advantage of green payment programs such as CSP is that they are not considered trade distorting under current WTO rules, and therefore may play an increasingly important role in the future of farm support. The recent report from the White House Council of Economic Advisors notes this, stating, "If new WTO negotiations produce an agreement to further reduce trade-distorting domestic support, countries may find it necessary to shift support from programs that are subject to reduction to programs that are exempt. This may include agri-environmental programs that qualify for inclusion in the WTO green box."[1]

There are significant differences between the structure of CSP as it is constructed in the original statute and the way it is implemented according to the NRCS' Interim Final Rule. CSP was created to be an entitlement program, but inadequate funding has forced NRCS to limit the number of CSP contracts given out each year. Indeed, many of the differences between the statute and the rule have arisen as NRCS has developed strategies to administer the program on a limited budget.

In this study we explore the effect that the current eligibility requirements and payment structure of CSP have on the structure and number of contracts given to farmers in New England. To do this, we constructed eight case studies of either real or hypothetical CSP contracts, including dairy, potato, cranberry, apple, and organic and conventional vegetable farms. These contracts represent typical New England farm types and crops.

Previous studies have evaluated CSP in other regions of the country: the Sustainable Agriculture Coalition has conducted in depth policy analysis of CSP[2]; the Maryland Center for Agro-Ecology recently published a study by a coalition of non-profit organizations and government entities analyzing the effectiveness of CSP in the Maryland area[3]; the Minnesota Project has conducted research on the impact that CSP has made on farmers in Minnesota[4]; the American Agricultural Economics Association selected a paper for presentation at their 2005 Annual Meeting about the potential for the CSP in the Midwest[5]; and in the Northeast we add our report to the existing dialogue begun by the University of Massachusetts, Amherst, and American Farmland Trust.[6] We feel that the perspective of New England farmers is useful for those who are trying to understand how CSP will effect farm viability and conservation efforts for this region.

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[1] White House Council of Economic Advisors, Economic Report of the President (Washington, D.C.: GPO, 2006).

[2] Sustainable Agriculture Coalition. Comments of the SAC Submitted to the NRCS of the USDA concerning the Amended Interim Final Rule for the CSP. (Sustainable Agriculture Coalition, September 9, 2005).

[3] Heller, Michael and Ferd Hoefner, Mark Waggoner, Jim Hanson, Jim Lewis, Robert Tjaden, Bryan Butler, Tom Simpson, Kim Kroll. *Assessing and Developing the Opportunities for Green Payments Programs for Maryland's Farmers.* (For the Maryland Center for Agro-Ecology, Inc. July 2005).

[4] McGrath, Mike, ed. *The Conservation Planner Special Edition: Now Is the Time to Comment on the CSP Rules.* (St. Paul, MN: The Minnesota Project, July 2005).

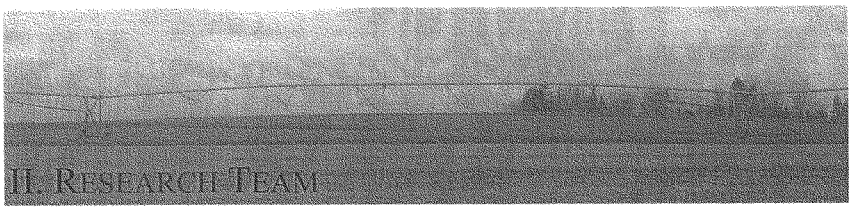
[5] Dobbs, Thomas L. and Nicholas J. Streff. *Potential for the Conservation Security Program to Induce More Ecologically Diverse Crop Rotations in the Western Corn Belt.* (Paper presented at the American Agricultural Economics Association Annual Meeting, July 2005).

[6] Al-Ashaikh, Asya and Clem Clay, John Mathews. *Conservation Security Program: Significance and Impact to Northeast Farms.* (Amherst: University of Massachusetts, December 22, 2003).

The information collected in this case study will be used to address the following questions:

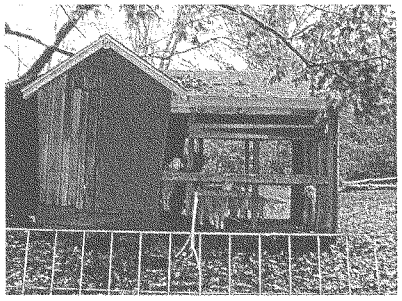
- Are the baseline eligibility requirements appropriate?
- Do the eligibility criteria (Soil Conditioning Index, Water Quality Eligibility Tool) accurately assess conservation efforts on these farms?
- Are there significant obstacles to eligibility, especially for farms that may be considered conservation oriented?
- How do organic farms fit into CSP?
- What is the effect of the enrollment categories on contracts?
- Is the program scale-neutral and/or crop-neutral?
- Are all the conservation efforts on the farm rewarded through CSP?
- Are CSP rules and decision making processes adequately transparent?
- Does CSP overlap or conflict with other NRCS programs?
- How much money and technical assistance can conservation oriented farmers in New England expect?
- Does the design of the program result in the achievement of program goals on New England farms?

CSP is likely be reexamined in the 2007 Farm Bill. We hope this study will contribute to the nationwide discussion on whether or how CSP should be redesigned and funded.



II. Research Team

This study was undertaken by a team of graduate students and the faculty director of the Agriculture, Food and Environment (AFE) Program of the Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy at Tufts University in Boston, Massachusetts. The AFE Program fuses the disciplines of nutrition, agricultural science, environmental studies and public policy. Students in the AFE Master of Science and Doctor of Philosophy programs learn to evaluate the ecological, political, economic and social aspects of food production and distribution. Information on the program is found at: http://www.nutrition.tufts.edu/admissions/programs/afe.



III. List of Acronyms

AFT: American Farmland Trust
AMA: Agricultural Management Assistance
CBO: Congressional Budget Office
CRP: Conservation Reserve Program
CSP: Conservation Security Program
CWT: Cooperatives Working Together
EQIP: Environmental Quality Incentive Program
GRP: Grassland Reserve Program
IEI: Irrigation Enhancement Index
IFR: Interim Final Rule
MILC: Milk Income Loss Contract
NRCS: Natural Resource Conservation Service
RUSLE2: Revised Universal Soil Loss Equation, version 2
SCI: Soil Conditioning Index
STIR: Soil Tillage Intensity Rating
WHIP: Wildlife Habitat Incentives Program
WIC: Special Supplemental Nutrition Program for Women, Infants, and Children
WQ Tool: Water Quality Eligibility Tool

A. History

The Conservation Security Program is the first comprehensive green payment program in the history of US farm support.[7] It was created as part of the 2002 Farm Bill. The 2002 Farm Bill was written amidst increasing pressure from both the international community, to eliminate so called "amber box" subsidies that were particularly trade distorting, and domestically from unfavorable attention surrounding traditional commodity payments and growing public concern about the environmental impact of agriculture.

The Conservation Security Program was designed with these concerns in mind. It was designed to "reward the best and encourage the rest"[8] to use sustainable practices on their farms and ranches. The program would pay farmers who were already using good conservation practices such as no-till or riparian buffers, and provide an incentive for less conservation-oriented farmers to begin using better practices.

The program would pay farmers who were already using good conservation practices such as no-till or riparian buffers, and provide an incentive for less conservation-oriented farmers to begin using better practices.

Since its inception in 2002, CSP has been on a budgetary and rulemaking roller-coaster.[9] While the Act decreed that the Secretary of Agriculture begin implementation of the program in 2002, the rulemaking process did not commence until February of 2003, when the USDA published an Advanced Notice of Proposed Rulemaking.[10]

In June 2004 the first Interim Final Rule (IFR) was released. A pilot program was begun, involving farms in eighteen eligible watersheds. During its first year of implementation CSP provided about $35 million in payments to farmers in over 2,000 approved contracts in these original watersheds.[11]

The second IFR was published in March 2005, with a last request for comments and the statement that the USDA would "finalize the CSP rule once additional programmatic experience is gathered with full-scale sign up period in 2005."[12] The 2005 sign-up period was announced at the same time, adding 202 new eligible watersheds to the program and allowing the original 18 watersheds a second chance to enroll, bringing the total to 220 watersheds. The Congressional Budget Office (CBO) recommended that the NRCS would need $282 million to implement CSP for FY05, but Congress only allocated $202 million.[13]

In the six New England states, 13 watersheds were eligible for the 2005 sign up period, resulting in 54 contracts.[14] Nationally 12,787 contracts were approved, giving New England 0.4% of the total

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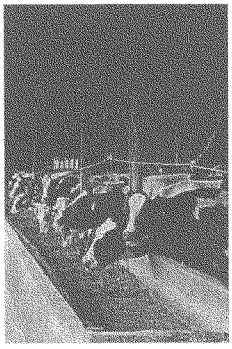
[7] Helms, J. Douglas. *Performance Based Conservation: The Journey toward Green Payments.* (NRCS. September 2005). http://www.nrcs.usda.gov/about/history/articles/perfbasedconservation.pdf (Accessed February 2006).
[8] NRCS. *CSP General Brochure* http://www.nrcs.usda.gov/programs/csp/ (Accessed December 2005)
[9] Sustainable Agriculture Coalition. *Comments of SAC Submitted to the NRCS of the USDA concerning the Amended Interim Final Rule for the CSP.* (Sustainable Agriculture Coalition, Sept 9, 2005).
[10] NRCS, "Action: Advance notice of proposed rulemaking and request for comments." Federal Register, 18 February 2003, 68:2, http://www.wais.access.gpo.gov (15 September 2005).
[11] NRCS. *FY 2004 Payments Approved* and *FY 2004 Contracts Approved.* http://www.nrcs.usda.gov/programs/csp/ (Accessed January 2006).
[12] 70 Fed. Reg. No 57 at 15202. March 25, 2005.
[13] Sustainable Agriculture Coalition.
[14] NRCS. *FY 2005 CSP Contracts Approved by State.* http://www.nrcs.usda.gov/programs/csp/pdf_files/FY-2005_CSP_Contracts_Approved_by_State.pdf (Accessed March 7, 2006).



contracts.[15] New England states garnered $234,068 in total payments.[16] This accounted for 0.15% of the funds given out nationwide.

For FY06 the budget has been capped at $274 million, despite the CBO estimate that CSP would cost $647 million in 2006 if all eligible farms were given contracts.[17] Although CSP accounts for only 1% of the agriculture budget, it received 27% of the budget cuts.[18] Because the funding was reduced, only 60 new watersheds are eligible for the 2006 sign-up period, reduced from the 110 watersheds that were initially announced as being eligible in late 2005. There is one watershed eligible in each of the New England states.[19]

The CSP was designed "to provide financial and technical assistance to agricultural producers... in accordance with certain requirements."[20] Financial assistance is provided through annual payments to those producers awarded CSP contracts. Technical assistance is much broader by definition and can be provided by either NRCS or NRCS-approved Technical Service Providers. As stated in the Interim Final Rule, "technical assistance may include, but is not limited to: assisting applicants during sign-up, processing and assessing applications, assisting the participant in developing the conservation stewardship plan; conservation practice survey, layout, design, installation, and certification; information, education, and training for producers; and quality assurance activities."[21] Despite these wide-ranging responsibilities, language from the 2002 Farm Bill limits spending on technical assistance to 15 percent of the funds expended for CSP in that fiscal year.[22]

B. Setting CSP Priorities

The tension between the simultaneous expansion of the program, budget cuts, and the limitation on technical assistance has resulted in some creative solutions by NRCS in order to run the under-funded program. The watershed based sign up process was not included in the original statute. The choice to implement the program in selected watersheds rather than on a national scale limits the program's size and allows for "tweaking" each new enrollment period to solve problems that occurred the year before. A smaller program costs less, and a staged rollout allows inefficiencies to be fixed before the program is implemented in every watershed.

Watersheds are selected with the input of state NRCS conservationists. Selected watersheds will be rotated annually until every watershed has been given a chance to participate. This is expected to occur on an eight year cycle. To determine which watersheds are chosen, NRCS uses a score based on a composite index of existing natural resource, environmental quality, and agricultural activity data. Some factors that are emphasized include: vulnerability of surface and ground water quality, and potential for excessive degradation of soil quality or grazing land. Farmers and ranchers in eligible

[15] NRCS. *FY 2005 Contracts Approved by State* http://www.nrcs.usda.gov/programs/csp/pdf_files/FY-2005_CSP_Contracts_Approved_by_State.pdf (Accesed March 7, 2006)

[16] NRCS. FY 2005 CSP Payments Approved, by State. http://www.nrcs.usda.gov/programs/csp/pdf_files/FY_2005_CSP_Payments_Approved_by_State.pdf (Accessed March 7, 2006).

[17] Sustainable Agriculture Coalition. *Comments of SAC Submitted to the NRCS of the USDA concerning the Amended Interim Final Rule for the CSP.* (Sustainable Agriculture Coalition, Sept 9, 2005).

[18] Agriculture Online News. *Ag Committee votes for $3 billion in cuts to ag spending.* (Agriculture Online: October 19th, 2005). http://www.mnproject.org/csp/index-cspnews.html (Accessed February 2006).

[19] NRCS. *CSP 2006 Watersheds List.* http://www.nrcs.usda.gov/programs/csp/2006_CSP_WS/index.html (Accessed January 2006)

[20] Federal Register, Conservation Security Program, *Interim Final Rule with request for comments,* 7 CFR Part 1469, March 25, 2005, p.15201.

[21] Federal Register, Conservation Security Program, *Interim Final Rule,* 7 CFR Part 1469, March 25, 2005, p.15218-9.

[22] NRCS, USDA, *"Farm Bill 2002: Watershed Approach for the Conservation Security Program,"* May 2004. Accessed on Feb.24, 2006 at http://www.nrcs.usda.gov/programs/farmbill/2002/pdf/Formatted_CSP_Watershed_Key_Points.pdf.

The tension between the simultaneous expansion of the program, budget cuts, and the limitation on technical assistance has resulted in some creative solutions by NRCS in order to run the under-funded program.

watersheds are notified by the NRCS by mail prior to the start of the sign up period if their operation is in an eligible watershed.

Enrollment categories also keep program spending in check when there are insufficient funds to pay for all eligible contracts. All applicants are placed in one of 5 Enrollment Categories (labeled A - E). Category A is funded first in all three Tiers, followed by category B, etc. If there is not enough money to fund a category completely throughout all three tiers, then those contracts will be ranked in 12 subcategories. Enrollment categories are based on the applicant's Soil Conditioning Index (SCI)[23] score and/or Soil Tillage Intensity Rating (STIR)[24] and the number of activities they do that address resources of concern. The enrollment categories are further broken down by stewardship payment type: pastureland, cropland, rangeland, and irrigated cropland. A farm that meets only the minimum eligibility requirements for its tier will be in category D or below. Farmers are placed in the enrollment category that the majority of their farm falls into. Tier I applicants do not have to include their entire farm in their application, and can therefore leave out sections of the farm that would lower their enrollment category. Farmers who are eligible for Tier II or III may chose to enroll in Tier I in order to increase their enrollment category. In 2005, the NRCS was able to fund contracts in enrollment categories A, B, and C-1.

NRCS has also chosen to cap the stewardship, new practice, and enhancement payments even though the statute only calls for the total payments to be capped for each Tier. Stewardship payments are reduced overall by two reduction factors, and then capped at different levels for each tier. The enhancement payments are paid at a variable rate that reduces the overall payment size by 60%, and are also capped at different levels for each tier. Additionally, the new practice payments are capped at $10,000 for all tiers.

C. Eligibility Requirements

Completion of a self-assessment workbook is the first step for farmers interested in participating in CSP. The workbook will determine whether basic eligibility requirements are met and help in the preparation of a benchmark inventory, which documents existing stewardship and conservation practices.[25]

Basic eligibility requirements include compliance with the highly erodible land and wetland conservation provisions (of the 1985 Food Security Act), and sharing in the risk of growing crops or raising livestock on the land (i.e. no "landlords" are eligible). Applicants must also meet Adjusted Gross Income requirements and be able to prove control of the land for the duration of the contract, a length of 5 or 10 years. The land itself must be private agricultural land or Tribal land. Private, non-industrial, forested land and other NRCS-approved land are also eligible at a limit of 10 percent of the total acreage under contract.

Farmers must own the land they wish to enroll in CSP, or be able to prove that they will have

[23] Please see page 10 for an explanation of the Soil Conditioning Index.

[24] STIR is an index used to evaluate the impact of tillage used on soil quality. Similar to the SCI, it is calculated using RUSLE2. Components used in calculation include the operating speed of tillage equipment, tillage type, depth, and percentage of surface area disturbed. The STIR rating affects the level of enhancement payment an applicant can expect to receive. A higher STIR rating implies a greater disturbance and more energy used, resulting in a lower payment. (NRCS, CSP Worksheet E-03, October 2005).

[25] The self-assessment workbook is available online at http://www.nrcs.usda.gov/programs/csp or through state NRCS offices.

Eligibility Requirements in the Statute[26]

The Interim Final Rule (IFR) sets more eligibility requirements for each Tier than the original statute.

- For Tiers I and II, the conservation plan needed to address only one significant resource of concern on the enrolled portion of the operation. The IFR requires producers to address two resources of concern, soil quality and water quality.
- For Tier III, the requirements in the statute and the IFR are the same: the conservation plan must address all resources of concern on the entire operation.

Unlike the IFR, the statute does not require producers to have implemented all aspects of their conservation security plan prior to enrollment in the program. Producers must only agree to implement the plan within the term of their contract.

control of the land for the duration of the CSP contract. In order to comply with this, farmers who rent land must be in possession of a lease that indicates that they will control the land for at least the length of the contract. If no such lease exists, the owner of the land must be willing to sign an agreement, provided by the NRCS, that states that they will agree to rent the land to the farmer for the length of the contract. If the landowner is unwilling to sign such an agreement, the land can not be enrolled in CSP.

Farmers who meet the basic eligibility requirements must apply during the open sign-up period, which is announced annually in the Federal Register by the Secretary of Agriculture. Enrollment is open only to those farmers who do not have an existing CSP contract, and whose agricultural operations are located within a selected watershed for that year.[27] Participants in CSP may only have one active contract at a time.

CSP is divided into three tiers of participation, each with its own eligibility requirements. The three tiers differ in levels of resource treatment, contract length, and payment amounts. Eligibility for a specific tier is determined by the NRCS using the benchmark inventory and other application materials.

In order to be eligible for Tier I, applicants must address "the nationally significant resource concerns of water quality and soil quality to the minimum level of treatment for *any* eligible land use on *part* of the agricultural operation"[28] prior to application.

Tier II eligibility requires applicants to address water and soil quality to the minimum level of treatment "for all land uses on the *entire* agricultural operation" ("entire" refers to all land considered to be under the control of the applicant) prior to application, as well as address an additional significant resource concern by the end of their contract period.[29]

Tier III requires applicants to address "*all* of the existing resource concerns listed in Section III of the NRCS Field Office Technical Guide (FOTG) with a resource management system that meets the minimum level of treatment on the *entire* agricultural operation" and adequately treat riparian zones prior to application.[30]

The SCI is a computer-based model[31] used to determine if soil quality criteria has been met. It predicts the effect of different cropping systems and tillage practices on soil organic matter levels. The three main components of the SCI include "the amount of organic material returned to or removed from the soil, the effects of tillage practices on organic matter decomposition, and the predicted soil erosion associated with the cropping system."[32] The information needed to calculate an SCI score

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[26] H.R.2646: Farm Security and Rural Investment Act of 2002 (Enrolled as Agreed to or Passed by Both House and Senate). TITLE II—CONSERVATION, Subtitle A--Conservation Security. SEC. 2001. CONSERVATION SECURITY PR OGRAM . <http:www.thomas.gov>.

[27] Lists of selected watersheds from 2004 to 2006 are available at http://www.nrcs.usda.gov/programs/csp/

[28] Notice, 2005 CSP Sign-up. Federal Register. Vol. 69, No. 118. June 21, 2004, p.34533.

[29] Notice, 2005 CSP Sign-up. Federal Register. Vol. 69, No. 118. June 21, 2004, p.34533.

[30] Notice, 2005 CSP Sign-up, 23.

[31] RUSLE2 (Revised Universal Soil Loss Equation) is the official, computer-based tool used by NRCS to calculate SCI score. http://www.iwr.msu.edu/rusle/ (Accessed January 2006)

[32] NRCS, October 2002. Guide to Using the Soil Conditioning Index, p.2. Accessed at: ftp://ftp-fc.sc.egov.usda.gov/SQI/web/SCIguide.pdf

includes soil type, soil texture, the crop rotation plan, typical yields for each crop, any additional application or removal of organic matter (i.e. manure or compost, baling of straw), all field operations (i.e. tillage, fertilizer, harvest), any conservation practices, and predicted rates of sheet and rill, wind, and irrigation-induced erosion.

A negative SCI value predicts declining levels of soil organic matter with the continuation of that production system. Similarly, a positive SCI value indicates increasing levels of soil organic matter. Land must have a positive SCI score in order to be eligible to participate in the CSP.

It is important to emphasize that the SCI is not a complete soil quality indicator. It assesses only soil organic matter, which is a primary indicator of soil quality and carbon sequestration. According to the NRCS, "controlling erosion and building organic matter do not guarantee good soil quality, but in most cropping situations they are prerequisites to improving and protecting soil quality and productivity. The SCI combined with erosion prediction technology can help assess these two basic components of good soil management."[33] Other important measures of soil quality that are not reflected in the SCI include the quality of organic matter, salinity, surface structure, nutrient management, soil biota, contaminants, runoff, and compaction.

As written in the CSP regulations, "the minimum level of treatment for water quality on cropland is considered achieved if the benchmark inventory indicates that the current level of treatment meets or exceeds the quality criteria"[34] specified in the NRCS technical guide for nutrients, pesticides, sediment, and salinity. Accepted practices that address water quality include: conservation tillage, filter strips, terraces, grassed waterways, managed access to water courses, nutrient and pesticide management, prescribed grazing, and irrigation water management.

For 2006, NRCS has developed a weighted, computer-based questionnaire called the Water Quality Eligibility Tool (WQ Tool) to determine basic water quality eligibility. By answering the questions included in this index, applicants must score a minimum number of points in each category in order to achieve the benchmark water quality standards. Point values are assigned to each positive response for conservation practices applied to protect or improve water quality.

D. Payment Structure

Farmers who receive a CSP contract will receive up to 4 types of payments: Stewardship, Existing Practice, New Practice, and Enhancements.

Stewardship Payment

NRCS provides stewardship payments for the benchmark level of conservation treatment. Stewardship payments are an acreage based payment, based on the local rental rate of the land for different land uses (e.g. irrigated cropland, pastureland, etc.). To arrive at the per acre stewardship payment, the local rental rate for each land use category is multiplied by two reduction factors: 1) an acre based Tier reduction factor; and 2) a payment based reduction factor.[35]

The NRCS divides the land area eligible for CSP into different land use categories. These categories include: non-irrigated cropland, irrigated cropland, non-irrigated pasture, irrigated pasture, pastured cropland, and rangeland. For each category the NRCS calculates the average 2001 land rental rates by utilizing the Agriculture Foreign Investment Disclosure Act (AFIDA) Land Value Survey, the National Agriculture Statistics Service (NASS) land rental data, and the Conservation Reserve Program (CRP) rental rates. The NRCS also adjusted county level rates to ensure local and regional consistency and equity, in areas where rental rates varied widely.[36]

When calculating a participant's stewardship payment, each land use category is calculated

[33] Notice, 2005 CSP Sign Up, 26.
[34] Notice, 2005 CSP Sign-up. Federal Register. Vol. 69, No. 118. June 21, 2004, p.34534.
[35] Federal Register. Vol. 70, No. 57. March 25, 2005, at 15279
[36] Federal Register. Vol. 70, No. 57. March 25, 2005, at 15279

separately. The number of acres in each land use category is first multiplied by the following tier factors.[38]

- Tier I: 0.05
- Tier II: 0.10
- Tier III: 0.15

These values are then multiplied by the NRCS determined rental rate for the corresponding land use category. The resulting values are finally multiplied by the additional reduction factor according to Tier.[39]

- Tier I: 0.25
- Tier II: 0.50
- Tier III: 0.75

Stewardship Payments in the Statute[37]

Stewardships payments, referred to as base payments in the statute, would be larger if they were calculated according to the statute. The statute calls for the base payment to be calculated as a percentage of the national average rental rate or another appropriate rate that ensures regional equity. The IFR reduces the base payment by an additional reduction factor that is not called for in the statute. In the statute:

- Tier I base payments would be 5% of the average rental rate
- Tier II base payments would be 10% of the average rental rate
- Tier III base payments would be 15% of the average rental rate

Calculated according to the statute, the stewardship payment rate for cropland in Maine's Presumpscot/Casco Bay watershed shown in Table 3-1 would be $2.16/acre for Tier I, $4.32/acre for Tier II, and $6.48/acre for Tier III.

The regional NRCS offices simplify this process by calculating the final payment price for each land-use and tier category for each watershed in question. In order to determine their potential stewardship payment rate, farmers simply need to multiply their eligible acreage by the payment listed for their land type and Tier. Stewardship payment rates for New England watersheds for 2005 can be found in Appendix A. For example the stewardship payment rates for Presumpscot/Casco Bay and Piscataquis River Watersheds in Maine are shown in Table 3-1. These rates are based on the average rental rate for land in this watershed, shown in the second column of the table. Nationally, the average rental rate for cropland was $78/acre in 2005.[40] The average cropland rental rate used to calculate the stewardship payment value for the Presumpscot/Casco Bay and Piscataquis watersheds is $43.20/acre, which is slightly below the Northeast average cropland rental rate of $46/acre.[41] Actual local rental rates often vary widely in New England, depending on the type of rental agreement.

Table 3-1. Stewardship Payments and Rental Rate for the Maine Presumpscot/Casco Bay and Piscataquis River Watersheds[42] ($/acre/year)

Land Category	Average Rental Rate per acre	Tier I	Tier II	Tier III
Cropland	$43.20	$0.54	$2.15	$4.84
Irrigated Cropland	$60.00	$0.75	$3.00	$6.75
Pastureland	$20.80	$0.26	$1.05	$2.36
Rangeland	$4.80	$0.06	$0.25	$0.56

[37] H.R.2646: Farm Security and Rural Investment Act of 2002.
[38] Federal Register. Vol. 70, No. 57. March 25, 2005, at 15279
[39] Federal Register. Vol. 70, No. 57. March 25, 2005, at 15279
[40] USDA, National Agricultural Statistics Service, Land Values and Cash Rents 2005 Summary. August 2005. <http://usda.mannlib.cornell.edu/reports/nassr/other/plr-bb/> Accessed March 14, 2006.
[41] USDA, NASS
[42] NRCS. *Presumpscot/Casco Bay Watershed.* (NRCS, November 2004) http://www.me.nrcs.usda.gov/programs/CascoBayWS.html (Accessed November 15, 2005)

Example A:
A farm enrolling 40 acres of Tier II cropland and 24 acres of Tier II pastureland would receive the following annual payment:
40 acres *($2.15) + 24 acres *($1.05) = $86.00 + $25.20 = $111.20

Existing Practice Payment

Existing practice payments provide funds to maintain existing conservation practices. Payment rates for existing practices are calculated at a flat rate of 25 percent of the stewardship payments.[43] According to the IFR existing practice payments were to be based on a percentage of the average 2001 county cost of maintaining a land management and structure practices. In the 2005 sign-up notice the existing practice payments are based on the land rental rate.

Existing Practice Payments in the Statute[44]
The statute states that existing practice payments should cover no more than 75% of the cost of maintaining the conservation practices as listed in the producer's conservation security plan (or no more than 90% for beginning or limited resource farmers). It does not state how the cost of maintaining these conservation practices should be calculated. The IFR avoids calculating the cost of maintenance and instead calculates the existing practice payment as a percentage of the stewardship payment.

Table 3-2. Existing Practice Payment Rate ($/acre/year): Maine, Presumpscot/Casco Bay and Piscataquis River Watersheds[45]

Land Category	Tier I	Tier II	Tier III
Cropland	$0.13	$0.54	$1.21
Irrigated Cropland	$0.19	$0.75	$1.68
Pastureland	$0.07	$0.26	$0.59
Rangeland	$0.02	$0.06	$0.14

Example B:
The farm in example A would receive the following annual existing practice payment:
(40 acres)($0.54)+(24 acres)($0.26)= $21.60+$6.24 =$27.84

[43] The rule states that The following items are NOT eligible for existing practice payments;
- maintenance of equipment
- any practice required to meet the conservation requirements for CSP
- routine maintenance actives related to farm production practices considered typical in farm and ranch operations for a specific location

This is currently irrelevant because the existing practice payment is calculated as a % of the stewardship payment. If this method of calculation were to change, these restrictions would then be relevant.
[44] H.R.2646: Farm Security and Rural Investment Act of 2002.
[45] NRCS. *Presumpscot/Casco Bay Watershed.*

New Practice Payment

The one-time new practice payments provide cost sharing to farmers to establish additional conservation practices. Unlike the other payment types, which are available annually, new practice payments are available only once for each practice. In 2005 the cost-share rates were 65 percent for limited-resource or beginning farmers[47] and 50 percent for all other farmers. All new practice payments were based on 2001 average practice installation costs and were capped at $10,000 per participant, regardless of Tier.[48]

Participants may contribute to their share of the cost through in-kind sources (e.g. personal labor, use of personal equipment, donated materials). Cost-share payments may also be provided by other programs (state, local, or private), as long as these payments are not received for the same practice on the same land area. The NRCS will not pay for any new practice required to meet the conservation requirements for CSP. Practices made available for new practice payments in 2005 included: animal trails and walkways; fencing; filter strips; riparian forest buffer; tree / shrub establishment; and windbreak / shelterbelt establishment.[49]

New Practice Payments in the Statute[46]
The statute states that new practice payments can be up to 75% of the cost of implementing the new practice (or 90% for beginning or limited resource farmers). The IFR only provides a 50% cost-share rate. The statute does not call for a separate cap on new practice payments, but the IFR adds in a new practice payment cap of $10,000 for all tiers.

The following table depicts examples of new practice categories and payments available to farmers in the Presumpscot/Casco Bay and Piscataquis River Watersheds in Maine for 2005 CSP contracts.

Table 3-3. FY2005 Maine CSP New Practice Payments[50]

Practice Name	CSP New Practice Payment Max. (50% of 2001 average cost)
Animal Trail and Walk-ways	$5.21 / foot
Filter Strip	$160.00 / acre
Mulching (wood chips / byproducts)	$2,060.39 / acre
Subsurface Drain	$3.65 / foot

Example C:
If the farm in Example A wished to construct a 1000 foot animal trail on their property, they would receive the following new practice payment:
1000 feet * $5.12 = $5,120.00

[46] H.R.2646: Farm Security and Rural Investment Act of 2002.
As defined by the CSP Interim Final Rule: a beginning farmer is who has not operated a farm for more than 10 consecutive years and substantially participates in the operation of the farm; a limited resource producer is a producer with gross farm sales no more than $100,000 for each of the previous two years and who has a total annual income less than the national poverty level for a family of four or less than 50 percent of county median household income in each of the previous two years.
[47] Definition from Federal Register, Conservation Security Program, Vol. 70, No. 57, Friday, March 25, 2005, pg. 15213-4.
[48] Federal Register. Vol. 70, No. 57. March 25, 2005 at 15279
[49] NRCS. *Presumpscot/Casco Bay Watershed.*
[50] NRCS. *Presumpscot/Casco Bay Watershed*

Enhancement Payments in the Statute[51]

The statute states that enhancement payments should be made for conservation activities that exceed the minimum requirements for the producer's tier level. Practices that qualify for enhancement payments in the statute include resource conserving crop rotations, managed rotational grazing, conservation buffers, participation in a regional conservation plan, activities that address conservation priorities identified by local NRCS offices, on-farm conservation research and demonstration projects, and assessment and evaluation activities in association with the conservation security plan. State NRCS offices select which enhancement practices to offer farmers from a list of practices provided by the national NRCS office. Several activities called for in the statute are absent from the current national list of practices. Resource conserving crop rotations, on-farm research and demonstration projects, and assessment and evaluation activities are all missing from the list of enhancement practices offered in 2005.

The variable payment rate for enhancement practices is not included in the statute. According to the statute, enhancement practice payments should be paid at a flat annual rate. There is also no separate cap on enhancement practice payments in the statute.

Enhancement Payments

Enhancement payments are available for practices and activities that provide increased resource benefits beyond those required for eligibility. The national NRCS office provides the states with a list of potential enhancement practices and payment amounts per acre for these practices. This list is developed with input from the state offices. NRCS State Conservationists, with the advice of their State Technical Committee, then select which of these enhancements to offer as part of their CSP contracts. This allows State Conservationists some ability to tailor the payments to meet the priorities of their watersheds. There are 9 categories of enhancement practices available to farmers. These include air resource management, soil management, water management, irrigation management, nutrient management, pest management, grazing management, habitat management, and energy management.

Typical enhancement practices for which farmers could receive payments in New England during 2005 included:

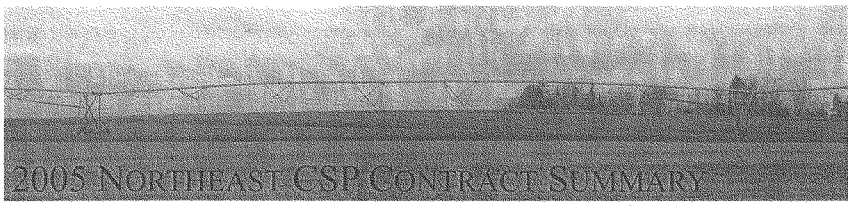
Rotational grazing
Stream buffer management
Manage haying or buffer zones to benefit wildlife
Manure injection at appropriate rates
Manage agricultural wastes for on and off-farm use (compost)
Reduce pesticide use through crop rotations, cultivation, mulching, or non-chemical brush control
Improving SCI or STIR score

Several of the enhancement practice payments are based on indices. Farmers can receive progressively higher payments depending on their score on the SCI, STIR, or the Irrigation Enhancement Index (IEI).[52] The IEI is a computer-based tool designed to assess the environmental impact of an irrigation system on any given farm. The irrigation system is evaluated and assigned an IEI value, an indicator of how well the system may perform. The IEI value is used to determine the level of Irrigation Management Enhancement payment an applicant is eligible to receive. This value will increase based on different variables such as efficiency of water delivery, ease of management, and capture and reuse of runoff. The final calculation requires a multiplier that varies (from 0.9 to 1.0) dependent on the value of the Soil Condition Index (SCI) score. If the IEI value is 50% or greater, the

[51] H.R.2646: Farm Security and Rural Investment Act of 2002.
[52] Please see Section IV.C, Eligibility requirements, page 10, for an explanation of the SCI. An explanation of STIR can be found on page 9.

applicant may be eligible for CSP payments. If the IEI value is 60% or greater, the applicant may be eligible for increased payments.

The total enhancement payment is made at a declining variable rate: 150% in year 1, 90% in year 2, 70% in year 3, 50% in year 4, 30% in year 5, 10% in year 6, and 0% for years 7-10. This variable payment rate pays the farmer 40% of what the farmer would have received if enhancement payments for a ten year contract were made at 100% annually. New enhancement practices may be added after year 1; according to the rule these will be paid at 100% annually for the remainder of the contract. This provision is designed as an incentive for farmers to undertake new enhancement practices during the life of their contract. Enhancement payments are capped at $13,750 for Tier I, $21,875 for Tier II, and $28,125 for Tier III.



The following charts describe the 2005 CSP contracts. The data was either taken from the NRCS website or compiled by the American Farmland Trust. Spending in Northeast states accounted for 4.7% of the national total projected cost of CSP. Farms in the Northeast accounted for 1.9% of the total acres enrolled in CSP. Farmers in the Northeast received an average payment of $34.90 per acre, while the national average was $14.30 per acre. However, the average total contract payment for New England farms was much lower than the national average.

Some state statistics were unavailable from NRCS. These are denoted N/A.

Table 4-1. FY 2005 Conservation Security Program Contracts in Northeast States[53]

	Contracts	Acres	Average FY05 Payments	Average Payment Per Acre	Percent of eligible acreage enrolled
Connecticut	4	322	$6,506	$81	<1%
Delaware	25	12,600	$17,400	$35	12%
Maine	8	756	$5,140	$54	1%
Maryland	362	101,037	$12,218	$44	19%
Massachusetts	11	894	$3,314	$41	3%
New Hampshire	13	2,245	$3,754	$22	5%
New Jersey	6	820	$10,504	$77	<1%
New York	77	33,231	$13,108	$32	7%
Pennsylvania	234	41,500	$4,340	$24	N/A
Rhode Island	3	46	$4,342	$283	1%
Vermont	10	3,585	$10,126	$28	2%
Northeast Total	**753**	**197,036**	**$9,678**	**$34.90**	**N/A**
National Total	**12,723**	**10,132,659**	**$11,395**	**$14.31**	**N/A**

[53] American Farmland Trust. *FY 2005 Conservation Security Program Contracts in Northeast States.* Northeast Federal Policy Update. October 2005. <http://farmland.org/policy/fed_policy_update.htm.> Accessed March 10,2006.

Table 4-2. 2005 National Contract Data[54]

FY 2005 CSP Payments Approved, by State

Watershed	Tier I	Tier II	Tier III	Total Payment	Tier 1 Average	Tier 2 Average	Tier 3 Average
Alabama	$186,029	$418,561	$409,346	$1,013,936	$11,627	$17,440	$17,056
Alaska	$0	$0	$11,776	$11,776	$0	$0	$5,888
Arizona	$59,462	$66,322	$72,466	$198,250	$36,449	$19,400	$27,419
Arkansas	$480,693	$10,718,590	$68,505	$11,267,788	$57,426	$49,647	$27,186
California	$1,722,035	$4,004,053	$478,505	$6,204,593	$54,155	$82,593	$158,210
Colorado	$501,598	$752,997	$965,022	$2,219,617	$59,647	$112,016	$128,946
Connecticut	$0	$4,030	$0	$4,030	$0	$2,025	$0
Delaware	$0	$51,133	$264,211	$315,344	$0	$25,567	$18,872
Florida	$100,654	$410,088	$0	$510,742	$11,184	$14,646	$0
Georgia	$39,529	$2,077,095	$1,385,061	$3,501,685	$16,018	$131,709	$165,482
Hawaii	$19,152	$0	$71,388	$90,540	$4,788	$0	$40,783
Idaho	$1,377,105	$1,115,335	$1,758,876	$4,251,316	$98,087	$100,210	$164,805
Illinois	$1,035,642	$3,968,681	$397,816	$5,402,139	$14,897	$38,932	$12,456
Indiana	$779,724	$1,645,851	$687,232	$3,112,807	$15,254	$34,469	$38,701
Iowa	$8,114,750	$2,364,246	$1,496,132	$11,975,128	$23,312	$36,780	$31,300
Kansas	$2,326,794	$1,527,479	$4,148,732	$8,003,005	$45,098	$88,174	$95,104
Kentucky	$116,570	$264,261	$5,780	$386,611	$6,476	$9,438	$5,780
Louisiana	$199,889	$158,354	$2,681	$360,924	$14,700	$31,671	$2,681
Maine	$17,789	$23,086	$0	$40,875	$5,930	$8,252	$0
Maryland	$1,243,432	$419,158	$2,838,058	$4,500,648	$16,487	$20,621	$28,973
Massachusetts	$27,712	$9,360	$0	$37,072	$12,140	$2,340	$0
Michigan	$474,019	$2,621,114	$2,057,343	$5,152,476	$33,367	$47,611	$47,120
Minnesota	$3,092,478	$913,152	$167,848	$4,173,478	$39,575	$63,353	$32,739
Mississippi	$139,033	$408,373	$0	$547,406	$13,422	$19,446	$0
Missouri	$2,786,816	$9,939,036	$1,379,428	$14,105,280	$40,492	$86,885	$55,767
Montana	$1,961,313	$979,985	$4,029,400	$6,970,698	$129,975	$114,361	$259,823
Nebraska	$4,695,835	$546,153	$91,105	$5,333,093	$20,004	$39,846	$12,115
Nevada	$203,802	$14,387	$376,007	$594,196	$33,526	$7,194	$25,881
New Hampshire	$37,596	$20,075	$2,933	$60,604	$5,371	$4,015	$1,467
New Jersey	$2,674	$54,723	$0	$57,397	$2,674	$10,945	$0
New Mexico	$132,156	$348,456	$1,354,792	$1,835,404	$33,451	$64,806	$167,059
New York	$94,429	$342,604	$580,600	$1,017,633	$19,428	$55,130	$65,292
North Carolina	$898,158	$578,063	$321,330	$1,797,551	$17,992	$29,463	$23,947
North Dakota	$1,792,974	$499,640	$2,452,795	$4,745,409	$30,729	$69,109	$90,042
Ohio	$1,342,641	$1,912,323	$2,467,106	$5,722,070	$30,289	$62,701	$75,810
Oklahoma	$491,845	$300,918	$11,374	$804,137	$15,591	$36,954	$5,669
Oregon	$844,419	$1,129,996	$13,930,440	$15,904,855	$96,413	$103,696	$219,651
Pennsylvania	$438,086	$248,630	$171,601	$858,317	$19,002	$11,928	$17,400
Puerto Rico	$1,097	$17,594	$76,729	$95,420	$1,097	$2,513	$3,654
Rhode Island	$0	$0	$13,023	$13,023	$0	$0	$4,341
South Carolina	$197,828	$388,600	$1,195,466	$1,781,894	$12,134	$22,198	$55,579
South Dakota	$460,749	$184,309	$14,736	$659,794	$9,293	$36,618	$14,736
Tennessee	$11,792	$33,208	$1,836	$46,836	$2,948	$3,019	$1,836
Texas	$335,375	$142,071	$884,958	$1,362,404	$127,665	$70,026	$222,160
Utah	$392,162	$83,920	$775,325	$1,251,407	$28,385	$39,712	$62,554
Vermont	$56,801	$21,663	$0	$78,464	$8,114	$21,663	$0
Virginia	$652,030	$385,831	$86,336	$1,124,197	$17,517	$27,019	$33,904
Washington	$866,093	$1,634,870	$1,636,187	$4,137,150	$70,355	$130,511	$105,835
West Virginia	$13,926	$256	$207	$14,389	$6,963	$256	$207
Wisconsin	$991,829	$636,759	$296,585	$1,925,173	$16,773	$32,332	$22,173
Wyoming	$242,669	$78,365	$503,834	$824,868	$13,042	$13,863	$32,909
US Total	$41,999,184	$54,463,754	$49,940,911	$146,403,849			

[54] NRCS. FY 2005 CSP Payments Approved, by State.

Table 4-3. FY 2005 Conservation Security Program Contracts in Northeast States By Tier[55]

	Tier	Farms	Acres	Average FY05 contract value	Average $/acre	Percent of agricultural acreage enrolled in eligible watersheds	Percent of farms enrolled in eligible watersheds
Connecticut	I	-	-	$ -	$ -	<1%	5%
	II	4	322	$ 6,506	$ 81		
	III	-	-	$ -	$ -		
	Total	4	322	$ 6,506	$ 81		
Delaware	I	3	1,300	N/A	N/A	12%	6%
	II	2	1,700	N/A	N/A		
	III	20	9,600	N/A	N/A		
	Total	25	12,600	$ 17,400	$ 35		
Maine	I	3	N/A	$ 5,981	N/A	1%	1%
	II	5	N/A	$ 4,635	N/A		
	III	-	N/A	$ -	N/A		
	Total	8	756	$ 5,140	$ 54		
Maryland	I	143	N/A	$ 8,559	N/A	19%	13%
	II	34	N/A	$ 12,409	N/A		
	III	185	N/A	$ 15,011	N/A		
	Total	362	101,037	$ 12,218	$ 44		
Massachusetts	I	7	653	$ 3,870	$ 42	3%	<1%
	II	4	241	$ 2,341	$ 39		
	III	-	-	$ -	$ -		
	Total	11	894	$ 3,314	$ 41		
New Hampshire	I	6	1,783	$ 4,733	$ 16	5%	1%
	II	4	239	$ 2,508	$ 42		
	III	2	223	$ 1,467	$ 13		
	Total	12	2,245	$ 4,067	$ 22		
New Jersey	I	1	N/A	$ 2,674	N/A	<1%	<1%
	II	5	N/A	$ 12,069	N/A		
	III	-	N/A	$ -	N/A		
	Total	6	820	$ 10,504	$ 77		
New York	I	12	2,242	$ 7,869	$ 42	7%	5%
	II	23	14,903	$ 15,063	$ 23		
	III	44	16,086	$ 13,570	$ 37		
	Total	79	33,231	$ 13,254	32		
Pennsylvania*	I	135	N/A	N/A	N/A	N/A	3%
	II	57	N/A	N/A	N/A		
	III	42	N/A	N/A	N/A		
	Total	234	41,500	$ 4,340	$ 24		

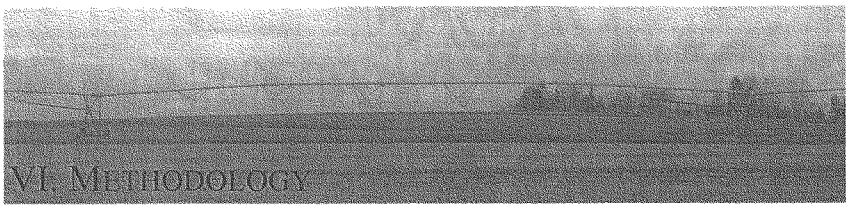
[55] American Farmland Trust. FY 2005 Conservation Security Program Contracts in Northeast States By Tier. . Northeast Federal Policy Update. <http://farmland.org/policy/fed_policy_update.htm.> Accessed March 10,2006.

[56] This column refers to the percent of the total agricultural acres in each participating watershed that were actually enrolled in CSP.

[57] This column refers to the percent of the total number of farms in each participating watershed that actually enrolled in CSP.

Rhode Island	*I*	-	-	$ -	$ -	1%	3%
	II	-	-	$ -	$ -		
	III	*3*	*46*	$ *4,342*	$ *283*		
	Total	3	46	$ 4,342	$ 283		
Vermont	*I*	*8*	*3,303*	$ *8,694*	$ *21*	2%	1%
	II	*2*	*282*	$ *15,853*	$ *112*		
	III	-	-	$ -	$ -		
	Total	10	3,585	$ 10,126	$ 28		
Northeast Summary***	*I*	*318*	*N/A*	*N/A*	*N/A*	*N/A*	4%
	II	*140*	*N/A*	*N/A*	*N/A*		
	III	*296*	*N/A*	*N/A*	*N/A*		
	Total	754	197,036	$ 9,863	$ 38		

** Estimated based on available data.



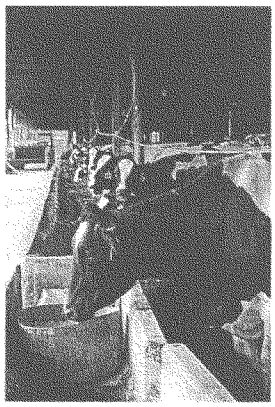
VI. Methodology

Farm Selection

All of the farms profiled in the case studies are located in New England (Connecticut, Massachusetts, Rhode Island, Maine, New Hampshire, and Vermont). Our goal was to include farms in this study that either already had CSP contracts or were likely to be future CSP recipients because of a known commitment to conservation on their farm. Because farmers in New England were unable to sign up for CSP until 2005 and the number of farms participating in CSP in New England was low, farms that enrolled in CSP in 2005 in New England did not represent all typical New England farm types. For these reasons we were unable to find a sufficient range of farm types for this study that had CSP contracts. Our solution to this dilemma, was to include more farms and the desired range of farm types by creating hypothetical contracts for farms that seemed to be likely candidates for participation in CSP. This was modeled on the approach that American Farmland Trust had followed in its 2004 New England dairy case example.[58] The process of creating hypothetical contracts also provided an opportunity for us to gain a unique perspective on what it was like for farmers to go through the process of signing up for CSP. In this study there are three case studies of farms with 2005 CSP contracts, and 5 case studies of farms with hypothetical CSP contracts.

Case Study Format

Every effort was made to standardize the data collection procedures for each of the eight case studies. The process of data collection was undertaken by a team of researchers who were assigned to each farm, and consisted of either one or two meetings. For the three farms with existing contracts, only one meeting was necessary to collect the necessary information, but for the remaining five farms without contracts, two meetings were required. Due to the direct involvement with the farmers, IRB[59] approval was obtained prior to the meetings. In an effort to protect the confidentiality of the farmers involved in the case studies, each of the case studies will be identified only by their state and farm type (e.g. "Connecticut dairy farm").



A preliminary letter was mailed to the farmers to set up each interview. The letter introduced the researchers, their affiliation, and the objectives of the research project. It also included a brief introduction of CSP and listed the necessary documents that would be needed at the time of the interview. A local NRCS representative was invited to attend each case study interview as well.

All dollar amounts in this study were calculated using the exact amount, but will be presented as rounded to the nearest dollar.

[58] This example was not published. More information about this case study can be found by contacting the New England Regional Office of AFT.

[59] The protocol used in this study was approved by the Scientific Review Committee of the Institutional Review Board (IRB) of Tufts University. The primary goal of the IRB is to protect the rights and welfare of human subject participants. In addition, all researchers involved in this study have met the mandatory educational requirements for human subjects protection. More information can be found at: http://www.tufts.edu/central/research/IRB.htm#req.

Analysis of Farms with Existing Contracts

The purpose of meeting with the farmers with existing contracts was to assess conservation practices required for entry into CSP and collect information about their payments. During the meeting, details of the existing CSP contract were collected. A brief farmer interview was also conducted during the meeting. The interview gathered basic details of the farm itself, on-farm conservation practices, prior involvement in USDA programs, and the farmer's opinion of them. It also included questions on the details of the CSP contract and the farmers' opinion on their contract. (The questions used for these interviews can be found in Appendix B.)

Analysis of Farms without Contracts

The initial meeting with farmers without CSP contracts began with a farmer interview identical to that used for the contract-holders, with the exception of questions regarding the contract itself. Following the interview, the mechanics of CSP were introduced and the Self-Assessment Workbook was completed. The Self Assessment Workbook details benchmark farm characteristics that determined whether the farm met basic eligibility requirements to participate in CSP. This includes information on farm size, crops grown, any livestock raised, current conservation practices, soil type, the crop rotation plan, and nutrient management plan. It also includes more detailed questions regarding land prices, any involvement in other government programs (i.e. whether the farmer was currently receiving commodity payments, EQIP, or other support), a description of any new or innovative activities, techniques, or methods used on their property, and general farming philosophy. If time allowed, a tour of the farm was taken.

In the second meeting, basic soil and water eligibility were determined for the farm using the farmer's records with the assistance of the NRCS. This entailed an overview of the farm's operations, including information on the farm's rotations, tilling techniques, fertilization and spraying schedules. The Revised Universal Soil Loss Equation II (RUSLE2) was used to calculate the SCI score to determine whether the farm's soil quality met eligibility requirements. RUSLE2 is a computer based tool that predicts loss of organic matter in the soil. The WQ Tool was used to assess basic water quality eligibility. Farmers also went through the list of available Enhancement Practices and New Practices to see which would apply to their farm. When possible, an NRCS representative was present to administer the calculations and answer any technical questions.

Following the interviews, any outstanding information that was necessary to construct a hypothetical contract was collected either through email or a phone interview.

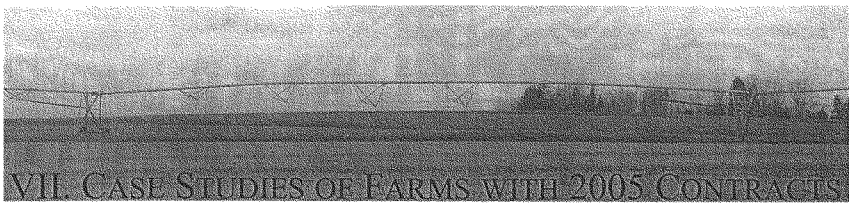
The Role of the NRCS in This Study

Implementation of CSP has been a tremendous task for NRCS staff. The learning curve has been steep thus far, and NRCS staff must remain diligent to stay current on continuous changes to the program. Consistency and strict adherence to the rule is certainly a challenge in implementation of the CSP. Because of these challenges, we found that there were discrepancies between the rule and sign-up notice and the way the program was implemented in some places. We have noted where our calculations of what farmer's payments should be differ from the amount listed in the farmer's NRCS contract.

Our assessment of the program is largely dependent on the assistance of local NRCS staff. Despite a large workload and limited funding, at least one NRCS staffperson was present at almost all of our farmer interviews. If someone was not present in person, communication was conducted via phone and email. Their technical expertise, familiarity with the program, and familiarity with the farmers all proved to be essential in completing the case studies.

Farmer Opinions

Each case study concludes with the farmer's impressions of CSP. These opinions came up either in the initial survey or during the course of our conversations with these farmers. The opinions expressed in these sections do not necessarily represent the conclusions we have reached in this study, and are included only to provide further insight into farmer's experiences with CSP.



VII. Case Studies of Farms with 2005 Contracts

A. Massachusetts Dairy, Beef, and Organic Vegetables

Farm Profile

This farm has 25 acres of organic vegetables sold in shares through a Community Supported Agriculture program. They also rotationally graze 130 head of beef and dairy. They have non-organic fields for hay and pasture. The property is over 650 acres in total and includes public access area with hiking trails and horse riding. The property is owned in entirety. This farm is already involved in EQIP, the Grassland Reserve Program (GRP), the Agricultural Management Assistance (AMA) and the Wildlife Habitat Incentives Program (WHIP).

Methodology

The standard protocol was followed with this farm interview, with no variation. The Farmer Survey was conducted in one visit. The contract was collected at the time of the interview, and further questions regarding the contract were answered by NRCS.

Eligibility

Self Assessment Workbook

The farmer spent about two hours on the Self-Assessment Workbook and application process without NRCS assistance. He attributes the relatively short time it took him to complete the workbook to the fact that he is enrolled in so many other NRCS programs. The farmer was able to answer all questions in the workbook affirmatively.

Soil Conditioning Index

The pasture soils on this farm have a SCI of 0.8 and 0.7. The acres in organic vegetable production did not qualify because they had a negative SCI score.

Water Quality Eligibility Tool and Irrigation Enhancement Index

The WQ Tool was not developed until after the 2005 sign up period. This farm was judged to have met the water quality requirements according to the criteria used during the 2005 sign up period. There is no irrigation of the pasture acres, so the IEI score for this farm was not calculated.

Additional Resource of Concern

This farm is only eligible for Tier I. Tier I farms do not need to address an additional resource of concern or have a resource management plan in order to be eligible.

Payments

Tier

This farm was only enrolled in Tier I because not all of the acres were eligible, due to the negative SCI score on the organic acres. This is a 5 year contract.

Stewardship Payments

87.8 acres cropland * $0.75/acre=	$66/year
65.8 acres pasture * $0.29/acre=	$19/year
Total Stewardship=	**$85/year**

Existing Practices Payments

87.8 acres cropland * $0.19/acre=	$17/year
65.8 acres pasture * $0.07/acre=	$5/year
Total Existing Practice=	**$22/year**

New Practices Payments **$0**

This farm did not sign up for any new practice payments.

Enhancement Practice Payments

Energy Management:

"Recycling of all used motor oil and lubricating oil for other farm equipment such as irrigation pumps or grain drying motors."

Flat rate = $200/year

"Soil Tillage Intensity Rating (STIR) is less than 15."

153.1 acres * $0.90= $138/year

Nutrient Management:

"Conduct annual nutrient testing of soil and/or plant tissue. Utilize test results to optimize application rates to reduce surface and ground water quality impacts."

153.1 acres * $2.00/acre= $306/year

"On hay or pastures, use split nitrogen applications based on UMass recommendations to deliver nitrogen when the crops need it most."

153.1 acres * $3.00/acre= $460/year

Soil Management:

"Improve soil conditioning and quality by implementing conservation measures that result in a SCI score of at least 0.7."

153.1 acres * $8.12/acre= $1243/year

Grazing Management:

"Rotate feeding, loafing, watering, mineral and salt, and/or sacrifice areas to help distribute high concentrations of nutrients, annually."

65.3 acres * $5.00/acre= $327/year

"Mechanically remove invasive species from pastures."

65.3 acres * $10.00/acre= $653/year

"Introduce additional forage species (not legumes) to the pasture."

65.3 acres * $10.00/acre= $653/year

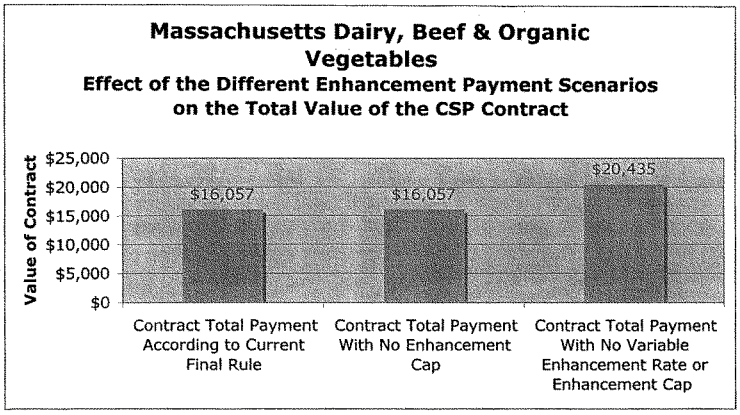
Total Enhancement Payments per year: **$3980/year**

Enhancement payments are limited by two payment reduction factors, the variable payment rate and the enhancement payment caps. These two reduction factors can reduce the total payment amount significantly, especially for small farms that will not receive a large stewardship or enhancement payment. The effect that the variable enhancement payment rate and enhancement payment cap have on the amount of payment that the farm can expect to receive can be seen in the "Enhancement Payment Schedule Under Different Scenarios" chart. Column 1 indicates the basic total enhancement payment rate, before the variable rate and cap are applied. Column 2 shows the yearly enhancement payment rate when only the variable rate schedule is applied, without the cap. Column 3 indicates the yearly enhancement payment that the farmer will receive according to the rule, which calls for both the variable payment rate and a cap on enhancement payments. For more detail on enhancement payments, please see section III.D. The following graph then shows how the different enhancement payment scenarios effect the total contract payment.

Enhancement Payment Schedule Under Different Scenarios

Contract Year	Enhancement Payment, no variable rate or cap	Enhancement Payment, variable rate, no cap	Actual Enhancement Payment (with variable rate and cap)
1	$3,980	$5,970	$5,970
2	$3,980	$3,582	$3,582
3	$3,980	$2,786	$2,786
4	$3,980	$1,990	$1,990
5	$3,980	$1,194	$1,194
Total over life of contract:	**$19,900**	**$15,522**	**$15,522**[60]

[60] There are some discrepancies between our calculation of the enhancement payments and those calculated by the NRCS. The number here is as calculated by us, according to the rule.



Payment Summary

Tier I	Stewardship	Existing Practice	New Practice	Enhancement	Total Payment
Year 1	$85	$22	0	$5970	**$6,077**
Year 2	$85	$22	0	$3582	**$3,689**
Year 3	$85	$22	0	$2786	**$2,893**
Year 4	$85	$22	0	$1990	**$2,097**
Year 5	$85	$22	0	$1194	**$1,301**
Total	**$427**	**$110**	**0**	**$15522**	**$16,057**

Total payments over life of contract = $16,057

Payment per acre per year = $21[61]

Percent of Farm Acres Enrolled: 23%

Farmer Impressions

The farm manager first heard about CSP while he was proactively searching for funding for the farm operation. The farm is a not-for-profit educational farm and the manager is responsible for soliciting government grants and funding. He was aware of CSP before his watershed was eligible.

This farm is already involved in EQIP, GRP, AMA and WHIP. Thus far the farm manager has only enrolled active farmland and he may consider enrolling the reserved public lands at some point. The farm manager has begun efforts to protect vernal pools, which he hopes may help bring in more

[61] For farms enrolled in Tier I, the payment per acre is calculated per enrolled acre, not per total farm acres.

conservation funding in the future.

The farm manager plans to renew his CSP contract if possible because it did provide financial help. He also felt that it provides justification and incentive for continuing conservation practices, which are sometimes more costly. Without the CSP contract the farm manager indicated that he might consider less sustainable practices if they were more affordable. The farm manager noted that CSP works for this farm because they are part of a non-profit conservation organization. He felt that commercial farmers might have less interest in the program if they weren't already doing some of the required practices.

The manager would like to see better federal support for the local NRCS offices. He was surprised they were not better informed about the program.

Regarding future changes for CSP, he does not believe the program fulfills Congress' intent. While it does reward their current conservation practices, he feels that it does not encourage conservation practices not currently underway, because the payments are too small to really be an incentive, especially for smaller farms. He is also concerned about the lack of enforcement of conservation practices.

In the future, the manager thinks programs like CSP should support small local sustainable agriculture. Right now government he feels most NRCS payments are supporting a system that subsidizes big agriculture and is based on foreign oil. He views this as a food security issue as well as a life style protection issue. He would like to see farm programs support an increase in the number of small farms and encourage local food.

B. Connecticut Organic Goats, Chickens, and Vegetables

Farm Profile

This 8.5 acre farm is entirely owned by the operator. The farm produces vegetables, chickens for eggs and meat, and meat and fleece from thirty to fifty angora goats that are kept on pasture. The entire operation is certified organic.

Methodology

The standard protocol was followed with this farm interview, with minimal variation. The Farmer Survey was conducted in one visit, but the contract was mailed after the interview. Further questions regarding the contract were answered by CT NRCS.

Eligibility

Self-Assessment Workbook

The NRCS assisted the farmer with filling out the Self Assessment Workbook. The farmer was able to answer all questions in the workbook affirmatively..

Soil Conditioning Index

The farm received a SCI score of .4 on the acres that were in pasture. The acres in organic vegetable production had a negative SCI score, and were therefore ineligible for enrollment.

Water Quality Eligibility Tool and Irrigation Enhancement Index

The WQ Tool was not developed until after the 2005 sign up period. This farm was judged to have met the water quality requirements according to the criteria used during the 2005 sign up period. There is no irrigation used on this farm, so the IEI score was not calculated.

Additional Resource of Concern

The farm addressed soil erosion, the additional resource of concern specified by CT, through its conservation practices.

Payments

Tier

This farm received a Tier II contract, even though the entire farm was not enrolled. It is unclear why this was the case. The contract term is 10 years.

Stewardship Payments

4.6 acres cropland * $3.35/acre= **$16/year**

Existing Practice Payments

4.6 acres cropland * $0.84/acre= **$4/year**

New Practice Payments

This farm did not sign up for any new practice payments. **$0/year**

Enhancement Practice Payments

Grazing Management:

"Selecting kinds of domestic animals suited to the terrain, climate and other existing grazing area conditions; optimizing grazing distribution; rotational grazing; and identifying and maintaining adequate cover on sensitive areas (wetlands)."

4.6 acres * $5.00/acre= $23/year

Soil Management:

" Improve soil conditioning and quality by implementing conservation measures that result in a SCI score of at least .4"

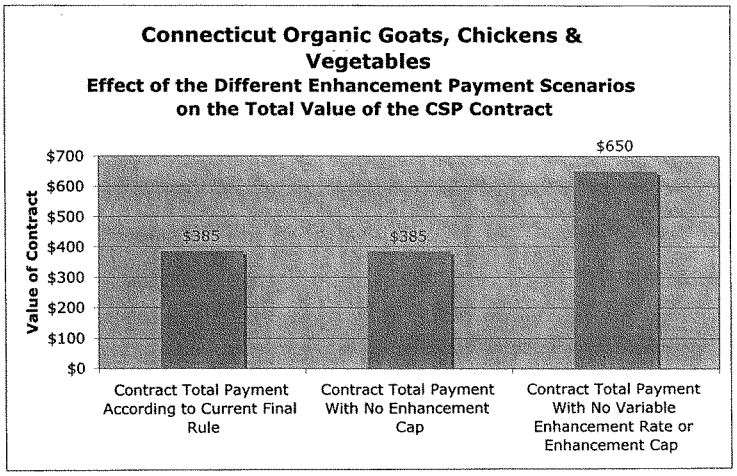
4.6 acres * $4.64/acre= $22/year

Total Enhancement Payments: $45/year

Enhancement Payment Schedule Under Different Scenarios[64]

Contract Year	Enhancement Payment, no variable rate or cap	Enhancement Payment, variable rate, no cap	Actual Enhancement Payment (with variable rate and cap)
1	$45	$68	$68
2	$45	$41	$41
3	$45	$33	$33
4	$45	$23	$23
5	$45	$14	$14
6	$45	$6	$6
7	$45	$0	$0
8	$45	$0	$0
9	$45	$0	$0
10	$45	$0	$0
Total over life of the contract	**$450**	**$185**	**$185**

[64] This chart shows the effect that the variable enhancement payment rate and enhancement payment cap have on the amount of payment that the farm can expect to receive. Column 1 indicates the basic total enhancement payment rate, before the variable rate and cap are applied. Column 2 shows the yearly enhancement payment rate when only the variable rate schedule is applied, without the cap. Column 3 indicates the yearly enhancement payment that the farmer will receive according to the rule, which calls for both the variable payment rate and a cap on enhancement payments. For more detail on enhancement payments, please see section III.D. The following graph then shows how the different enhancement payment scenarios effect the total contract payment.



Payment Summary

Tier II	Stewardship	Existing Practice	New Practice	Enhancement	Total Payment
Year 1	$16	$4	0	$68	**$88**
Year 2	$16	$4	0	$41	**$61**
Year 3	$16	$4	0	$33	**$53**
Year 4	$16	$4	0	$23	**$43**
Year 5	$16	$4	0	$14	**$34**
Year 6	$16	$4	0	$6	**$26**
Year 7	$16	$4	0	$0	**$20**
Year 8	$16	$4	0	$0	**$20**
Year 9	$16	$4	0	$0	**$20**
Year 10	$16	$4	0	$0	**$20**
Total	$160	$40	0	$185	**$385**

Total payments over the life of the contract = $385

Payment per acre per year = $8.37 [65]

Percent of Farm Acres Enrolled: 54%

Farmer Impressions

The farmer first heard about CSP in a letter from NRCS. She was very interested in rewards for "green practices" from the beginning. The farm is not enrolled in any other government payment programs. She did not believe she would receive a very large payment from CSP, nor did she particularly need the money. She chose to apply to show her support for the program. She wants CSP to succeed, and believes if no one signs up for it, it will not continue. Despite her continued support for the program, however, she feels that the size of her payment did not justify the time she and the NRCS agent spent on her application.

The farmer spent six to eight hours on the application process. A NRCS agent visited the farm three to four times during the application process. The farmer filled out all the paperwork with the help of the NRCS agent.

She was not sure at the time of the interview if she would apply again if given the opportunity. When asked if CSP provided incentive to change her conservation practices, she noted that the program prevented her from allowing her goats to drink out of the stream on her property. She had intended to begin doing this, but her application to CSP caused her to change her mind. The farmer is considering installing an irrigation system for the vegetables with help from CSP in the future.

It is the farmer's impression that CSP is designed to work for the large, Midwestern farms and the effort of applying is not worth the payment for farms her size. She thinks smaller farms are important and CSP should be designed to help these farms, too. She believes that risk management assistance is important for farmers, to help when things go wrong. "Government payments should help to keep small farmers afloat." She observed that all the growers in the farmer's market that she sells at are hobby farmers, not commercial farmers. She also likes that the government allows coupons from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) to be used at farmers markets. She feels that this keeps farmers in business and helps low income people buy nutritious food they might not have access to otherwise. She estimates that about 50% of her customers use WIC coupons.

[65] This is per enrolled acre, not per total farm acres.

C. Vermont Dairy Farm

Farm Profile

This family run dairy operation includes roughly 2000 acres, of which approximately 1400 are owned by the farmer and family members involved in the farming operation. The agricultural operation includes 610 cows, corn, hay, soybeans, and woodland, as well as a methane "biodigester" and a commercial composting business. The methane biodigester generates enough electricity to supply the farm and all of the houses of family members that live on the farm. The composting operation handles manure from the dairy operation as well as manure from several other area farms.

The farm enrolled 1307.5 acres in a 2005 CSP contract. An additional 600 acres of the agricultural operation are leased through informal bargaining agreements. Although the farmer stated that the landowner would sign a contract guaranteeing control of the land for the duration of the CSP contract, the leased land was not included in the contract. In addition, the methane biodigester and commercial compost business did not qualify for CSP enrollment. In the case of the latter, manure is brought in from multiple other farms and thus cannot be considered part of the same "agricultural operation" by USDA. The methane biodigester was not included in the contract because the electricity it generated was not metered and recorded.

The operation is currently committed to an EQIP contract. The farm also participates in government loan programs, cost-share programs with the state of Vermont, crop insurance, Milk Income Loss Contract (MILC), and Cooperatives Working Together (CWT).

Methodology

The Farmer Survey and interview were conducted in one visit. Although we were not able to obtain a copy of the contract for confidentiality reasons, we were permitted to transcribe key features of the contract during the interview. Further questions regarding the contract were answered by NRCS via email.

Eligibility

Self Assessment Workbook

The farmer is uncertain how much time he spent completing the Self-Assessment Workbook. He was able to answer all question in the workbook affirmatively.

Soil Conditioning Index

Calculation the SCI score for this farm was complex because there are over 200 fields in use. Similar soil types and uses were grouped together by NRCS to calculate the payments. On the enrolled acreage, SCI scores range from 0.4 to 0.6. Some acres did not receive a positive SCI score, and these were not eligible for inclusion in the contract.

Water Quality Eligibility Tool and Irrigation Enhancement Index

The WQ Tool was not developed until after the 2005 sign up period. This farm was judged to have met the water quality requirements according to the criteria used during the 2005 sign up period. Drainage improvement and containment in the heifer barn is being undertaken through an EQIP contract.[66]

[66] Although not part of the CSP contract, it is worth noting that a leachate collection pond and filter strip to be used in conjunction with the commercial composting business have also been added recently through EQIP.

Additional Resource of Concern

This farm is only eligible for Tier I, due to the ineligible pasture acres and negative SCI scores on some fields. Tier I farms do not need to address an additional resource of concern or have a resource management plan in order to be eligible.

Payments

Tier

This operation received a five year, **Tier I** contract because its pastures did not meet eligibility requirements and soil quality requirements were only met on part of the agricultural operation. This farm's pastures were not eligible for CSP because the farm's record keeping for its pastures was considered to be inadequate. The farm did not keep track of grass height when it moved heifers on and off of the field.

Stewardship Payments

1307.5 acres * $0.41/acre = **$536/year**[67]

Existing Practice Payments

1307.5 acres * $.10/acre = **$1301/year**

New Practice Payments **$0/year**

This farm did not sign up for any new practice payments.

Enhancement Practices

Soil Management:

"Improve soil conditioning and quality by implementing conservation measures that result in an SCI score of at least .6."

399 acres * $6.96/acre = $2777/year

SCI of at least 0.5.

736 acres * $5.80/acre = $4269/year

SCI of at least 0.4

66.5 acres * $4.64/acre = $309/year

Reduce areas of compaction by controlling traffic that result in a Soil Tillage Intensity Rating (STIR) of between 31 and 60.

1037 acres * $0.50/acre = $537/year

Reduce areas of compaction by controlling traffic that result in a STIR of between 16 and 30.

127 acres * $1.00/acre = $127/year

[67] All dollar amounts are rounded to the nearest whole dollar.

Nutrient Management:
"Apply manure to fields that have P levels equal to or less than 7 ppm..."
148 acres * $5.00/acre = $740/year

Energy Management:
"Use of manure, legumes or other alternatives to supply nutrient needs and to reduce energy needed for the production of inorganic forms of nitrogen."
1201.5 acres * $0.50/acre = $601/year

"Reduce energy use by reducing tillage operations. Achieve an improved STIR of less than 60 by modifying... ground-disturbing passes."
1201.5 acres * $0.70/acre = $841/year

Future Enhancements
Since the time of application, the farmer has installed a meter on the methane biodigester to track its output, and will receive payments beginning in year 2.

"Generate renewable energy. Conserve energy and increase energy independence by generating renewable sources of energy including biogas (methane)."
1743.3 acres * $2.50/acre = $4358/year

The farmer plants corn continuously on certain fields, cutting it high, and leaving the debris on the field. Because a cover crop was not used at the time of application, payment was not received for this practice. However, the farmer plans to plant rye in the winter, and expects to begin receiving payments for this practice beginning in year 3.

The farmer plans to begin keeping records on heifers, such as the length of time spent on pasture and the height of pasture at that time. If these practices are begun before the contract ends, they will also be added as enhancement payments in the future.

Total Enhancement Payments, Year 1 = $10,200

Total Enhancement Payments per Year, Years 2 thru 5= $14,558

Enhancement payments are limited by two payment reduction factors, the variable payment rate and the enhancement payment caps. These two reduction factors can reduce the total payment amount significantly, especially for small farms that will not receive a large stewardship or enhancement payment. The effect that the variable enhancement payment rate and enhancement payment cap have on the amount of payment that the farm can expect to receive can be seen in the charts labeled "Enhancement Payment Schedule Under Different Scenarios". For this case study, Column 1 indicates the basic total enhancement payment rate, before the variable rate and cap are applied. Column 2 shows the yearly enhancement payment rate when only the variable rate and cap are applied. (The payments at the variable rate are the same with and without the cap, because the cap is higher than the largest annual enhancement payment the farmer will receive at the variable rate). Column 3 indicates the yearly enhancement payment that the farmer will receive according to his NRCS contract,

which does not seem to be calculated according to the rule. This is because the enhancement added in year 2 should be paid at 100% annually according to the rule, but is calculated in the contract as being paid at the variable rate. For more detail on enhancement payments, please see section III.D. The graph that follows shows how the different enhancement payment scenarios effect the total contract payment.

Enhancement Payment Schedule Under Different Scenarios

Contract Year	Enhancement Payments, no caps or variable rate[68]	Enhancement payments calculated according to the rule, with variable rate and caps[69]	Enhancement Payments according to the contract[70]
1	$10,200	$13,739	$13,739
2	$14,558	$12,445	$13,102
3	$14,558	$10,390	$10,191
4	$14,558	$8,360	$7,279
5	$14,558	$6,330	$4,367
Total over life of contract:	**$68,432**	**$51,264**	**$48,678**

Total Payments Summary

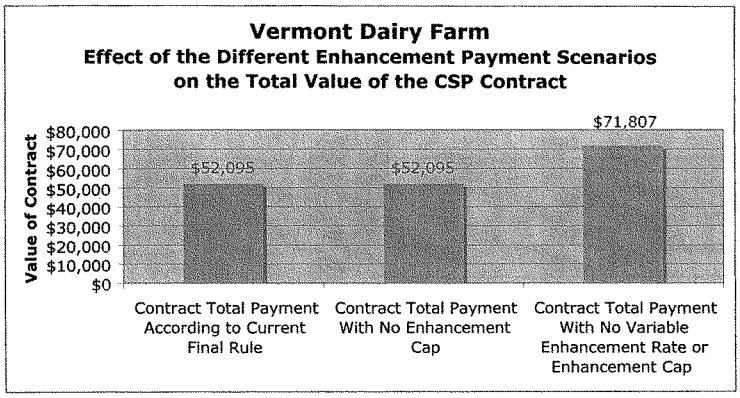
Tier I	Stewardship	Existing Practice	New Practice	Actual Enhancement[71]	Actual Payment[72]
Year 1	$540	$135	$0	$13,739	$14,425
Year 2	$540	$135	$0	$13,102	$13,787
Year 3	$540	$135	$0	$10,191	$10,874
Year 4	$540	$135	$0	$7,279	$7,960
Year 5	$540	$135	$0	$4,367	$5,049
Total	**$2,700**	**$675**	**$0**	**$48,720**	**$52,095**

[68] This column lists the sum of the itemized payments in this case study, with no caps, variable rate, or fudge factor applied.
[69] The researchers discovered that the method by which the additional enhancement practice added in Years 2-5 was calculated in this contract (figures listed in the column labeled "Enhancement Payments according to the contract") conflicted with that stated in the rule. NRCS added the additional enhancement in Year 2 and reduced it by the variable rate, whereas the rule states that additional enhancements added after Year 1 are not subject to the variable rate, and are to be paid fully each year. The total estimate, which is calculated in this column according to the rule, exceeds the total amount for enhancement payments listed in the contract ($48,720).
[70] These are the annual enhancement payments as written in this farmers contract. NRCS calculated enhancement payments in the contract using a multiplier referred to by staff as a "fudge factor." For Year 1, the fudge factor is 1.3477, 0.9015 for Year 2, 0.70 for Year 3, 0.501 for Year 4, and 0.302 for Year 5. This multiplier was not referred to anywhere in the rule and the researchers are not clear in which cases this method of calculation is utilized.
[71] The yearly enhancement payment rate according to the contract.
[72] The total yearly payment as written in the contract.

Total Payments over Life of Contract = $52,095

Payment per acre (enrolled in the contract) per year = $8

Percent of Farm Acres Enrolled: 1307.5 acres enrolled / 2000 acres total = **65%**



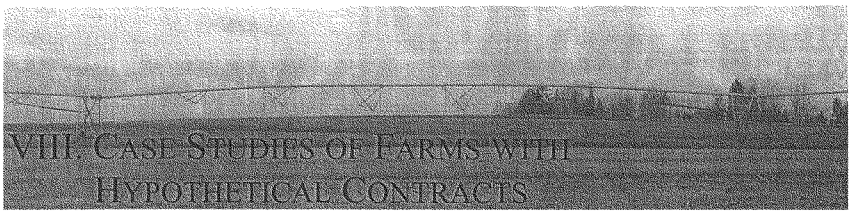
[73]

Farmer Impressions

In general, the farmer feels that CSP does effectively encourage farmers to increase their conservation practices. The farmer decided to apply to CSP because he felt that many of the necessary practices were already taking place, and would not require a large amount of extra work to apply. He feels that he would probably reapply to CSP when his current contract expires in 2009, but is not confident that CSP will still be available by then. Furthermore, the CSP application process took longer than he expected to complete. He commented that "you have to go through an awful lot before you even know if you'll be accepted. There's extensive involvement before you know the benefits." He recommends changing CSP to more closely resemble EQIP, with less paperwork, an easier application process, and simpler, project-based payments. In addition, he thinks CSP should provide more of an incentive for woodland management (which would currently only be taken into account for a Tier III contract).

The farmer points out that "one shoe doesn't fit all" and a toolbox of varied programs is necessary to meet the needs of different types of farms. However, he suggests "a one-stop shopping" approach for all NRCS programs would streamline the application process and make them more user-friendly. In his opinion, a lot of programs are geared towards commodity crop production, for which New England farmers often aren't eligible because a crop must be raised for 3 years before being eligible to receive insurance. He believes all the risk is at the farm gate and safety nets are needed. For instance, the safety net provided by MILC is weakened because payments are capped for large family-operated farms such as his. In addition, he believes USDA should allow a fuel surcharge. He thinks that many farmers would prefer to have the marketplace provide an appropriate income level, but doesn't foresee that happening because he feels that Americans do not pay enough for their food.

[73] These numbers are calculated based on the contract values as they were calculated by the researchers, which are somewhat different from those in the contract. See footnotes 69 and 70.



VIII. Case Studies of Farms with Hypothetical Contracts

A. Maine Apple Orchard

Farm Profile

On this farm, the farmer and his extended family run a 16 acre "you-pick" apple orchard, grow 5 acres of sweet corn, 3 acres of pumpkins, maintain a 1 acre "Maize Maze," and 0.25 acres of raspberries. The farmer also has 19.4 acres of pasture, on which he grazes three head of cattle for home consumption. The remainder of the farm's 327.9 acres consist mostly of woodland. The farmer owns all the land with the exception of 55 acres that he leases from the town under a 20 year rental agreement. Both the farmer and his wife have off-farm employment.

The farm has participated in disaster relief payments, such as crop disaster payments for hail damaged apples and payments from the Tree Assistance Program to replace apple trees killed during an extremely cold winter. The farmer has not worked extensively with NRCS, but has had his soil and manure tested with the motive of creating a manure management plan (which is still in the process of being created), so that he would be eligible to participate in NRCS programs in the future.

Methodology

NRCS staff were unavailable to assist us in the calculation of precise SCI and STIR scores for this farm. Estimates of likely SCI and STIR scores for this farm were obtained from NRCS employees experienced in calculating SCI scores, and from comparisons with other farms with similar soils and tillage practices.

Due to the farm's small size it does not have a comprehensive nutrient management plan or manure management plan. The farmer does use leaf tissue analysis for applying fertilizers in the orchards and takes soil samples from the fields every two to three years. For this case study we assume that the use of the leaf tissue analysis on the orchards qualifies as a 'nutrient management plan' for those fields and thus allows for CSP eligibility.

There are also some abandoned wells in the orchards that may not be properly sealed. For the purposes of creating this hypothetical contract we assumed that the wells are properly sealed, but in actuality these wells could prevent the farm from being eligible for a future CSP contract.

Eligibility

Self Assessment Workbook

Some questions in the Self Assessment Workbook were not relevant to apple orchards, or to smaller operations. For example, since apple orchards are not rotated on a short term basis, question 12 under the Cropland Questions section, "Do you grow high-residue crops, such as corn, small grains, canola, or mint at least 1 in 3 years in rotation?" was inapplicable to the farm, but "N/A" is not listed as an acceptable answer to this question. The farm only kept three head of cattle for home consumption, but still had to answer the questions in the Self Assessment Workbook regarding pasture and rangeland management practices. Since these questions were written for commercial livestock farmers, many of the questions seemed irrelevant for a herd of three cattle. Also, many of the management practices used as examples were more relevant to larger scale farming operations (i.e. no-

till, strip-till, mulch-till crop rotations) and did not apply to a small farm with limited farm machinery.

The farmer had difficulty understanding some of the questions, a problem that was noted in another case study that was due to the "federal language" of the workbook.

The Self Assessment Workbook results indicated that the farm's pasture acres would not be eligible for CSP, because the three cows have access to surface water for drinking. The farmer was otherwise able to answer the questions in the workbook affirmatively.

Soil Conditioning Index

As stated in the methodology, we were unable to obtain the exact SCI and STIR scores for this farm. This small farm had not participated in other NRCS programs that required SCI scores or similar soil measurements. NRCS employees familiar working with RUSLE II and calculating SCI scores agreed that unless the farmer was tilling in between the rows of the orchard, orchard SCI scores should be positive. STIR scores were considered to be the lowest possible, since very little tillage occurs on the orchard soils. It was also determined that the tillage practices used on the corn and pumpkin land (plowing with a moldboard plow and harrowing at least twice a year) would lead to a negative SCI score, since the SCI scores of similar fields in Maine that used more conservation based tillage practices were calculated to be negative. Thus only the 16 acres of orchards were included in the payment calculations.

Water Quality Eligibility Tool and Irrigation Enhancement Index

The farm received a passing score on the WQ Tool. There was some uncertainty in completing the WQ Tool for this farm, however, due to the fact that the farmer does not have a comprehensive nutrient management plan. Since he does take soil samples every two to three years and takes leaf tissue samples in the orchards, we judged that these practices constituted nutrient management plan and therefore could be used to answer 'yes' to questions that require the use of a nutrient management plan on the WQ Tool.

For this case study the Irrigation Enhancement Index Score was considered not applicable since the farmer does not irrigate the orchards included in the CSP payments. The farmer does use drip irrigation on two acres of pumpkins, but these acres were not included in the CSP contract so the IEI was not calculated for these acres.

Additional Resource of Concern

This farm does not meet the minimum requirements for application on all of the fields and therefore would not be eligible for Tier II and Tier III payments. Thus the additional resource of concern does not apply.

Payments

Tier

This farm qualifies for Tier I, due to the fact that many of the fields do not meet the eligibility requirements for CSP because of pasture management and soil management issues. Only the 16 acres of apple orchards were included in the contract. The contract length for all Tier I farms is 5 years.

Stewardship Payments

16 acres cropland * 0.54/acre= **$9/year**

Existing Practice Payments

16 acres cropland * 0.13/acre= **$2/year**

New Practice Payments

This farm did not sign up for new practice payments. **$0/year**

Enhancements

Soil Management[75]**:**

"Improve soil conditioning and quality by implementing conservation measures that result in a Soil Conditioning Index (SCI) score of at least 0.1. Payments are $1.16 for each 0.1 improvement in the SCI, up to a maximum of $29."

16 acres * $11.60/acre= $186/year

"Reduce soil compaction by controlling areas of traffic that result in a Soil Tillage Intensity Rating (STIR) of 15 or less"

16 acres * $2.00/acre= $32/year

Nutrient Management:

"Conduct annual nutrient testing of soil and/or plant tissue. Utilize test results to optimized application rates to reduce surface and ground water quality impacts"

16 acres * $3.00/acre= $48/year

"Utilize and maintain field borders to reduce nutrient loads to surface water and improve wildlife benefits"

1.69 acres * $20.00/acre= $34/year

"Utilize and maintain filter strips to reduce nutrient loads to surface water and improve wildlife benefits"

1.69 acres * $75.00/acre= $127/year

"Utilize and maintain riparian forest buffers to reduce nutrient loads to surface water and improve wildlife benefits"

0.84 acres * $50.00/acre= $42/year

Pest Management:

"Utilize two of the following to minimize over-application and offsite movement potential: hooded sprayers, drift reduction formulations/adjustments, drift reduction nozzles/application techniques"

16 acres * $2.00/acre= $32/year

"Reduce quantity applied (spot treatment)"

16 acres * $10.00/acre= $160/year

"Prevent pesticide from leaving the field with a windbreak/shelterbelt"

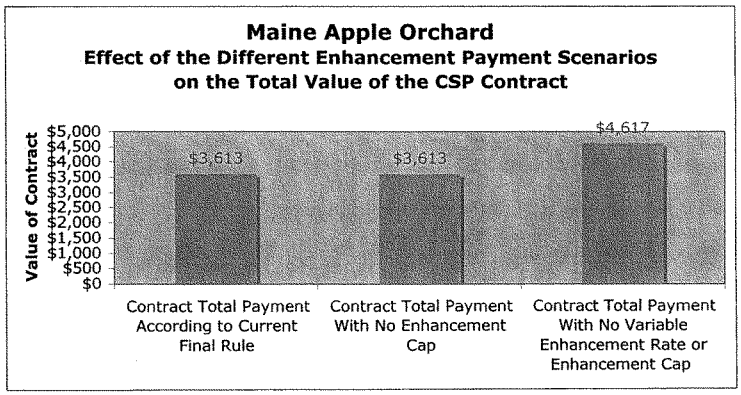
5.05 acres * $50.00/acre= $253/year

Total Enhancements **$913/year**

[75] To calculate the SCI based Enhancement payment it was assumed that the SCI score for the orchard land would be 1.1.

Enhancement Payments Under Different Scenarios[76]

Contract Year	Enhancement Payment, no caps or variable rate	Enhancement Payment	Enhancement Payment total with cap
1	$913	$1369	$1369
2	$913	$821	$821
3	$913	$639	$639
4	$913	$456	$456
5	$913	$274	$274
Total over life of contract:	**$4563**	**$3559**	**$3559**



[76] This chart shows the effect that the variable enhancement payment rate and enhancement payment cap have on the amount of payment that the farm can expect to receive. Column 1 indicates the basic total enhancement payment rate, before the variable rate and cap are applied. Column 2 shows the yearly enhancement payment rate when only the variable rate schedule is applied, without the cap. Column 3 indicates the yearly enhancement payment that the farmer will receive according to the rule, which calls for both the variable payment rate and a cap on enhancement payments. For more detail on enhancement payments, please see section III.D. The following graph then shows how the different enhancement payment scenarios effect the total contract payment.

Total Contract Payments

Tier I	Stewardship	Existing Practice	New Practice	Enhancement	Total Payment
Year 1	$9	$2	$0	$1,369	$1,380
Year 2	$9	$2	$0	$82	$832
Year 3	$9	$2	$0	$639	$650
Year 4	$9	$2	$0	$456	$467
Year 5	$9	$2	$0	$274	$285
Total	**$43**	**$10**	**$0**	**$3,559**	**$3,613**

Total payments over life of contract = $2889

Payment per acre per year = $36[77]

Percent of Farm Acres Enrolled: 23%

Enrollment Category

This farm is likely to be in Enrollment Category D: it has a SCI rating of .1 or higher and at least one unique practice or activity from each area of Soil Quality and Water Quality.

Farmer Impressions

The farmer was not interested in implementing any practices on the new practice payment list, but he was very interested in implementing the new practice of strip tilling his pumpkin fields (planning winter rye in the winter, killing it with herbicide in the spring, then strip till planting the pumpkins into the residue). He saw a sample of a small-scale strip tiller and is interested in constructing one using an old spray tank (filled with water it will weight the plow down). He would have liked to receive new practice payments to build the strip tiller and implement the practice of strip tilling on his pumpkin fields.

The farmer was concerned that the record keeping burden would not be worth the effort to receive payment for a small operation like his own. He said that for him farming was more a life style choice than a profit maximizing business and he did not see it worth his time to keep track of all the records needed to receive CSP payments.

[77] This is per acre per year for acres included in the contract, not for total farm acres.

B. Connecticut Dairy Farm

Farm Profile

This dairy farm has approximately 670 cows and calves. The farm consists of 730 acres, 676 of which are cropland and 54 of which are pasture. Some of this land – 132 acres of cropland, 54 acres of pasture – is rented by informal agreement; the remainder of the land is owned, most of which is under permanent agricultural conservation easement.

The farm's owner-operators have participated in several USDA-Natural Resources Conservation Service (NRCS) programs, and recently concluded an Environmental Quality Incentives Program (EQIP) contract. The EQIP contract provided cost sharing to the farm for the construction of a waste storage facility, two composting facilities – one for manure and bedding, the other for dead animals – and a new solids separating facility for manure handling. The farm also receives MILC payments.

Methodology

This case study was constructed in the summer of 2005 by a member of our research team at the request of the American Farmland Trust. At that time we were unable to calculate the farm's SCI score. Based on the farmer's practices we assumed that the SCI would be positive, and used a positive score of .1 to calculate the enhancement payment. We later used the WQ Tool to determine water quality eligibility.

Eligibility

Self Assessment Workbook

The farmer was able to answer all questions in the Self Assessment Workbook affirmatively. There is some rented land that is rented without a formal agreement on a year to year basis, so these acres would not be included in the CSP contract. If those acres were included in the application, the farmer may not have been able to answer all questions in the self-assessment book correctly. As a result, these acres would have had a negative impact on the farm's Tier eligibility. This is because the rented pastureland has several ponds that need to be fenced in for this area to meet water quality requirements. The lack of fences around these ponds would make these acres ineligible for CSP payments, and therefore reduce the farm's overall eligibility to Tier I.

Soil Quality

We did not have access to RUSLE II to determine the SCI for this example, but made certain assumptions about the farm's score and eligibility. The cropland used for corn on this farm is tilled more than once annually, which reduces the likelihood that it will have a positive SCI score. However, the cropland receives a significant input of organic matter from both cover crops and manure injection that could offset the effects of the tillage. The cropland used for hay is likely to have a positive score. For the purposes of this example we will assume that the entire farm received a SCI score of .1.

Water Quality Eligibility Tool and Irrigation Enhancement Index

This farm received a positive score on the WQ Tool. One important reason why this farm met CSP water quality criteria is due to the farm's recently concluded EQIP contract. The EQIP contract provided cost sharing to the farm for the construction of a waste storage facility, two composting facilities – one for manure and bedding, the other for dead animals – and a new solids separating facility for manure handling. Had there been outstanding commitments remaining under the EQIP contract, it is likely that at least a portion of the farm would not have been considered to have met the minimum level of treatment for water quality. This would in turn affect the farm's eligibility and tier level. There is no irrigation used on this farm, so the Irrigation Enhancement Index was not applicable.

Additional Resource of Concern

In addition to meeting soil and water quality requirements, Tier II participants must also address a third resource of concern. This farm addresses the third resource of concern specified by the state for 2005, soil erosion. In order to address this resource of concern, applicants must have addressed any soil erosion issues on the property including sheet and rill erosion, classic and ephemeral gullies, streambank erosion, and irrigation-induced erosion. This farm was nor eligible for Tier III because it did not have a complete resource management plan.

Payments

Tier level

Since the farm meets all water and soil eligibility requirements for all owned acreage, and addresses the additional resource of concern, this farm would receive a Tier II contract. The contract is for 10 years.

Stewardship Payments

544 acres cropland * $3.35/acre = **$1822/year**

Existing Practice Payments

544 acres cropland * $.84/acre= **$457/year**

New Practice Payments

Windbreak/shelterbelt establishment
1 acre * $600/acre * 50% cost share= **$300.00**

Enhancement payments

Nutrient Management:
"Incorporate ag wastes into soil using equipment that manages surface residue, reduces odors, and limits the potential for surface runoff (ie injection)":
420 acres*$20/acre = $8400/year

Habitat Management:
"Manage haying to avoid prime wildlife ground nesting period (April 15-August 1)."
10 acres*$75/acre = $750/year

Nutrient Management:
"Manage winter cover crops to capture residual nitrogen for recycling to the next crop"
450 acres*$20/acre = $9000/year

Air Resource Management:
"Reduce animal waste odors by managing windbreaks on windward side of animal waste storage and confined livestock areas."
1 acre*$50/acre = $50/year

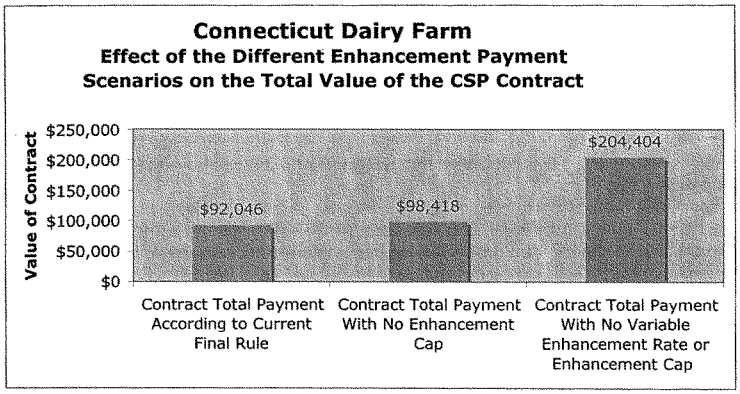
Soil Management:
Improve soil conditioning and quality by implementing improvements that result in a soil conditioning index of at least .1.
544 acres*$1.16/acre = $631/year

Total Potential Enhancement Payments per year: $18,831/year

Enhancement Payment Schedule Under Different Scenarios[78]

Contract Year	Enhancement Payment, no variable rate or cap	Enhancement Payment, variable rate, no cap	Actual Enhancement Payment (with variable rate and cap)
1	$18,131	$28,247	$21,875
2	$18,131	$16,948	$16,948
3	$18,131	$13,182	$13,182
4	$18,131	$9,416	$9,416
5	$18,131	$5,649	$5,649
6	$18,131	$1,883	$1,883
7	$18,131	$0	$0
8	$18,131	$0	$0
9	$18,131	$0	$0
10	$18,131	$0	$0
Total over life of contract:	**$181,310**	**$75,324**	**$68,953**

[78] This chart shows the effect that the variable enhancement payment rate and enhancement payment cap have on the amount of payment that the farm can expect to receive. Column 1 indicates the basic total enhancement payment rate, before the variable rate and cap are applied. Column 2 shows the yearly enhancement payment rate when only the variable rate schedule is applied, without the cap. Column 3 indicates the yearly enhancement payment that the farmer will receive according to the rule, which calls for both the variable payment rate and a cap on enhancement payments. For more detail on enhancement payments, please see section III.D. The following graph then shows how the different enhancement payment scenarios effect the total contract payment.



Total contract payments

Tier II	Stewardship	Existing Practice	New Practice	Enhancement	Total Payment
Year 1	$1822	$457	$300	$21875	$24454
Year 2	$1822	$457	0	$16948	$19227
Year 3	$1822	$457	0	$13182	$15461
Year 4	$1822	$457	0	$9416	$11695
Year 5	$1822	$457	0	$5649	$7929
Year 6	$1822	$457	0	$1883	$4162
Year 7	$1822	$457	0	0	$2279
Year 8	$1822	$457	0	0	$2279
Year 9	$1822	$457	0	0	$2279
Year 10	$1822	$457	0	0	$2279
Total	**$18224**	**$4570**	**$300**	**$67069**	**$92046**

Total payments over life of contract = $92,046

Payment per acre per year = $17

Percent of Farm Acres Enrolled: 75%

Enrollment Category

This farm is likely to be in Enrollment Category C: it has a SCI rating of .1 or higher and at least one unique practice or activity from each area of Soil Quality, Water Quality, and Wildlife Habitat.

Farmer Impressions

The farmer feels that CSP has the potential to be a good program as long as it is not overly restrictive about what farmers can do. He thinks it should have reasonable guidelines and expectations for on farm conservation efforts. He is concerned that if eligibility requirements are set too high then no one will want to be a part of it.

He is also concerned that payments need to be equitable. He pointed out that caps such as those used in CSP are overly punitive towards larger family farms: if the family split the farm apart, each smaller farm would then be eligible for more overall payments because the caps would not be as restrictive. He feels that because his family has chosen to work together as one farm they are unfairly burdened by low caps on payments.

C. Massachusetts Cranberry Farm

Farm Profile

This farm is a large, family run cranberry operation. The operation includes 609 acres in cranberry bogs, and 1,192 acres in upland. A portion of the land is leased at variable rates, based on a percentage of the crop's value. The leased land on this operation is leased in long-term agreements, but long-term control cannot be assured because development pressure in this region is high. The leased land is therefore ineligible for enrollment in CSP. The land that will be included in the CSP contract is only land that is owned by the operation.

This constitutes 419 acres in bogs, and 687 acres in upland. All agricultural acreage (bog land) may be included, but only 10% of that amount in additional, "incidental" land (upland) is eligible. The precise definition of "incidental" land is unclear, but is interpreted in this case to refer primarily to forested land. Reservoir and bypass canal acreage typical of cranberry operations are included in the agricultural acreage definition. In summary, the hypothetical CSP contract for this operation will include 461 acres total, 419 in bogs, and 42 additional upland acres. In addition, this operation has completed several EQIP contracts.

Methodology

In this example, a 78.6 acre area of the operation was used as a representative sample of the entire operation. This specific area is considered to be a representative model for the conservation practices used on the rest of the operation. All conservation management practices in use on this operation are also in use in this area. This hypothetical contract is based on the characteristics of this specific area and then extrapolated to the entire acreage for calculating potential payments.

Due to the unique nature of cranberry operations, considerable assistance from NRCS during the interview and via email was required to complete this case study.

Eligibility

Self Assessment Workbook

The farmer was able to answer all questions in the Self Assessment Workbook affirmatively..

Soil Conditioning Index (SCI)

The SCI was not designed to evaluate soil in cranberry bogs, which consists of alternating layers of sand and decomposing organic matter in a bog that is periodically flooded. However, the SCI score is expected to be positive for cranberry operations because no tillage is undertaken. NRCS representatives calculated 0.65 to be a typical SCI score for cranberry operations. We will assume the SCI score to be **0.65** in this case study, which is well in the range to qualify for participation in CSP.

Water Quality Eligibility Tool and Irrigation Enhancement Index

The WQ Tool was utilized to determine eligibility. Water quality is the single most important factor in determining the eligibility of cranberry operations to participate in CSP. In this case, water quality is particularly important because the drinking water supply for the adjacent community directly abuts the farm.

The WQ Tool caused some initial confusion in this case study because it is geared primarily towards annual, row crop operations which apply manure or fertilizers, and whose practices differ significantly from those of cranberry operations. Because of this, many of the questions are not applicable to cranberry operations. The version of the WQ Tool being used by NRCS changed while this case study was being completed, and the newer version allowed exceptions for cranberry production that enabled this operation to receive a passing score.

Although the Irrigation Enhancement Index score is not an eligibility requirement, it does pertain to water quality and effects the operation's total enhancement payments. This operation rated 68% on the Index, qualifying for an enhancement payment.

Additional Resource of Concern

The additional resource of concern for 2005 in Massachusetts was invasive species. Invasive species have not been a problem for this operation in the past, but yellow loosestrife does grow in the bogs, a species which may be listed on the state's list of invasive species, and may thus require future remedial action. The operator has not addressed this in the past, but is willing to in the future. This will qualify this farm for Tier II. The farm does not qualify for Tier III because it does not adequately address the wildlife resource category.

Payments

Tier

This operation qualifies for **Tier II** because it meets both soil and water quality requirements, and the requirements for an additional resource of concern.

Stewardship Payments

461 acres irrigated cropland * $6.60/acre = **$3043/year**

Existing Practice Payments

461 acres irrigated cropland * $1.65 = **$761/year**

New Practice Payments

Critical Area Planting- Dikes
10.5 acres * 0.5 cost share * $375/acre = **$1,969**

Enhancement Practices

Soil Management:
Soil Conditioning Index Level 1 - 0.7
419 acres * $8.11/acre = $3398/year

Nutrient Management:
"Use slow release forms of N fertilizer, including N inhibitors, to reduce risk of off-site impact."
120.5 acres * $5/acre = $602/year

"Apply fertilizer in ways that will place nutrients as close as possible to the root zone of the plant and at the time the plants will need them..."
419 acres * $5/acre = $2095/year

Pest Management:
"Follow a high level of IPM, >66% to maintain pest populations below the economical threshold, while minimizing pest resistance and harmful effects of chemicals..."
419 acres * $30/acre = $12,570/year

"Use biological and cultural control agents… to break pest cycles and reduce the need for chemical suppression."	
140 acres * $10/acre =	$1400/year
"Reduce the potential risk of off-site chemicals damage by applying chemicals with 'Low' and 'Very Low' environmental hazard."	
419 acres * $15/acre =	$6285/year
"Reduce the potential risk of off-site chemicals damage by following Massachusetts Department of Agricultural Resources guidelines for pesticide storage."	
419 acres * $5/acre =	$2095/year
"Reduce the potential risk of off-site chemical damage by applying an existing sprayer with new technology that improves efficiency…"	
419 acres * $10/acre =	$4190/year
Irrigation:	
Irrigation Enhancement Index Level 2: 65-69%	
419 acres * $3.60/acre =	$1508/year
Energy Management:	
"Conduct an Energy Audit."	
Flat rate =	$500/year
"Recycle 100% of on-farm lubricants."	
Flat rate =	$200/year
"STIR rating less than 10."	
419 acres * $0.90/acre =	$377/year
Total Potential Enhancement Payments Per Year =	**$35,221/year**
Future Enhancements	
Second, Follow-up Energy Audit=	$500
The contract already includes one energy audit as an enhancement. Therefore, the operator may not be able to receive payment on any additional energy audits.	
Biodiesel pumps	
Flat rate=	$25/year

Enhancement Payment Schedule Under Different Scenarios[79]

Contract Year	Enhancement Payments, no caps or variable rate	Enhancement Payments, variable rate, no cap	Actual Enhancement Payment with variable rate and cap
1	$35,221	$52,832	$21,875
2	$35,221	$31,699	$21,875
3	$35,221	$24,655	$21,875
4	$35,221	$17,611	$17,611
5	$35,221	$10,566	$10,566
6	$35,221	$3,522	$3,522
7	$35,221	0	0
8	$35,221	0	0
9	$35,221	0	0
10	$35,221	0	0
Total over life of contract:	$352,211	$140,884	$97,324

Total Annual CSP Payments Summary:

Tier II	Stewardship	Existing Practice	New Practice	Enhancement	Total Payment
Year 1	$3,043	$761	$1969	$21,875	$25,678
Year 2	$3,043	$761		$21,875	$25,678
Year 3	$3,043	$761		$21,875	$25,678
Year 4	$3,043	$761		$17,611	$21,414
Year 5	$3,043	$761		$10,566	$14,370
Year 6	$3,043	$761		$3,522	$7,325
Year 7	$3,043	$761		0	$3,803
Year 8	$3,043	$761		0	$3,803
Year 9	$3,043	$761		0	$3,803
Year 10	$3,043	$761		0	$5,772
Total	$30,426	$7606	$1969	$97324	$137,325

[79] This chart shows the effect that the variable enhancement payment rate and enhancement payment cap have on the amount of payment that the farm can expect to receive. Column 1 indicates the basic total enhancement payment rate, before the variable rate and cap are applied. Column 2 shows the yearly enhancement payment rate when only the variable rate schedule is applied, without the cap. Column 3 indicates the yearly enhancement payment that the farmer will receive according to the rule, which calls for both the variable payment rate and a cap on enhancement payments. For more detail on enhancement payments, please see section III.D.

Total payments over the life of the contract = $137,325

Payment per acre per year = $30[80]

Percent of Farm Acres Enrolled: 25.6%

Additional Proposed Enhancement Practices

State NRCS offices are able to propose additional enhancement practices that meet unique situations in their particular region. These additional 7 enhancements have been proposed in Massachusetts to support cranberry growers in the state. If these enhancements are approved by the national NRCS office, they will be available to farmers in this region. We include them here to show what unique conservation practices could be available to cranberry operations.

Nutrient Management:
"Enhance nutrient management precision... through soil and/or leaf tissue testing at least every 3 years."
419 acres * $1/acre = $419/year

Pest Management:
"Sand every 3 years to bury pest-infested leaf litter and reduce pest pressure."
419 acres * $25/acre = $10,475/year

"Minimize rinse time to increase the efficacy of materials delivered through the irrigation system."
Rinse time of 5 minutes or less: 104.75 acres * $8/acre = $838/year
Rinse time of 8 minutes or less: 314.25 acres * $5/acre = $1,571/year

Water Quality Management:
"Utilize a tailwater recovery system in order to collect irrigation and flood waters to improve off-site water quality."
419 acres * $15/acre = $6,285/year

"In flow-through bog systems, utilize a by-pass canal to reroute water during fertilizer and pesticide applications."
419 acres * $15/acre = $6,285/year

Public Relations (Human):
"Allow the public to use private property as 'open green space' for recreational activities."
0 acres * $5/acre = $0/year

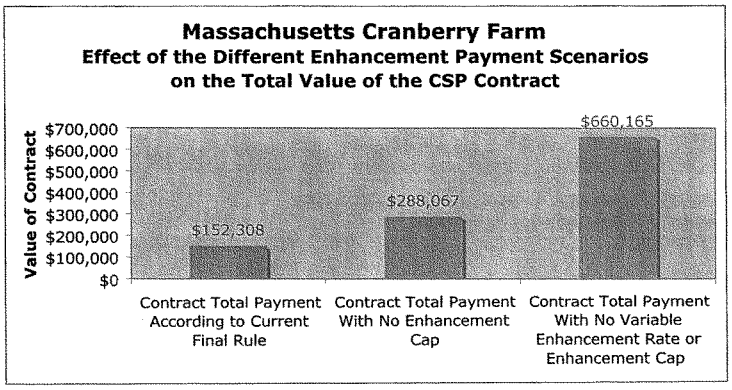
"Maintain adequate mufflers on the exhausts of machinery and/or pumps to minimize noise near residential areas."
461 acres * $2/acre = $922/year

Total Potential Additional Enhancement Payments Per Year = $26,795

[80] Payment per acre enrolled in the contract, not per total acres.

Enhancement Payment Schedule Under Different Scenarios, With Cranberry-Specific Enhancement Practices Added[81]

Contract Year	Enhancement Payments, no caps or variable rate	Enhancement Payments, variable rate, no cap	Enhancement Payments with variable rate and cap
1	$62,016	$93,025	$21,875
2	$62,016	$55,815	$21,875
3	$62,016	$43,411	$21,875
4	$62,016	$31,008	$21,875
5	$62,016	$18,605	$18,605
6	$62,016	$6,202	$6,202
7	$62,016	0	0
8	$62,016	0	0
9	$62,016	0	0
10	$62,016	0	0
Total over life of contract:	$620,163	$248,065	$112,307



[81] This chart shows the effect that the variable enhancement payment rate and enhancement payment cap have on the amount of payment that the farm can expect to receive. Column 1 indicates the basic total enhancement payment rate, before the variable rate and cap are applied. Column 2 shows the yearly enhancement payment rate when only the variable rate schedule is applied, without the cap. Column 3 indicates the yearly enhancement payment that the farmer will receive according to the rule, which calls for both the variable payment rate and a cap on enhancement payments. For more detail on enhancement payments, please see section III.D. The following graph then shows how the different enhancement payment scenarios effect the total contract payment.

Total Payments Summary

Tier II	Stewardship	Existing Practice	New Practice	Enhancement	Total Payment
Year 1	$3,043	$761	$1,969	$21,875	$25678
Year 2	$3,043	$761		$21,875	$25678
Year 3	$3,043	$761		$21,875	$25678
Year 4	$3,043	$761		$21,875	$25678
Year 5	$3,043	$761		$18605	2$2408
Year 6	$3,043	$761		$6,202	$10005
Year 7	$3,043	$761		$0	$3803
Year 8	$3,043	$761		$0	$3803
Year 9	$3,043	$761		$0	$3803
Year 10	$3,043	$761		$0	$5772
Total	$30,426	$7607	$1969	$112,306	$152,308

Total payments over life of contract = $152,307

Payment per acre (enrolled in the contract) per year = $33

Percent of Farm Acres Enrolled: 461 acres enrolled / 1801 acres total: 25.6%

Enrollment Category

The enrollment categories for cropland are based on the SCI score or the STIR rating. This farm would be placed in Category A using the SCI score of 0.65 typical for cranberry operations. Category A receives the highest priority for funding, so this farm would receive a contract.

Farmer Impressions

The farmer's comments largely reflected current practices in USDA programs. He believes programs should be directly related to land improvements in conjunction with an implementation agency (such as NRCS) to ensure that the improvements are being made. He also commented that programs should protect water quality, help growers stay educated about new technology, and provide incentives to stay competitive in an increasingly urban environment.

D. Maine Potato Farm

Farm Profile

This farm produces potatoes for chips and corn for silage and feed. There are 1000 acres of potatoes and 800 acres of corn in a 2 year rotation. These acres are spread out in over 200 fields located in three different watersheds. In addition, there is one 25 acre field, previously planted to hay, that is now planted with poplars under a 10 year contract with a paper company. The farmer does not share in the risk of producing the poplars (since through the contract he is paid regardless of the success of the trees), so these acres are not eligible for CSP payments. Further, trees for paper are not considered to be eligible for CSP[81].

This farm is involved in EQIP, AMA, and Long Term Care insurance (LTC). The grassed waterways (used for irrigation) are enrolled in the CRP.

Methodology

Due to the size of the farm, NRCS was unable to calculate the SCI for each field for the purpose of this example. We selected a representative grouping of 7 fields that totaled 166.6 acres, and then extrapolated the results to create a contract for the entire farm. One of the fields in this area was ineligible to be enrolled in CSP because it was the field planted to poplars. Of the remaining acres, 31 % were eligible for CSP, so for the purposes of calculating a payment for the entire farm we assumed that 31 % of the total 1800 acres would be eligible, or 565 acres in total. The farmer estimates that 80% of the acres on the farm are irrigated, so in our payment calculations we estimate that 80%, or 452 acres, of the total eligible acres are irrigated.

Eligibility

Self Assessment Workbook

The farmer was able to answer all questions in the Self Assessment Workbook affirmatively.

Soil Conditioning Index

Due to the intensive nature of commercial potato farming, soils need special attention to maintain a healthy nutrient balance. This farm has a continuous two-year corn-potato rotation and the fields do not lie fallow. These practices require a diligent operator to keep the soil productive. The fields with Thorndike shaley silt loam soils had higher SCI scores than the Bangor silt loams, which are generally considered to be higher quality Maine soils.

Although the same conservation methods were being practiced on all the fields in our sample area, not all fields had a positive SCI score. In the sample area only two fields had a positive SCI. Of the 143.6 sample acres, 104 acres or 72%, had a negative SCI score. All of the SCI scores on these fields were quite close to zero. Slight differences in the estimated slope length and percent used in the SCI calculation could have made the difference between positive and negative scores. An increase of half a percentage point or less in the total SCI score would have brought all the sample fields up to a positive score, and made the difference between whether the farm was eligible for Tier I or Tier II.

Sample Field	Soil Type	Field Size	SCI Score
Field 1	Bangor silt loam	80 acres	-0.06
Field 2	Thorndike shaley silt loam	26.6 acres	0.0005
Field 3	Bangor silt loam	15 acres	-0.05
Field 4	Thorndike shaley silt loam	13 acres	0.008
Field 6	Dixmont silt loam	9 acres	-0.02

Water Quality Eligibility Tool and Irrigation Enhancement Index

The farm had a passing score in all categories on the WQ Tool. Although the farm did receive a passing score, there were several aspects of the index that the farmer felt did not accurately reflect his water quality conservation activities. Question 11 asks the applicant to choose between 3 nitrogen application techniques: "most nitrogen is applied at or close to planting", "most nitrogen is applied as sidedress or foliar," or "no nitrogen is applied". It does not allow the farmer to indicate that he splits his N application, even though this method is more efficient than strictly adhering to one of the indicated choices.

Another difficulty the farmer had with the water quality tool was with the evaluation of phosphorus levels. The farm's score in the phosphorus category was lowered because he was unable to check the box for "No phosphorus is applied where soil tests indicate a very high or excessive rating." This is because the soils on this farm are highly acidic, and the phosphorus becomes easily bound to the soil and unavailable to plants. Even though tests may indicate high levels of phosphorus in the soil, this phosphorus is not available to plants and more must be applied.

This farm uses a boom sprinkler and low pressure "drop down" center pivot. The center pivot scored high on the given scale, while the boom sprinkler scored low. The farmer measures the flow of water over his whole farm manually. This practice also scores relatively high on the IEI, where "no flow measuring device" is given the lowest score, and "automatic whole farm measurement" is given the highest. This farmer uses gypsum blocks and moisture probe, in addition to site and manual inspection to determine the irrigation schedule. These methods also scored well on the IEI. The farmer received the highest rating possible on his ability to control water distribution, water conveyance and land slope. The tailwater capture and reuse was based on his score for the two different irrigation systems- the boom and the center pivot.

The final IEI is calculated by multiplying all the scores, including the SCI, together. This farm's scores for two different fields were not high enough to qualify for payments by a large margin. The IEI must be above 50 for the farm to be eligible for CSP payments. This farm scored 0.36 on one field and -5.26 on the other and would be ineligible for irrigation enhancement payments. Although the farm's irrigation practices scored well on the IEI, the overall score was significantly reduced by the low SCI scores.

Additional Resource of Concern

This farm is only eligible for Tier I due to the negative SCI score on certain fields. Tier I farms do not need to address an additional resource of concern or have a resource management plan in order to be eligible.

Payments

Tier

Due to a slightly negative SCI score on some fields (all negative SCI scores were between -.002 and -.06) this farm is only eligible for Tier I. The contract length for all Tier I farms is 5 years.

Stewardship Payments

452 acres irrigated cropland * .75/acre =	$339/year
113 acres cropland * .54/acre=	$61/year
Total Stewardship=	**$461/year**

Existing Practice Payments

452 acres irrigated cropland * .19/acre =	$86/year
113 acres cropland * .13/acre=	$15/year
Total Existing Practice=	**$101/year**

New Practice Payments

This farm did not sign up for any new practice payments. **$0/year**

Enhancement Practice Payments

Nutrient Management:

"Conduct annual nutrient testing of soil and/or plant tissue. Utilize test results to optimize application rates to reduce surface and ground water quality impacts."
565 acres * 3.00/acre= $1695/year

"Utilize split nitrogen applications based on PSNT or similar soil test to match nutrient applications to plant needs and reduce the potential for nitrogen loss."
565 acres * $3.00/acre= $1695/year

"Utilize winter cover crops to capture residual nitrogen for recycling to the next crop."
565 acres * $20/acre = $11300/year

"Utilize and maintain filter strips to reduce nutrient loads to surface water and improve wildlife benefits."
5 acres * $75/acre = $375/year

"Utilize and maintain riparian forest buffers to reduce nutrient loads to surface water and improve wildlife benefits."
64 acres * $50/acre = $3200/year

Pest Management:

"Utilize two of the following to minimize over-application and offsite movement potential: hooded sprayers, drift reduction formulations/adjustments, drift reduction nozzles/application techniques."
565 acres * $2.00/acre = $1130/year

Habitat Management:

"Annually defer haying of grass until after August 1st of a calendar year for the duration of the contract period."
8 acres * $75/acre = $600/year

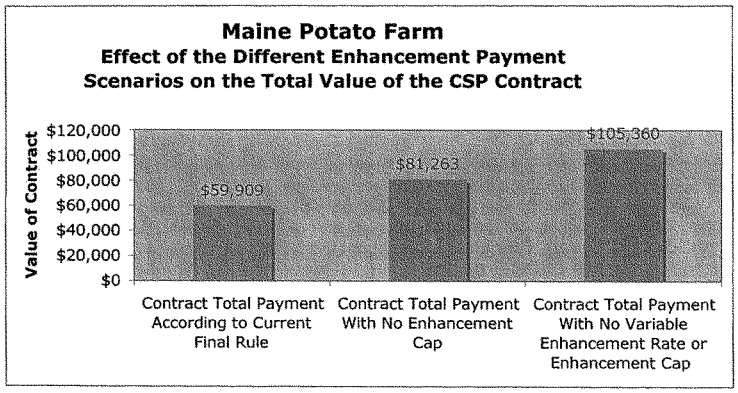
Energy Management:

"Recycling of all used motor oil for tractors and lubricating oil for other farm equipment such as irrigation pumps or grain drying motors."
Flat rate = $200/year

Total Potential Enhancement Payments per year: $20,195/year

Enhancement Payment Schedule Under Different Scenarios[83]

Contract Year	Enhancement Payment, no caps or variable rate	Enhancement Payment with variable rate, no cap	Enhancement Payment total with variable rate and cap
1	$20,195	$30293	$13,750
2	$20,195	$18176	$13,750
3	$20,195	$14137	$13,750
4	$20,195	$10098	$10,098
5	$20,195	$6059	$6,059
Total over life of contract:	$100,975	$78,761	$57,406



[83] This chart shows the effect that the variable enhancement payment rate and enhancement payment cap have on the amount of payment that the farm can expect to receive. Column 1 indicates the basic total enhancement payment rate, before the variable rate and cap are applied. Column 2 shows the yearly enhancement payment rate when only the variable rate schedule is applied, without the cap. Column 3 indicates the yearly enhancement payment that the farmer will receive according to the rule, which calls for both the variable payment rate and a cap on enhancement payments. For more detail on enhancement payments, please see section III.D. The following graph then shows how the different enhancement payment scenarios effect the total contract payment.

Payment Summary

Tier I	Stewardship	Existing Practice	New Practice	Enhancement	Total Payment
Year 1	$400	$101	0	$13,750	$14251
Year 2	$400	$101	0	$13,750	$14251
Year 3	$400	$101	0	$13,750	$14251
Year 4	$400	$101	0	$10,098	$10598
Year 5	$400	$101	0	$6,059	$6559
Total	**$2000**	**$503**	**$0**	**$57,406**	**$59,909**

Total payments over life of contract = $59,908

Payment per acre per year = $21[84]

Percent of Farm Acres Enrolled: 31%

Enrollment Category

This farm does not meet any of the SCI or STIR requirements for categories A- D, so it is in category E, "Must meet minimum eligibility requirements as defined in 7 CFR 1469." In the event of insufficient funding, category E is the last to be funded.

Farmer Impressions

Although the farmer did not plan to add any enhancements right away, he did indicate that he would consider adding a year of hay or grain into his rotation in an effort to improve his SCI score. This could significantly alter his CSP eligibility. If all fields received a positive SCI score as a result of this change, he could increase to Tier II after 2 years of positive SCI scores. If any fields increased their SCI to .1 or higher, the farm would begin to receive enhancement payments on those fields. Because the Tier I contract is only for 5 years, these changes might not take effect until the farm applied for a new contract.

[84] Per acre that is in the contract, not per total farm acres.

E. Massachusetts Vegetable and Fruit Farm

Farm Profile

This Massachusetts farm produces diversified fruit and vegetable crops on 170 acres, 80 acres of which are owned by the farmer. The remaining acreage is rented on a year-to-year lease. 35 acres are certified organic and the farmer hopes to certify 35 more in the near future. The farm produces winter squash, carrots, turnips, sweet corn, peas, rutabagas, strawberries, raspberries, peaches, sweet cherries, blueberries and field corn. The fruits and vegetables are sold in bulk or processed (jams, jellies, peeled and cut vegetables). The farmer is very active in farm to school programs and sells produce to schools, colleges, as well as Meals-on-Wheels and Head Start programs.

The farm sits over the aquifer that provides water for the near by town and the farmer is very conscientious about maintaining high water quality. He uses cover crops instead of synthetic nitrogen fertilizer when at all possible.

The farmer has participated in disaster relief programs. He also has had two EQIP contracts, only one of which has been completed.

Methodology

Due to time constraints and scheduling difficulties, only the Self Assessment Workbook was completed in person with the farmer. The remaining sections of the case study interview were conducted over the phone.

In addition, we assumed that the farmer would agree to address the additional resource of concern, invasive species management, although this was not confirmed by the farmer.

Eligibility

Self Assessment Workbook

The farmer was able to answer all questions in the Self Assessment workbook affirmatively.

Soil Conditioning Index

The SCI score for the organic vegetable fields on this farm was positive (0.21). Due to time constraints only the organic vegetable field SCI scores were calculated for this farm. These fields were chosen because they use the most aggressive tillage practices on the operation and therefore would most likely to have the lowest SCI score. If the organic fields received a positive score, so would the rest of the farm. The NRCS employee calculating this score commented that there probably wouldn't be much difference between the organic and non-organic vegetable fields, since the tillage practices were more or less the same. The orchard soils were assumed to have an even higher SCI score, since they are rarely tilled.

Water Quality Eligibility Tool and Irrigation Enhancement Index

This farm has a relatively high level of phosphorus in the soil. The farmer has cut down the amount of phosphorus he applies, but he still applies some. He commented that while the phosphorus may appear in the soil test, sometimes it is bound to the soil and is not available to the plants, and therefore more must by applied. As a result, the farmer could not answer 'yes' to question 16 on the WQ Tool ("No Phosphorus (excluding starter) is applied where soil test indicate a 'very high or excessive' rating"). Even though the farmer answered 'No' to question 16, the farm still met the minimum water quality requirements. Due to the low amount of irrigation used, the irrigation index score was not used.

Additional Resource of Concern

We assumed that the farmer would agree to address the additional resource of concern, invasive species management, in the future. This farm did not qualify for Tier III because it did not address all the existing resource concerns listed in Section III of the NRCS Field Office Technical Guide (FOTG).

Payments

Tier

This farm qualifies for Tier II, since it covered all resource areas of concern on the land enrolled in CSP and addresses the additional resource area of concern invasive species management. The rented acres were not considered to be eligible for CSP because the farm did not have a long term contract for those acres, but they do not prevent the farm from being eligible for Tier II.

Stewardship Payments

15 acres irrigated cropland * 6.60/acre=	$99/year
65 acres cropland * 3.00/acre=	$195/year
Total Stewardship=	**$294/year**

Existing Practice Payments

15 acres irrigated cropland * 1.65/acre=	$25/year
65 acres cropland * 3.00/acre=	$49/year
Total Existing Practice =	**$74/year**

New Practice Payments

For pipeline instillation:	
3,000 foot pipe line * 0.50/foot	$1,500/year
Total New Practice Payments=	**$1,500/year**

Enhancement Practice Payments

Soil Management[85]**:**

"Soil Condition Index Level 1 – 0.1"

69 acres * $1.16/acre= $80/year

"Soil Condition Index Level 1 – 0.7"

11 acres * $8.11/acre= $89/year

Nutrient Management:

"Enhance nutrient management precision by optimizing application rates to reduce surface and ground water quality impacts through annual soil and/or leaf tissue testing"

80 acres * $2.00/acre= $160/year

"Use split nitrogen applications based on pre-side dress nitrate test (PSNT) to deliver nitrogen when the crop most needs it."

80 acres * $3.00/acre= $240/year

[85] For means of calculating the Enhancement payments the orchard soils were given a SCI of 0.7, the rest of the land was given the calculated SCI score of 0.21.

"Use slow release forms of N fertilizer, including N inhibitors, to reduce risk of off-site impact"
80 acres * $5.00/acre= $400/year

"Apply fertilizer in ways that will place nutrients as close as possible to the root zone of the plant and at the time the plants will need them (banding, side-dressing, injection and fertigation)."
70 acres * $5.00/acre= $350/year

Pest Management:
"Follow a high level of IPM, >66% to maintain pest populations below the economical threshold, while minimizing pest resistance and harmful effects of chemicals (Follow Amass IPM guidelines)"
80 acres * $30.00/acre= $2,400/year

"Use biological and cultural control agents such as predator augmentation and conservation to break pest cycles and reduce the need for chemical suppression."
80 acres * $10.00/acre= $800/year

"Reduce the potential risk of off-site chemicals damage by applying chemicals with 'Low' and 'Very Low' environmental hazard (WIN_PST)"
80 acres * $15.00/acre= $1,200/year

"Reduce the potential risk of off-site chemical damage by applying an existing sprayer with new technology that improves efficiency. Can include replacing nozzles with more efficient ones."
80 acres * $10.00/acre= $800/year

"Reduce the potential risk of off-site chemical damage by applying only spot treatment of pesticides(,20% of filed), banded applications, or labeled reduced rates."
45 acres * $2.00/acre= $90/year

"Reduce the potential risk of off-site chemical damage by maintaining a USDA organic certification on cropland."
9 acres * $10.00/acre= $90/year

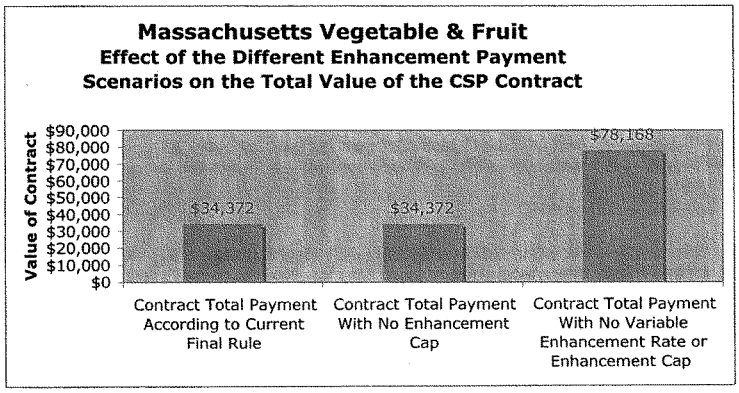
Energy Management:
"Recycle 100% of on-farm lubricants."
Lump Sum $200/year

Air Management:
"Use reduced tillage in cropping operation to reduce soil in the air."
20 acres * $20.00/acre= $400/year

Total Enhancements **$7,299/year**

Enhancement Payment Schedule Under Different Scenarios[86]

Contract Year	Enhancement Payment, no caps or variable rate	Enhancement Payment, variable rate, no cap	Enhancement Payment total with cap and variable rate
1	$7,299	$10,949	$10,949
2	$7,299	$6,569	$6,569
3	$7,299	$5,109	$5,109
4	$7,299	$3,650	$3,650
5	$7,299	$2,190	$2,190
6	$7,299	$730	$730
7	$7,299	$0	$0
8	$7,299	$0	$0
9	$7,299	$0	$0
10	$7,299	$0	$0
	$72,993	**$29,197**	**$29,197**



[86] This chart shows the effect that the variable enhancement payment rate and enhancement payment cap have on the amount of payment that the farm can expect to receive. Column 1 indicates the basic total enhancement payment rate, before the variable rate and cap are applied. Column 2 shows the yearly enhancement payment rate when only the variable rate schedule is applied, without the cap. Column 3 indicates the yearly enhancement payment that the farmer will receive according to the rule, which calls for both the variable payment rate and a cap on enhancement payments. For more detail on enhancement payments, please see section III.D. The following graph then shows how the different enhancement payment scenarios effect the total contract payment.

Total Contract Payments:

Tier II	Stewardship	Existing Practice	New Practice	Enhancement	Total Payment
Year 1	$294	$74	$1,500	$10,949	$12,816
Year 2	$294	$74		$6,569	$6,937
Year 3	$294	$74		$5,109	$5,477
Year 4	$294	$74		$3,650	$4,017
Year 5	$294	$74		$2,190	$2,557
Year 6	$294	$74		$730	$1,097
Year 7	$294	$74		$0	$368
Year 8	$294	$74		$0	$368
Year 9	$294	$74		$0	$368
Year 10	$294	$74		$0	$368
Total	**$2,940**	**$735**	**$1,500**	**$29,197**	**$34,372**

Total payments over life of contract = $34,372

Payment per acre per year = $43[87]

Percent of Farm Acres Enrolled: 47%

Enrollment Category

This farm would fall into the enrollment category B-3. Since the farm's SCI score was 0.21 and the farm meets the stewardship practice requirements in soil quality, water quality, and wildlife habitat, it would fall in to enrollment category 'B'. If the enrollment categories could not be completely funded then the farm would fall into sub-category '3' which includes farms that are in an aquifer zone.

Farmer Impressions

This farmer commented that he would like to see a farm payment program that rewarded the use of nitrogen fixing cover crops to reduce agriculture's dependence on fossil fuels. He would also like to see tax breaks offered to farmers who farm organically in areas that are important for drinking water quality.

[87] This is a per acre that is in the contract, not total farm acres.

IX. Discussion of Findings

Table 7-1 provides an overview of the case studies in this report. In addition to general farm data, the table shows the payment per acre per year, which allows for a comparison of farms in respect to both size and contract length. The Massachusetts cranberry farm received the largest total contract payment ($152,308), while the Connecticut organic goats, chickens, and vegetable farm received the lowest total contract payment ($385). In comparing the farms based on a payment per acre per year basis, the Vermont dairy and Connecticut organic goats, chickens, and vegetable farms received the lowest payment of $8/acre/year while the Maine apple orchard received the highest payment in this category ($45/acre/year).

There are currently 9 official categories of enhancement practice types that farmers are eligible for through CSP: soil management, nutrient management, pest management, water management, irrigation management, grazing management, habitat management, energy management, and air management. A tenth category, public relations, is being considered as an addition to the available enhancement practices in Massachusetts (this category would include practices such as farm noise reduction). Table 7-2 depicts the distribution of the value of the enhancement practice payments between the different categories of available enhancement practices for the case studies in the first year of the CSP contract.

Figure 7-2 illustrates the cumulative distribution of these payments in each category. The pest management and nutrient management categories were the largest categories of enhancement practices, each constituting slightly over a third of all enhancement payments awarded to farmers in these case studies. Soil and water management categories contributed to 10 and 11 percent of the total enhancement payments, respectively. The remaining categories contributed under 3 percent each to the overall total of the enhancement payments.

Figure 7-1.

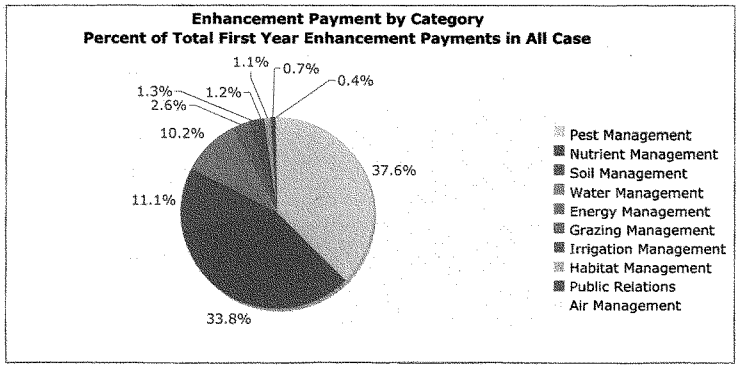


Table 7-1.

Case Study CSP Contract Payment Summary

Farm	Acreage in Contract	% farm enrolled	Tier	Duration of Contract (years)	Stewardship Payment	Existing Practice Payment	New Practice Payment	Enhancement Payment	Contract Total Payment	Payment (Dollars/Acre/Year)
Farms with Contracts										
Connecticut Organic Goats, Chickens, & Vegetables	5	50%	II	10	$130	$45	$0	$125	$300	$9
Massachusetts Dairy, Beef, & Organic Vegetables	153	15%	I	5	$425	$110	$0	$15,522	$16,057	$21
Vermont Dairy Farm	1,018	85%	I	5	$2,700	$678	$0	$48,720	$52,098	$8
Farms without Contracts										
Massachusetts Cranberry Farm	461	71%	II	10	$30,428	$7,607	$1,959	$112,308	$152,305	$33
Massachusetts Vegetable & Fruit Farm	80	47%	II	10	$2,940	$735	$1,500	$29,197	$34,372	$43
Maine Apple Orchard	18	22%	I	5	$43	$10	$0	$3,560	$3,613	$48
Maine Potato Farm	565	31%	I	5	$2,000	$503	$0	$57,406	$59,909	$21
Connecticut Dairy Farm	544	78%	II	10	$13,224	$4,875	$600	$68,953	$92,098	$17

Table 7-2.

Enhancement Payments by Category in the First Payment Year for All Case Studies

Farm	Soil Management	Nutrient Management	Pest Management	Water Management	Irrigation Management	Grazing Management	Habitat Management	Energy Management	Air Management	Public Relations	Total
Farms with Contracts											
Connecticut Organic Goats, Chickens & Vegetable	$22	$0	$0	$0	$0	$23	$0	$0	$0	$0	$45
Massachusetts Dairy Beef & Organic Vegetable*	$1,248	$755	$0	$0	$0	$1,633	$0	$958	$0	$0	$9,950
Vermont Dairy Farm**	$5,018	$740	$0	$0	$0	$0	$0	$1,442	$0	$0	$10,200
Farms without Contracts											
Massachusetts Cranberry Farm	$5,298	$5,117	$29,424	$12,570	$1,509	$0	$0	$1,077	$0	$922	$62,016
Massachusetts Vegetable & Fruit Farm	$159	$1,150	$5,360	$0	$0	$0	$0	$290	$400	$0	$7,299
Maine Apple Orchard	$218	$250	$448	$0	$0	$0	$0	$0	$0	$0	$916
Maine Potato Farm	$0	$18,265	$1,180	$0	$0	$0	$600	$200	$0	$0	$20,245
Connecticut Dairy Farm	$632	$17,400	$0	$0	$0	$0	$750	$0	$50	$0	$18,832
Total	$12,699	$41,680	$46,375	$12,570	$1,508	$1,656	$1,350	$3,297	$450	$922	$123,479

*Note: This is the MA Dairy, Beef and Organic Vegetable Farm's enhancement payment according to the NRCS, not the rounded figure used in other charts and graphs.

**Note: These are the enhancement payments for the VT dairy farm as calculated by the NRCS retrospectively for this report.

Baseline Eligibility Requirements

CSP currently has very high standards for eligibility. Farmers must currently meet both soil and water quality requirements on at least part of their operation, a provision that is much stronger than the original statutory requirement that farmers meet standards for only one significant resource of concern, either prior to or as a result of participation in CSP, in order to be eligible. This raises the question of whether CSP's heightened bar for eligibility hinders the program's effectiveness.

CSP's two principal goals are stated in the program's catchy motto "reward the best and motivate the rest." Currently, CSP fulfills its first goal of rewarding farms with a high level of conservation, but the program has yet to meet its second goal of motivating farms with a lower level of conservation to implement new conservation practices. Many farmers that meet the high standard of conservation required to be eligible for CSP are being rewarded with payments. The farms in this study were chosen because they are regarded as conservation-minded farms. Therefore one would expect these farms to be eligible for CSP if the program is truly rewarding farms with high levels of conservation.

However, many of the farmers that could most greatly benefit from payments to increase their conservation practices are ineligible for the program. The emphasis on the SCI score for eligibility, the strict record keeping requirements, and the addition of the enrollment categories in the 2005 sign up notice all eliminate farmers who are doing less conservation work but could be motivated into doing more if allowed into the program. The Maine apple farm, which had the most difficulty with CSP eligibility, is a good example of a farm that could be motivated into using more conservation practices. The farm has some conservation practices in place, but also has some areas that could use improvement. The farmer would like to receive assistance to implement more conservation practices, but it is questionable if the farm would meet the minimum requirements for CSP. The farmer did not seem interested in implementing further conservation practices on his farm if he was not going to receive assistance implementing these practices. If one of the goals of CSP truly is to 'motivate the rest,' the eligibility requirements should allow for more farms like the Maine apple orchard to enroll in CSP to receive assistance to attain that goal.

Since CSP does not currently receive sufficient funding to make payments to all eligible farms, the high conservation standards serve as a way to ensure that at least those farms with the very best conservation practices will benefit from the program. Adjusting the eligibility requirements to allow more farmers into the CSP may have the inadvertent effect of also lowering payment amounts to the point where there is no longer any incentive to participate. Alternatively, the bar could be set lower for CSP eligibility but higher for continued CSP participation. This option would more closely reflect the CSP statute than the CSP being offered by NRCS, and would allow greater attention to the "motivational" aspect of CSP while potentially weeding out farms that are currently eligible due primarily to high SCI scores. This rebalancing of the program might result in a fairer distribution of participation and higher environmental benefits relative to the current CSP offering.

The Indices: Soil Conditioning Index, Water Quality Eligibility Tool, and Irrigation Enhancement Index

CSP uses quantitative indices for determining farm eligibility. Quantitative measures are attractive in that they provide a science-based, time-efficient approach in their application to farms, and can set a "baseline" standard required to participate. However, the northeastern region contains many diverse farm types and practices, rendering it nearly impossible to apply a "one-size-fits-all" approach to assessment. Each farm type has different strengths and weaknesses in terms of conservation, and problems of imprecision often arise when utilizing rigid, quantitative measures alone. To work well, quantitative measures must be balanced with more individualized, qualitative measures to assess eligibility.

The SCI is a quantitative measure in that a positive score is required to achieve basic soil quality

"You could send 25 NRCS guys out to a field and get 25 different SCI scores."

eligibility. The use of a quantitative measure to determine if a farm meets soil quality eligibility criteria is intended to standardize the process of evaluating different farms in different places. However, bias and inconsistencies in judgment are still possible because it is easy for different NRCS agents to calculate different SCI scores for the same field. One NRCS agent commented, "You could send 25 NRCS guys out to a field and get 25 different SCI scores." Problems arise due to this imprecision in the calculations. When a field's SCI score is close to 0, small variations in field length or slope estimates used in calculations can produce a SCI score that is slightly positive or negative. A negative score renders a field or entire farm ineligible. It should be noted that the SCI was developed in Texas and was not subjected to rigorous analysis and recalibration in other parts of the country before it was put into use for CSP.[88]

NRCS field staff are encouraged to group fields with similar characteristics (i.e. soil type, slope) together when calculating SCI scores for a farm. This is an effective strategy in the Midwest, where fields are large, slope variation is less, and soil types are more uniform. In New England, however, a 1000 acre farm could consist of over 100 scattered fields. Each of these fields is likely to have a different slope and many will have a different soil type. Grouping becomes difficult and highly inaccurate. The workload for calculating the SCI score for a large New England farm can become staggering. It almost invariably exceeds the technical assistance hours allotted for NRCS staff to implement this program.

The potato farm case study offers an example of this imprecision. Although the farmer uses the most up-to-date conservation technology, his fields are in continuous corn-potato rotation, and no time is allowed for fields to lie fallow. As a result, his SCI score is slightly negative on some fields. On other fields, the SCI score is slightly positive, but not high enough to receive an enhancement payment. Even though the farmer applies the same conservation practices on all fields, only some fields are eligible. This is largely due to factors beyond the farmer's control, such as small differences in slope and soil type, not because of any difference in conservation efforts.

The Massachusetts vegetable and fruit farm suggests other difficulties with SCI. SCI scores are positive for permanent and perennial crops, such as orchard crops and berries, in which tillage is rarely practiced. However, SCI scores are lower on annual vegetable crops, even those grown organically. According to the farmer, the area's premium land prices prohibit him from leaving fields fallow. In addition, the short growing season prevents him from using a no-till system (which typically produces a positive SCI score) because the soil doesn't warm up quickly enough for an early spring planting without tillage, and a delayed planting would result in lost market and revenue. However, he is dedicated to using annual cover crops and is doubling the amount of acreage in organic production this year. The lower SCI scores for these fields do not reflect that this farmer uses as many or more conservation practices on his vegetable acres than he uses on the orchard and berry crops.

The Massachusetts cranberry farm case study provides a unique regional example in contrast to the previous examples. The SCI was not designed to evaluate soil in cranberry bogs. Cranberry bogs are never tilled, and their soil consists of alternating layers of sand and decomposing organic matter. The bogs spend a significant portion of the year completely flooded. NRCS determined for this case study

[88] F.Hoefner, personal communication, March 7 2005.

that cranberry bogs will typically earn a high SCI of approximately 0.6 due to the soil type, the permanence of the crop and the lack of any need for tillage. Thus, a cranberry farm is much more likely to be eligible to participate in CSP and receive enhancement payments for a higher SCI score, even though the farmer may not be putting nearly as much effort into soil conservation as other farm types. This bias could be corrected by treating cranberry bogs and orchards as a separate category for the purposes of CSP payments, instead of grouping them with cropland.

"If CSP is truly conservation oriented, then shouldn't it consider, 'Is it ok to have crops every year or should there be a year in between when the fields are fallow?' This farm should probably have a fallow year, but within the practices that they're using on each field, they are doing much better than the standard."

Difficulty in earning a positive SCI score seems to be the limiting factor in terms of eligibility. SCI tends to favor systems that have reduced tillage or soil types that can retain soil organic matter better than others, regardless of other conservation practices. One NRCS employee remarked, "If CSP is truly conservation oriented, then shouldn't it consider, 'Is it ok to have crops every year or should there be a year in between when the fields are fallow?' This farm should probably have a fallow year, but within the practices that they're using on each field, they are doing much better than the standard." A related question that could be considered is whether a farmer should be rewarded for his efforts if he strives to be conservation-oriented, but may not grow the most appropriate crop for that that region.

SCI also is used as a component of the Irrigation Enhancement Index (IEI), comprised of eight measures which determine eligibility for increased enhancement payments based on irrigation water delivery systems. For the potato farm, the SCI score was the only element that was inadequate, but it still effectively lowered the entire IEI score below the point where the farmer could receive any payments for it.

The new WQ Tool was not used for determining water quality eligibility in 2005, but it will be used for 2006 CSP applicants and it was available for us to use for the creation of hypothetical contracts. Unlike the SCI, the WQ Tool score is not used as a basis for an enhancement practice payment, so it does not have as big of an impact on a farmer's overall CSP payment. Overall it appears to be less biased towards certain production types than the SCI, although there are a few instances where the tool does seem to favor certain farm types. Both the Massachusetts cranberry farmer and NRCS staff noted that the majority of the questions included in the index seem to be geared toward farms that grow annual crops and use manure on their fields. Although the index seems to be geared toward farms that routinely apply manure, there are inexplicably no questions regarding manure storage or runoff prevention.

Many New England soils are acidic and have high levels of phosphorus in the soil. However, some of that phosphorus may be bound up in the soil, and unavailable to the plants. Therefore, even though a soil test may indicate a high amount of phosphorus in the soil, additional phosphorus in usable form must be applied. Both the Maine potato farmer and the Massachusetts vegetable and fruit farmer pointed out this issue when they were answering the questions for the WQ Tool. Both farmers make an effort to apply their phosphorus responsibly, but the wording of the question asks whether "*no* phosphorus is applied where soil tests indicate a very high or excessive rating." Therefore, neither farm was able to answer this question affirmatively. In addition, on some multiple choice questions both farms were unclear about which answer was most appropriate when more than one choice applied to different parts of their operation.

In the Massachusetts cranberry case study, many of the questions in the WQ Tool were not applicable to cranberry operations. Even though the cranberry farm was using the latest water conservation technologies, it seemed they were not going to satisfy the WQ Tool criteria due to a few

questions that did not take into account the special conditions found in cranberry farming. Fortunately, the NRCS was able to revise the WQ Tool to take these issues into account. As a result, the farm in this case study achieved a satisfactory score on the revised version of the WQ Tool.

Certainly, the availability of a standardized, easy-to-use computer program must be popular to an already overburdened NRCS staff. However, one NRCS staff person noted that RUSLE2 (which is used to calculate the SCI score) is constantly being updated, and it is difficult for staff members to stay abreast of the changes. Our experience with the WQ Tool shows that it is also a work in progress. The changeability of these indices is a reminder of the shortcomings of using these tools as the only basis for determining farm eligibility.

Obstacles to Enrollment

While many conservation oriented farms may be eligible for CSP, there are a number of eligibility requirements that limit the amount of land that can be enrolled. These farms may have a high level of conservation in many areas, but if they do not meet one specific requirement in one part of their farm, that section cannot be enrolled. Some specific eligibility requirements that caused problems for the farms in this report include the need for formal, long term rental agreements and the need for records of regular testing of pasture soils. Farmers who did not have a history of working with the NRCS also seemed to have more difficulty applying for CSP.

CSP requires farmers to "have control of the land [they] intend to enroll in CSP for the life of the proposed contract period."[89] Many of the farms in this study did not have formal, long-term rental agreements for their land. The Massachusetts vegetable and fruit farm has a year-to-year lease on his rented land, despite the fact that some of the land has been rented for three generations. The Connecticut dairy and Vermont dairy farms had informal or year-to-year rental agreements for part of their land. The Connecticut dairy farmer and the Massachusetts vegetable and fruit farmer were not able to include rented acres in their contracts because the landowners were unwilling to sign an a statement for the NRCS that they would lease the land to the farmer for the duration of the contract. The requirement for a long-term lease or rental agreement ensures that the land enrolled in CSP is land on which farmers have the ability to implement long-term conservation goals. By excluding these acres, though, this requirement may prevent farmers from putting conservation efforts into rented land. Given that many farmers in New England rent at least some of their fields[90], this seems to pass up a significant opportunity for conservation improvements on these farms.

The Connecticut dairy case study demonstrates this issue. The lack of a long-term rental agreement for some of the land he operates and consequent exclusion of that land from his CSP contract had two effects. First, it allowed the farmer to be eligible for Tier II instead of Tier I, because the rented land contained two unfenced ponds, which would have disqualified the farm from Tier II for unsatisfactory water quality. This was a clear benefit to the farmer because it raised the overall Tier level of the farm. Second, since the rented land was not included in CSP, the farmer was not eligible to receive payments on that land. If these rented acres had been eligible, it is possible that this payment could have provided enough assistance for the farmer to fence in the ponds. The farmer may have decided to fence in the

[89] NRCS. *Conservation Security Program: Questions and Answers.* (April 2005). http://www.nrcs.usda.gov/programs/csp/cspqa5905.pdf (Accessed October 2005).

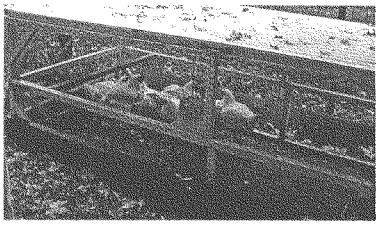
[90] The Census of Agriculture shows that between 12 and 18% of farmers in New England pay cash rent for their land. This does not account for less formal rental agreements. USDA-NASS, 2002 Census of Agriculture, Volume 1 Chapter 2: U.S. State Level Data, Table 3. Farm Production Expenses: 2002 and 1997, http://www.nass.usda.gov/census/census02/volume1/us/index2.htm (accessed February 10, 2006).

ponds to increase his tier, and he may have been able to get help in putting up the fencing through CSP. This opportunity is lost when these acres are excluded from the CSP contract.

Fortunately for many farmers, the NRCS does allow considerable flexibility in determining what defines a long term rental agreement. A lease is not required as proof of a long term agreement, but the landowner must be willing to sign a statement for the NRCS that says that they intend to rent the land to the farmer for the duration of their contract. In areas where development pressure is high, as in many parts of New England, many landlords are unwilling to sign this agreement.

Inadequate record keeping on pastureland was another obstacle to eligibility for many farmers in New England. According to several of the NRCS employees with whom we spoke, pastureland soils are not typically tested on a regular basis in New England, nor do farmers often keep records of grass height on their pasture or their livestock rotation schedule. The requirement for having two years of records, including soil tests, grass height and livestock rotation schedules is a limiting factor for livestock operations, even if they are rotationally grazing and follow other conservation practices. This was an issue for the Vermont dairy farm, where parts of their pastureland were not eligible for CSP because they did not have grass height records and livestock rotation data for certain fields.

While prior experience working with the NRCS is not a specified requirement in the CSP application, the lack of prior experience seemed to be a disadvantage for farms that want to apply for CSP. Many of the farms interviewed for this study had a long history of involvement with the NRCS (including the Massachusetts vegetable and fruit farm, Massachusetts cranberry operation, Massachusetts dairy, beef, and vegetable operation, Maine potato farm, Vermont dairy farm, and Connecticut dairy farm). When a farmer has already worked with the NRCS, the information needed to determine the farm's eligibility (data needed to determine SCI and WQ Tool scores, the delineation of the farms fields, etc.) is often already in NRCS files. This makes it easier for NRCS to complete their portion of the CSP application and determine eligibility. Some NRCS employees also mentioned that they prefer working with farms that have a history with NRCS because the money allotted to them for CSP is not enough to cover the costs of the labor required to survey fields and calculate the different indices required for the CSP application.



Organic Farms and CSP

The Massachusetts dairy, beef, and vegetable farm did not receive payments on acreage in organic vegetable production due to a negative SCI score. The farm manager considers the land in organic vegetable production to be the best conserved land on the property. However, the farm's pastureland, on which chemical fertilizer is used, did qualify for CSP, partially because the SCI score on that land was positive. The farm manager thought it was odd that the farm did not receive payments for the land where they applied many conservation practices, and did receive payments for the land where fewer conservation practices were used.

This raises the issue of whether organic vegetable farmers, which are often thought of as conservation oriented, may be less likely to be eligible for CSP than conventional farms due to the SCI score requirement. Since organic farmers cannot use herbicides they often substitute increased cultivation for chemical weed control. This extra cultivation has a negative effect in the SCI score calculation, and could cause a SCI score that would otherwise be positive to be lowered. If the score became negative, this could disqualify that land or lower the enhancement payments the farm would receive. This may have been the case at the Massachusetts dairy, beef, and vegetable farm.

It should be noted that the other farm in our study with organic vegetable acreage, the

Massachusetts vegetable and fruit farm, received a positive SCI score (0.21) on its organic fields. It may be that the negative SCI score at the Massachusetts dairy, beef, and vegetable farm was due to a combination of soil type and cultural practices.

While organic vegetable farms may have a disadvantage obtaining a positive SCI score, they typically include production practices which conventional farmers might not follow. These other practices could improve their eligibility or increase their potential enhancement payments. Certified organic farms must keep many records as part of their organic certification requirements. An organic farmer should not have any problems producing the two years of written records required for CSP eligibility. Organic farmers often plant cover crops and incorporate compost or manure into their fields, which may help raise their SCI score to counteract the effect of the extra tillage.

The national list of enhancement practice and new practice payments included payments for organic production (an enhancement payment) or transitioning to organic production (a new practice payment). The only New England state to offer payments for organic production was Vermont, which offered a new practice payment of $25/acre for transitioning to organic production. Many of the NRCS staff that we spoke with noted that they were instructed not to offer new practice payments, though, so farmers who are hoping to receive assistance with transitioning to organic production are not likely to find it from CSP.

Enrollment Categories

The enrollment categories that were added to CSP in the 2004 sign up notice make the eligibility criteria much stricter. In particular, they limit funding for farms with low SCI scores and group farms with cropland by their SCI score and the amount of resource concerns met on that farm. The SCI score groupings for farms with cropland are as follows:

- Category A includes farms with scores of 0.3 and above;
- Category B includes those with a score between 0.2 to 0.29;
- Category C and D include farms with a score range of 0.1 to 0.19;
- Category E includes all farms with SCI scores less than 0.1.

If CSP is fully funded, then all eligible farms will receive payments. If the program is not fully funded, categories are prioritized for funding starting with A, until the funding is exhausted. The further division of enrollment categories into sub-categories allows for a way to fund only part of a category in the event that a whole enrollment category cannot be funded (see page 6 for more information on Enrollment Categories). In 2005, contracts were funded up through level C-1, and eligible farms with low SCI scores were denied payments. This effectively raises the SCI score needed to be eligible for a funded contract.

The Maine potato farm had SCI scores of 0.0005 and 0.008 and thus would receive payments only if CSP was fully funded. These categories place even more emphasis on a farm's SCI score, despite the shortcomings of the SCI as an indicator of soil conservation.

Farm Size

While CSP is open to any farm type in an eligible watershed, the interviews in this study show that different types of farms have different experiences and levels of success in enrolling in the program - from fulfilling the application requirements to becoming eligible and receiving meaningful payments.

Farmers involved in this study frequently complained that the application process was cumbersome and poorly timed to coincide with the planting season. Farms with a certain level of management were more able to dedicate the time required to fill out the application, but the process was a burden for these farms as well. Smaller farms and farms not already enrolled in other NRCS programs did not have the proper records on file with the NRCS. The Maine apple farmer stated,

"I am not convinced it will be worth it for small farms in Maine to keep the detailed records

requested in the enclosure. The added labor for this record keeping just isn't justified by the revenues earned from the relatively small acreage. Our small farm is more of a lifestyle choice than financial career decision and as such we tend to not care to know or keep track of every detail that a larger farm might have to. We keep track of what the law requires and that is probably all we want to keep track of."

Lastly, CSP may favor larger farms because the payments are calculated per acre. This automatically means that a smaller farm will receive smaller payments for the same practices that a larger farm is doing. While this may seem fair initially, as larger farms incur greater expenses, it can reduce the incentive for smaller farmers to apply. For example, the Connecticut organic goat, chicken, and vegetable operation received a total of $385 for 4.6 acres in a ten year contract, an amount that was hardly worth the time the farmer and the NRCS spent creating the contract.

At the Massachusetts dairy, beef, and organic vegetable operation the application took the farm manager about two hours. The farmer attributed this relatively short time to the fact that the farm had many other contracts with NRCS already and thus all the relevant documents were on hand. In this case, the farm also employed a full time manager, whose responsibilities included securing funding to continue the public education aspects of the farm. The manager readily admitted, "(CSP) works for (this farm) because we have a full time manager to look for funding programs, but small commercial farms would have trouble with the application process."

Program Complexity

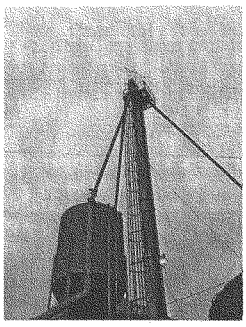
Nearly all of the farmers in this study cited the complexity of CSP as their primary complaint. The Vermont dairy farmer complained, "The application required an extensive paper trail. . . . You thought you were there [finished], and then you weren't. There was always a new requirement. It was never clear what needed to be done."

The Self Assessment Workbook, the first step in the CSP application process, is intended to function as a filter by giving farmers a preliminary indication of whether they might be eligible for CSP. It is also intended to reduce the workload for NRCS field office staff by preventing ineligible farmers from beginning the application process.

One NRCS agent who was involved in the 2005 sign up noted that many farmers had trouble with the "federal language" of the workbook. All of the farmers who participated in this study required at least some assistance completing it. However, the workbook did seem to be an effective tool to get farmers started on their application. The guidelines for farm delineation offered a useful tool to help farmers outline the boundaries of their farm for inclusion in the application.

The Self Assessment workbook can also be a useful tool to help farmers identify possible conservation needs on their farm. The Maine apple grower had several negative answers to workbook questions, but because the conservation problems were in isolated locations on the farm it merely reduced his status to Tier I instead of disqualifying the entire farm. For instance, the three cows that are raised for family consumption are kept in a tile drained pasture, where they are allowed to drink from surface water at the bottom of the drainage system. This meant that the farmer could not affirmatively answer questions relating to the livestock's access to water, and gave the farmer an early indication that he would only be able to enroll his orchards in CSP. It also gave the farmer ideas about which aspects of his farm he could focus on improving in order to increase his future chances of receiving a CSP contract. If farmers were to complete the workbook before their watershed is selected for participation in CSP, they may even be able to address conservation problems on their farm in time to be eligible for CSP when their watershed is selected.

The indices and records used to gauge eligibility often lack real meaning for the farmer. For example, the SCI score can be a very abstract concept unless NRCS takes the time to explain it. If these indices have no meaning to the farmers they have a hard time understanding the importance of these



tools to the process, or how to make improvements on their farm and thus increase their scores. Because the NRCS is already overburdened, it is difficult for them to take the time to ensure that farmers understand all aspects of their application. The use of indices allows CSP to reward farmers for conservation performance instead of just conservation practices, but the complexity of these indices will be an ongoing challenge for farmers and the NRCS.

The watershed based sign up also caused confusion to many farmers, especially those with larger farms. Large farms in New England consist of many fields spread out over a relatively large area. The Maine potato farm in this study had land in three different watersheds. The potato farmer was under the impression that he would need to enroll pieces of his farm separately as the three watersheds they were in were selected. CSP rules actually require that farmers in this situation wait until the watershed that contains the majority of their farm is selected, at which point they may enroll the entire farm. Although a watershed-based sign up process may make sense from the point of view of environmental management, farmers are more accustomed to dealing with the arbitrary boundaries of county lines and NRCS districts. If the goals of CSP were more closely aligned with the needs of participating watersheds, it would make sense to continue with the watershed boundary as the basis for selecting sign up areas. But if the intent of the NRCS is solely to reduce the number of applicants during each sign up period, NRCS district boundaries could serve the same purpose in a way that is more familiar to farmers.

The distinction between the different types of payments was often another source of confusion for farmers. Several farmers expected the stewardship payment to be larger than it was since it was an acreage based payment. The distinction between the existing practice payment category and the enhancement payment category was similarly confusing. Many farmers did not see the difference between a payment for the maintenance of conservation efforts and a payment for implementing conservation efforts. The process of selecting enhancement activities was complicated by multiple listings for the same payment in the enhancement activities list. For instance, although a farmer can only receive one payment for having a riparian buffer, these buffers are eligible for payments under both the nutrient management enhancements and pest management enhancements categories in the list of Maine enhancement activities. Lastly, we found several instances of NRCS field offices being told not to offer new practice payments. This is understood to be one solution to budget cuts. However, offering the payments in the literature but not in reality adds to the confusion for farmers navigating the application process.

There were some discrepancies found in the calculations made to determine payments for the 2005 contracts that we reviewed. The Connecticut organic goats, chickens, and vegetable farm was given a Tier II contract even though their entire farm was not eligible for CSP. This increased the payments awarded to this farm (although the farm still will only receive $385 for the entire contract). The Vermont dairy farm's contract offers another example where NRCS calculations did not conform to the exact methods stated in the regulations. NRCS calculated enhancement payments in this contract using a multiplier that staff referred to as a "fudge factor". Enhancement practices that would be added by this farm in the second year of its contract were also calculated in at the variable enhancement rate, instead of at 100% as required by the rule. These inconsistencies highlight the difficulty that NRCS staff has had with CSP implementation due to the overall complexity of the program.

The complexity of CSP might be less daunting to farmers if there were more NRCS staff assigned to work on the program. However, the 15% limit on Technical Assistance was already greatlyexceeded in 2005[91], and the inclusion of additional staff would only make this number greater. If NRCS were to

[91] Craig Derickson, NRCS. CSP Roundtable Discussion, American Farmland Trust, Washington, D.C. December 14,2005.

calculate the amount of technical assistance that they could provide as 15% of the yearly contract value as suggested by the Sustainable Agriculture Coalition, rather than 15% of the total contract value, this would free up a considerably larger amount of money for technical assistance. As more watersheds are enrolled in CSP, more NRCS staff will become familiar with the program and it is likely that farmer understanding of CSP will also improve.

NRCS Program Overlap

There are several aspects of CSP that overlap with other programs already offered by the NRCS. The overlap between different NRCS programs places an additional burden on NRCS staff, who must offer all of these programs to farmers in their districts, even when certain aspects of the programs are redundant. Farmers are not allowed to receive payments for the same activity through two NRCS programs, so they must choose between them.

The most obvious potential overlap is between the New Practice cost sharing payments available from the CSP and the Environmental Quality Incentives Program (EQIP). The CSP offers farmers a 50% cost share rate (65% for beginning or limited resource farmers) on a range of new practices, while EQIP offers farmers up to a 75% cost share rate (up to 90% for beginning or limited resource farmers). The CSP limits New Practice Payments for farmers to $10,000 per contract, while EQIP limits farmers to $450,000 in payments for the duration of the term of the Farm Bill. Clearly EQIP offers a better cost share rate and more money for farmers. None of the farmers in this study who received CSP contracts in 2005 signed up for any new practice payments. Several NRCS agents who assisted with this study also noted that they were told to discourage farmers from signing up for any new practice payments.

The Vermont dairy, Connecticut dairy, and Massachusetts cranberry farm had all participated in EQIP prior to their participation (or hypothetical participation) in the CSP. In each case, the completion of the EQIP contract improved conservation efforts on the farm, and likely contributed to the farm's eligibility for a CSP contract.

There is also overlap between some of the enhancement activities offered by the CSP and other NRCS programs, including the Conservation Reserve Program (CRP) and other land set- aside programs. The Maine potato farmer pointed out that he would receive more money per acre for the grassed waterways in his fields through the CRP than he would through the enhancement payments available through CSP. The same is true for riparian buffers, which would also receive a higher payment through the CRP than they would through the enhancement payments offered by CSP. Farmers could make the differences between the two programs work to their benefit by enrolling buffers, grassed waterways, and contour grass strips into the CRP, and then enrolling the rest of the farm into CSP. Having land enrolled in CRP would also increase the farmer's chances of enrolling in Tier III, because it counts as having addressed the wildlife habitat resource of concern.

Payments for New England Farmers

In 2005, the average payment per acre for farms in New England ranged from a low of an average $22 per acre for farmers in New Hampshire to a high of an average of $283 per acre for farmers in Rhode Island (the average payment per acre for all states can be seen in Section IV). The average payment per acre per year for farmers involved in this study ranged from $8 for the Vermont dairy to $45 for the Maine apple orchard. The size of the payment per acre a farm can expect to receive appears to be affected both by the number of conservation practices being done on a farm, whether or not the farm uses irrigation, and the size of the farm. Although the payment per acre may be higher for some smaller farms than it is for some larger farms, larger farms can expect to receive a higher payment over the life of the contract than smaller farms. Figures 7-2 and 7-3 show the total payments and payments per acre per year for farms in this study.

Figure 7-2.

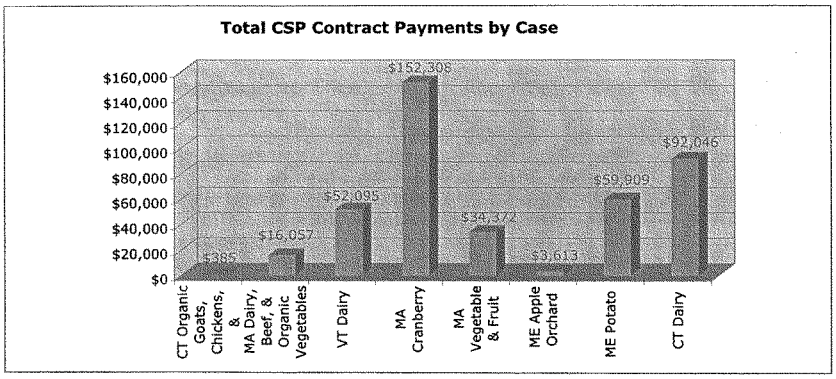
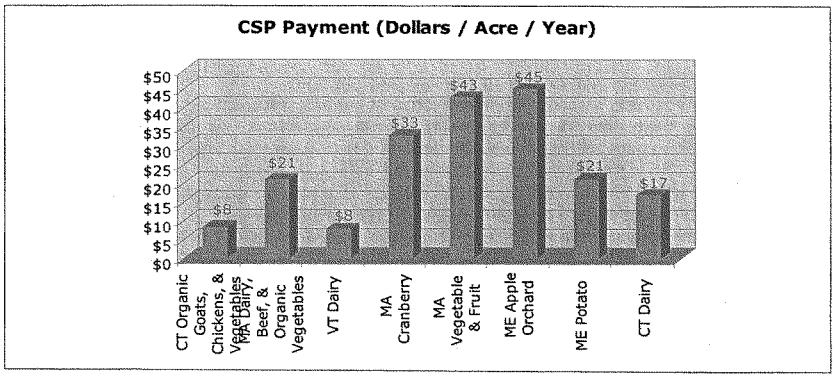


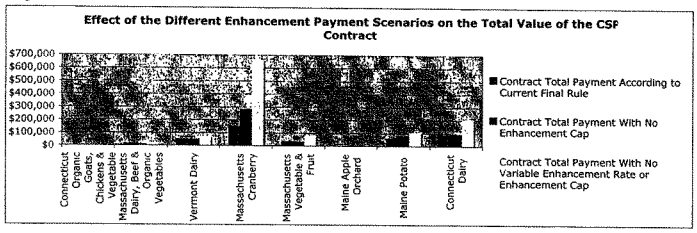
Figure 7-3.



The number of conservation practices in use on a farm will affect the number of enhancement activities for which the farmer can receive payments. Since most enhancement payments are made on a per-acre basis, medium and large farms are more affected by the cap on enhancement payments and the variable rate enhancement payment schedule. Because enhancement payments make up the bulk of contract payments for all of the farms involved in this study, the cap and variable rate on the enhancement payment have a large impact on a farm's overall payment. For farms with a ten year contract, the variable enhancement rate reduces their cumulative enhancement payment by at least 60%. Figure 7-4 illustrates the effects that the variable enhancement rate and cap on enhancement payments have on each of the farms in this study. The variable rate may also act as a perverse incentive for

farmers to delay implementing new conservation activities until after they have enrolled in CSP so that they can receive larger payments for those activities.

Figure 7-4.



For smaller farms, enhancement payment rates may not be high enough to provide an incentive to do the enhancement activity. The Connecticut organic goat, chicken, and vegetable farmer stated that the yearly payments she would receive from her 2005 CSP contract were not incentive to participate in CSP at all; she was only participating in the program because she liked the idea of CSP and wants to see the program succeed.

The use of irrigation greatly increases the payment per acre a farm can expect to receive because of the stewardship payment. Stewardship payment rates are based on the average regional rental rate for farmland, and rental rates are significantly higher for irrigated farmland. In this study, the farms that received the highest per acre payment were the Massachusetts cranberry and Maine apple farm. Both of these farms use irrigation on the entire eligible portion of the farm.

It is difficult for farmers to clearly estimate whether or not they will receive any money before they begin the extensive application process. Even if the Self Assessment workbook indicates that they meet preliminary eligibility requirements, farmers still have no way of easily predicting how much money they may receive. This is a deterrent to participation in CSP for many farmers. The Maine potato farmer felt that he would not be interested in applying for CSP if he was only going to be eligible for Tier I, because he had heard that Tier I farms did not receive a large payment.

The enrollment categories add to the farmer's inability to predict whether they will receive a CSP contract. Farmers who meet all of the eligibility requirements but do not have high enough SCI or STIR scores may discover that even though they thought they were eligible for CSP they will not receive any funds. In 2005, funds were only available to give contracts to farmers through category C-1, leaving the rest of category C, and all of categories D and E, without funding. By these standards, both the Maine potato farm and the Connecticut dairy would not receive any funds.

One NRCS agent involved in the 2005 sign up process explained that many farmers who did receive a CSP contract were surprised by how large their payments were. Like the Maine potato farmer, many farmers began the application process convinced that participation would only be worth it if they were eligible for Tier II or Tier III. The NRCS agent said, "There were a lot of misconceptions about how small payments were going to be. If people had stayed in they would have been surprised about the payment size."

"There were a lot of misconceptions about how small payments were going to be. If people had stayed in they would have been surprised about the payment size."

Achieving Conservation Goals on New England Farms

CSP effectively encourages those conservation efforts specified as "enhancement practices" by providing substantial rewards for them. Enhancement practice payments never constituted less than 48% of the total contract payment in these case studies, and were more often over 80% of the total payment.[92] The Enhancement Practices cover a breadth of categories, from soil and water to habitat and energy. These give eligible farmers an opportunity to receive payments for their current conservation practices.

Several farmers involved in this study indicated that they were willing to consider changing their conservation practices to improve their chances of being eligible for CSP, to improve their Tier, or to receive a higher enhancement payment. The Vermont dairy farmer indicated that he was planning to begin more comprehensive monitoring and record keeping on his pasture in order to enroll that land in CSP. The Maine potato grower stated that he would consider changing his crop rotation if it would increase his SCI scores and allow him to enroll more acres in CSP, but only if he qualified for Tier III. He felt that the potential payments from a Tier I or Tier II contract would not be high enough to compensate him for the loss of production that would result from changing his conservation practices. The Connecticut organic goat, chicken, and vegetable farmer said that in the process of creating her CSP contract, her NRCS agent convinced her to abandon her future plan of allowing her goats to drink from a stream on her property.

There was some hesitance on the part of other farmers in this study to change conservation practices just for CSP. The Connecticut dairy farmer said that he felt that conservation efforts on his farm were already high, and CSP payments were unlikely to be high enough to cause him to make further changes to his conservation practices. For farms such as these, the declining variable enhancement rate will only serve to diminish the size of their payments, instead of providing the incentive to add new conservation practices as it was intended to do.

The eligibility requirements of CSP draw a bold line between "the best" and "the rest", even though in reality it is hard to make such a determination. Certainly the farms that are eligible are using advanced conservation practices. But some farms may be eliminated by the eligibility requirements even though they use advanced conservation practices. The Massachusetts dairy, beef, and vegetable farm in this study is a good example of this because their organically managed vegetable acres were ineligible for CSP. The Maine potato farmer selected for this study was chosen because he is known for using advanced conservation practices on his fields. However, many of his acres were disqualified because of slightly negative scores on the SCI. The land that did have a positive SCI score would still not be likely to receive any funding, because it did not have a high enough score to get into an enrollment category that will be funded.

Currently CSP is only available to farmers who have already achieved a high level of conservation on their farm. It follows that the farmers who do not meet current eligibility standards are probably using practices that are more likely to degrade the environment. Thus, they are likely to be more in need of incentives to improve their conservation than farmers who participate in CSP. By keeping eligibility standards high, CSP may be shutting out the farmers that could make the most difference to the environment. If farmers were allowed to enroll in CSP before they met all of the eligibility requirements and instead required to meet the eligibility standards during the life of the contract, as called for in the statute, CSP could result in greater environmental improvements.

[92] CT organic goats, chickens and vegetables enhancement payments = 48% of contract total; Maine Apple Orchard = 99%.

X. Conclusions and Recommendations

Outreach

The NRCS could improve outreach for CSP. As discussed in the Synthesis section, the NRCS seems to prefer to work with farms that have a prior history working with the NRCS. This facilitates the speed of the CSP application process for both the farmer and the NRCS employees, but it also causes CSP enrollees to be farmers that may already consider themselves 'conservation minded'. **NRCS should increase CSP outreach to farmers who do not have a working history with the NRCS or who might not consider themselves 'conservation-minded' to ensure that the whole farming community is aware of the benefits of applying to the CSP program.**

Several farmers commented that they thought the CSP payments were going to be so low that it would not be worth the time required to fill out the application, but after finding out the amount of their payments, many farmers where surprised as to how high they were. The frustration felt by the Vermont dairy farmer during the application process over seemingly endless paperwork with no clear indication of expected benefits was felt by other farmers as well. **There is no mention of an 'average payment' or example payment schedules in the Self-Assessment Workbook or other CSP promotional information. One way to address this issue would be for the NRCS to utilize hypothetical farm contracts to give farmers an idea of what the potential rewards of CSP enrollment might be before entering into the program.**

The timing of the CSP application period has also been criticized in the past two years as being too short and out of sync with the growing season. Secretary of Agriculture Mike Johanns partially addressed this criticism in his recent announcement of the 2006 sign up to be held from February 13 to March 31.[93] "This year, we're providing applicants the ability to sign up prior to most planting decisions to encourage more conservation leaders." Johanns' statement is confusing in that the sign up is still open only during a short window of time during peak spring planning months. **A longer sign up period would eliminate this problem, and give the NRCS more time to reach out to new applicants and help farmers complete complicated applications.**

Overlap or conflict between CSP and other NRCS programs

During the course of this study some farmers observed that they could receive higher payments for certain activities, such as setting aside land or cost sharing for the installation of a new watering facility, through other NRCS programs. The overlap between NRCS programs causes confusion for farmers and creates extra work for NRCS employees, who must offer the same assistance through several programs, each requiring a separate application. It may make sense to eliminate the New Practice Component of CSP, and have farmers continue to rely on EQIP for cost sharing for environmental improvements to their farm. This would avoid redundancy and lower the amount of time NRCS staff spends administering these programs.

One way to streamline the programs offered by NRCS would be to use a universal application for all NRCS programs. Several farmers and NRCS employees mentioned to us that they would like to see this, a concept that one farmer referred to as **"one stop shopping". A universal application for all NRCS programs would simplify the process of providing assistance to farmers for environmental**

[93] NRCS. *Johanns Announces Sign-up for 2006 Conservation Security Program.* (NRCS News Release No. 0031.06, Jan. 31, 2006) http://www.nrcs.usda.gov/ (Accessed February 2005).

improvements, and help NRCS staff identify which programs could be used to help each farmer. The NRCS could conduct a benchmark inventory of a farm at the beginning of the process, similar to the one currently conducted for CSP, and then use the results to determine which programs farmers could participate in. This would minimize the paperwork needed for each program, which would help alleviate another common complaint about CSP.

A universal application for NRCS assistance would also encourage farmers to participate in programs that they would not have initially considered participating in. Farmers who do not regard themselves as conservation oriented might not investigate what they would need to do to participate in CSP, but some of those farmers might be surprised to learn that after completing an EQIP contract or making a few other changes to their farm that they could enroll.

Payment Size

As mentioned earlier, some farmers who received CSP contracts for 2005 found that payments were substantially higher than they expected, even if they were only enrolled in Tier I. Farmers may have expected to receive such small payments because of the small size of the stewardship payment rate, but the bulk of their payments was greatly increased by available enhancement activities.

Despite this, the size of the contract payment is still artificially lower than it needs to be. None of the payments (actual or hypothetical) farmers in this study received reached the overall Tier caps. This was because the annual payment amounts were greatly reduced by the variable enhancement rate, and the individual caps on enhancement payments, stewardship payments, and new practice payments. These caps were not called for in the statute, and greatly lower the amount that farmers can expect to receive. They also add significantly to the complexity of administering the program. **With the exception of the overall Tier caps, all caps should be removed. In addition, the variable enhancement rate should be eliminated. This would significantly increase the amount of assistance that all farms could expect to receive from CSP.**

Contract payments were lower than they could have been due to the absence of new practice payments. **The NRCS should allow farmers to actually sign up for new practice payments, which are currently only a part of the program on paper.**

The small farms in this study received very low payments, particularly the Connecticut organic goats, chickens, and vegetable farm. This farm will receive only $385 over the course of the 10 year contract, starting with a payment of $88 in year 1 and ending with payments of $17 in years 7-10. This payment is hardly worth the hours that both the farmer and the NRCS spent on the application. Such a small payment size could be a deterrent to enrollment for small farms.

In the paper *Assessing and Developing the Opportunities for Green Payments Programs for Maryland's Farmers,* Heller et al suggest that one way to make stewardship payments more equitable and foster the participation of small farms in CSP would be to establish a payment floor for the stewardship payment.[94] This would ensure that even small farms in areas with low rental rates would be adequately compensated. Heller et al suggest a payment floor of $500 per year for farms under 50 acres and $1000 per year for farms over 50 acres. This payment floor would make payments more equitable and encourage the participation of small farms.

Targeting

Initially, implementing a conservation-oriented program using boundaries of environmental significance seems to make sense. Counties or conservation districts, which are used more typically in other NRCS-administered programs, are boundaries that hold political significance, not environmental. However, it is unclear to what extent environmental significance played a part in the decision to use a watershed-based sign-up to implement the CSP. The decision seems to be guided more by the desire to

[94] Heller et al.

focus funding and resources in select areas, allowing higher priority areas to be targeted and contracts to offer more substantial payments than would be the case with a nationwide sign-up. Due to the limited funding of the CSP, the watershed rotation serves as a strategy "to reduce the administrative burden on applicants while it reduces the technical assistance costs associated with NRCS and its technical service providers."[95]

To date, the watershed-based approach has not been implemented in a manner consistent with the NRCS' stated logic for choosing such an approach. Although it does provide the flexibility to adapt to available funding, it is unclear how the use of watershed boundaries provides any environmental benefits. The process in which watersheds are evaluated to fulfill stated selection criteria is not transparent.

Logistically, it is very confusing to both NRCS and to farmers interested in applying for participation in the CSP. Operations with fields in more than one watershed are particularly burdened by this system of organization. **Unless the advantages of a watershed-based approach are utilized, the NRCS should return to using traditional county lines to select districts for participation in CSP. If a watershed-based approach sign-up continues to be used, the selected watersheds should be announced one full year in advance and opened up to a longer sign-up period.** This would allow NRCS to realize their stated intent of spreading out their workload by promoting the program and preparing farmers well in advance.

Eligibility

The SCI is essentially a quantitative measure of the expected trend in soil organic matter. Similarly, the IEI and WQ Tool are also quantitative assessments of irrigation practices and water quality, respectively. Currently, the SCI score is the most limiting eligibility requirement for farmers interested in participating in the CSP. Farms which till more intensively, typically vegetable farms and organic farms, are predominantly vulnerable to ineligibility based on a negative SCI score. Quantitative measures such as these should be used as "baseline" assessments and should not be the sole basis for excluding farmers from the program. Quantitative measures must be balanced with more individualized, qualitative measures for eligibility and both should first be considered for a farm to be deemed ineligible to apply. Examples of additional factors not considered by SCI include the quality of organic matter, salinity, surface structure, nutrient management, biota, contaminants, runoff, and compaction. **Some organizations, including the Sustainable Agriculture Coalition (SAC), have suggested using the Soil Quality Index (SQI) in addition to the SCI in order to have a more balanced assessment of on farm soil conservation efforts.[96] The NRCS needs to seriously consider using the SQI to improve their methods for determining whether a farm meets soil quality eligibility requirements. Alternately, more flexibility and autonomy in implementation could allow regional or state NRCS offices to make changes to meet the needs of their farmers as necessary.**

Our case studies have convinced us that New England has and will continue to benefit from the CSP. We believe green payments are the future of agricultural support. While there are numerous implementation challenges and opportunities to improve the program, the bottom line is that farmers are being rewarded for stewardship. Many of the program difficulties identified in this report are a function of insufficient funding that has led to rules that deviate from the original statute and contorted bureaucratic efforts to distribute limited resources. As we approach the 2007 farm bill debate, we urge policymakers to be optimistic about the future of the CSP and to undertake a renewed effort to provide full funding for the program.

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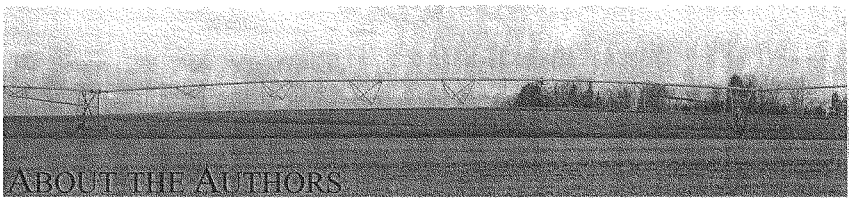
[95] NRCS, Key Points, *"Watershed Approach for the Conservation Security Program."* http://www.nrcs.usda.gov/programs/csp/watershed_approach_reasons.html http://www.nrcs.usda.gov/programs/farmbill/2002/pdf/Formatted_CSP_Watershed_Key_Points.pdf (Accessed February 2006).

[96] Sustainable Agriculture Coalition. *Comments of the Sustainable Agriculture Coalition Submitted to the NRCS of the USDA concerning the Amended Interim Final Rule for the CSP.* (Sustainable Agriculture Coalition, Sept 9, 2005).



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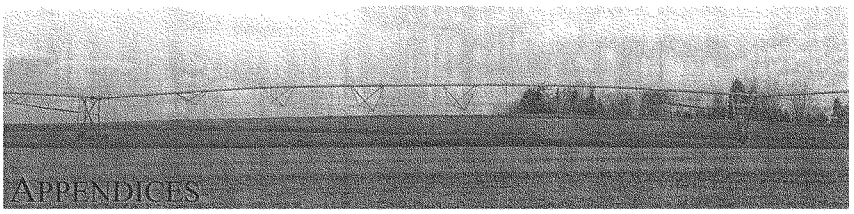


Appendix A: 2005 Stewardship Payment Rates for Participating New England Watersheds

State	Watershed	Land Category	Tier I	Tier II	Tier III
Connecticut	Quinebaug Watershed	cropland	0.86	3.45	7.76
		irrigated cropland	1.54	6.15	13.84
		pasture	0.3	1.2	2.7
	Shetucket Watershed	cropland	0.84	3.35	7.54
		irrigated cropland	1.46	5.85	13.16
		pasture	0.31	1.25	2.81
Maine	Piscataquis	cropland	0.54	2.15	4.84
		irrigated cropland	0.75	3	6.75
		pasture	0.26	1.05	2.36
		range	0.06	0.25	0.56
	Presumpscot/ Casco Bay Watershed				
		cropland	0.49	1.95	4.39
		irrigated cropland	1.28	5.1	11.48
		pasture	0.24	0.95	2.14
		range	0.06	0.25	0.56
Massachusetts	Farmington	cropland	0.73	2.9	6.53
		irrigated cropland	1.29	5.15	11.59
		pasture	0.4	1.6	3.6
	Housatonic	cropland	0.66	2.65	5.96
		irrigated cropland	1.16	4.65	10.46
		pasture	0.4	1.6	3.6
	Ipswich	cropland	0.75	3	6.75
		irrigated cropland	1.85	6.6	14.85
		pasture	0.29	1.15	2.59
	Merrimack	cropland	0.63	2.5	5.63
		irrigated cropland	1.43	5.7	12.83
		pasture	0.24	0.95	2.14

New Hampshire	Black-Ottauquechee	cropland	0.5	2	4.5
		irrigated cropland	1.14	4.55	10.24
		pasture	0.21	0.85	1.91
	West River	cropland	0.54	2.15	4.84
		irrigated cropland	1.16	4.65	10.46
		pasture	0.19	0.75	1.69
	Upper Ct-Mascoma	cropland	0.55	2.2	4.95
		irrigated cropland	1.23	4.9	11.03
		pasture	0.23	0.9	2.03
Rhode Island	Pocasset Watershed	cropland	0.85	3.4	7.65
		irrigated cropland	1.63	6.5	14.63
		pasture	0.3	1.2	2.7
		range	0.05	0.2	0.45
Vermont	Otter Creek	cropland	0.41	1.65	3.71
		irrigated cropland	0.91	3.65	8.21
		pasture	0.19	0.75	1.69
	West River	cropland	0.54	2.15	4.84
		irrigated cropland	1.16	4.65	10.46
		pasture	0.19	0.75	1.69

Appendix B: Farmer Interview Questions

FARM/FARMER:
DATE OF INTERVIEW:

YOUR FARM

1. What type of farm do you have?
2. How many acres is your farm?
    a. How many acres do you own?
    b. For rented land, what do you pay in rent per acre?
    c. Are rental agreements season to season, or for a longer period?

YOUR FARM AND CSP

1. How did you first hear about the CSP?
2. Are you involved in any other government payment programs? Which?
3. Is your land in a watershed which was eligible for the 2005 CSP sign-up? **(No, go to Q. 4)**
    a. Why did you apply for CSP?
    b. How many hours did you spend on the CSP application? How much did you receive help from the NRCS? Was the time spent on the application worth the payment received?
    c. When you applied, what were your expectations of your payment from the CSP?
        i. Per acre?
        ii. Lump sum?
        iii. Cost share? (As a percentage)
    d. Were you enrolled in CSP?
    e. What was the amount of your total annual payment?
    f. How did the actual amount compare to what you expected to receive?

THE CONSERVATION SECURITY PROGRAM

g. Do you have any conservation practices that you did not receive funding for? (either as enhancement payments or new practice payments)

h. Are there conservation practices that you are considering adding in the upcoming years to increase your CSP payment?

i. When does your contract run out?

j. Will you apply again when your contract runs out?

i. Why or why not?

k. Are there any changes that you would like to see made to CSP?

4. If your land has not yet been in an watershed eligible for sign-up in the CSP:

a. Are you interested in applying for CSP when it comes to your watershed?

i. If not, why not?

b. What would be an appropriate/helpful payment amount for you to receive from the CSP?

i. Cost share?

CSP IMPRESSIONS

1. What were your first impressions of CSP (two years ago)?
2. How have your impressions of CSP changed in the last two years, since sign-ups began?
3. Does CSP provide an incentive to you to increase or change your conservation practices?

GOVERNMENT FARM PAYMENTS

1. In your opinion, on which farmer/farm characteristics should government farm payments be based:

a. The type of crop you grow

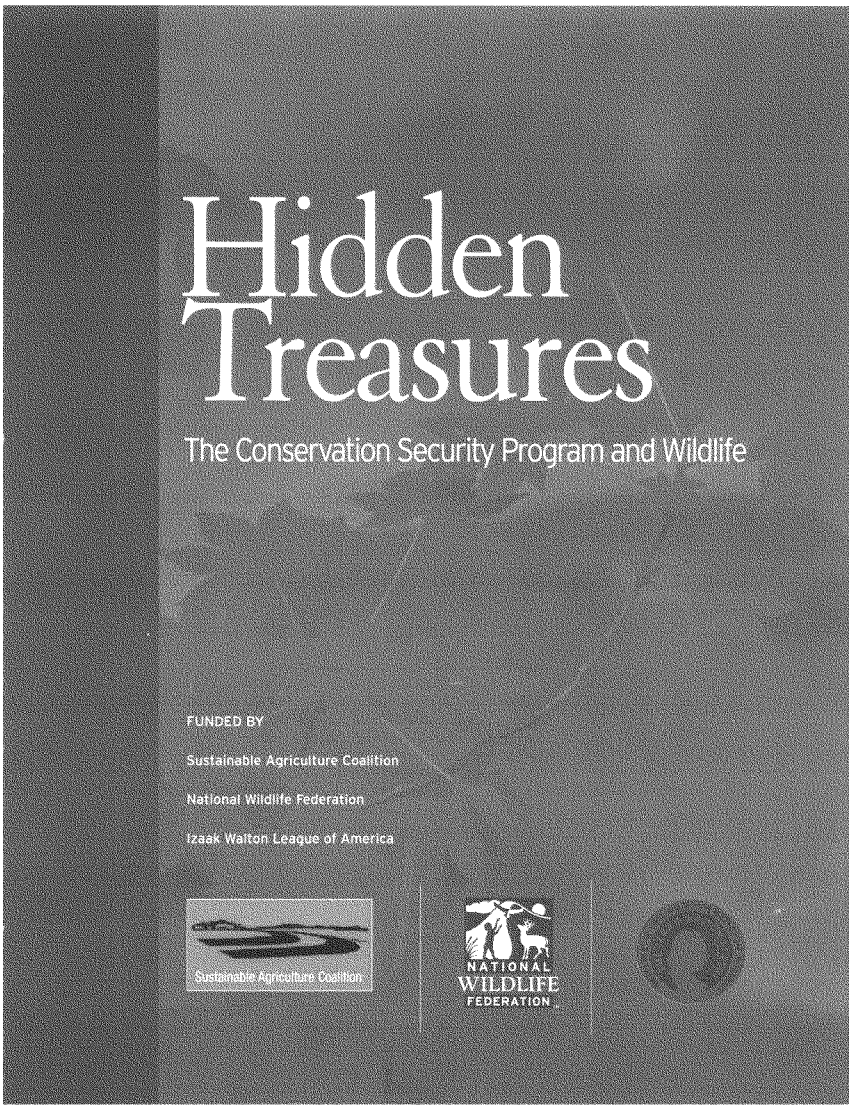
b. The market price of a crop

c. Whether a farmer does any conservation farm practices

d. The money a farmer spends on conservation practices

e. Other:

2. In your opinion, what are two or three ways you would like to see farm programs change in the future?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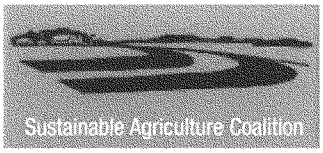

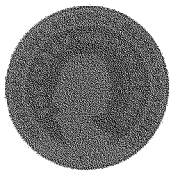

This report was funded by the Sustainable Agriculture Coalition, National Wildlife Federation, and Izaak Walton League of America, to gain information about the relative benefits of the Conservation Security Program for fish and wildlife.

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The principle author, Duane Hovorka, is a public policy consultant who has experience in the analysis of state and federal policies impacting agriculture and wildlife. Errors and omissions are, of course, to be blamed on the author alone.

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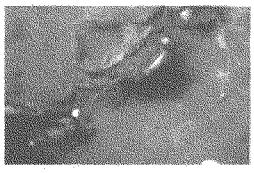


Congress enacted the Conservation Security Program (CSP) in the 2002 Farm Bill to reward farmers and ranchers for natural resource and environmental benefits provided to society, including the restoration and maintenance of wildlife habitat. This report focuses on the relative benefits of the CSP for fish and wildlife in light of its subsequent funding by Congress and implementation by USDA's Natural Resources Conservation Service. The report provides a brief overview of the Conservation Security Program's structure and payments, and then examines the role of conservation measures funded by the program in meeting the needs of wildlife.

The report includes case studies of potential wildlife benefits provided by the Conservation Security Program in six states and the Chesapeake Bay region and a cursory review of wildlife benefits which may result from the 2006 CSP sign-up in other states.

According to the USDA data, 81 percent of CSP payments in 2005 were in the form of "enhancement" payments, and on a national basis 7 percent of enhancement payments in 2004 and 8 percent of enhancement payments in 2005 were for USDA-designated Habitat Management practices. However, many conservation practices address more than one resource concern. *Based on our analysis of the data provided by USDA, it appears that roughly one-half of Conservation Security Program payments resulting from 2006 contracts will provide either wildlife habitat benefits, or pesticide reduction practices that benefit some wildlife.*

In some of the case studies, the percentage was much higher. In Missouri and Minnesota, for instance, 88 and 85 percent of CSP payments from 2006 contracts are for practices that either provide wildlife habitat benefits, or reduce pesticide use in ways that benefit wildlife. On the other hand, some states scored far lower on wildlife benefits. For example, in Nebraska, 26 percent of payments resulting from 2006 CSP contracts are for practices that provide wildlife habitat, or reduce pesticide use in ways that should benefit some wildlife. In other states not among our case studies, the percentage appeared to be lower still.

The findings of the report include:

1) The Conservation Security Program pays for practices that provide substantial wildlife benefits;
2) Conservation Security Program wildlife benefits vary considerably from state to state; and
3) The Conservation Security Program could provide even greater wildlife benefits.

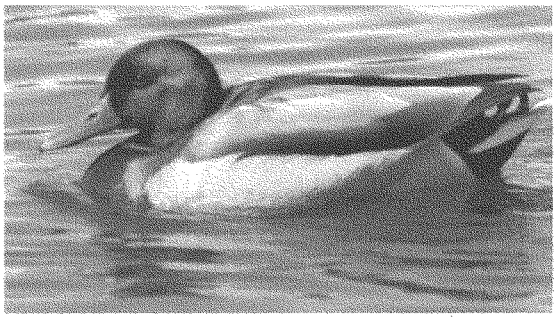
The report recommends the following improvements to the Conservation Security Program:

- Congress should substantially increase CSP funding so that farmers and ranchers on a nationwide basis have timely enrollment opportunities;
- Congress should direct USDA to provide cost-share for new practices under the CSP and to do so at the same rate as provided by other USDA programs;
- All CSP Tier II and Tier III contracts should address wildlife habitat as a resource of concern, and the emphasis on wildlife should be increased in Tier I contracts;
- USDA should expand the number and variety of wildlife conservation practices available in each watershed, and should continue to define new wildlife-related practices including practices that address high priority fish and wildlife species;
- USDA should provide for the involvement of wildlife agencies and organizations with landowners contemplating CSP enrollment early in the CSP application process;
- USDA should undertake ongoing review of CSP enhancement payment rates to ensure both that farmers and ranchers are adequately rewarded for their wildlife conservation efforts, and that taxpayers are being asked to provide only fair compensation, not excessive payments;
- USDA should ensure that all NRCS State Conservationists establish CSP standards and resource criteria for wildlife that provide a consistently high level of wildlife benefits; and
- USDA, working with organization and state agency partners, should establish a scientifically valid and robust monitoring and evaluation initiative to measure actual outcomes of the conservation practices it funds.

Introduction

The Conservation Security Program

When Congress enacted the Conservation Security Program as part of the 2002 Farm Bill, it culminated over two decades of discussions on the need to create a program that rewards farmers for the natural resource and environmental benefits they can provide to society, including wildlife habitat. It was also designed to address a desire expressed by farmers to have a single, comprehensive conservation plan for their farm.



As enacted, the Conservation Security Program was to be available nationwide, open to every farmer and rancher in America willing to meet exceptional natural resource and environmental quality standards. The program was to be made available without a bidding or ranking process like that used in many other USDA conservation programs. Instead, the program would enroll any farm operator willing to implement and maintain conservation systems that achieve or surpass the highest standards developed by the Natural Resources Conservation Service (NRCS) for each resource concern. The program was designed to be open to farmers and ranchers, without regard to the particular crops or livestock they produce.

Three tiers of payments provide rewards that increase as participants agree to provide higher levels of conservation benefits. The first tier allows for partial farm enrollments, while tier two and three require the whole farm to be enrolled. The number of resource concerns that must be addressed to reach the sustainable or "non-degradation" level increases at each tier.

Participants at the Tier III level (the highest level of contract payments) must put in place plans to address every natural resource concern on their entire farm or ranch. Wildlife habitat, nutrient management, pest management, soil conservation, water quality, air quality, grazing management, energy conservation and other natural resource concerns all need to be addressed to the highest NRCS standard, on an entire farm or ranch, to earn a Tier III contract.

As passed, the Conservation Security Program (CSP) was projected to become the second largest conservation program at the United States Department of Agriculture (USDA), behind the Conservation Reserve Program ($2 billion per year), with more than $1 billion per year in funding. (The Environmental Quality Incentives Program (EQIP) also has an annual funding level of more than $1 billion per year, but EQIP funding covers the full length of EQIP contracts signed in a given year, whereas CRP and CSP annual funding amounts cover the contract payments for a given year, not for the entire length of the contract.)

Unfortunately, since passage of the 2002 Farm Bill, Congress has enacted annual CSP funding caps through riders on the annual agriculture appropriations bill. In Fiscal Year 2006, for instance, Congress limited Conservation Security Program funding to $259 million, much less than the Conservation Reserve Program ($2 billion) or the Environmental Quality Incentives Program ($1 billion), and

slightly more than the Wetlands Reserve Program ($246 million). In addition, Congress placed long term caps on CSP funding, first as a budgetary offset to emergency farm disaster aid, and then as part of budget reconciliation legislation. Combined with the annual caps, Congress has reduced funding for the CSP by $4.3 billion compared to the funding originally made available by the 2002 Farm Bill.

USDA has also been slow to implement the program. The 2002 Farm Bill funded Conservation Security Program (CSP) signups in 2003, but the USDA's first CSP signup was not held until July, 2004. As USDA's rule-making process dragged on and the Administration failed to spend CSP funding, Congress proceeded to restrict funding for the program. With restricted funding, USDA opted to limit CSP enrollment to specified watersheds. USDA offered Conservation Security Program signups in 18 pilot watersheds in 2004, 220 watersheds in 2005, and 60 watersheds in 2006. Increasingly, USDA has turned down eligible applicants to keep program costs down.

Nonetheless, through the first three years of the program, USDA has awarded almost 19,400 CSP contracts on nearly 16 million acres of land in 280 selected watersheds, or about 12 percent of total US watersheds.

CSP Signup	Watersheds Eligible	Farmers in Watershed	Eligible Applications	Contracts Approved	Percentage Approved
2004	18	27,300	2,188	2,188	100%
2005	220	235,000	14,516	12,700	87%
2006	60	75,000	8,570	4,404	51%

CONTRACT FLEXIBILITY

The Conservation Security Program is designed to allow contract holders to increase their payments during the term of their contract by putting in place additional measures that benefit natural resources. For instance, participants in Tier I can enroll additional land in the program, add new conservation activities, increase the number of resource concerns being addressed, or move from Tier I to II to III during the term of their contract. In June, 2006, the USDA announced that participants who signed CSP contracts in 2004 had offered to amend their contracts, by adding more enhancement practices and bringing additional acres of land under the program. In return, USDA will add $12.7 million in payments to their contracts, an increase of nearly 50 percent. Habitat Management enhancement payments increased, from just under $1 million in 2004 to $2.6 million in 2006, as a result of the contract modifications.

The ability to modify contracts is particularly important in light of the fact that USDA has not allowed cost-share payments to install new conservation when they first sign up for a contract, as provided for in the Farm Bill. USDA has instead deferred support for new practices to the contract modification process. Some of the most popular contract modifications have been in habitat management practices. However, in July, 2006, USDA announced that upgrades for contracts signed in 2005 would be restricted. These restrictions on upgrades could reduce the future potential to obtain similar increases wildlife benefits on farms and ranches already in the program. Those contract modifications will not be announced until later in 2007.

VIEW FROM THE FARM

Where the USDA has offered CSP signups, the response has generally been strong. For example, in 2005, of the 2,724 farms located in the two watersheds in Maryland (the Chester-Sassafras and Monocacy) eligible for Conservation Program enrollment, 1,002 farmers sought information on the program, 700 attended workshops, 398 actually applied, and 377 were enrolled in the program. That represents a very high response for a new conservation program, especially since a substantial number of those not applying or enrolling likely realized their existing conservation efforts were not strong enough to meet the CSP standards and therefore did not try to

enroll. An important long-term question for the program is whether a significant number of those farmers might increase their conservation effort in order to qualify the next time the program is available to them.

In 2005, the USDA surveyed farmers who had obtained Conservation Security Program contracts in the first (2004) signup.[1] *The Conservation Security Program scored an 83 (out of 100) on how willing participants were to say positive things about the program, which the survey report said "is a relatively high score for a new program."*

On a question of how likely it is that the Conservation Security Program will influence farmers and ranchers to modify their agricultural operations in the future, the CSP scored a 77, and the report noted "this score should increase with the maturity of the program."

The survey did note "the only area of concern among the attributes measured relates to the staff's knowledge about the CSP. NRCS may wish to provide additional training for the program to state and local staff since participants rely on local resources for the majority of their information."

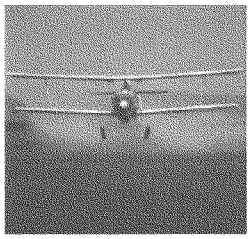
CONSERVATION SECURITY PROGRAM PAYMENT STRUCTURE

The Conservation Security Program as enacted provides for four types of payments to participants. Base payments were intended to give farmers incentives to sign up for the program. Maintenance payments were designed to cost-share the annual management and maintenance cost of maintaining beneficial practices (e.g., implementing integrated pest management or maintaining fences once installed). New practice cost-share payments were intended to provide incentives for farmers to adopt new practices, by paying for a portion of the installation/adoption cost. Enhancement payments were intended to reward innovative practices, like resource-conserving crop rotations, managed grazing, and conservation buffers.

In implementing the program, the USDA took a very different approach than was envisioned in the legislation. Base payments were set at a small fraction of the per-acre rates provided for in the legislation. Instead of setting maintenance payments based on a farmer's cost of maintaining a specific practice, USDA used 25 percent of the base payment as a proxy for maintenance rates rather than tying them to specific practices. Cost-share payments for new practices were eventually set at 50 percent, a lower rate than for many of the same practices in other USDA programs. Moreover, USDA officials said they expected other USDA programs to provide cost-share for farmers and ranchers to establish new practices and therefore have not actively implemented even the reduced 50 percent cost-share.

The USDA focused the bulk of Conservation Security Program payments on enhancement payments. Using practices from the USDA field office technical guide, and some new conservation practices and activities identified by NRCS State Conservationists and State Technical Committees, USDA established enhancement payment rates. In 2005, 81 percent of all Conservation Security Program payments were for enhancement payments.

Wildlife Benefits of Conservation Security Program Contracts



Although a landowner must meet resource concern quality standards and conservation practice standards to get a Conservation Security Program contract, which for some Tier I, most Tier II, and all Tier III participants includes wildlife habitat, neither base payments nor maintenance payments are based on specific practices that could be identified as either benefiting wildlife or not. This report therefore focuses on an analysis of the wildlife-related benefits provided by Conservation Security Program enhancement payments, in an attempt to assess the impact of the program as implemented by USDA on fish and wildlife. Enhancement payments represented 81% of Conservation Security Program payments in 2005, and virtually all the payments tied to particular conservation practices.

The USDA identified nearly 1,900 enhancement practices for Conservation Security Program purposes that were used in the 2006 signup, including state-specific practices. Those were divided into 11 categories: Habitat Management, Grazing Management, Pest Management, Nutrient Management, Air Management, Drainage Management, Energy Management, Plant Management, Salinity Management, Soil Management, and Water Management.

Habitat Management practices were designed specifically to benefit wildlife. They include practices that provide habitat components, such as converting introduced plant species to native species to benefit wildlife, or providing nest boxes or bat houses. They also include practices that directly benefit wildlife, like using fish screens when withdrawing irrigation water from streams, or using flusher bars when mowing to protect grassland birds.

Habitat Management enhancement payments represented about 7% percent of all enhancement payments in the USDA's first (2004) signup, and 8% in 2005.[2] However, using that percentage alone would substantially understate the level and kind of wildlife-related benefits provided by the Conservation Security Program.

Grazing Management practices can provide wildlife benefits. Research has shown higher numbers and diversity of grassland birds on lands managed using a rotational grazing strategy, where livestock are moved from paddock to paddock, versus whole-field grazing. Stream and pond habitat can be protected by restricting livestock access; brush management can improve habitat for grassland birds like prairie chickens; and restoring native plant species on native prairies can benefit bird and butterfly species.

Nutrient Management practices can provide benefits to wildlife. Where vegetative buffer strips are installed between crop fields and streams to protect streams from nutrient runoff, those buffers can also provide cover for birds, and habitat for butterflies and deer. Reducing the use of phosphorus can benefit stream habitat, because phosphorus tends to bind with soil particles and get washed into streams when it rains. Although nitrogen runoff can be a problem in some places, in many cases nitrogen not used by crops either goes up into the air, or down into the groundwater. To be conservative, we did not count most nitrogen reduction strategies as providing wildlife habitat benefits in our analyses.

Some pest management practices, like using vegetative buffer strips between crop fields and streams, can also provide refuge areas for wildlife. We counted those practices as providing wildlife habitat benefits.

Pest Management practices that reduce (or eliminate) the use of pesticides can also provide benefits for fish and wildlife, by reducing harm to non-target species. Commonly used pesticides like atrazine have been shown to harm aquatic species. Research has shown that organic corn production results in higher numbers and higher diversity of bird species than conventional corn production.

KEY CSP PRACTICES THAT BENEFIT WILDLIFE

- Rotational Grazing
- Remove Invasive Plants
- Prescribed Burning
- Wildlife Habitat Index
- Quail Habitat Index
- Buffer Strips Along Streams Border Strips and Filter Strips
- Leave Crops Un-harvested
- Leave Forage Un-harvested Plant Food Plots
- Barrier-Free Antelope Habitat
- No Haying in Nesting Season
- Use Flush Bars When Haying
- Avoid Bush-Hogging Residue
- Plant Winter Cover Crops
- Non-Chemical Pest Methods
- Integrated Pest Management
- Conservation Crop Rotations
- Spot Spraying (v. Whole-field)
- Manage Open Water for Birds
- Limit Livestock Access to Streams and Wetlands

Extensive use of pesticides can substantially reduce insect populations that serve as a food base for pheasants and other birds. Research has documented the importance of insect availability for pheasant survival.[3]

In this report, we counted practices like buffer strips that provide habitat areas as providing wildlife habitat benefits. We provided separate information on practices that should

benefit some wildlife species by reducing pesticide use (e.g., using organic methods, or spot-spraying instead of whole-field spraying). We did not count practices that do not appear to have a substantial positive impact on wildlife, like precision agriculture methods or planting insect-resistant varieties.

Other categories of Conservation Security Program enhancements appear to provide few or no substantial wildlife benefits. For example, Air Management practices that reduce dust or odors from concentrated livestock facilities would appear to have little direct benefit for wildlife. Practices that reduce energy use may contribute in some small way to reduced global warming, but would appear to have little direct impact on local wildlife. We generally did not count no-till or reduced-till methods as having direct wildlife benefits, although with some crops they can leave some additional winter cover for wildlife. A few grazing management practices, like over-seeding (non-native) cool-season grasses into a (native) warm-season pasture could actually work against some native grassland species.

Overall, nearly all of the Habitat Management enhancement practices appear to have direct benefits for wildlife. About two-thirds of the Nutrient Management practices, and half of the Grazing Management practices, appear to provide wildlife habitat benefits. Some Pest Management practices provide wildlife habitat benefits (e.g., buffer strips), and about two-thirds of the Pest Management practices appear to provide reductions in pesticide use that should benefit at least some wildlife species.

In general, it appears that few of the Air Management, Plant Management, or Soil Management enhancement practices provide direct wildlife benefits. None of the Drainage Management, Energy Management, Salinity Management, or Water Management practices appear to provide direct wildlife benefits.

TIER III CONTRACT REQUIREMENTS

To be eligible for a Tier III Conservation Security Program contract, an applicant must show they have addressed all the relevant natural resource concerns on their farm or ranch, including wildlife. In a 2006 report, the United States Government Accountability Office said the wildlife habitat criteria, used by Natural Resource Conservation Service state offices to decide which farmers are eligible for Tier III contracts, were not consistent.[1] The report said:

"For the fiscal year 2004 CSP sign-up, according to NRCS, state offices developed wildlife habitat assessment criteria that were extremely variable, contributing significantly to differences in Tier III participation and payments among the various watersheds. For example, among the nine watersheds where cropland was the predominant type of land enrolled, the percentage of payments going to Tier III contracts ranged from 0 to 75 percent. In response, NRCS developed national guidance that its state offices were to follow in creating wildlife habitat assessment criteria. However, we found—and NRCS officials agreed--that some state offices developed and applied criteria for the fiscal year 2005 sign-up that were inconsistent with the national guidance. For example, the criteria used in watersheds under these states' jurisdiction did not require that a minimum percentage (as determined by the relevant state office) of a producer's operation be non-crop vegetative cover, such as grassy or riparian areas managed for wildlife, as specified in the national guidance. Thus, producers in these watersheds were eligible for Tier III payments even though they may not have satisfied criteria for one of the resource components that the national guidance specifies is necessary for eligibility.... Finally, the use of criteria that are inconsistent with the national guidance not only weakens CSP cost control measures by making more Tier III payments possible, it also reduces NRCS's ability to ensure that CSP is achieving its intended wildlife habitat benefits."

In our discussions with state wildlife officials, they echoed this concern that applicants in some states in 2004 were awarded Tier III contracts with only minimal effort to address wildlife concerns. An internal USDA team reviewed the GAO report and the eligibility criteria being used by NRCS state offices, and in October, 2006, issued guidance designed to ensure that the wildlife eligibility criteria used at the state level meets minimum national standards. It appears improvements have been made in this area, but given the initial inconsistencies, it deserves annual evaluation and continuing improvement.

QUANTIFYING WILDLIFE BENEFITS

Using information provided by the USDA on the 2006 Conservation Security Program signup, we have attempted to quantify the wildlife benefits provided by the program. The Case Study states were selected to obtain a diverse mix of watersheds. They represent different regions of the United States, areas with very different agricultural systems, and signups that were both relatively large and small in terms of dollars and contracts.

The Conservation Security Program is a new program, so we are not able to assess the actual impact of implemented contracts on habitat or wildlife. Of course, without careful monitoring and evaluation, we cannot measure the impact of the Conservation Security Program or any other program on wildlife, water quality, or other resources. What we assess in this report is how Conservation Security Program funds will be spent based on approved contracts, and what reasonable expectations there can be for wildlife-related benefits resulting from those contracts.

In this report, we provide information on the total contract payments that were made based on enhancements that appear to provide wildlife or wildlife habitat benefits. We also provide information on the payments made for strategies that provide for a reduction in pesticide use. The Case Studies should provide readers with an idea of the kinds of wildlife-related enhancement practices funded through the program. Where we had access to local payment rates, we also provided estimates of the acres impacted by each practice, to provide a sense of the reach of the program within the watershed.

We caution the reader that Conservation Security Program contracts are fluid over time. As noted above, in June, 2006, the USDA announced that participants who signed CSP contracts in 2004 had offered to amend their contracts, adding more enhancement practices and bringing additional acres of land under the program. In return, USDA would add $12.7 million in payments to their contracts. Habitat Management enhancement payments increased, from just under $1 million in 2004 to $2.6 million in 2006, as a result of the contract modifications. Therefore, it reasonable to expect wildlife benefits from each annual signup to improve over time.

Some organizations have questioned whether the Conservation Security Program produces substantial net benefits for wildlife, because the program rewards some farmers who have already adopted high levels of resource conservation. Farmers and ranchers who previously adopted wildlife-friendly practices at their own expense might argue that it is unfair to deny them incentive payments that others will receive — accompanied by cost-share payments in many cases — for adopting those same practices today.

In implementing the Conservation Security Program, USDA largely ignored its authority to provide cost-share to encourage the installation of new practices, like planting buffer strips or restoring wetlands. Were USDA to use cost-share for new practices more extensively, it would be far easier to determine what new practices are resulting from the program.

Some of the enhancement practices funded through the Conservation Security Program do require the installation of new practices (for example, expanding the width of a riparian forest buffer, creating shallow wet areas for wildlife, fencing out livestock to protect streams, or converting areas with introduced plants to native species to benefit wildlife). CSP enhancement payments can also be made for taking actions that forego profits and benefit wildlife, such as leaving un-harvested crops in the field to provide food and winter cover for wildlife (crops that would otherwise be harvested).

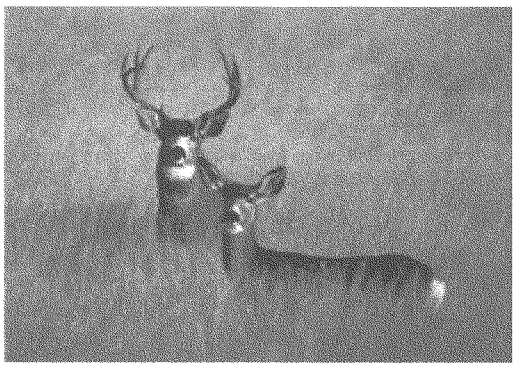
In general, in our discussions with farmers and USDA employees, they told us that almost every person who gets a Conservation Security Program contract will install some new suite of practices, or change some existing practice, as a result of the contract. Clearly, the program is paying for more than just maintaining existing wildlife benefits.

Findings

FINDING 1: THE CONSERVATION SECURITY PROGRAM PROVIDES SUBSTANTIAL WILDLIFE BENEFITS

Based on our evaluation of the information provided by the USDA for the 2006 signup, more than half of the payments made under the Conservation Security Program are for practices that either provide habitat benefits for wildlife, or reduce pesticide use in ways that benefit wildlife.

It is also clear that Habitat Management enhancements represent only a small share of the wildlife-related benefits that result from the program. Wildlife habitat benefits were provided through Habitat Management, Grazing Management, and to a lesser extent Nutrient Management and Pest Management enhancements.



The largest enhancement category in terms of dollars is Pest Management. Most of those funds were for practices that reduce or eliminate pesticide use in ways that benefit some fish or wildlife.

Our seven case studies represent a projected $102 million in Conservation Security Program payments over the next 10 years, representing about 24 percent of the total projected payout in all states for CSP contracts signed in 2006.

For every dollar USDA will spend on Conservation Security Program contracts in our case study watersheds, about 16 cents will pay for Wildlife Management enhancements, and another 19 cents will pay for enhancements that provide other wildlife habitat benefits (through Grazing Management, Nutrient Management, or Pest Management enhancements). Another 17 cents will pay for practices that will reduce pesticide use and benefit some fish and wildlife. 27 cents will pay for practices that address other resources (e.g., soil conservation), and 21 cents will go for base payments and maintenance payments. In other words, 35 percent of total payments provided wildlife habitat benefits, and including pesticide

reduction activities that should benefit some wildlife, 52 percent of CSP payments should benefit wildlife.

Based on our analysis and the USDA's publicly released nationwide data, we believe that roughly one-half of Conservation Security Program payments provide either wildlife habitat benefits, or pesticide reduction practices that benefit some wildlife. However, given the higher ratio of pest management payments in all states, compared to our case study watersheds, we believe that nationwide numbers would show relatively more pesticide reduction, and relatively less wildlife habitat benefits, than are indicated by totaling the data from our case study watersheds, shown above.

FINDING 2: WILDLIFE BENEFITS VARY CONSIDERABLY FROM STATE TO STATE

Based on our case studies, and on a cursory review of the results of the 2006 signup in other states, the percentage of Conservation Security Program spending that appears to provide wildlife habitat and pesticide reduction benefits varies considerably from state to state. At the top of our case study list is the 2006 Missouri Conservation Security Program signup in the Spring River watershed, where 73 percent of the total Conservation Security Program spending (through 2015) is for practices that we believe have direct wildlife habitat benefits, and another 15 percent is for practices that benefit wildlife by reducing pesticide use.

At the bottom of our case study list is Nebraska, where payments for practices that provide wildlife habitat benefits represent just 17 percent of total Conservation Security Program payments, and payments for enhancement practices that reduce or eliminate pesticide use and thus benefit some wildlife species totals 9 percent of payments. Several other states that were not chosen for case studies appeared to have even lower percentages. However, without a closer examination, we cannot determine whether some of the Conservation Security Program contracts in those states might have provided local fish or wildlife benefits that were not captured in our categorization, or what other types of natural resources were being addressed by the program.

The differences probably reflect, in part, the relative priority given in each state NRCS office to wildlife habitat and wildlife-related practices versus other resource concerns. It

Case Study	Wildlife Habitat	Pesticide Reduction	Total
Missouri	73 %	15 %	88 %
California	38 %	49 %	87 %
Minnesota	57 %	28 %	85 %
Texas	67 %	13 %	80 %
Georgia	16 %	42 %	58 %
Chesapeake Bay	32 %	15 %	47 %
Nebraska	17 %	9 %	26 %

appears other factors were also at work. In Missouri, for example, there has been a strong working relationship between local USDA offices and Missouri Department of Conservation offices, and the program was promoted locally as one that could help landowners boost wildlife numbers. In watersheds with substantial grazing land, wildlife habitat can be improved on those lands without a large change in land use. In watersheds dominated by cropland, it is more difficult to improve wildlife habitat without changing land use.

Clearly, watersheds like those we studied in Missouri, Minnesota and Texas provide models for ways the Conservation Security Program can be implemented to provide substantial benefits for wildlife habitat.

FINDING 3: THE CONSERVATION SECURITY PROGRAM COULD BE EVEN BETTER FOR WILDLIFE

Our review of the information provided, and our discussions with wildlife managers, farmers, and others convince us that while the Conservation Security Program currently benefits wildlife, the program could be improved to provide much greater benefits. Full funding and nation-wide implementation of the program would, of course, provide wildlife benefits in areas not previously eligible for the program. At the 2006 funding level of 60 watersheds per year, it will take USDA at least 25 years to reach every watershed in America with just one chance to enroll in the program.

Even within the current program structure, changes in the way the USDA carries out the program could increase the value of wildlife benefits provided. One major barrier is a general lack of knowledge about wildlife habitat practices among farmers, ranchers, and USDA field office personnel. Although of necessity very knowledgeable about cropping practices and livestock management, most have never had a need for extensive training or education in wildlife management. USDA could address this barrier and boost wildlife benefits substantially by involving wildlife professionals early in the process.

A second barrier is the shortage of locally appropriate wildlife management practices offered by USDA to farmers and ranchers under the Conservation Security Program. USDA Field Office Technical Guides were developed to provide best management practices with respect to farming and ranching. USDA officials, along with federal and state wildlife agencies and other partners, have been working to develop wildlife-related practices and techniques (like wildlife habitat indices) that could be used for the Conservation Security Program and other USDA programs. However, much work remains to be done to provide wildlife management practices appropriate for specific localities, wildlife species, and habitat types -- especially where those practices could provide benefits for rare and protected species.

Those practices need to fit the context of the quality criteria developed for wildlife for each state. USDA's standards for Conservation Security Program contracts are based on reaching resource conservation standards for each resource, including wildlife. USDA needs to improve those quality criteria for wildlife in some states.

USDA has made the situation worse by limiting farmers to a very short list of enhancement practices in each watershed, and by refusing to provide cost-share for new practices. USDA could boost wildlife benefits by providing farmers and ranchers with a wider variety of options for addressing the needs of wildlife in their area.

Convincing farmers and ranchers to adopt new practices will be much easier if USDA offers cost-share for the adoption of new practices, as was provided for in the legislation.

USDA requires applicants to address soil conservation and water quality concerns to be eligible for a Tier I contract. USDA requires applicants to address one additional resource of concern to obtain a Tier II contract, but does not require that an applicant address wildlife as a concern unless he or she is seeking a Tier III contract. Although most applicants already select wildlife as a resource to address at Tier II, requiring that wildlife be addressed in all Tier II contracts would boost overall wildlife benefits.

Finally, as the Government Accountability Office report noted, state-to-state differences in the minimum efforts needed to meet habitat management standards for getting Tier III contracts may be undermining the goal of obtaining wildlife benefits through the program.

Recommendations

1. CONGRESS SHOULD BOOST FUNDING FOR THE CONSERVATION SECURITY PROGRAM

Based on our research, the Conservation Security Program provides substantial benefits for wildlife, and it addresses other important conservation priorities. By limiting funding for new signups under the program, Congress has restricted the ability of USDA to deliver wildlife and other benefits.

USDA's plan to rotate the eligibility for Conservation Security Program contracts to about one-eighth of the Nation's farmers would leave many gaps. With Tier I contracts limited to just five years, many farmers would have had to wait for three years after their contract expired to be eligible for a new contract. Farmers who did not get a contract the year they were eligible would have to wait eight years to be eligible again.

However, Congress and USDA have fallen short of meeting even that modest goal. Annual funding must first pay for existing program contracts and technical assistance, before providing for new contracts. Funding levels for new contracts provided by Congress for 2006, which allowed for Conservation Security Program signups in just 60 watersheds, would allow USDA to get around to each watershed at best every 25 years or so. At that rate, the program is clearly not viable. Addressing the funding issues, including removal of the multiyear funding caps imposed on the program since the last Farm Bill became law, is therefore paramount.

Congress should substantially increase funding for the Conservation Security Program so that farmers and ranchers on a nationwide basis have timely enrollment opportunities, as was intended by the 2002 Farm Bill.

2. CONGRESS AND USDA SHOULD PROVIDE COST-SHARE UNDER THE PROGRAM

USDA has generally not funded cost-share for new practices through the Conservation Security Program. It is clear that many new practices are

being installed and maintained under Conservation Security Program contracts through payments for enhancements. However, USDA's refusal to provide cost-share under the CSP has reduced the ability of the program to deliver additional wildlife and other conservation benefits through the installation of new practices. The current practice of funding new conservation practices and activities through the contract modification process delays benefits, adds yet another layer of uncertainty to the program, and results in an initial undercounting of wildlife and conservation benefits.

Officially, USDA now offers 50 percent cost-share under the Conservation Security Program for new practices, although in practice it does not fund them. That cost-share rate remains well below the cost-share rates provided for similar practices under other USDA programs. Further, Congressional restrictions on program funding would make it difficult for USDA to provide cost-share in future signups.

Congress should send a clear message to USDA that it should provide cost-share for new practices under the Conservation Security Program and do so at the same rate as in other USDA programs. Congress should give USDA adequate program funding to allow for cost-share payments along with other program payments.

3. CONGRESS OR USDA SHOULD REQUIRE ALL TIER II CONTRACTS TO ADDRESS WILDLIFE

USDA made an administrative decision to adopt soil and water quality as two national resource concerns that must be addressed in all Conservation Security Program contracts. Like soil conservation and water quality, wildlife habitat is an important resource of concern throughout the nation.

USDA should require that all Tier II and Tier III contracts address wildlife habitat as a resource of concern, and should increase the emphasis on wildlife in Tier I contracts. If USDA fails to act, Congress should make this a requirement in the next Farm Bill.

4. USDA SHOULD PROVIDE MORE AND BETTER OPTIONS THAT BENEFIT WILDLIFE

Although USDA has identified nearly 1,900 enhancement practices, it sent explicit directions to USDA state offices that only a short list of practices would be available in any one watershed. USDA State Conservationists, with input from state and local working groups, decided which would be made available in each watershed. The practices selected reflect local priorities, and in some cases wildlife was a low priority. To boost wildlife benefits and provide additional choices for farmers and ranchers, USDA should expand the number and variety of enhancement practices available in each watershed.

USDA should also continue to develop new wildlife-related practices, including practices that address high priority fish and wildlife species, as part of its effort to update the Field Office Technical Guide that serves as a comprehensive recipe book of conservation practices for farmers and agency employees and is the basis for payments under the Conservation Security Program and other programs. USDA should accelerate its efforts to work with federal and state wildlife agencies and organizations to develop and describe wildlife-friendly practices that could then be offered under the Conservation Security Program or other programs. That work is especially important with respect to state and federally protected species, and wildlife needs identified in state Wildlife Action Plans and Fish Habitat Action Plans. USDA could also increase the benefits of the program by focusing program funding more strongly on practices that deliver benefits for multiple resources, including wildlife. Wildlife-related practices relevant to the watershed should be among the enhancement choices offered in every watershed.

5. USDA SHOULD INVOLVE WILDLIFE PROFESSIONALS EARLY IN THE PROCESS

Wildlife management is unfamiliar territory for many farmers and ranchers, and for most USDA field office staff as well. State wildlife agencies and organizations have stepped forward in many states to help farmers and ranchers weigh their alternatives and understand the benefits of different wildlife practices. However, in an effort to streamline the signup process USDA told field offices that no on-farm visits would occur before or during the 2006 Conservation Security Program signup. That denied local wildlife agency staff the opportunity to discuss wildlife practice options with farmers before they submitted their program application.

USDA should encourage wildlife agencies and organizations to be involved with landowners contemplating a Conservation Security Program application early in the process, when key decisions are made. That would give farmers and ranchers access to the knowledge of professional wildlife managers as they develop their plans, and should result in more wildlife benefits under the program. This could be done using staff from state or federal wildlife agencies, non-profit organizations, or technical service providers to avoid any impact on NRCS staff workload.

6. USDA SHOULD REVIEW AND REVISE PAYMENT RATES

In our discussions with both sustainable farming organizations and wildlife organizations and agencies, we heard concerns about some of the payment rates established for enhancement practices. For example, delaying hay harvest until the end of the nesting season provides clear wildlife benefits, since nesting birds have a chance to hatch and fledge undisturbed. The farmer foregoes some profit as a result, by having fewer cuttings of hay or harvesting lower-quality hay. The payment rate for a practice like this should therefore fairly reflect the lost revenue. In other cases, practices were designed to benefit particular wildlife species: leaving standing dead trees to benefit woodpeckers, or branch piles to benefit rabbits and other small mammals. The concern we heard was that, in some states, the per-acre payment for implementing these enhancements far exceeded the cost to the farmer or the benefits to wildlife. In most cases, as a result of this feedback, NRCS adjusted the payment rates to more appropriate levels in the succeeding sign-up.

With several years of signup experience under its belt, USDA should continue to review Conservation Security Program enhancement payment rates, to ensure both farmers and taxpayers are getting a fair deal under the program.

7. USDA SHOULD ENSURE HIGH STANDARDS FOR WILDLIFE BENEFITS

Comments from wildlife professionals familiar with the Conservation Security Program show a concern that some 2004 participants were getting Tier III contracts—under which they are supposed to meet minimum non-degradation standards for every applicable resource of concern— with fairly weak efforts with respect to wildlife. Those comments echoed the concern raised in the General Accountability Office report cited above. For example, the GAO report noted that the national criteria require a minimum percentage of a producer's operation to be non-crop vegetative cover to benefit wildlife, but that criterion was not applied consistently in every state.

USDA should continue to review Tier III wildlife standards and wildlife resource criteria established by its state offices to ensure that a consistently high standard of wildlife benefits is obtained under the Conservation Security Program.

8. USDA SHOULD PROVIDE MONITORING AND EVALUATION OF PROGRAM OUTCOMES

The only way USDA will be able to properly assess actual outcomes of the program, for wildlife and other resources, is to undertake a robust monitoring and evaluation program. The legislation gives USDA authority to fund on-farm monitoring and evaluation as an enhancement practice, although USDA has funded very few such contracts. The Land Stewardship Project has developed and tested an on-farm monitoring tool-kit that could serve as a model for on-farm monitoring and evaluation.[5] USDA should encourage and fund on-farm monitoring and evaluation enhancements as a high priority practice.

USDA also needs better program-level data on the actual impact of various practices with respect to wildlife and other resources to enable it to judge the relative benefits provided by various practices. That information would help USDA better manage the Conservation Security Program, as well as other USDA conservation programs that encourage conservation. USDA, working with organizational and agency partners, should establish a robust monitoring and evaluation program that measures actual outcomes of the conservation practices it funds, using scientifically valid methods. Congress should recognize the long-term importance of this endeavor and fund it adequately as part of the total farm bill conservation program implementation cost, much in the same way it currently does for technical assistance.

End Notes / *Part 1*

[1] USDA Natural Resources Conservation Service, *American Customer Satisfaction Index: Natural Resources Conservation Service Conservation Security Program Participants Customer Satisfaction Study, Final Report,* October, 2005.

[2] US Department of Agriculture, *Fiscal Year 2004 Conservation Security Program Contracts Modified,* news release, June 27, 2006.

[3] D.A. Hill, *The Feeding Ecology and Survival of Pheasant Chicks on Arable Farmland, The Journal of Applied Ecology,* Vol. 22, No. 3 (Dec., 1985), pp. 645-654.

[4] United States Government Accountability Office, *Conservation Security Program: Despite Cost Controls, Improved USDA Management is Needed to Ensure Proper Payments and Reduce Duplications With Other Programs,* April, 2006, Washington, DC.

[5] *A Guide to the Art & Science of On-Farm Monitoring: The Monitoring Tool Box, Land Stewardship Project.* See www.landstewardshipproject.org/resources-pubs.html.

Conservation Security Program and Wildlife Case Study 1:

California's Feather River Watershed

The 2006 Conservation Security Program signup in California included the Lower Feather River watershed in Butte, Sutter, and Yuba counties in north-central California. The 369,150-acre watershed is agriculturally diverse, including about 108,330 acres of orchard and vineyards (29% of the watershed), 103,850 acres of cropland, (28%), 90,450 acres of rangeland (25%), and 26,400 acres of pasture (7%), with the remainder developed land, wetlands and open water.

The area features moderately deep to very deep soils, and generally level ground except in the Sutter Buttes area. Rice production is the primary use for cropland. The rangeland is typically oak woodland and/or annual grassland. Virtually all the orchard, vineyard, cropland and pasture in the watershed is irrigated[1].

USDA identified water quality, water quantity, nutrients and sediments as key resource concerns in the watershed.

CONSERVATION SECURITY PROGRAM CONTRACTS

In June, 2006, the USDA announced that 60 California farmers in the Lower Feather River watershed were approved for Conservation Security Program contracts that would provide just under $1 million in FY 2006, and $6.4 million through 2015, in payments. (In the much larger 2005 signup, 393 farmers in five California watersheds received CSP contracts that will provide $6.2 million in 2005 alone, covering 198,701 acres, mostly irrigated cropland).

WILDLIFE HABITAT BENEFITS

Habitat Management enhancements are the second largest category of Conservation Security Program payments in the watershed, representing a total commitment of $2.4 million (and 37% of total CSP payments). A total of $769,373, representing about 12% of CSP payments, will be used to manage rice straw residues to provide winter water for waterfowl on about 3,350 acres ($25/acre/year). Another $150,600 will be used to manage rice fields by leaving 2-5% of the field un-cropped for wildlife food and cover on 75 acres ($75/acre/year).

Maintenance of 130 acres of native trees and shrubs in riparian buffer zones will be supported through $475,120 ($400/acre/year), or about 7% of Conservation Security Program payments. Other Conservation Security Program contracts will pay for maintaining upland water for wildlife on over 3,500 acres, managing non-cropped areas with at least 80% native vegetation, and maintaining field borders for wildlife cover.

Six contracts (totaling about 5% of payments) will provide for managing

surface water irrigation withdrawals to benefit critical fisheries (for example, fish screens on water intakes). Those will be in place on irrigation systems providing water to about 1,877 acres of cropland.

About 1% of CSP payments will be used to provide winter cover crops to capture nitrates, or to provide for grazing management strategies that should benefit grassland habitat.

In all, just over $2.4 million in Conservation Security Program payments will be used for practices that appear to provide direct wildlife habitat benefits. That represents 38% of total Conservation Security Program payments resulting from the 2006 signup.

OTHER WILDLIFE BENEFITS

Pest management is the largest category of funded enhancements. The bulk of the contract funding is for the use of Integrated Pest Management (IPM) strategies which either meet University of California IPM standards for a comprehensive program (1,023 acres in 2007), or use IPM techniques but not the full comprehensive program (more than 4,600 acres in 2007). Three program contracts utilize a certified organic pest management system on a total of 295 acres of organic cropland.

Those contracts could include the use of buffer strips or other habitat-related practices, but that information is not available to us. By reducing pesticide use and encouraging non-chemical pest control methods, those program payments should provide some benefits to some wildlife species.

In this watershed, farmers applying for a Tier II contract must first meet minimum water-use efficiency criteria on the entire operation, in addition to having water quality and soil quality protected on the whole operation. Minimum water quality protection includes both nutrient management and pest management practices[2].

In all, $3.1 million in Conservation Security Program enhancement payments, representing 49% of all CSP payments resulting from the 2006 signup in California, will be used for pest management practices designed to reduce pesticide use that should also benefit some wildlife.

In all, 87% of the total Conservation Security Program payments resulting from the 2006 signup in California's Feather River watershed are for practices that appear to provide either direct wildlife habitat benefits, or a reduction in the use of pesticides that should benefit some wildlife species.

1 Lower Feather Watershed, USDA Natural Resources Conservation Service California web site, www/ca.nrcs.usda.gov/programs/CSP/2006/lowerfeather.html.

2 Landowners with irrigated cropland must have an Irrigation Enhancement Index score of at least 50 to obtain a Tier II contract, and must use fallow in crop rotations to conserve soil moisture on non-irrigated land. For details, see www. ca.nrcs.usda.gov/programs/CSP/2006/lowerfeather.html.

	Conservation Security Program Enhancement Practices With Wildlife Habitat & Pesticide Reduction Benefits in California	Payments Through 2015	Share of all CSP payments
EHM 24 EHM 15	Manage rice straw residues for waterfowl, and rice fields for food/cover	$916,973	14%
EHM 08	Maintain native trees and shrubs in riparian areas	$475,120	7%
EHM 04	Manage surface water irrigation withdrawals to benefit critical fisheries	$339,216	5%
EHM 06	Provide water for upland wildlife	$339,115	5%
EHM 10	Manage non-crop areas with minimum 80% native plants	$140,000	2%
EHM	Other habitat management, including field borders, managing cropland for wildlife, eradicate invasive plants	$184,344	3%
ENM 24	Use winter cover crops to capture nitrogen (providing winter cover)	$37,012	1%
EGM	Forage production monitoring plans and alternate water sources	$12,060	0%
	Wildlife Habitat Payments	$2,446,840	38%
EPM01-1	Use comprehensive U-Cal Integrated Pest Management system	$1,166,139	18%
EPM01-2	Use Integrated Pest Management system components (less than comprehensive plan)	$1,683,475	26%
EPM 02	Use Certified Organic pest management	$265,050	4%
	Pesticide Reduction Payments That Should Benefit Wildlife	$3,128,048	49%
	Total Wildlife Habitat & Pesticide Reduction Payments	$5,574,888	87%
	Total CSP Payments	$6,426,506	100%

Conservation Security Program and Wildlife Case Study 2:

Chesapeake Bay

The Chesapeake Bay is America's largest estuary, measuring nearly 200 miles long, and draining 64,000 square miles. The watershed covers part of six states, including nearly all of Maryland and much of Virginia and Pennsylvania.

According to the US Government Accountability Office, "over time, the bay's ecosystem has deteriorated. The bay's 'dead zones'—where too little oxygen is available to support fish and shellfish--have increased, and many species of fish and shellfish have experienced major declines in population."[1]

"Water quality and ecosystem integrity in the Chesapeake Bay have been affected by excessive nutrient loading, which has resulted in the depression of dissolved oxygen levels and the loss of submerged aquatic vegetation. These effects have impacted economically important aquatic species and have diminished the value of the bay as a recreational resource. "[2]

In 1998, the US Geological Survey assessed the areas of the watershed that appeared to have the highest impact (in terms of nitrogen load) on the bay.[3] Some of the high-impact watersheds identified in that analysis were eligible for Conservation Security Program signups in 2005 or 2006, including the Monocacy in central Maryland (2005) and southern Pennsylvania (2006), the Lower Susquehanna-Swatara in southeast Pennsylvania (2005), and the Nanticoke in Maryland and Delaware (2006).

CONSERVATION SECURITY PROGRAM CONTRACTS IN THE CHESAPEAKE REGION

The 2006 Conservation Security Program signup included four watersheds that drain into the Chesapeake: the Monocacy in southern Pennsylvania, the Choptank and Nanticoke that straddle the Delaware-Maryland border, and the North Fork Shenandoah in Virginia. In addition to the watersheds eligible for the Conservation Security Program signup in 2006, farmers in seven other watersheds that drain into the Chesapeake Bay were eligible for CSP contracts in 2005 (see table).

The Choptank and Nanticoke are adjacent watersheds that flow through the lower Eastern Shore into Chesapeake Bay. Combined, they drain about 879,000 acres, about three-quarters of which are in Maryland and the remainder are in the headwater areas in Delaware. About half of the land is used for agricultural purposes, and primary crops include corn, beans, barley, wheat, and vegetables. Poultry production is an important industry in the watershed, and poultry manure management a particular concern.

CSP Signups in the Chesapeake Region

WATERSHED	STATE	YEAR
S. Fork Shenandoah	Virginia	2005
N. Fork Shenandoah	Virginia	2006
Lower Rappahannock	Virginia	2005
Mattaponi	Virginia	2005
Raystown	Pennsylvania	2004, 2005
Lower Susquehanna - Swatara	Pennsylvania	2005
Monocacy	Pennsylvania	2006
	Maryland	2005
Chester-Sassafras	Maryland, Delaware, Pennsylvania	2005
Choptank	Maryland, Delaware	2006
Nanticoke	Maryland, Delaware	2006

USDA says the Nanticoke "is one of the healthiest rivers in the Chesapeake and provides excellent habitat for many threatened and endangered species." The Choptank watershed in Maryland is one of the subjects of an intensive, 5-year effort by USDA to measure the benefits of farm conservation practices on the environment.[6]

The Monocacy watershed is in southeast Pennsylvania and northern Maryland. The Maryland portion of the Monocacy watershed was eligible for the Conservation Security Program in 2005.

The North Fork Shenandoah watershed is in northwestern Virginia. A neighboring watershed, the South Fork Shenandoah, was eligible for the Conservation Security Program in 2005.

2006 CONSERVATION SECURITY PROGRAM CONTRACTS

In June, 2006, USDA announced that farmers in the Nanticoke, Choptank, Monocacy and North Fork Shenandoah watersheds would be eligible for about $24.2 million in Conservation Security Program contract payments through 2015. Contracts in the Chesapeake Bay region were concentrated in the Choptank and Nanticoke watersheds, along the eastern shore of the Bay. The Maryland portions of those watersheds — the downstream portion with the most direct influence on the Bay— will receive nearly three-quarters of the CSP contract payments awarded in the region in 2006. Delaware farmers (the upper parts of the Choptank and Nanticoke watersheds) will receive about 21% of total CSP payments. As a result, our analysis is heavily skewed by policies in these two states, where about 45% of total CSP payments provided either wildlife habitat benefits, or pesticide reduction that should benefit some wildlife.

In contrast, in the North Fork Shenandoah watershed in Virginia, 65% of Conservation Security Program payments either provide for wildlife habitat benefits, or for pesticide reduction that should benefit some wildlife, while in Pennsylvania the percentage was about 87%. However, those two watersheds represented only about 5% of the projected CSP payments we reviewed.

WILDLIFE HABITAT BENEFITS

One in five Conservation Security Program contract dollars — a total of over $4.7 million — is slated for habitat management. The largest category of funded enhancement is for

increasing and maintaining wildlife habitat in order to achieve a Habitat Management Index score of at least 0.5. The enhancement was used in all except the Monocacy watershed, and most of the payments went for farms that ended up in the 0.6 to 0.7 range on the index (higher payments were awarded for higher scores).

Overall, payments based on some form of habitat management index represent 18% of the Conservation Security Program payments in the region. It was the most significant wildlife-related habitat enhancement in the North Fork Shenandoah, Choptank and Nanticoke watersheds. The Habitat Management Index appears to be the primary tool used in the region for measuring and rewarding wildlife habitat through the Conservation Security Program.

Throughout the region, field borders, buffer strips, contour strips and new hedgerows were used to reduce nutrient and pesticide runoff and provide additional wildlife habitat. In various forms, this enhancement represented about $1.9 million, or 8% of total Conservation Security Program payments.

Our estimate of wildlife habitat benefits likely understates the actual wildlife benefits provided. As noted above, nutrient loads in the Chesapeake Bay are a primary concern in the region, because of their impact on the Bay's aquatic species. Our screen for assessing wildlife-related benefits largely excluded nitrogen management strategies, except where they used practices like buffer strips that also provide terrestrial habitat benefits. Additional nutrient management practices not included in our totals should help reduce the impact of nutrients on the aquatic habitat in Chesapeake Bay and its tributaries.

In total, at least $7.6 million in Conservation Security Program enhancement payments in the Chesapeake Bay region will be used for practices that should provide wildlife habitat benefits. That represents 31% of total CSP payments resulting from the 2006 signup in these watersheds.

OTHER WILDLIFE BENEFITS

Low input non-chemical methods of pest control were used extensively in Conservation Security Program contracts in the Choptank and Nanticoke watersheds. Those should reduce runoff into the Bay and reduce pesticide impacts on local beneficial insects. Crop rotation (using at least two crops in three years) was also used to break up pest cycles and reduce the use of pesticides.

Payments will also provide for high-intensity integrated pest management systems in some locations. The information available does not allow us to determine if, for example, buffer strips and other habitat-producing practices were included.

In all, $3.7 million in Conservation Security Program enhancement payments, representing 15% of all CSP payments resulting from the 2006 signup in the Chesapeake Bay region, will be used for pest management practices designed to reduce pesticide use that should also benefit some wildlife.

Overall, $11.2 million, representing 47% of Conservation Security Program payments resulting from the 2006 signup in the Chesapeake Bay region, is for enhancements that appear to provide wildlife habitat benefits or reduce pesticide use in ways that should benefit some wildlife.

	Conservation Security Program Enhancement Practices With Wildlife Habitat or Pesticide Reduction Benefits in the Chesapeake Bay Region	Payments Through 2015	Share of all CSP payments
EHM 02 ENM 20	Increase and maintain wildlife habitat management index on lands (0.5 to 1.0)	$4,434,208	18%
EPM03 EHM 11 ENM	Use field borders, buffer strips, contour strips and hedgerows to reduce nutrient and pesticide runoff, and provide for wildlife habitat	$1,931,420	8%
ENM 03	Use 5-10 foot setback in applying nutrients to protect waterways	$359,239	1%
ENM	Other nutrient management (e.g., nutrient application using phosphorus-based application rates, incorporating manure to prevent runoff)	$473,313	2%
EHM	Other habitat management (crops left unharvested, blue bird or bat boxes, etc.)	$203,186	1%
EGM	Rotational grazing systems and livestock exclusion	$199,743	1%
EPL EAM	Plant management (nectar-producing plants) and windbreaks near feedlots	$11,397	0%
	Total Wildlife Habitat Payments	$7,612,506	31%
EPM 02	Use low input non-chemical pest control methods	$1,952,764	8%
EPM 09	Use crop rotations to break up pest cycles	$1,446,461	6%
EPM	Use high intensity integrated pest management and other strategies	$314,877	1%
	Total Pesticide Reduction Payments That Should Benefit Wildlife	$3,714,102	15%
	Total Wildlife Habitat & Pesticide Reduction Payments	$11,326,608	47%
	Total CSP Contracts (estimated)	$24,196,700	100%

3 US Government Accountability Office: *Chesapeake Bay Program: Improved Strategies Needed to Better Guide Restoration Efforts*, Statement of Anu K. Mittal, Testimony before the Subcommittee of Interior, Environment, and Related Agencies Committee on Appropriations, House of Representatives, July 13, 2006, page 4-5.
4 US Geological Survey, *Spatially Referenced Regression Modeling of Nutrient Loading in the Chesapeake Bay Watershed*, proceedings of the First Federal Interagency Hydrologic Modeling Conference, Las Vegas, Nevada, April, 1998, page 1-2. URL:water.usgs.gov/nawqa/sparrow/chesbay/ches.html.
5 USGS, ibid, page 3-4. URL:water.usgs.gov/nawqa/sparrow/chesbay/ches.html. United States Department of Agriculture, USDA To Assess Environmental Benefits of Conservation Programs, news release, July 22, 2004, www.usda.gov/newsroom/0299.04.html.
6 United States Department of Agriculture, *USDA To Assess Environmental Benefits of Conservation Programs*, news release, July 22, 2004, www.usda.gov/newsroom/0299.04.html.

Conservation Security Program and Wildlife Case Study 3:

Georgia's Little Ocmulgee Watershed

The 2006 Conservation Security Program signup in Georgia included the Little Ocmulgee Watershed in southeast Georgia. According to the University of Georgia, just over one-quarter of the Little Ocmulgee watershed is in agricultural production, with the remainder primarily forest, forested wetlands, and clearcut areas.[7]

In 2002, the state of Georgia completed a watershed cleanup plan (a Total Maximum Daily Load assessment) designed to address excess levels of fecal coliform bacteria in the river. The plan recommended, among other management practices, a reduction in livestock access to streams in the watershed, and limiting the land application of manure to agronomic rates.

Fencing can protect streams from livestock impacts and provide wildlife habitat.

The Georgia Department of Natural Resources Wildlife Resources Division notes the presence of 6 wildlife species of concern in the watershed. The red-cockaded woodpecker and gopher tortoise are federally protected. The Ocmulgee shiner, yellow-crowned night-heron, Florida pine snake, and sailfin shiner are listed as species of concern.[8]

Upland pine forest, a natural community of special concern, occurs in the watershed, as do 17 plant species that are federally protected, state protected, or a species of special concern at the state level.

CONSERVATION SECURITY PROGRAM CONTRACTS

In June, 2006, the USDA announced that 58 farmers were approved for Conservation Security Program contracts that would provide nearly $1.2 million in FY 2006, and $6.3 million through 2015, in payments. The 58 contracts include, on average, about 4 practices each that should provide wildlife habitat benefits or reduce pesticide use. (In the larger 2005 sign-up, 119 farmers in five Georgia watersheds received CSP contracts that will provide payments covering 92,508 acres, most of it irrigated cropland).

WILDLIFE HABITAT BENEFITS

Through 2015, Conservation Security Program contract enhancement payments for planned Habitat Management activities total $706,057, about 11% of total CSP payments. The largest funded practice is for managing crop residue after planting to retain at least 30% cover of the soil surface (in some contracts 70%). Conservation Security Program payments will provide over $500,000 for this practice, which represent 8% of total CSP payments. The practice is intended to reduce surface runoff and

soil erosion, but it would also maintain some spring cover in crop fields.

Conservation Security Program contract enhancement payments for grazing management strategies that should benefit wildlife habitat total $304,264 through 2015, about 5% of total CSP payments. One practice funded in Georgia is rotational grazing strategies that will provide for at least 4 pastures, with 4-8 day average rotational cycle (EGM 02), which should help maintain a mosaic of different grassland heights. Those payments represent about 3% of Conservation Security Program payments, and will cover about 1,424 acres in 2007. Other grazing management practices funded in Georgia include rotating feed or shade at least four times per year to keep livestock at least 100 feet from surface water or other sensitive areas (1,978 acres, EGM 05), and excluding livestock from water bodies (1,270 acres, EGM 04).

Conservation Security Program payments for restricting manure application based on phosphorus needs should benefit aquatic habitat by keeping excess nutrients out of the surface water. Those payments will total $117,036, representing about 2% of total program payments.

A small portion of program payments in the watershed will provide for the use of phosphorus (rather than nitrogen) as the basis for manure application rates, which should reduce runoff into neighboring streams. 14 contracts, representing roughly 1% of Conservation Security Program payments, will provide for livestock exclusion from nearby water bodies (EGM 04). Both practices could help address the excess fecal coliform bacteria in the river.

In all, about $1.1 million in Conservation Security Program payments in Georgia's Little Ocmulgee watershed will be used for practices that provide wildlife habitat benefits, representing 18% of total CSP payments through 2015.

Prescribed burning of under-story species can improve habitat in wooded areas. US FWS photo

OTHER WILDLIFE BENEFITS

The key pest management practice receiving funding is the use of crop scouting and pesticide applications based on Extension Service treatment thresholds to reduce or optimize pesticide use (EPM 10).

Two other pest management practices also feature prominently in Georgia. Management of undesirable pasture pests through the use of crop scouting and pesticide applications based on Extension Service treatment thresholds (EPM 16) represents about 6% of payments. Managing nematode zones to minimize the use of pesticides (EPM 09) represents about 4% of payments. In all three cases, the payments are for strategies that rely on pest scouting and specific pesticide application, rather than annual whole-field spraying. That should reduce the impact of pesticides on non-target wildlife species.

A total of $2.5 million in Conservation Security Program payments are for Pest Management enhancements that should benefit some wildlife, and they account for 40% of all projected program payments through 2015.

In all, about $3.6 million in Conservation Security Program enhancement payments planned through 2015 should provide wildlife habitat benefit, or result in reduced pesticide use that supports wildlife, in Georgia. That represents about 58% of the $6.3 million in total CSP contract payments resulting from the 2006 signup in Georgia.

	Conservation Security Program Enhancement Practices With Wildlife Habitat Benefits	Payments Through 2015	Share of all CSP payments
EHM 17	Manage for crop residue after planting that exceeds 50% ground cover	$503,667	8%
EGM 02	Use 4-8 pastures or more for rotational grazing with short rotation cycles	$170,965	3%
EHM	Other habitat management, including leaving unharvested grain and hay, early sucessional habitat on idle crop land, managing field borders, prescribed burning of woodlots, and other.	$202,390	3%
EGM	Other grazing management, including rotating feed to distribute livestock impacts, excluding livestock from water bodies, and other	$133,299	2%
ENM 31	Base manure application on phosphorus rates to reduce runoff	$117,036	2%
	Total Wildlife Habitat Practice Payments	$1,127,357	18%
EPM 10	Use crop scouting and Extension Service recommendations to reduce pesticide use	$1,853,970	30%
EPM 16	Use scouting and weed control to reduce undesirable pasture pests	$379,280	6%
EPM 09	Manage nematode zones to minimize the use of pesticides	$273,196	4%
	Total Pesticide Reduction Practices	$2,506,446	40%
	Total Wildlife Habitat & Pesticide Reduction	$3,633,803	58%
	Total CSP Payments	$6,264,068	100%

7 University of Georgia Institute of Ecology, Little Ocmulgee Watershed 1998 Land Cover.
8 Georgia Department of Natural Resources, Wildlife Resources Division, *Known Occurrences of Special Concern Plants, Animals and Natural Communities in Little Ocmulgee River Watershed* (HUC8:03070105). February 25, 2004.

Conservation Security Program and Wildlife Case Study 4:

Minnesota's Red Lakes Watershed

The 2006 Conservation Security Program signup in Minnesota included the Red Lakes watershed in northern Minnesota (Beltrami, Clearwater, Koochiching and Itasca Counties). The watershed includes about 1.3 million acres of land, including large forested areas and a number of lakes. Only about 6% of the watershed is cropland (77,600 acres), and another 3% is pasture (36,400 acres). The cropland is used primarily for small grains, soybeans, and forage crops. The pasture is typically used for beef and dairy production.[1]

The USDA identified water quantity management, pasture management, water and wind erosion, and water quality as major resource concerns in the watershed.

Prescribed burning of grasslands can help maintain grasslands.
US Fish & Wildlife Service photo.

CONSERVATION SECURITY PROGRAM CONTRACTS

In June, 2006, USDA announced that 14 farmers were approved for Conservation Security Program contracts that would pay participants $120,558 in FY 2006, and $1.4 million through 2015. The relatively small number of contracts likely reflects the lack of agricultural land in the watershed. (In the larger 2005 sign-up, six Minnesota watersheds were eligible for Conservation Security Program contracts. 590 farmers received contracts that will provide payments covering 147,768 acres, predominantly dryland cropland.)

WILDLIFE HABITAT BENEFITS

Through 2015, Conservation Security Program contract enhancement payments from the 2006 signup for planned Habitat Management activities total $538,731, about 38% of total CSP payments. Key practices receiving funding include avoiding the nesting season (May 1 to July 1) in haying alfalfa or grass (which will benefit 200 acres in 2007), using a flushing bar when harvesting forage to reduce wildlife damage (which will benefit about 4,150 acres in 2007), and leaving wide swaths of uncut forage as habitat (86 acres in 2007). A small amount ($9,900 in 7 contracts over 9 years) will encourage the use of nest structures and brush piles for habitat, including about 110 acres in 2007.

Grazing Management enhancements provide the bulk of remaining Conservation Security Program enhancements with substantial wildlife habitat benefits ($251,682 through 2015, 18% of CSP payments). Key practices include using a Pasture Condition index to better manage the pasture (which should result in more

diverse growth patterns on over 2,800 acres in 2007), and other practices that reduce grazing pressure and the impact of livestock on waterways.

Small amounts ($40,449 in total) will also be used to reward two farmers who use phosphorus-based manure application rates on fields bordering streams, lakes and wetlands, to pay for leaving un-harvested corn for living snow fences (providing winter cover), and to manage shelterbelts near feedlots.

In all, 57% of the Conservation Security Program payments in Minnesota's Red Lakes watershed will pay for practices that should provide wildlife habitat benefits.

OTHER WILDLIFE BENEFITS

Conservation Security Program payments for pest management enhancements including funding for the use of two or more pest management enhancement components identified by USDA. Those enhancement components apply to about 6,600 acres in 2007 and are designed primarily to reduce the use of pesticides or target their use to selected areas.

A total of $395,305 in funded enhancements is for pest management practices that should benefit some wildlife (about 28% of all Conservation Security Program contract payments).

All together, 85% of the $1.4 million in Conservation Security Program payments in Minnesota's Red Lakes watershed will pay for practices that either provide wildlife or wildlife habitat benefits, or reduce pesticide use and benefit some wildlife.

	Conservation Security Program Enhancement Practices With Wildlife Habitat or Pesticide Reduction Benefits	Payments Through 2015	Share of all CSP payments
EHM 03	Avoid nesting period (May/June) when haying legumes and grasses	$212,310	15%
EHM 19	Use flushing bar when harvesting forage	$186,804	13%
EGM 14	Use Pasture Condition Score Sheet to monitor and manage pasture	$133,683	9%
EHM 01	Leave at least 100' of uncut hayfield as habitat (up to 10%/field)	$124,137	9%
EGM	Other grazing management strategies, including better cattle distribution, limiting access to livestock ponds, using crop residue instead of fall forage.	$117,999	8%
EHM	Other habitat management, including brush piles and snags, no fall tillage, and converting grass areas to native species	$15,480	1%
EAM 10 EAM 06	Use unharvested corn as living snow fence, and manage s helterbelts near feedlots	$13,419	1%
ENM 14	Base manure application rates on Phosphorus on fields bordering streams, lakes and wetlands.	$11,550	1%
	Wildlife Habitat Enhancements	$815,382	57%
EPM 01	Implement 2-4 pest management enhancement components	$395,305	28%
	Pesticide Reduction Enhancements	$395,305	28%
	Total Wildlife Habitat & Pesticide Reduction Payments	$1,210,687	85%
	Total Program Payments	$1,432,751	100%

9 Red Lakes Watershed, USDA NRCS web site, www.mn.nrcs.usda.gov/programs/csp/2006/red_lakes/red_lakes.html

Conservation Security Program and Wildlife Case Study 5:

Missouri's Spring River Watershed

In discussions with wildlife professionals about the Conservation Security Program, many cite Missouri as an example of where the program provides ample benefits for wildlife. The 2006 signup in Missouri included the Spring River watershed in the southwest region of the state. The watershed includes about 1.3 million acres of land, including about 549,000 acres of pasture and range, 331,000 acres of active cropland, 56,400 acres of Conservation Reserve Program land, and 210,000 acres of forest land. Only about 17,000 acres of the watershed's cropland is irrigated, mostly from wells.

The cropland is primarily located in the northern part of the watershed, while pasture, rangeland, and some forest dominate the southern part of the watershed.

The watershed faces many natural resource challenges. The resource concerns identified by the Natural Resources Conservation Service in Missouri include inadequate habitat for wildlife, a variety of threatened and endangered wildlife and plants, noxious and invasive plants, sheet and rill erosion, and levels of pathogens (from livestock), nutrients and organics in the area's surface water. Surface water supplies public drinking water in three places in the watershed.[19]

The area is on the edge of the historic tallgrass prairie range. Some 99% of the Nation's historic tallgrass prairie has been lost to the plow or urban development.

Wild turkeys are found throughout Missouri.
US Fish & Wildlife Service photo.

CONSERVATION SECURITY PROGRAM CONTRACTS

In June, 2006, the USDA announced that 360 Missouri farmers and ranchers were approved for Conservation Security Program contracts that would provide $2.9 million in FY 2006, and $20.6 million through 2015, in payments. (In 2005, 1,133 farmers in 7 Missouri watersheds were approved for CSP contracts).

WILDLIFE HABITAT BENEFITS

Through 2015, Conservation Security Program contract payments for planned Habitat Management activities total $5.4 million, or about 26% of total CSP payments. In addition, about $9 million in payments (44% of total CSP payments) is planned for grazing management activities that should also benefit wildlife, primarily through managed rotational grazing strategies.

The Missouri NRCS used a Wildlife Enhancement Index Score as the primary means of providing habitat management enhancement payments. CSP contract payments will cover nearly 60,000 acres of land that meet a minimum 0.6 Wildlife Enhancement Index score. Enhancement payments for farmers providing a bundle of quail habitat practices should cover over 5,800 additional acres of quail habitat.

Habitat Management enhancement payments also include contracts in 45 places, with payments totaling $201,802 through 2015, for managing native grasslands to maintain native plants. While relatively small, those contracts could be significant with respect to maintaining about 1,425 acres of remnant native tallgrass prairies in 2007.

The bulk of the Grazing Management contract funding is related to the use of managed rotational grazing strategies. The large number of grazing management enhancements in the area should provide substantial benefits for grassland wildlife. For example, EGM 05 ($4.8 million through 2015) involves maintaining a grazing system with at least 4, 8, or 16 pastures, and moving livestock every 4 to 15 days. The Missouri contracts will provide for that practice on about 71,700 acres of land in 2007. EGM 10 ($2.7 million through 2015) requires farmers to adopt at least two enhanced grazing management activities from a designated list, which will provide contract payments covering over 32,500 acres of grazing land. Both practices should result in improved, more diverse grassland vegetation.

In addition, $0.5 million (2% of payments) is planned for nutrient management enhancements that should benefit wildlife, including the use of buffer strips and reduced phosphorus application. The enhancement payments for buffer areas should provide better managed wildlife habitat on nearly 7,000 acres.

Pest Management enhancement payments that will provide for the use of managed hedgerows, field borders, buffer strips and buffer areas represent 1% of CSP payments, covering 9,155 acres in 2007.

In all, about $15.1 million in Conservation Security Program enhancement payments planned through 2015 should provide wildlife habitat benefits. That represents about 73% of the $20.6 million in total program contract payments resulting from the 2006 signup in Missouri.

OTHER WILDLIFE BENEFITS

There is $3.2 million planned for pest management strategies, including spot spraying, field scouting and other activities that replace broadcast pesticides and reduce pesticide runoff and leaching potential. The commitment of resources to reduce pesticide runoff should help address the water quality problems identified in area streams. The largest pest management payment category, using spot spraying in place of broadcast pesticides to reduce runoff and non-target impacts, will provide for that practice on nearly 81,000 acres of land. Those practices should reduce the impact of pesticides on birds, their food base, and other wildlife.

In all, $3.2 million, 15% of Conservation Security Program payments in Missouri, will pay for practices that should benefit wildlife by reducing the use or impact of pesticides.

All together, $18.2 million, or 88% of the $20.6 million in Conservation Security Program payments in Missouri's Spring Creek watershed, will be used for practices that provide wildlife habitat or pesticide reduction benefits.

10 USDA Natural Resources Conservation Service of Missouri, FY '06 Proposed Conservation Security Program Sub-basin Spring River - 11070207, www.mo.nrcs.usda.gov/programs/CSP/spring.html. Author's note: The NRCS-Missouri web site includes substantial information on the Spring River watershed, and would be a good model for other states to follow.

	Conservation Security Program Enhancement Practices With Wildlife Habitat and Pesticide Reduction Benefits in Missouri	Payments Through 2015	Share of all CSP payments
EGM	Managed rotational grazing strategies	$9,035,898	44%
EHM 20	Improve habitat to achieve wildlife enhancement index score of at least 0.6	$4,021,585	20%
EHM 12	Use quail habitat bundle of practices on cropland or grazing land.	$664,904	3%
EHM 01	Leave crops un-harvested, or plant food plots on grasslands	$392,103	2%
EHM 21	Manage native grasslands to maintain native plants.	$201,802	1%
EHM 11	Hay and graze outside the nesting seasons.	$123,537	1%
ENM	Nutrient management through buffer strips and application set-backs, and reducing phosphorus application	$453,789	2%
EAM 06	Windbreaks to buffer feedlot areas	$7,200	0%
EPM 17	Use of hedgerows, borders, filters and buffers to reduce pesticide impact	$153,926	1%
	Total Wildlife Habitat Payments	**$15,055,209**	**73%**
EPM 05	Use spot spraying, mowing, or natural controls instead of broadcast pesticides	$1,957,880	10%
EPM 10	Use field scouting to help keep pests below economically damaging thresholds.	$738,910	4%
EPM	Other pest management enhancements, including pesticide selection to reduce runoff, and spray area set-backs from waterways.	$460,676	2%
	Total Pesticide Reduction Payments That Should Benefit Wildlife	**$3,157,466**	**15%**
	Total Wildlife Habitat and Pesticide Reduction Payments	**$18,212,210**	**88%**
	Total CSP Payments	**$20,584,026**	**100%**

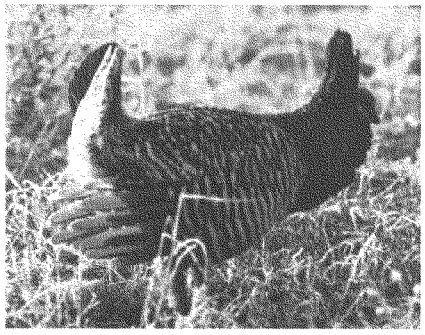
Conservation Security Program and Wildlife Case Study 6:

Nebraska's Little Blue Watershed

The 2006 signup in Nebraska included the Upper Little Blue watershed in south-central Nebraska. The watershed includes 1.4 million acres of land in south-central Nebraska, plus several thousand acres in Kansas. The watershed is about 70% cropland and 30% range land and pasture.

The watershed has many natural resource challenges and lies at the western edge of the historic tallgrass prairie region in the central United States. Only 2% of Nebraska's historic tallgrass prairies remain intact and this area includes some of the state's last large parcels of native tallgrass prairie . It also includes portions of the Rainwater Basin, a complex of wetlands that provides internationally important migratory habitat for millions of ducks, geese, and other waterfowl. Only about 10% of historic Rainwater Basin wetlands remain intact, and the area serves as the "waterfowl hotel" for the Central Flyway of North America .

The Little Blue River provides about 36% of the annual flow of the Big Blue River, which supplies drinking water for Topeka, Lawrence, and Kansas City, Kansas. Because of the extensive use of herbicides used to grow corn and sorghum, atrazine levels in the river have been a continuing problem. Irrigated agriculture (almost all from groundwater sources) is prevalent in the central and western part of the basin, especially north of the Little Blue River. Dryland crops, pasture and range are most common south of the river. The lower part of the watershed has fairly steep slopes that generally exceed 10%, making fields in that portion more susceptible to runoff .



In the last several years, the ongoing drought has led to concerns about the level of river flows in the Big Blue River. A compact between Nebraska and Kansas requires Nebraska to restrict water use in the basin when needed to maintain target river flows at the state line .

CONSERVATION SECURITY PROGRAM CONTRACTS

In June, 2006, USDA announced that 348 Nebraska farmers and ranchers were approved for Conservation Security Program contracts that would provide $5 million in payments in 2006 and over $40 million through 2015. (In 2005, 1,016 farmers in 4 watersheds were approved for CSP contracts covering about 429,000 acres of land in Nebraska, most of it irrigated cropland).

WILDLIFE HABITAT BENEFITS

Through 2015, Conservation Security Program contract enhancement payments for planned Habitat Management activities total $1.8 million, about 5% of total CSP payments. In addition, about $4.2 million in payments (10% of total program payments) is planned for grazing management activities that should also benefit wildlife, primarily managed rotational grazing strategies that should provide benefits for grassland wildlife.

The per-acre payment for the largest category of grazing enhancements (EGM05-16, which provides for water, cross-fencing, and adequate rest of grasslands during the grazing season), would appear to cover over 23,000 acres of grassland in 2007. The number of 2006 contracts that involve conservation of remnant native tallgrass prairies has not been confirmed, but state wildlife officials report that a number of the recent CSP contracts in this part of Nebraska have included tallgrass prairie (including some Tier III contracts).

The enhancement payments for providing quail habitat should cover nearly 30,000 acres of habitat, the bulk in the habitat quality index range of 0.51 to 0.60 (representing usable but not ideal quail habitat, including a combination of food sources and cover). The quail habitat enhancement was one of the most popular practices in Nebraska.

Enhancement payments designed to reward good prairie chicken habitat (typically large blocks of open grassland) should cover over 10,500 acres of habitat, all in the habitat quality index range of 0.51 to 0.60 (representing usable but not ideal habitat). Nebraska Game & Parks Commission staff will be conducting surveys in the future to gauge changes in prairie chicken habitat that result.

The enhancement payments for leaving tall, undisturbed small grain stubble over winter would translate into winter cover on nearly 59,000 acres. Nutrient Management payments to provide 5-15% (or more) buffer to cropland ratio should help reduce atrazine, other pesticides, nutrients and sediment in the river. The planted buffer areas should also provide wildlife cover, nesting and food.

The small amount of enhancement payments for wetland management would appear to be enough to provide benefits to about 59 acres of wetlands. Some of the other practices funded could also have benefits for wetlands, including reduced runoff of nutrients, sediments, and pesticides into wetland areas.

In all, $6.7 million, representing 17% of Conservation Security Program payments, is planned for practices that should provide wildlife habitat benefits in Nebraska.

OTHER WILDLIFE BENEFITS

Pest management strategies that select and apply products in ways that reduce pesticide runoff and leaching potential, using crop rotations and spot spraying or banding of pesticides, should help address atrazine and nutrient problems in area streams.

$3.8 million, representing 9% of Conservation Security Program payments, is planned for pesticide reduction strategies that should benefit some wildlife species.

In all, $10.5 million in Conservation Security Program enhancement payments planned through 2015 should provide wildlife habitat or pesticide reduction benefits in Nebraska's Little Blue watershed. That represents just over one-quarter of the $40 million in total program contract payments resulting from the 2006 signup in Nebraska.

	Conservation Security Program Enhancement Practices With Wildlife Habitat or Pesticide Reduction Benefits in Nebraska	Payments Through 2015	Share of all CSP payments
EGM 05	Managed rotational grazing strategies	$3,850,976	10%
ENM 03	Manage buffers with greater than 5% buffer/crop ratio	$672,582	2%
EHM 20	Habitat index rating for quail at least 0.51	$647,210	2%
EHM 01	Leave undisturbed small grain stubble over winter	$565,823	1%
EHM 02	Early successional habitat on field borders and buffers, and un-harvested alfalfa buffers	$287,100	1%
EHM 20	Habitat index for prairie chickens at least 0.51	$185,226	0%
EGM	Other grazing management enhancements	$324,015	1%
EHM	Other habitat management enhancements	$132,670	0%
ENM	Other nutrient management enhancements	$105,990	0%
EAM 06	Windbreaks to buffer feedlot areas	$3,375	0%
	Total Wildlife Habitat Payments	$6,739,220	17%
EPM 03	Products selected to reduce runoff, use crop rotations, spot spraying or banding to reduce pesticide use or impact	$3,757,288	9%
	Total Pesticide Reduction Payments That Should Benefit Wildlife	$3,757,288	9%
	Total Wildlife Habitat & Pesticide Reduction Payments	$10,532,255	26%
	Total CSP Payments	$40,543,562	100%

11 Nebraska's signup area included a small portion of the Middle-South Platte-Sterling watershed (located primarily in Colorado), but that watershed represents only about 1% of the wildlife-related CSP payments in Nebraska.
12 Bachand, Richard, *The American Prairie: Going, Going, Gone? A Status Report on the American Prairie*, National Wildlife Federation, Boulder, Colorado, 2001.
13 Rainwater Basin Joint Venture, *The Rainwater Basin*, www.rwbjv.org/_TRWB/index.htm.
14 University of Nebraska, Conservation Buffers: Big Blue River Basin Nebraska and Kansas, Background, http://conservationbuffers.unl.edu/blueriverbackground.htm.
15 Nebraska Department of Natural Resources, *2006 Annual Evaluation of Availability of Hydrologically Connected Water Supplies: Little Blue River Basin*, December 30, 2005

Conservation Security Program and Wildlife Case Study 7:

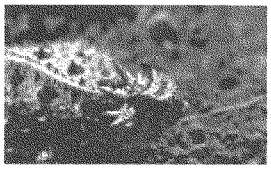
North Texas Watersheds

The 2006 Conservation Security Program signup in Texas included four watersheds in northern Texas, plus the corner of Oklahoma's Upper Beaver watershed. The Upper Prairie Dog Town Fork Red watershed is in the Texas panhandle; the South Wichita and Wichita watersheds are in north Texas; and the East Fork Trinity watershed lies northeast of Dallas.

The South Wichita and Wichita watersheds lie in the rolling hills of north Texas. The area is mostly range; the Wichita watershed includes just over one-fourth cropland and 56% range, and the South Wichita is about 88% range. Major crops include wheat, cotton, and forage and grain sorghum. Invasive woody species are a concern, as are wind and water erosion on cropland.

The Upper Prairie Dog Town Fork Red watershed in the Texas Panhandle includes 1.3 million acres, about two-thirds of it range land. Dryland crops represent 292,900 acres, about 22% of the watershed, while irrigated crops cover about 77,800 acres, or 6% of the watershed. The area includes many cattle on range land, and primary crops are small grains, grain and forage sorghum, and cotton.

The East Fork Trinity watershed lies just northeast of Dallas. About one-fourth of the 787,500 acres of land in the watershed is developed and about 45% is pasture or rangeland. Nearly one-fourth of the watershed is dryland cropland that grows wheat, corn, grain and forage sorghum, cotton, soybeans, and vegetables.



The Texas horned lizard, the state lizard, is a state-protected species that lives throughout Texas.
US Fish & Wildlife Service photo.

CONSERVATION SECURITY PROGRAM CONTRACTS

In June, 2006, the USDA announced that 15 applications from Texas were approved for Conservation Security Program contracts that would provide $395,373 in FY 2006, and $2.9 million through 2015, in payments. Those contracts were primarily in the Upper Prairie Dog Town Fork Red watershed and to a lesser extent the Witchita watershed. A few Conservation Security Program contracts in the Upper Beaver watershed are also included. The East Fork Trinity watershed received only one very small contract, representing just $1,350 through 2015, and the South Wichita watershed received no approved CSP contracts.

In 2005, 67 Texas farmers and ranchers in 18 watersheds received Conservation Security Program contracts, covering about 379,000 acres.

WILDLIFE HABITAT BENEFITS

Based on USDA information, through 2015, Conservation Security Program contract enhancement payments for planned Habitat Management activities in Texas total $1.2 million, about 41% of total CSP payments. In addition, $726,756 (25% of total CSP payments) is planned for grazing management activities that should also benefit wildlife.

The $1.2 million in Habitat Management enhancements through 2015 will provide for a variety of practices that will benefit wildlife in the dry rangeland of north Texas. In the Upper Prairie Dog Town Fork Red watershed, that includes providing year-round water sources for wildlife on over 30,000 acres of range (EHM 06). Wildlife escape ramps would be provided for water tanks serving over 28,000 acres of range (EHM 29). Landowners would manage the timing of harvest to avoid the nesting season on over 3,300 acres (EHM 03). Other wildlife habitat management practices include leaving unharvested grain as a wildlife food source, prescribed burning of grasslands, and brush management.

Grazing management enhancements should provide the second highest category of wildlife habitat benefits, in a region that contains substantial range land. In the Upper Prairie Dog Town Fork Red watershed, enhancements include providing alternative sources of water to reduce the impact of livestock on streams and natural springs on over 28,000 acres of range (EGM 10). In that watershed, invasive brush would be controlled on over 100,000 acres of land (EGM 08). Other grazing management enhancements include grazing strategies designed to benefit a designated wildlife species, rotational grazing practices, and fencing to restrict livestock access to ponds and streams.

In all, about $1.9 million in Conservation Security Program enhancement payments planned through 2015 should fund practices that provide benefits to wildlife or wildlife habitat. That represents about 67% of the $2.9 million in total contract payments resulting from the 2006 signup in Texas.

OTHER WILDLIFE BENEFITS

Pest management enhancements include the use and application of products in ways that would reduce pesticide runoff and leaching on nearly 18,000 acres in the Witchita watershed, and spot spraying or banding would be used to reduce pesticide use on over 6,600 acres. Other funded pest management strategies include using crop rotations to break up pest cycles, and field scouting to reduce pesticide use.

Conservation Security Program contract enhancement payments for pest management that should benefit wildlife total $367,162 through 2015, about 13% of total program payments.

In all, $2.3 million in Conservation Security Program enhancement payments planned through 2015 should fund practices that provide benefits to wildlife or wildlife habitat, or reduce pesticides in ways that should benefit wildlife. That represents 80% of the $2.9 million in total contract payments resulting from the 2006 signup in Texas.

	Conservation Security Program Enhancement Practices With Wildlife Habitat and Pesticide Reduction Benefits	Payments Through 2015	Share of all CSP payments
EHM 29	Provide wildlife escape ramps for water tanks	$374,456	13%
EHM 03	Avoid nesting period when harvesting hay, crops	$263,715	9%
EGM 10	Use alternate watering facilities to reduce the impact of livestock on streams and springs	$221,145	8%
EGM 08	Manage invasive brush species	$208,080	7%
EGM 03	Grazing management strategies that benefit a target wildlife species	$192,908	7%
EHM 06	Provide year-around water source for wildlife	$151,882	5%
EHM	Other habitat management, including leaving un-harvested grain for food, prescribed burns, clearing brush, and obtaining a minimum habitat index score	$392,874	14%
EGM	Other grazing management, including rotational grazing and limiting livestock access to streams and ponds	$104,623	4%
	Total Wildlife Habitat Payments	$1,910,068	67%
EPM 03	Pesticide selection to reduce runoff	$224,063	8%
EPM	Other pest management, including spot spraying instead of broadcast, use of crop rotation to break up pest cycles	$143,099	5%
	Total Pesticide Reduction Payments That Benefit Wildlife	$367,162	13%
	Total Wildlife Habitat and Pesticide Reduction	$2,277,230	80%
	Total CSP Payments	$2,862,031	100%

QUESTIONS AND ANSWERS

JANUARY 17, 2007

Senate Agriculture Committee Hearing - Working Lands Conservation
January 17, 2007
Senator Blanche L. Lincoln
Questions for the Record

For Arlen Lancaster, Chief, Natural Resources Conservation Service
1) Mr. Lancaster, congratulations once again on your new position with NRCS. It has been an absolute pleasure working with you through your various positions on the Hill and at USDA. We are lucky to have someone with your expertise and commitment to conservation issues at NRCS, and I look forward to your leadership.

Like many of my colleagues, I applaud your agency's efforts to implement the Conservation Security Program under difficult funding constraints. However, I share the concerns echoed by many here today regarding the complexity of the program, as well as its practical implications on the ground. Many producers in my state have expressed frustration at what they perceive as a lack of transparency in the application process, specifically in regard to which fields were scored and how. They also raise, in my view, legitimate questions concerning the Soil Conditioning Index, and its impact on producers who undertake a variety of conservation practices, but must till at a minimum level due to the crop they produce. Would you be willing to look into these issues and follow up with my staff at your earliest convenience?

2) Mr. Lancaster, in Arkansas, 50% of the working landscape is forested, owned mostly by small private owners, individuals, and families. CSP currently applies only to "incidental forest land". Clearly agricultural lands are important to conserve but if we are truly to conserve the rural landscape, should forests be better incorporated as part of this landscape--and particularly through CSP?

3) Mr. Lancaster, Arkansas has been a prime example of the good things EQIP can do to help address forestry challenges--insect infestations and overstocking in forest stands. Is this occurring in other regions of the country? How can we better encourage a comprehensive--forest and agriculture land approach to conservation?

4) Mr. Lancaster, Arkansas, like many other southern states, is facing significant population growth and development, particularly in central and northwestern parts of the state. In fact, the Forest Service estimates nationally that roughly 44 million acres will face increased housing density by 2030, at the current rate. While this is certainly good for those communities and their economic development, how can EQIP and CSP like programs do a better job of helping to conserve forested lands in this vastly changing landscape--so we have lumber for our children and great-grandchildren's homes as well as places to hunt and camp?

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Response: Senator, thank you for your kind comments. Please know that I look forward to working with you and would be happy to follow-up with your staff on concerns about the Conservation Security Program (CSP). In the meantime, I would offer some thoughts on the current program.

In the interest of making the CSP application evaluation process as transparent as possible, the NRCS publishes a sign-up notice in the Federal Register. The sign-up notice describes the process, standards, and criteria used to evaluate applications.

We agree that the application process for CSP is cumbersome and have suggested several streamlining actions which will improve CSP in the next Farm Bill including:

- Moving to an acreage based program to allow signup in every watershed every year
- Allowing for ranking of applications which eliminates the need for the enrollment categories
- Eliminating the use of the agricultural operation to allow producers to enroll the acres they want to enroll and
- Eliminating taxable payments and only paying for enhancement that provides new environmental performance.

CSP applicants must meet the minimum level of treatment for soil quality and water quality. The criteria for soil quality is a positive rating on the soil conditioning index (SCI). There are a number of ways producers can meet a positive SCI and remain in their current rotation. They can either adjust their tillage style, such as a tillage reduction, or change to a different type shank on

their tillage equipment. Producers can also introduce a cover crop or other management activity between crops to improve the soil organic matter and nutrient holding capability of the soil and decrease erosion.

2) Mr. Lancaster, in Arkansas, 50% of the working landscape is forested, owned mostly by small private owners, individuals, and families. CSP currently applies only to "incidental forest land". Clearly agricultural lands are important to conserve but if we are truly to conserve the rural landscape, should forests be better incorporated as part of this landscape--and particularly through CSP?

Response: Forested lands are an important component of our rural landscapes and addressing resource concerns on these lands are important to the overall watershed health. As you indicated, only those forested land that are an incidental part of our agricultural operation are eligible for enrollment in the Conservation Security Program (CSP). This is a limitation imposed by the statue. However, the Natural Resources Conservation Service administers other programs to assist forest landowners, including the Environmental Quality Incentives Program and the Healthy Forest Reserve Program.

3) Mr. Lancaster, Arkansas has been a prime example of the good things EQIP can do to help address forestry challenges, insect infestations and overstocking in forest stands. Is this occurring in other regions of the country? How can we better encourage a comprehensive forest and agriculture land approach to conservation?

Response: In fiscal year (FY) 2006, over $19 million from the Environmental Quality Incentives Program (EQIP) was obligated for the implementation of forestry related conservation practices throughout the nation. Although forestry practices appear in nearly every State, the Pacific Basin, and the Caribbean Area, the emphasis placed on forestry varies by location. This variation is part of the locally-led process whereby State Technical Committees and local workgroups help set the priorities for EQIP. Therefore, one of the best ways to encourage a comprehensive forest and agriculture land approach is for forestry advocates to actively participate in the locally-led process. Through this process, various interests compete for the 40 percent of EQIP funds that are available for non-animal agriculture conservation. This limited funding is one important reason why it is important for forestry interests to be involved.

The table below provides a breakdown of forestry related practices for FY 2006.

Conservation Practice	Unit	Amount Planned Nationally	EQIP Funds Approved Nationally	Amount Planned in Arkansas	EQIP Funds Approved in Arkansas
Alley Cropping	ac.	116	$9,920		
Windbreak/Shelterbreak Establishment	ft.	2,871,395	$1,742,961		
Silvopasture Establishment	ac.	822	$23,814		
Riparian Forest Buffer	ac.	7,852	$360,606	9	$675
Firebreak	ft.	4,209,177	$859,604	1,170,329	$183,380
Forest Site Preparation	ac.	59,860	$4,185,761	9,316	$453,461
Tree/Shrub Establishment	ac.	83,632	$4,768,112	8,942	$600,607
Windbreak/Shelterbreak Renovation	ft.	517,128	$338,227		
Forest Harvest Trails & Landings	ac.	4,547	$652,567	67	$834
Tree/Shrub Pruning	ac.	1,711	$344,947		
Forest Stand Improvement	ac.	73,845	$6,027,421	2,546	$118,964
National Total			**$19,313,939**		**1,357,921**

4) Mr. La ıcaster, Arkansas, like many other southern states, is facing significant population growth and development, particularly in central and northwestern parts of the state. In fact, the Forest Se vice estimates nationally that roughly 44 million acres will face increased housing density by 2030, at the current rate. While this is certainly good for those communities and their economic development, how can EQIP and CSP like programs do a better job of helping to conserve forested lands in this vastly changing landscape--so we have lumber for our children and great-grandchildren's homes as well as places to hunt and camp?

Response:

The Environmental Quality Incentives Program (EQIP) offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land. The Conservation Security Program (CSP) supports ongoing stewardship of private agricultural lands by providing payments for maintaining and enhancing natural resources. EQIP and CSP are similar in that they address agricultural production and environmental quality on private working lands. Although the focus of EQIP and CSP has not been on forest lands, by assisting farmers and ranchers in conserving natural resources, both programs help keep agriculture viable and provide protection against development.

Another policy tool for protecting agricultural lands is easements. The Healthy Forests Reserve Program (HFRP) is a working lands easement program that can be used to protect threatened and endangered species while allowing for timber harvest, grazing and other uses that are compatible with the restoration plan and safe harbor agreements. Through the Wetland Reserve Program (WRP), NRCS works with landowners to protect, restore, and enhance wetlands on their property by establishing easements or long-term agreements on eligible lands. The Farm and Ranchland Protection Program (FRPP) is a voluntary program which helps landowners keep their land in agriculture. Although the focus of FRPP is on agricultural working lands, forest land associated with the farm can be included. Through the Conservation Reserve Program (CRP), the Farm Service Agency offers annual rental payments and cost-share assistance to establish long-term, resource conserving covers on eligible farmland. The Forest Service manages the Forest Legacy Program to assist in the preservation of our forested lands.

With a portfolio consisting of cost-share, stewardship, and easement programs, the NRCS and its partners have the tools necessary to help conserve private non-industrial forest lands. The keys to doing a better job are State and local priority setting and continued program funding.

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