



THE CONSERVATION SECURITY PROGRAM: Rewards and Challenges for New England Farmers

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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 CSP²; 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 area³; the Minnesota Project has conducted research on the impact that CSP has made on farmers in Minnesota⁴; the American Agricultural Economics Association selected a paper for presentation at their 2005 Annual Meeting about the potential for the CSP in the Midwest⁵; 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.

¹ White House Council of Economic Advisors, *Economic Report of the President* (Washington, D.C.: GPO, 2006).

Sustainable Agriculture Coalition. Comments of the SAC Submitted to the NRCS of the USDA concerning the Amended Interim Final

² 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).

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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





IV. CSP OVERVIEW

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.

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

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.

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).

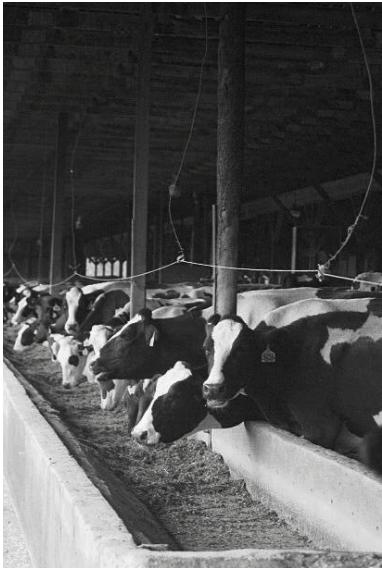
¹¹ NRCS. *FY 2004 Payments Approved and FY 2004 Contracts Approved*. <http://www.nrcs.usda.gov/programs/csp/> (Accessed January 2006).

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).

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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 (Accessed 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.

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Eligibility Requirements in the Statute²⁶

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 model³¹ 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

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 PROGRAM.

<<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

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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

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 Watersheds⁴² (\$/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

Stewardship Payments in the Statute³⁷

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.

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 pasture-land would receive the following annual payment:

$$40 \text{ acres } * (\$2.15) + 24 \text{ acres } * (\$1.05) = \$86.00 + \$25.20 = \$111.20$$

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 Statute⁴⁴

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 Watersheds⁴⁵

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:

$$(40 \text{ acres})(\$0.54) + (24 \text{ acres})(\$0.26) = \$21.60 + \$6.24 = \$27.84$$

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 activites 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.

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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 farmers⁴⁷ 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

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 Payments⁵⁰

Practice Name	CSP New Practice Payment Max. (50% of 2001 average cost)
Animal Trail and Walkways	\$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:

$$1000 \text{ feet} * \$5.12 = \$5,120.00$$

New Practice Payments in the Statute⁴⁶

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.

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 Statute⁵¹

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.

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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.



2005 NORTHEAST CSP CONTRACT SUMMARY

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 States⁵³

	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

⁵³American 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.

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Table 4-2. 2005 National Contract Data⁵⁴**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 Tier⁵⁵

	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.

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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

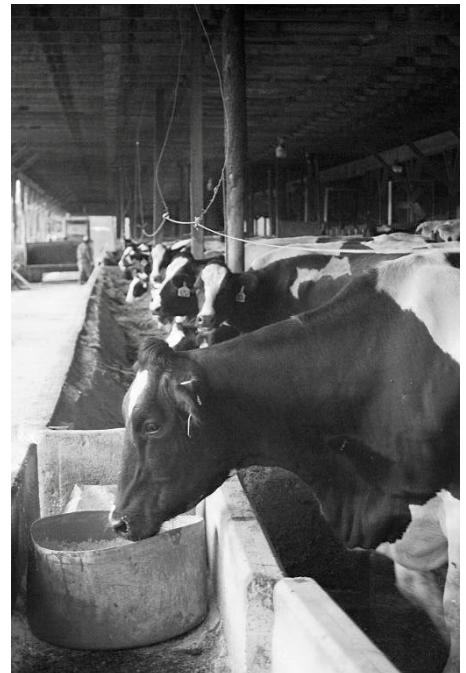
Every effort was made to standardize the data collection procedures for each of the eight case studies. The process of data collection was undertaken by a team of researchers who were assigned to each farm, and consisted of either one or two meetings. For the three farms with existing contracts, only 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, IRB⁵⁹ 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

This farm did not sign up for any new practice payments. **\$0**

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
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“Soil Tillage Intensity Rating (STIR) is less than 15.”

153.1 acres * \$0.90=	\$138/year
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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
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“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
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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
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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
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“Mechanically remove invasive species from pastures.”

65.3 acres * \$10.00/acre=	\$653/year
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“Introduce additional forage species (not legumes) to the pasture.”

65.3 acres * \$10.00/acre=	\$653/year
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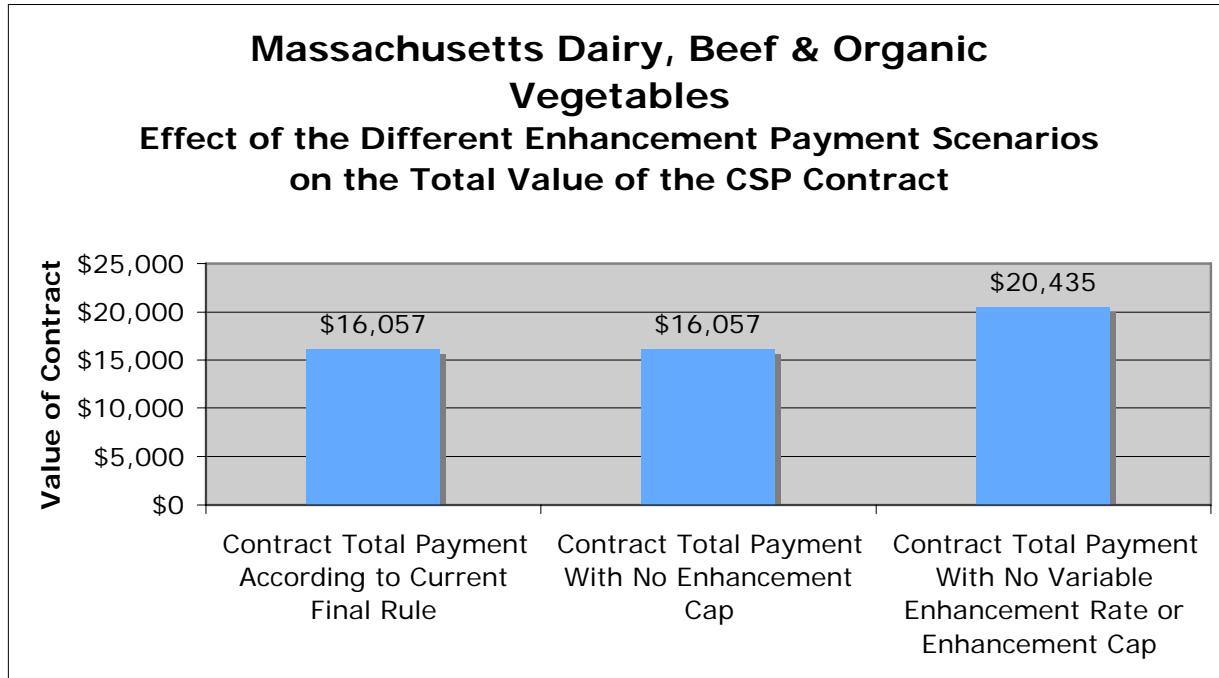
Total Enhancement Payments per year: **\$3980/year**

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	\$15,522⁶⁰

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 = \$21⁶¹

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.

CASE STUDIES OF FARMS WITH 2005 CONTRACTS

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
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Existing Practice Payments

4.6 acres cropland * \$0.84/acre=	\$4/year
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New Practice Payments

This farm did not sign up for any new practice payments.	\$0/year
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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”

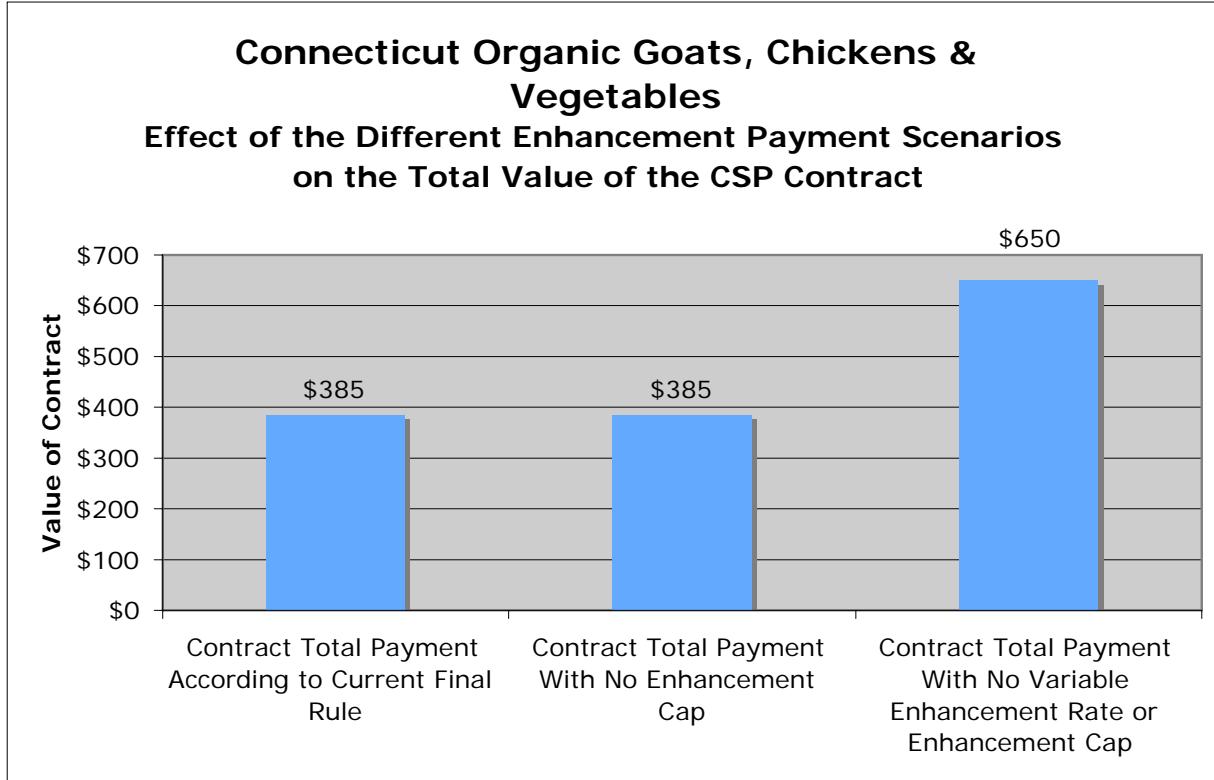
4.6 acres * \$4.64/acre= \$22/year

Total Enhancement Payments: \$45/year

Enhancement Payment Schedule Under Different Scenarios⁶⁴

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
Year 2		\$16	\$4	0	\$41
Year 3		\$16	\$4	0	\$33
Year 4		\$16	\$4	0	\$23
Year 5		\$16	\$4	0	\$14
Year 6		\$16	\$4	0	\$6
Year 7		\$16	\$4	0	\$0
Year 8		\$16	\$4	0	\$0
Year 9		\$16	\$4	0	\$0
Year 10		\$16	\$4	0	\$0
Total		\$160	\$40	0	\$185
					\$385

Total payments over the life of the contract = \$385

Payment per acre per year = \$8.37⁶⁵

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.

⁶⁵This 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 “biogester” and a commercial composting business. The methane biogester 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 biogester 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 biogester 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/year⁶⁷
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Existing Practice Payments

1307.5 acres * \$.10/acre =	\$1301/year
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New Practice Payments

This farm did not sign up for any new practice payments.	\$0/year
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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
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SCI of at least 0.5.

736 acres * \$5.80/acre =	\$4269/year
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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 * \$.50/acre =	\$537/year
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Reduce areas of compaction by controlling traffic that result in a STIR of between 16 and 30.

127 acres * \$1.00/acre =	\$127/year
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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.

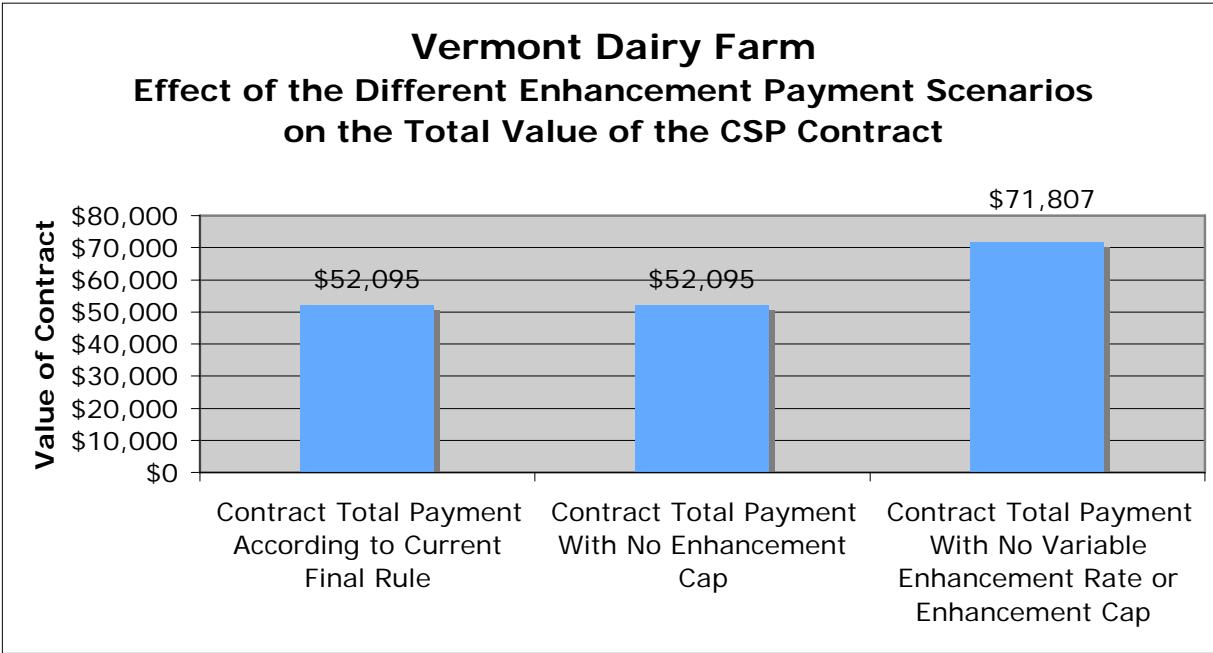
⁷¹ The yearly enhancement payment rate according to the contract.

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%**



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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-

THE CONSERVATION SECURITY PROGRAM

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
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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 Management⁷⁵:**

“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

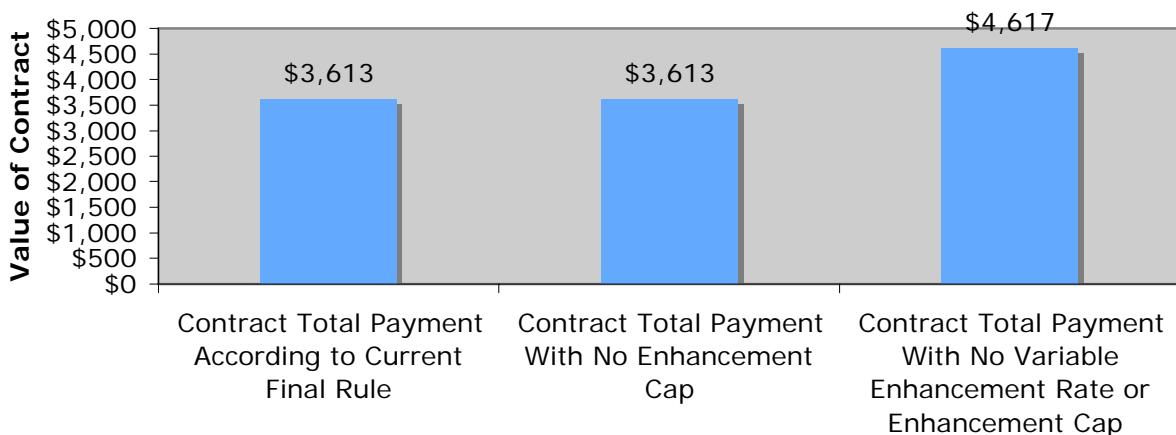
\$913/year

⁷⁵To 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 Scenarios⁷⁶

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

Maine Apple Orchard
Effect of the Different Enhancement Payment Scenarios
on the Total Value of the CSP Contract



⁷⁶This 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 = \$36⁷⁷

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
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Existing Practice Payments

544 acres cropland * \$.84/acre=	\$457/year
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New Practice Payments

Windbreak/shelterbelt establishment 1 acre * \$600/acre * 50% cost share=	\$300.00
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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
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Habitat Management:

“Manage haying to avoid prime wildlife ground nesting period (April 15-August 1).”

10 acres*\$75/acre =	\$750/year
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Nutrient Management:

“Manage winter cover crops to capture residual nitrogen for recycling to the next crop”

450 acres*\$20/acre =	\$9000/year
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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
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THE CONSERVATION SECURITY PROGRAM

Soil Management:

Improve soil conditioning and quality by implementing improvements that result in a soil conditioning index of at least .1.

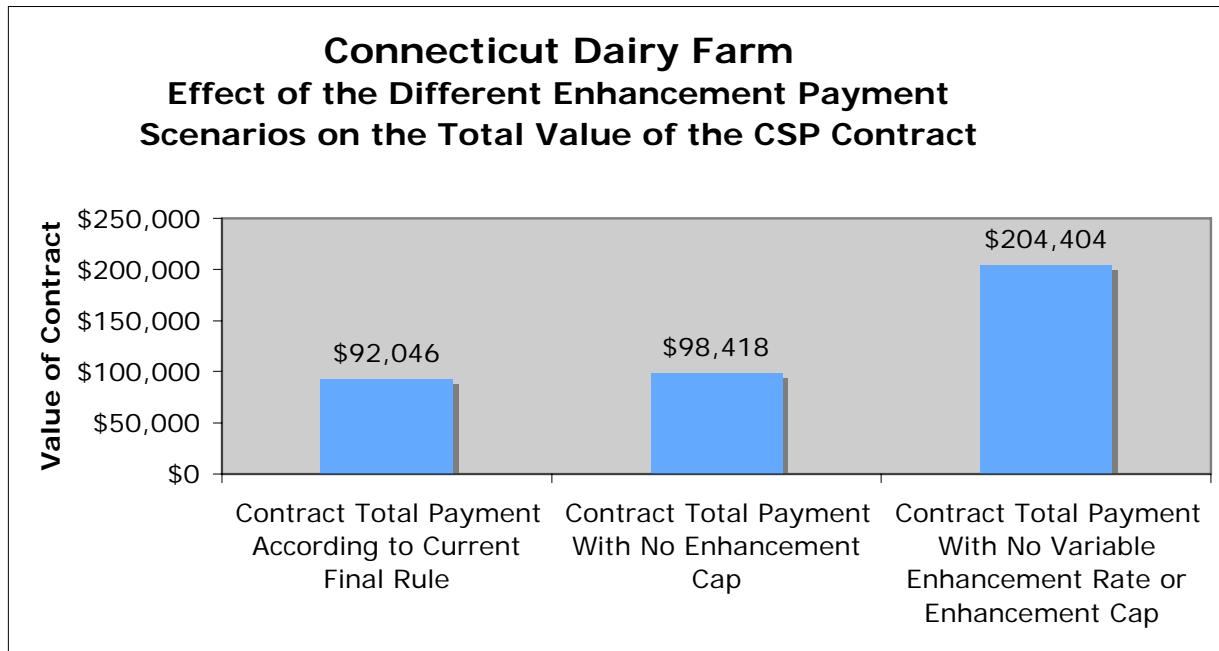
544 acres* \$1.16/acre = \$631/year

Total Potential Enhancement Payments per year: \$18,831/year

Enhancement Payment Schedule Under Different Scenarios⁷⁸

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.

THE CONSERVATION SECURITY PROGRAM

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
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Existing Practice Payments

461 acres irrigated cropland * \$1.65 =	\$761/year
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New Practice Payments

Critical Area Planting- Dikes 10.5 acres * 0.5 cost share * \$375/acre =	\$1,969
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Enhancement Practices

Soil Management:

Soil Conditioning Index Level 1 - 0.7 419 acres * \$8.11/acre =	\$3398/year
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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
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“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
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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
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CASE STUDIES OF FARMS WITH HYPOTHETICAL CONTRACTS

“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

THE CONSERVATION SECURITY PROGRAM

Enhancement Payment Schedule Under Different Scenarios⁷⁹

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 = \$30⁸⁰

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

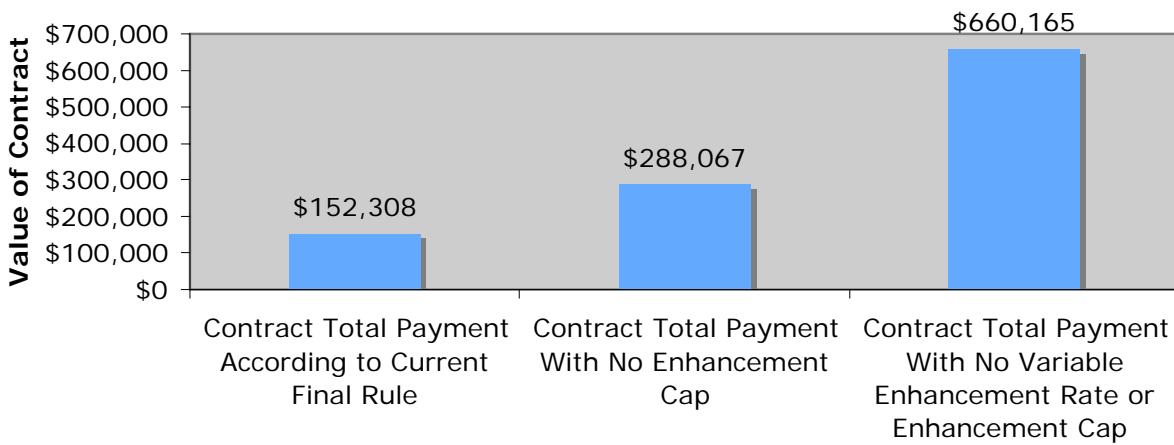
⁸⁰ Payment per acre enrolled in the contract, not per total acres.

THE CONSERVATION SECURITY PROGRAM

Enhancement Payment Schedule Under Different Scenarios, With Cranberry-Specific Enhancement Practices Added⁸¹

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

Massachusetts Cranberry Farm
Effect of the Different Enhancement Payment Scenarios
on the Total Value of the CSP Contract



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	\$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 CSP⁸¹.

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.”

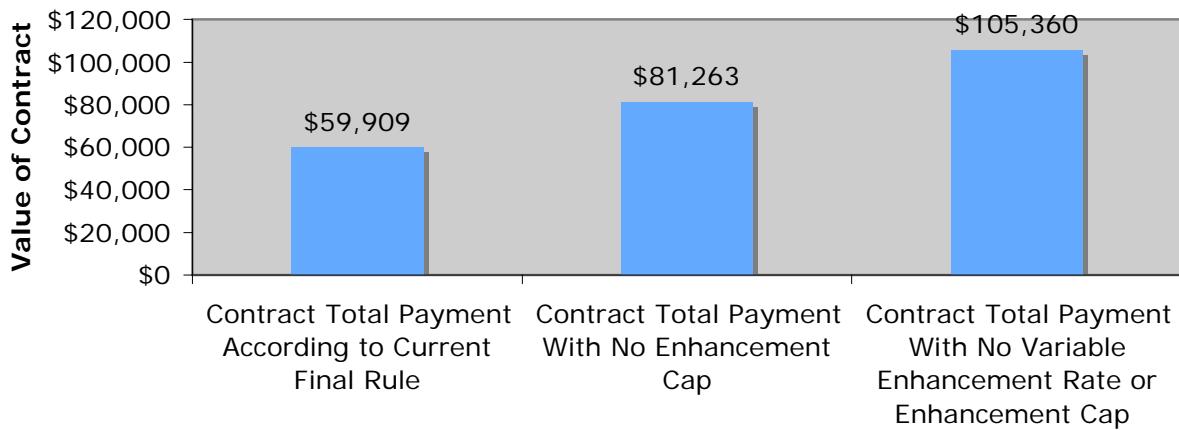
Flat rate = **\$200/year**

Total Potential Enhancement Payments per year: **\$20,195/year**

CASE STUDIES OF FARMS WITH HYPOTHETICAL CONTRACTS

Enhancement Payment Schedule Under Different Scenarios⁸³

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

Maine Potato Farm**Effect of the Different Enhancement Payment Scenarios on the Total Value of the CSP Contract**

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.

THE CONSERVATION SECURITY PROGRAM

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 = \$21⁸⁴

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 nearby 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 must be 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 Management⁸⁵:

“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
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“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
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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.

CASE STUDIES OF FARMS WITH HYPOTHETICAL CONTRACTS

“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

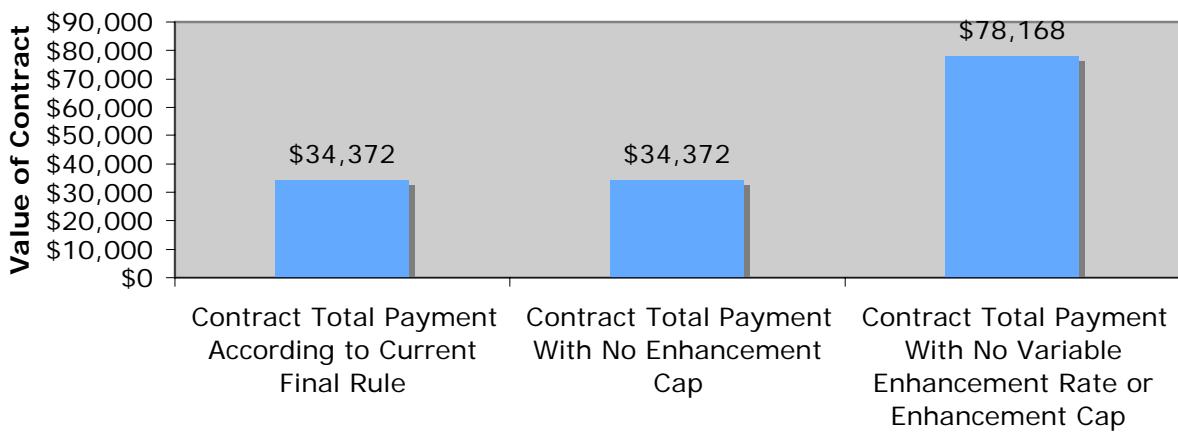
\$7,299/year

THE CONSERVATION SECURITY PROGRAM

Enhancement Payment Schedule Under Different Scenarios⁸⁶

Contract Year	Enhancement Pay- ment, no caps or vari- able rate	Enhancement Payment, vari- able 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

**Massachusetts Vegetable & Fruit
Effect of the Different Enhancement Payment
Scenarios on the Total Value of the CSP Contract**



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 = \$43⁸⁷

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.

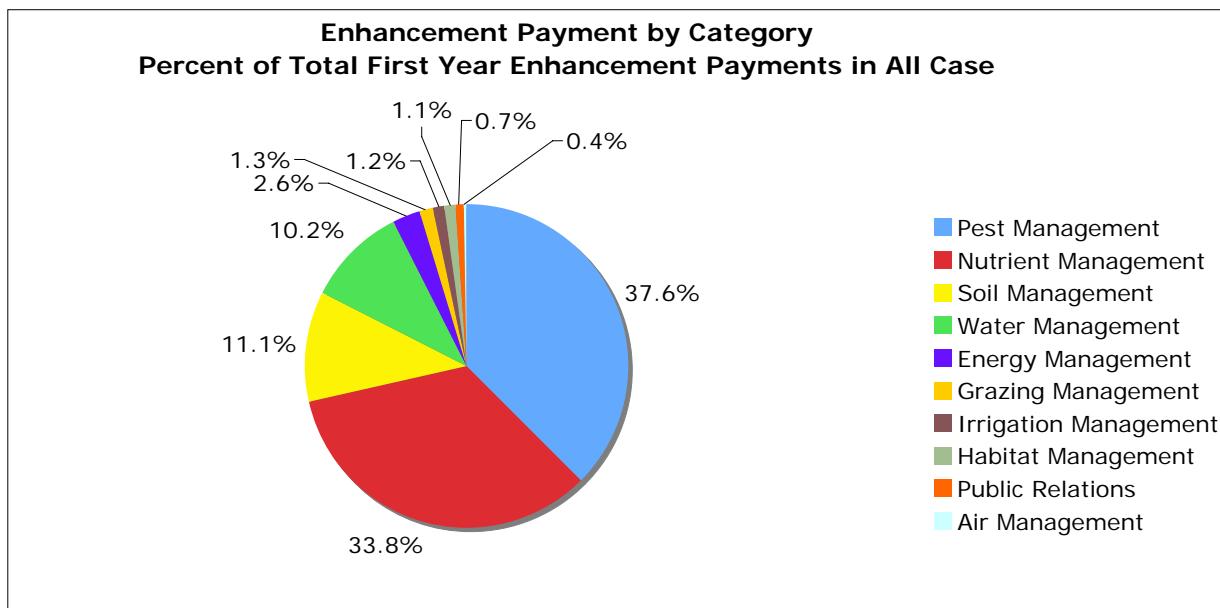


Table 7-1.**Case Study CSP Contract Payment Summary**

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	54%	II	10	\$160	\$40	\$0	\$185	\$385	\$8
Massachusetts Dairy, Beef, & Organic Vegetables	153	15%	I	5	\$425	\$110	\$0	\$15,522	\$16,057	\$21
Vermont Dairy Farm	1308	65%	I	5	\$2,700	\$675	\$0	\$48,720	\$52,095	\$8
Farms without Contracts										
Massachusetts Cranberry Farm	461	71%	II	10	\$30,426	\$7,607	\$1,969	\$112,306	\$152,308	\$33
Massachusetts Vegetable & Fruit Farm	80	47%	II	10	\$2,940	\$735	\$1,500	\$29,197	\$34,372	\$43
Maine Apple Orchard	16	23%	I	5	\$43	\$10	\$0	\$3,559	\$3,613	\$45
Maine Potato Farm	565	31%	I	5	\$2,000	\$503	\$0	\$57,406	\$59,909	\$21
Connecticut Dairy Farm	544	75%	II	10	\$18,224	\$4,570	\$300	\$68,953	\$92,046	\$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 *	\$1,243	\$766	\$0	\$0	\$0	\$1,633	\$0	\$338	\$0	\$0	\$3,980
Vermont Dairy Farm * *	\$8,018	\$740	\$0	\$0	\$0	\$0	\$0	\$1,442	\$0	\$0	\$10,200
Farms without Contracts											
Massachusetts Cranberry Farm	\$3,398	\$3,117	\$39,424	\$12,570	\$11,508	\$0	\$0	\$1,077	\$0	\$922	\$62,016
Massachusetts Vegetable & Fruit Farm	\$169	\$1,150	\$5,380	\$0	\$0	\$0	\$0	\$200	\$400	\$0	\$7,299
Maine Apple Orchard	\$218	\$250	\$445	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$913
Maine Potato Farm	\$0	\$18,265	\$1,130	\$0	\$0	\$0	\$600	\$200	\$0	\$0	\$20,195
Connecticut Dairy Farm	\$631	\$17,400	\$0	\$0	\$0	\$0	\$750	\$0	\$50	\$0	\$18,831
Total	\$13,699	\$41,688	\$46,379	\$12,570	\$11,508	\$1,656	\$1,350	\$3,257	\$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.

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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.

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

“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.”

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 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 fields⁹⁰, 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).

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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

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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 greatly exceeded in 2005⁹¹, 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.

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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.

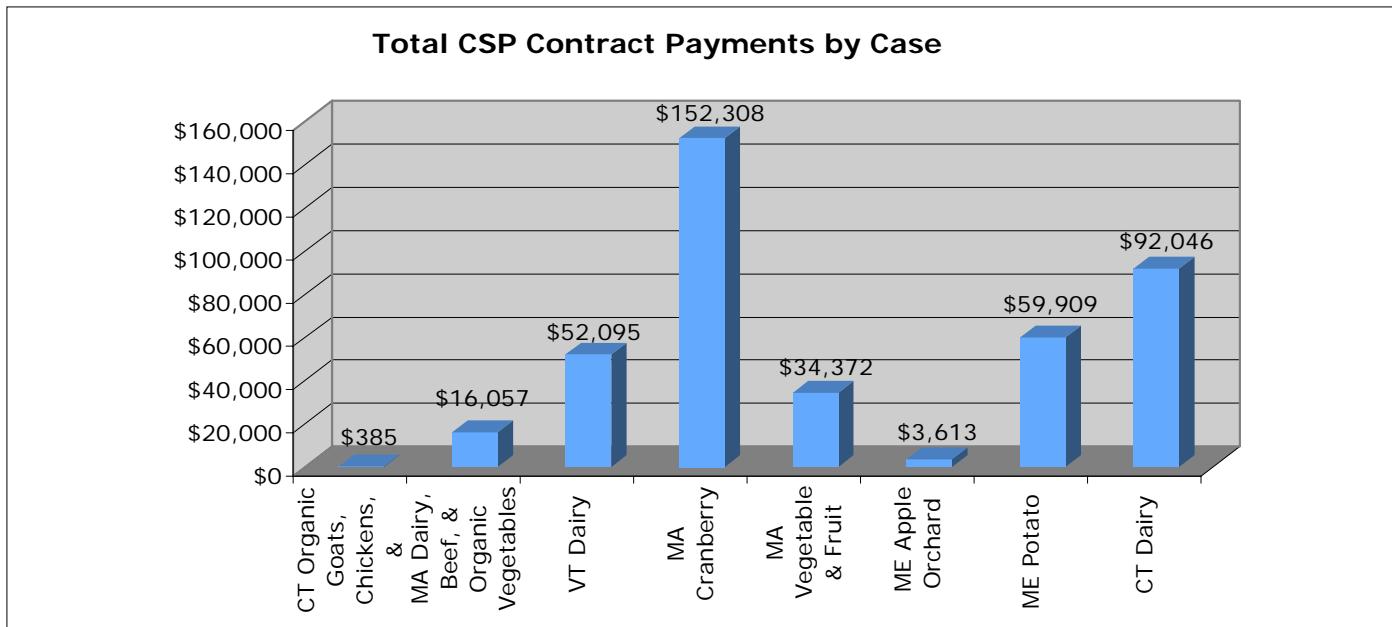
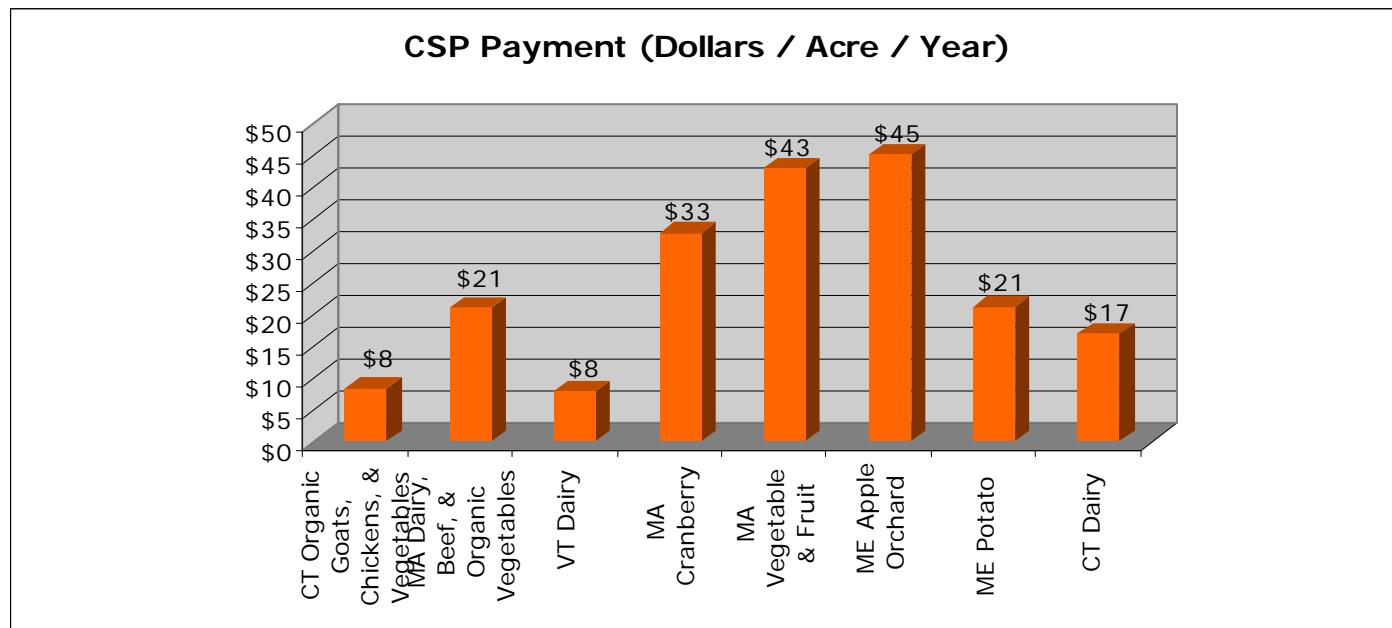
The most obvious potential overlap is between the New Practice cost sharing payments available from the CSP and the Environmental Quality Incentives Program (EQIP). The CSP offers farmers a 50% cost share rate (65% for beginning or limited resource farmers) on a range of new practices, while EQIP offers 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.

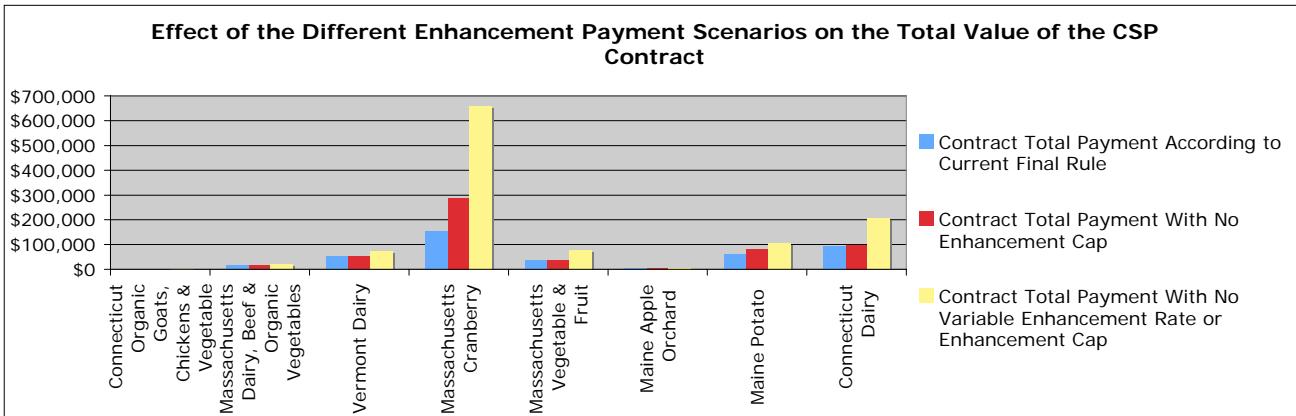
Figure 7-2.**Figure 7-3.**

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

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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%.



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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 were 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.

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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.

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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APPENDICES

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

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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?

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- 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:

APPENDIX B

2. In your opinion, what are two or three ways you would like to see farm programs change in the future?

