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CONSERVATION PROVISIONS OF THE 2007 FARM BILL:
OPPORTUNITIES TO INFORM DEBATE

FROM THE BLUE RIBBON PANEL CONDUCTING AN
EXTERNAL REVIEW OF THE U.S. DEPARTMENT OF AGRICULTURE

# CONSERVATION EFFECTS ASSESSMENT PROJECT

SOIL AND WATER CONSERVATION SOCIETY

A Soil and Water Conservation Society Project

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## About SWCS

The Soil and Water Conservation Society (SWCS) is a nonprofit scientific and educational organization that serves as an advocate for natural resource professionals and for science-based conservation policy. Our mission is to foster the science and art of soil, water, and environmental management on working land—the land used to produce food, fiber, and other services that improve the quality of life people experience in rural and urban communities. We work to discover, develop, implement, and constantly improve ways to use land that sustains its productive capacity and enhances the environment at the same time.

SWCS has about 7,000 members around the world. They include researchers, administrators, planners, policymakers, teachers, students, farmers, and ranchers. Nearly every academic discipline and many different conservation institutions are represented within the membership.

Member benefits include the widely respected *Journal of Soil and Water Conservation*, representation in policy circles, opportunities for leadership and networking, and discounts on books and conference registrations.

SWCS chapters throughout the United States, Canada, and the Caribbean Basin conduct a variety of activities at local, state, and provincial levels and on university campuses. These 75 chapters represent the grassroots element of the organization. Each chapter elects its own officers, organizes conservation forums, and formulates local recommendations on conservation and environmental issues.

**Soil and Water Conservation Society**
**945 Southwest Ankeny Road, Ankeny, Iowa 50023**
**P: (515) 289-2331 • F: (515)289-1227 • www.swcs.org**

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The CEAP Blue Ribbon Panel's report of preliminary findings, released in March 2005, included the following key findings:

> "The panel believes the need to supply policymakers, program managers, and the conservation community with the information they need to manage and/or propose reforms to conservation programs is greater than ever. Demands to ensure that conservation funding is used effectively have intensified given the 80 percent increase in funding provided by the 2002 farm bill. At the same time, coming federal fiscal year budgets are expected to be tight. Competition for federal funds between conservation and other purposes, and among conservation programs themselves, will be intense. The panel hopes a rigorous debate—if based on solid, science-based information—can result in a stronger, more effective, and more efficient conservation effort."

> "The panel expects conservation to be central to the 2007 farm bill debate. Important decisions regarding conservation funding, program reform, and priorities will be made. Policymakers, program managers, and the conservation community will need credible, science-based information to make those decisions."

Those findings led to this recommendation: "In the short term, USDA should redirect CEAP resources to produce assessments that will inform the 2007 farm bill conservation title debate."

The panel's report went on to recommend:

> "USDA should quickly identify 'low-hanging fruit'—opportunities to use the CEAP framework to inform the 2007 farm bill debate. U.S. Department of Agriculture (USDA) should also draw on datasets and assessment capabilities not formally considered part of CEAP, but that are underway both inside and outside of the Department. The panel concluded there are likely many examples of low-hanging fruit in the CEAP national assessment, watershed studies, and related efforts. The panel recommends a concerted effort to identify and take advantage of as many of those opportunities as possible."

USDA subsequently requested the panel to help develop such a list of low-hanging fruit. Panel members first were asked this question: "What three to five questions would you really like answers to before the debate of the 2007 farm bill conservation provisions starts in earnest?" Panel members were not to worry about the feasibility of answering their questions or whether those questions were within the scope of CEAP. They were asked simply to think about what information would be most useful to them.

Panel members' "wish lists" were then run through two screens to catch those ideas that could be implemented within 18 months and would provide policymakers, program managers, and members of the conservation community with the most useful information to inform the 2007 farm bill debate. This screening step was largely accomplished through a dialogue involving panel members, CEAP staff members from Natural Resources Conservation Service (NRCS) and Agricultural Research Service (ARS), and other federal agency staff liaisons during the panel's May 4-5, 2005 meeting in Washington, D.C. This report attempts to capture the results of that dialogue and the panel's deliberations in executive session.

The panel's scope of inquiry was defined by the following CEAP-related activities:

1. CEAP national assessment activities
   a. Cropland and Conservation Reserve Program (CRP) component
   b. Wildlife and wetlands component
2. CEAP watershed studies
3. Agency performance reporting systems

Other assessment activities were briefly discussed during the panel's meeting, but time and USDA's charge to the panel did not allow for in-depth exploration of those activities.

## EXTEND THE VALUE AND MEANING OF CEAP RESULTS

The list of questions offered by panel members to help inform the 2007 farm bill debate was long. Many questions were well beyond the scope of CEAP. In the course of their deliberations, panel members repeatedly returned to three ideas they thought could help expand the potential for CEAP to inform the 2007 farm bill: collaboration, regional versus national reporting, and ground-truthing.

### Collaboration

CEAP's potential to inform the 2007 farm bill debate will increase significantly by bringing to bear the related datasets and assessment efforts of others—federal agencies, state agencies, and nongovernmental organizations. Those datasets and assessment efforts could provide context for interpretation of CEAP results and create a multiplier effect, expanding the reach and meaning of CEAP results. The kind of collaborative approach envisioned by the Resource Conservation Act (RCA) appraisal process, as described to the panel, should be undertaken to expand the opportunities to inform the 2007 farm bill debate.

### Regional versus National Reporting

Regional-level assessments rather than national-level assessments and reporting of results represented another opportunity identified by panel members. Panel members expressed concern that the demands of national-level reporting planned for the cropland-CRP assessment might overshadow opportunities to produce more focused and comprehensive regional-level assessments. Moreover, regional-level assessments would likely provide a more specific context for environmental problems and more meaningful interpretations of CEAP results that could inform the 2007 farm bill debate.

### Ground-truthing

Panel members also repeatedly stressed the value of buttressing the results of model simulations and estimates of effect with reference to "real-world" data. Marshalling evidence from efforts to monitor the effects of conservation practices and programs at small watershed or other landscape scales are essential to put simulated results into a real-world context and verify modeled results. CEAP watershed studies should play a central role in this ground-truthing effort. In addition, differences between simulated effects and the results of ongoing monitoring programs must be explained or serious questions will be raised about CEAP estimates. Finally, targeted, on-the-ground assessments of key issues, such as CRP cover quality, activities encompassed by and results anticipated from financial assistance for broadly defined management-intensive practices, or the success of wetland restoration, would substantially enhance the value of CEAP outputs.

## STATE OF THE NATION'S CONSERVATION EFFORT ON WORKING LAND

Clearly describing and documenting the current "state of conservation" on working land—the privately-owned land comprising working farms, ranches, and forests—would be a major contribution to informing the 2007 farm bill debate. Understanding the "conservation baseline" would help inform discussions about where the gaps in conservation effort are and what steps could be taken to fill those gaps. That baseline would provide a starting point for identifying opportunities and evaluating proposals to change policy, programs, and/or funding levels. In the words of one panel member, "If you don't know where you are, it is hard to decide where you need to go."

Panel members identified three opportunities to construct a comprehensive conservation baseline with CEAP results: the cropland-CRP baseline estimate of effects; the CEAP survey of land users at NRI points; nuts and bolts of program implementation.

Each of these opportunities is described in more detail below.

### CEAP Cropland-CRP Baseline Estimate

USDA staff members explained to panel members that revised CEAP plans include simulating the environmental effects of a "baseline" conservation effort using the conservation practices found to be in place on cropland during the 2003 and 2004 CEAP survey of 13,000 cropped sample points and 4,000 CRP sample points. Such a baseline will produce a valuable aggregate-level estimate of the current state of conservation on cropland by describing the magnitude and geographic distribution of effects at national and/or large regional scales. This baseline scenario will help describe where we are today and provide a basis for simulating where we might want to go in the future. Panel members applaud USDA for adjusting its plans to produce this baseline scenario.

### CEAP Survey of Land Users

Data from the CEAP survey of land users also should be mined for useful information regarding the current state of conservation effort. Panel members have not received an in-depth briefing on the survey questions or results, but available information suggests the data could be analyzed for indications of (a) the level of participation in USDA or other public conservation programs, (b) what share of the conservation effort is supported by USDA technical and financial assistance programs, and (c) the distribution, variability, and range of conservation practices and systems applied, i.e., the level of conservation effort on

farms in the survey. There likely are other important opportunities to mine the CEAP survey data. USDA officials and their partners should rigorously explore those opportunities in their attempt to describe the current state of conservation on cropland. Such analyses of CEAP survey data could be further enriched by parallel analyses of the USDA Economic Research Service's Agricultural Resource Management Survey (ARMS) dataset—focusing especially on socioeconomic elements of the state of our current conservation effort.

### Nuts and Bolts of Program Implementation

Are we solving or preventing problems? Policymakers, program managers, and members of the conservation community generally will want this question—more than any other—answered as the 2007 farm bill debate unfolds and proposals are offered to reform conservation policies and programs. But the question can only be answered with basic, nuts-and-bolts information about program implementation—what practices have been funded; where have they been applied; how much have they cost; and what are the primary environmental effects of funded practices?

Panel members were encouraged by the briefings they received about the extent of basic information being collected and plans to make that information widely available. They recommended using those basic data to analyze the contributions specific programs are making to solve problems on the nation's working land. Example analyses included the following:

1. Compare the kind and location of practices funded before 2002 to the kind and location of practices funded after 2002 to explore the effect the 2002 conservation title had on conservation activity in the United States.
2. Compare the geographic distribution of practices funded to the geographic distribution of known problems—impaired watersheds, air quality nonattainment areas, critical or threatened habitats, and others—to explore how well funded practices line up with problems.
3. Explore the priorities implicit in conservation programs based on the practices funded and the primary environmental effects of funded practices.

Panel members believe many more such questions could be answered by creatively using the basic, nuts-and-bolts data on program implementation readily available from agency reporting systems. Updating the data and assessments in the 2000 report analyzing the effect of conservation programs on fish and wildlife habitat is another important opportunity to document the current conservation baseline effort on working land.

## CHALLENGES AND UNFINISHED BUSINESS

The next major contribution to informing debate that panel members recommend, is an effort to define the nation's unfinished conservation business—the environmental problems and conservation opportunities that are not being addressed with the current level of conservation effort. Such information would contribute significantly to the farm bill debate by permitting a comparison of the current level of effort to the extent, magnitude, and geographic distribution of unmet challenges. This information is critical to any discussion about what level of conservation effort should be sought to address the unfinished business. Panel members encourage the CEAP effort to mine all data being gathered to identify the extent, magnitude, and geographic distribution of unmet challenges. Three such opportunities are the following:

1. "Pre-CEAP" vulnerability and risk assessments should be assembled and updated where needed and feasible to create aggregate-level assessments of potential problems and opportunities. Vulnerability assessments should be compared to the "CEAP baseline" estimate to make gross estimations of the extent to which vulnerability and risks are being addressed through the current conservation effort.
2. NRI and related inventory data should be analyzed to identify shifts in land use and/or agricultural production activities that would indicate shifts in the location, extent, or magnitude of potential problems and opportunities. The "CEAP baseline" estimate could be used to make gross estimations of the extent to which such shifts, if any, are being addressed through the current conservation effort.
3. The data being gathered in the wildlife and wetlands components of the CEAP national assessment, while less comprehensive and statistically based than the cropland-CRP component, should also be explored for information about unmet challenges.

The benefits of collaboration in defining unfinished business are substantial, perhaps more so than in any other area. The value of the CEAP results could be multiplied through reference to related datasets and assessment activities. Panel members strongly recommend that USDA ask its federal, state, and nongovernmental partners to help assemble related data and participate in the analysis of unmet needs. These data sets might include U.S. Geological Survey National Water Quality (NAWQA) data; Clean Water Act Section 319 program monitoring data and impaired waters lists; stream, wetland, and wildlife habitat assessment data; and other information needed to construct a comprehensive picture of conservation needs and opportunities on working land.

## ANALYSIS OF ALTERNATIVES: WHERE COULD WE GO FROM HERE?

The final contribution CEAP should make to informing the 2007 farm bill debate, according to the panel, is to provide the analytical framework for evaluating alternative options for addressing unmet challenges and unfinished business.

### CEAP National Assessment

The CEAP Cropland-CRP analytical framework should be used to simulate—at the aggregate level—the effect of alternatives on the CEAP 2003-2004 baseline. This analytical framework is amenable to large and diverse simulations. The feasible simulations are undoubtedly fewer, given staff and budget constraints, but panel members do not have the information needed about those constraints to make recommendations on which simulations might be most feasible. Panel members do recommend, however, that USDA focus its simulations on two related questions: (1) What could be accomplished with a different level of conservation effort, and (2) what could be accomplished by improving the way we do things? Such simulations could include:

1. What would happen to environmental quality if the backlog of applicants for conservation programs were eliminated?
2. What would the environmental effect be of funding different kinds and combinations of practices?
3. What would the environmental effect be if the geographic distribution of funded practices were changed?
4. What would be the effect on fish and wildlife habitat of changing the geographic distribution of CRP acres and/or the kind and quality of vegetative cover on CRP acres?

### CEAP Watershed Studies

Results to date from CEAP watershed studies—particularly the long-term ARS benchmark watershed studies—should be analyzed for lessons learned. Time has not allowed panel members to review individual watershed study plans. The list of potential lessons learned is likely larger and more varied than those panel members might identify. Panel members do, however, recommend that USDA review watershed studies to determine what is known about:

1. Best options for targeting conservation programs to enhance effectiveness while recognizing concerns for equity in access to public programs?
2. Critical conservation concerns that may not be adequately addressed currently. For example, discussion during the panel's meeting highlighted the profound effect of channel instability, bank erosion, and in-stream processes on water quality and aquatic habitat outcomes.
3. What is known about the effectiveness of alternative conservation practices and systems in achieving particular environmental objectives; which practices are the best?

## CONCERNS

Panel members, at their May meeting, identified important opportunities to use CEAP to inform the 2007 farm bill debate. Taking advantage of those opportunities would result in a more informed debate and, panel members hope, a stronger conservation effort on working land in the United States. Panel members, however, also identified four ongoing areas of concern, based on the CEAP information they received at that meeting.

### Feasibility, Realistic Expectations, and Priorities

Panel members are aware of the need to set realistic expectations for using CEAP to inform the 2007 farm bill debate. They also are aware of their own limited ability to shape those expectations. Members have only cursory information about the staff and resource constraints USDA faces; the costs of conducting particular data collection, simulation, or assessment efforts; and most importantly, the tradeoffs that could be required to redirect additional resources to support CEAP and related assessments.

Panel members also are aware that there are competing objectives for CEAP among legitimate interests both inside and outside of USDA. In the long term, accountability and strategic resource management objectives can and should be compatible and mutually supporting components of an adaptive management information system. But in the short-term, using CEAP to meet demands for improved annual performance reporting may compete with using CEAP for strategic resource management assessment, given limited financial and staff resources. In the short-term, panel members strongly urge USDA to focus CEAP staff and resources on efforts to inform the 2007 farm bill debate and, subsequently, on using the capabilities of CEAP as a strategic resource management assessment tool. Panel members applaud USDA officials for the decisions they have already made in this regard, as reported during the May 2005 meeting.

Panel members tried to focus most of their recommendations for using CEAP to inform the 2007 farm bill debate in areas where information is most critically needed and is most feasible to produce, given staff and resource constraints. Panel members are most confident, based on the information at hand, that documenting the "state of the Nation's conservation effort" is feasible with existing staff and resources. The primary datasets required—CEAP survey and the nuts and bolts of program implementation—are either available or planned for, and CEAP staff is committed to producing the "CEAP baseline" simulation and an updated assessment of program effects on wildlife habitat in early 2006.

Panel members also are confident that many potential partners are available to help analyze survey and program implementation data and thus help determine the state of the nation's conservation effort. Panel members strongly recommend that USDA undertake a coordinated, collaborative effort—similar to the RCA appraisals undertaken in the past—to take full advantage of its partners' information and assessment capabilities. Providing policymakers, program managers, and members of the conservation community with a comprehensive picture of the state of the nation's conservation effort appears to be within reach and would make a major contribution to an informed and constructive debate over the conservation provisions of the 2007 farm bill.

Panel members also are confident that the CEAP cropland-CRP national assessment analytical framework could be used in meaningful ways to evaluate alternatives for strengthening the conservation effort. Panel members have suggested a number of ways to use that analytical framework to pose important "what if" questions. USDA should take full advantage of this analytical framework to help policymakers, program managers, and members of the conservation community understand the implications of alternatives for the reach and impact of the USDA component of the nation's conservation effort on working land.

Just as collaboration with partners is essential for completing the analysis of the state of the nation's conservation efforts and identifying unmet needs, the feasibility of completing other analyses depends largely on the extent to which effective collaborations with multiple partners inside and outside of USDA can be developed. Again, panel members strongly urge USDA and its partners to develop a coordinated strategy that takes advantage of all opportunities for collaboration to expand the information base available to inform the 2007 farm bill debate.

Finally, panel members are aware that the assessment and evaluation capabilities represented by CEAP are as well, or better suited to informing implementation strategies as they are for informing the farm bill debate. Lessons learned from CEAP watershed studies, the documentation of the science base for quantifying the environmental effects of conservation practices, and other CEAP activities could provide valuable insight for agency officials who must develop new program rules and policy guidance when the farm bill becomes law. Panel members urge USDA to start thinking now about the opportunities to use CEAP as a strategic resource management tool to guide implementation of the conservation provisions of the 2007 farm bill.

## Grazing Land: An Important Information Gap

CEAP national assessment activities will produce useful information about the environmental effects of conservation on cropland and the habitat benefits derived from conservation programs applied to additional land uses. There will be much less information available from CEAP activities to inform debate about the nation's conservation effort on grazing land. Given the extent and importance of grazing land in the United States, this limitation will pose a serious information gap for policymakers, program managers and members of the conservation community generally.

## A More Comprehensive Wildlife Assessment is Needed

CRP will be the focus of most habitat assessment activities conducted in time to inform the 2007 farm bill debate. This is understandable, given that CRP already has been heavily studied. Panel members recommend, however, that USDA revisit its plans for wildlife and wetlands assessments to produce a more comprehensive and program-neutral analysis of the current conservation effort, unmet needs, and alternatives. CRP clearly provides important opportunities to enhance wildlife habitat, but the contribution of other conservation programs must receive comparable attention.

Panel members also are concerned that the focus of the wildlife and wetlands assessments appears to be heavily weighted toward terrestrial wildlife habitat. Again, this reflects the focus of most of the technical literature available to inform the assessments. It seems apparent, however, that efforts to address water quality and/or water conservation should have significant benefits for aquatic habitat and aquatic ecosystems. More attention should be paid to the aquatic habitat benefits of conservation programs in the CEAP wildlife and wetlands assessment activities. In short, panel members are concerned that the CEAP wildlife and wetlands assessments could suffer from the limitations of "looking under the lamp post."

## An In-depth Assessment of the Technical Services Infrastructure is Needed

Panel members repeatedly discussed the status of the technical services infrastructure—research, education, and technical assistance—during their deliberations over key questions that must be answered to inform the 2007 farm bill debate. Panel members are acutely aware of the importance of this infrastructure as the foundation of the nation's conservation effort on working land. An in-depth assessment of the strengths and weaknesses of the current technical services infrastructure should be a major component of the analysis of the state of the nation's conservation effort on working land.

Panel members realize such an in-depth assessment is largely outside the scope of CEAP and outside the scope of the panel's charge. But if CEAP simulations consider the implications of program implementation at higher levels of effort or through more strategic implementation, they will be assuming that the technical services needed to secure those higher levels of performance are available. Clearly, those assumptions warrant additional scrutiny. Moreover, panel members believe technical assistance and advice are often a more cost-effective means to enhance environmental benefits from conservation on working land than financial assistance, particularly when directed at implementation of management-intensive, annual conservation systems. Alternatives for strengthening the technical services infrastructure should be considered as an integral part of exploring options to strengthen the nation's conservation effort on working land.

## NEXT STEPS

The panel recommended, in its report of preliminary findings referred to earlier, that USDA make short-term adjustments in CEAP to help inform the 2007 farm bill debate. The panel applauds USDA and its partners for the steps already taken to ensure CEAP and related efforts will help inform a constructive debate on the conservation provisions of the 2007 farm bill. The panel hopes the ideas and recommendations presented in this report will prompt more action to take advantage of additional opportunities to build a solid, science-based, credible, and shared base of information as the foundation for that debate.

But the panel also raised serious concerns about long-term plans for CEAP. The panel's report of preliminary findings also stated, "USDA must also change its long-term goal for CEAP to ensure its larger purpose will be met. The current long-term goal, as presented to the panel, is a system capable of producing national-level estimates of all environmental benefits produced by each individual conservation program in every year. The panel thinks a better long-term goal is a system capable of producing rigorous assessments of options for implementing conservation programs in the future. CEAP, in other words, should be built to answer the question 'What should we do next year?' rather than 'What did we do last year?' The panel thinks the current plan to spend most CEAP resources building a system to quantify annual, program-by-program performance will be a mistake…." Dedicating CEAP resources largely to quantify annual program-by-program performance may address short-term, tactical, accountability issues, but it will not provide the foundation for the necessary strategic analysis needed to guide conservation programs based on adaptive management.

The panel now intends to take up its last task—helping to shape a blueprint for CEAP over the long term. Informing the 2007 farm bill is important and CEAP must make an important contribution to the effort. But CEAP's most important contribution will be to inform strategic resource management in the long-term. The panel spent a great deal of time discussing how CEAP could play that role. The utility of CEAP will be determined by how the data and information collected will be used in implementing current conservation programs and to develop recommendations for the design and implementation of future programs. Its next and final report, expected in fall 2005, will build on this theme and summarize the panel's ideas and recommendations for making the most of CEAP in the long term.

This report is part of a larger effort—supported by a cooperative agreement with the U.S. Department of Agriculture (USDA) Agricultural Research Service—to assist with the design and implementation of the Conservation Effects Assessment Project (CEAP). The Soil and Water Conservation Society (SWCS) facilitated an external, policy-level review of CEAP. We relied on input and advice from the CEAP Blue Ribbon Panel, whose members are listed below.

We are indebted to the agency liaisons and presenters who shared their time and expertise during the panels' meetings. The findings and conclusions, however, are solely the responsibility of SWCS.

**CEAP Blue Ribbon Panel**

**Sandra Batie:** Professor, Michigan State University-Department of Agricultural Economics.

**Otto Doering:** Professor, Purdue University-Department of Agricultural Economics.

**Ronald Hammerschimdt:** Director, Division of Environment, Kansas Department of Health and Environment.

**Krysta Harden:** Chief Executive Officer, National Association of Conservation Districts.

**Jay Hardwick:** Farmer, National Cotton Council.

**Ferd Hoefner:** Policy Director, Sustainable Agriculture Coalition.

**Charlie Ingram:** Director, Legislative and Regulatory Affairs, National Association of State Departments of Agriculture.

**Joe Martin:** Director of Congressional Affairs, American Farm Bureau Federation.

**Tamara McCann Thies:** Director for Environmental Issues, National Cattlemen's Beef Association.

**Jennifer Mock:** Agriculture Conservation Policy Analyst, International Association of Fish and Wildlife Agencies.

**Peter Nowak:** Professor, University of Wisconsin-Madison-Department of Rural Sociology and Department of Environmental Studies.

**Ross Racine:** Executive Director, Intertribal Agricultural Council.

**Tim Searchinger:** Attorney, Ecosystem Restoration Program, Environmental Defense.

**Jeff Vonk:** Director, Iowa Department of Natural Resources and SWCS Board of Directors Ex-Officio Liaison.

**Mary Watzin:** Director, Rubenstein Ecosystem Science Laboratory, University of Vermont-Rubenstein School of Environment and Natural Resources.

**Jeffrey Zinn:** Specialist in Natural Resources Policy, Congressional Research Service.

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Soil and Water Conservation Society
945 SW Ankeny Rd.
Ankeny, IA 50021
Phone: 515-289-2331
Fax: 515-289-1227
www.swcs.org



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