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# USDA Conservation Effects Assessment Project

SWCS Point of View  
and Current Activities

# Cover Two Main Topics

- SWCS point of view:
  - Where did CEAP come from?
  - Why is CEAP important?
  - What should CEAP produce?
- SWCS CEAP activities:
  - Blue Ribbon Panel review of CEAP.
  - Literature review and synthesis.

# Where did CEAP come from?

- Senate version of 2002 farm bill included many provisions mandating monitoring, evaluation, and assessment of conservation programs.
  - SEC. 1244 (b) Education, Outreach, Monitoring and Evaluation.
  - SEC. 1244 (d) Program Evaluation.
  - SEC. 205. Reform and Assessment of Conservation Programs.
  - SEC. 205 (c) National Conservation Plan.

# Where did CEAP come from?

- House version of 2002 farm bill contained no such provisions.
- Conference report eliminated most of Senate provisions but included “report language” regarding monitoring and evaluation.

# Why is CEAP important?

- 1985—Advent of the environmental agenda in agricultural conservation policy and programs.
  - Most profound change in past 60 years.
  - Struggle to adapt: politics, policy, programs, science, technology.
- 2002—Farm bill conservation title.
  - Historic opportunity: Money and balance.
  - Will we measure up?
  - Did we measure up?

# Why is CEAP important?

## Advent of Environmental Agenda

- Environmental agenda has reordered our priorities:
  - Enhance productivity of agriculture.
  - Sustain the resource base agriculture depends on.
  - Improve soil, water, & air quality; fish and wildlife habitat; ecological goods and services.

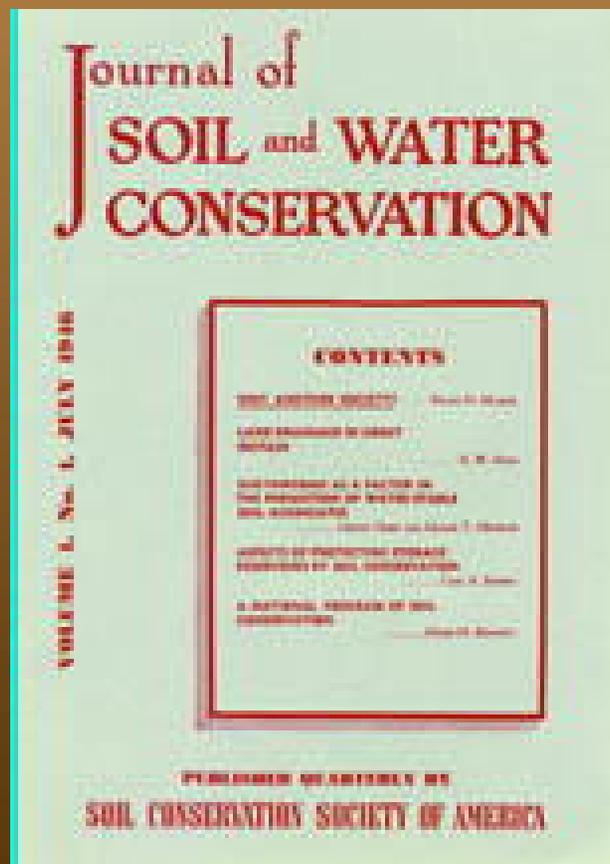


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# Why is CEAP important?

## Changing Priorities



# Why is CEAP important?

## Changing Priorities

- 1946 JSWC feature: “Land Drainage in Great Britain.”
- Conservation’s contribution to winning the “Battle of Britain.”
  - Increased food production from 1/3 to 2/3 of domestic needs.
  - Converted 4 million acres of grass and waste land to tilled crops.
  - Applied “vast” quantities of commercial fertilizer.
  - Rehabilitated or constructed thousands of agricultural drains.

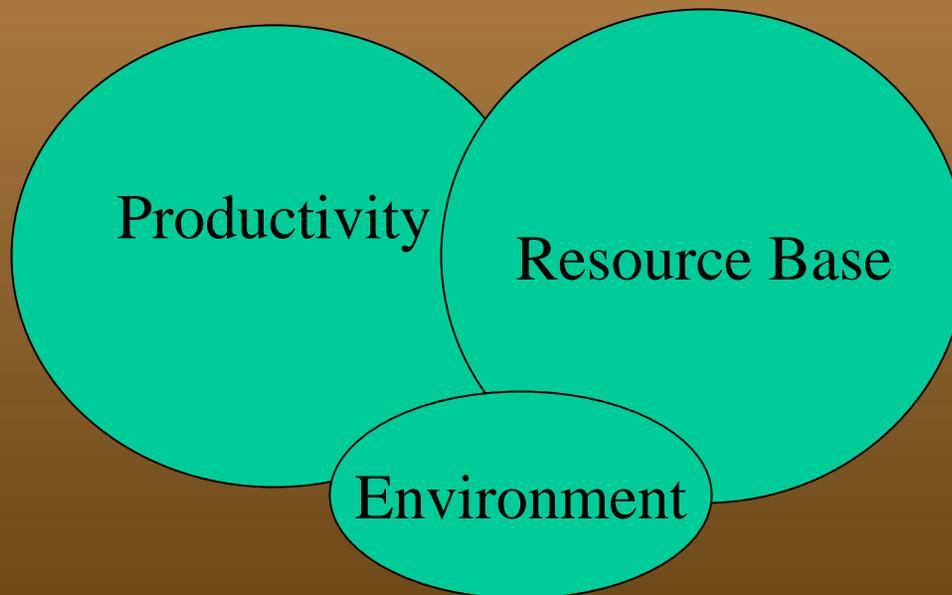


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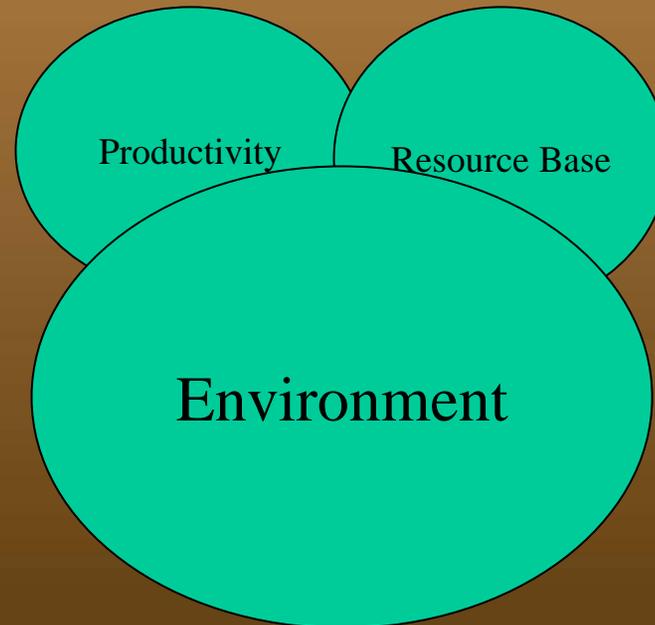
# Why is CEAP important?

## 1946 Priorities



# Why is CEAP important?

## 2002 Priorities



# Why is CEAP important? Changing Priorities

- Think about wetlands:
  - Up to 1970s we paid farmers to drain wetlands.
  - 1985 we deny farm subsidies if a farmer drains wetlands.
  - 1990 pay farmers to restore wetlands (WRP).



# Why is CEAP important?

## Changing Priorities

- Think about program names and funding:
  - AGRICULTURAL CONSERVATION Program: 1995-\$70 million.
  - ENVIRONMENTAL QUALITY Incentives Program: 2005-\$1 billion.
  - ACp to EQip.
  - 15 fold increase in funding.

# Why is CEAP important?

## Changing Priorities

- Think about changes in law:
  - 1935 Soil Conservation & Domestic Allotment Act.
    - Preservation and improvement of soil fertility.
    - Promotion of economic use and conservation of land.
  - 2002 Farm Bill.
    - Assist producers comply with regulatory requirements.
    - Avoid need for regulation by assisting producers meet environmental quality criteria.

# SWCS Point of View

## Why is CEAP important?

- Critical step to respond to environmental agenda.
- Scientific basis for environmental management of working land.
  - Policy.
  - Programs.
  - Recommendations to landowners.



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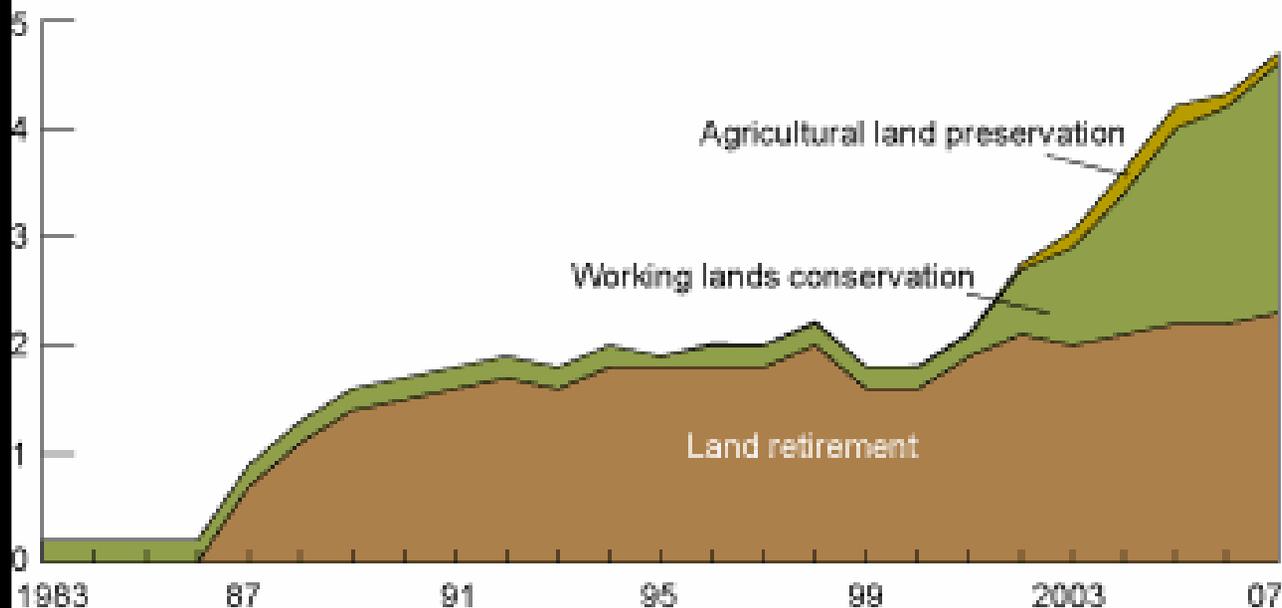
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# Why is CEAP important?

## Historic Opportunity

The 2002 Farm Act has authorized substantially increased conservation funding, particularly for working lands programs

Billions of dollars



Sources: Office of Budget and Policy Analysis, USDA, and the Congressional Budget Office.

# Historic Opportunity: Balanced Agenda

- Repair key landscape functions—land retirement and restoration.
  - Hydrology: the amount, timing, and pathway water reaches streams.
  - Stream corridors and channels.
- Improve farm & ranch management—working land conservation.
  - Nutrient, water, soil, grazing, crop management.
  - Pollution pathways: erosion, runoff, drainage.

# Historic Opportunity: Over \$4 billion annual budget

<b>Program</b>	<b>2004</b>	<b>2005</b>	<b>2006?</b>
<u>Land Management</u>			
Conservation Technical Assistance	\$764	\$743	\$659
Environmental Quality Incentives Program	\$975	\$1,017	\$1,000
Wildlife Habitat Incentives Program	\$42	\$47	\$60
Farm and Ranch Land Protection Program	\$112	\$112	\$84
Ground and Surface Water Conservation	\$51	\$51	\$60
Small Watershed Rehabilitation	\$30	\$27	\$15
<b>Subtotal</b>	<b>\$1,974</b>	<b>\$1,997</b>	<b>\$1,878</b>
<u>Land Restoration</u>			
Conservation Reserve Program	\$1,850	\$1,942	\$2,021
Wetlands Reserve Program	\$285	\$275	\$321
Grassland Reserve Program	\$57	\$128	\$0
<b>Subtotal</b>	<b>\$2,192</b>	<b>\$2,345</b>	<b>\$2,342</b>
<b>TOTAL</b>	<b>\$4,166</b>	<b>\$4,342</b>	<b>\$4,220</b>

# Why is CEAP important?

## Will we measure up?

- Scientific basis for advice to landowners.
  - Environmental effect of “practices.”
  - Environmental effect of “systems.”
  - What works, what doesn’t, and why?
- Scientific basis for program & policy change.
  - Funding.
  - Targeting.
  - Opportunities.

# Why is CEAP important?

## Did we measure up?

- Scientific basis for estimating what programs have accomplished.
  - What are the right questions?
  - What are the right indicators?
  - How should indicators be tracked?
  - How should indicators be interpreted?
- Wrong question, wrong indicator, wrong interpretation = serious trouble.

# SWCS Point of View

## Why is CEAP important?

- Build scientific basis for ensuring we measure up:
  - Make good recommendations to landowners.
  - Adaptive management of programs and policy.
    - What have we accomplished so far?
    - How can we do things better?

# SWCS CEAP Activities

## Blue Ribbon Panel

- External, policy-level review of CEAP.
- *What* should CEAP produce, not *how* CEAP should produce it.
- Panel composed of people representing interests who will use and shape opinion about CEAP.
  - *Academics.*
  - *Leaders of agricultural, environmental, conservation organizations.*
  - *Leaders of state and tribal entities.*

# CEAP Blue Ribbon Panel

## Preliminary Findings & Recommendations

- Strongly and unanimously endorse the purpose of CEAP.
- Recommend “immediate change in direction and emphasis” to ensure CEAP achieves its purpose.

# CEAP Blue Ribbon Panel

## Change Direction and Emphasis

- CEAP purpose: help program managers and policymakers implement existing programs or design new programs to better achieve objectives.
- Current CEAP vision: best way to achieve that purpose is to provide program-by-program, annual estimates of environmental effects of past activities.
- Panel vision: best way to achieve that purpose is to build capacity to rigorously:
  - Define promising opportunities.
  - Evaluate options.

# CEAP Blue Ribbon Panel Change Direction and Emphasis

- Short term:
  - Focus on informing the 2007 farm bill.
  - Use resources to extract value from CEAP analytical framework, watershed studies, related efforts rather than build more capacity.
  - Then start building again, but, with a different direction in mind.

# CEAP Blue Ribbon Panel Change Direction and Emphasis

- Redefine the “Cadillac”—ultimate vision of what CEAP should be when it is finished.
- Current vision—annual, national-level, program-specific estimates of environmental effects of past activities.
- All programs, all environmental effects, everywhere, every year.
- Watershed studies test, refine, and validate methods used in national assessment.

# CEAP Blue Ribbon Panel Change Direction and Emphasis

- Current vision of the ultimate won't achieve CEAP's larger purpose.
  - “What if we are told EQIP reduced nitrate losses by 80 million tons? Was that enough, should we have done more, how much more?”
  - “Massive and expensive task fraught with problematic assumptions”—likely scientifically indefensible.
  - Duplicate investments in annual performance reporting systems.
  - Simulation models, watershed studies better suited to evaluating future options.

# CEAP Blue Ribbon Panel Change Direction and Emphasis

- Current vision: What did we do last year?
  - EQIP reduced nutrient delivery to streams by X in 2006.
  - CSP sequestered Y tons of carbon in 2007.
- Panel vision: What should we do next year?
  - What would it take to change ag from a “major” to a “minor” source of impairment?
  - What would it take to make ag a net sink for greenhouse gases?

# CEAP Blue Ribbon Panel

## Next Steps

- Help USDA identify “low-hanging fruit” to inform 2007 farm bill debate.
- Review agency annual performance reporting systems.
- Provide more detail about what a “forward-looking” CEAP would look like.

# SWCS CEAP Activities Literature Review & Synthesis

- Document what we know and don't know about the environment effects of conservation practices applied to cropland—consolidate environmental management science base.
  - Positive and negative effects on soil, water, and air quality; water conservation.
  - Major factors determining magnitude and direction of effects.
- Knowledge gaps and research needs—build environmental management science base.

# SWCS CEAP Activities

## Literature Review & Synthesis

	<b>RAINFED CROPLAND</b>	<b>IRRIGATED CROPLAND</b>
<b>Soil Mgmt</b>	Randall Reeder Ohio State University	Dale Westermann USDA-ARS
<b>Water Mgmt</b>	Jim Baker Iowa State University	Dean Eisenhauer University of Nebraska
<b>Nutrient Mgmt</b>	Andrew Sharpley John Schmidt USDA-ARS	Gary Hergert University of Nebraska
<b>Pest Mgmt</b>	Don Wauchope USDA-ARS	Rick Roush University of California
<b>Landscape Mgmt</b>	Richard Lowrance USDA-ARS	

# SWCS CEAP Activities

## Literature Review & Synthesis

- SWCS coordinating its efforts with The Wildlife Society (TWS).
- TWS is reviewing fish and wildlife habitat effects.
- SWCS and TWS will publish companion volumes.
  - SWCS August 2005.
  - TWS Fall 2005.



## The Soil and Water Conservation Society

(SWCS) is a nonprofit scientific and educational organization—founded in 1943—that serves as an advocate for professional resource conservationists and environmental managers and for science-based conservation and environmental practice, programs, and policy.

SWCS has over 7,000 members around the world. Our mission is to foster the science and art of natural resource conservation 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 pursue our mission through a combination of research, education, and advocacy.

You can learn more about SWCS and our projects by visiting our website: [www.swcs.org](http://www.swcs.org)