

## Resources & Environment



# Conservation Reserve Enhancement Program: Early Results from A Federal-State Partnership

The Conservation Reserve Enhancement Program (CREP) is a 3-year-old Federal-state partnership designed to encourage eligible farm operators to adopt specific conservation practices that meet certain water quality or wildlife-related goals. The 13 states that currently participate in CREP's have used various types of incentives to induce potential participants to voluntarily retire their land.

Given the program's short track record and some programmatic difficulties, the impact of these incentives on enrollment is difficult to evaluate, but some incentives do appear to have more impact than others. Lessons gleaned from existing programs may help other states design a CREP or provide insights for the design of similar programs beyond 2002, when authority for the Secretary of Agriculture to sign new CREP agreements expires under current law.

### *What Is the CREP?*

The CREP is a joint Federal-state land retirement conservation program that combines state and Federal resources under current provisions of USDA's Conservation Reserve Program (CRP). The CREP is a distinct program that uses CRP authorities to operate. State authorities sign contracts with local landowners to target specific state and national conservation and environmental objectives, such as improving water quality or preserving wildlife habitat.

Under this arrangement, USDA provides participants who enroll their land with a set level of cost sharing, the same signing (enrollment) incentive payment as for "continuous" signup CRP enrollees, an annual land rental rate (the rental rate plus a percentage that may vary by conservation practice and individual CREP agreement), and an annual land maintenance payment. The CREP allows states to supplement Federal incentives, to address more state-specific goals, and to target certain conservation practices.

State enrollment incentives have included additional cost sharing to minimize or eliminate out-of-pocket costs for participants, up-front enrollment payments, and the option, or requirement, for participants to extend a conservation contract or provide a permanent easement. Permanent easements are limited property rights—in this case designed to keep land in conservation uses—that are granted by the property owner to the state government. Under the CRP, the Federal government does not retain an ownership interest in any easement.

CREP enrollment is usually conducted in the same manner as the "continuous" CRP signup option. That is, eligible CREP participants are allowed to sign up at any time without going through the periodic competitive Environmental Benefits Index (EBI) ranking process normally used to select potential "general" CRP participants. Each state defines specific areas (e.g., watersheds) or land characteristics (e.g., highly erodible land) for CREP eligibility, targeting particular goals that coincide with national objectives—such as improved water quality or preserving endangered species habitats.

In Maryland, for example, the program is targeted to protect Chesapeake Bay water quality, which supports Clean Water Act objectives. In New York, watersheds that supply water to New York City are targeted to protect the city's drinking water supply, which coincides with objectives of the Safe Drinking Water Act. In Washington and Oregon, the focus is on areas that provide habitat for endangered species.

### *Who Participates In the CREP?*

Since 1997, 13 states have implemented CREP's. This analysis includes data on CREP's in Maryland, Illinois, North Carolina, New York, Delaware, Minnesota, Ohio, Oregon, and Washington, but excludes data from Pennsylvania, Virginia, Michigan, and Missouri because of the recent implementation or small number of contracts recorded in these states. Nine additional states (Arkansas, Florida, Iowa, Kentucky, Nebraska, North Dakota, Vermont, West Virginia, and Wisconsin) have CREP pro-

posals under consideration by USDA's Farm Service Agency, which oversees the program. As of October 2000, about 103,000 acres had been enrolled in CREP's, with the largest enrollment in Illinois (about 53,000 acres) and Maryland (approximately 20,000 acres).

Current enrollment under the CREP is dwarfed by enrollment under other land conservation programs—general CRP and the continuous CRP. USDA has committed about \$1.7 billion over the 15-year life of the program to assist the enrollment of almost 1 million acres under the 13 current CREP agreements. In addition to the large difference in total enrolled acreage, the CREP differs from the CRP in several respects, including the size of farms that participate, the type of land enrolled, and the length of contracts. These differences in large part reflect distinctions in the program goals of the general and continuous CRP and the CREP.

Participants in the CREP have farms that are smaller on average than those in the general or continuous CRP, which may reflect farm characteristics in states that

**Provisions of CREP Are Distinct from General and Continuous CRP Signup...**

Program Provisions	General signup CRP	Continuous CRP <sup>1</sup>	CREP
Signup period	Discrete	Continuous	Continuous
Acceptance process	Competitive bid	Noncompetitive	Noncompetitive
Regional scope of enrollment	National	National	State level
Conservation practices	Chiefly new or established grass or tree cover	Chiefly filter strips and riparian buffers	State-specific set of practices, chiefly wetland restoration, buffers, and filter strips

**...And CREP Enrollment Characteristics Are Different Also**

Enrolled acres (thousands) <sup>2</sup>	32,026	1,201	103
Average farm size (acres)	524	439	289
Average parcel size (acres)	83	11	17
Share of acres in whole-farm enrollment (percent) <sup>3</sup>	25	6	12
Average contract length (years)	10	12	14
Average imputed rental rate (\$/acre)	37	44	92
Average Erosion Index (water) <sup>4</sup>	8	4	7

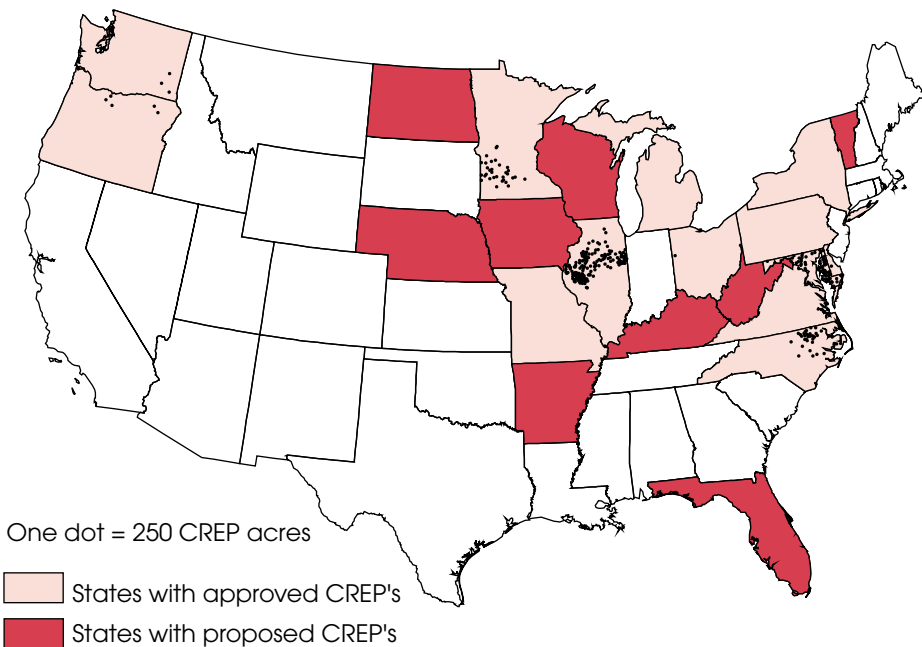
1. Excluding CREP. 2. Enrollment as of October 2000. 3. Ninety-five percent or more of farm enrolled. 4. Water erosion index only.  
Source: Farm Service Agency, USDA.  
Economic Research Service, USDA

operate CREP's. The average CREP contract size (parcel of land per farm enrolled) is slightly greater than that under

the continuous CRP, but considerably smaller than under the general CRP. This could be the result of several factors. The continuous CRP targets relatively small parcels for specific conservation practices (e.g., filter strips) that provide a positive environmental impact for a much larger area. Some CREP states also require that parcels be of a certain minimum size. In addition, only 6 percent of continuous CRP signup acreage is enrolled under whole-farm contracts, with the participant effectively retiring or closing the farm, whereas 12 percent of CREP acreage and one-quarter of general CRP acreage are under whole farm contracts.

The average CREP contract is longer than that of either the general or continuous CRP signup because of a minimum 15-year contract period stipulated by some states. Moreover, CREP acreage is highly valuable, with an average land rental rate more than double the rate on CRP acreage. Given that enrollment under the general signups explicitly considers expected environmental benefits and costs, expensive land is less likely to be accepted under the competitive general CRP signups, other things being equal, than it is under the continuous CRP and the CREP.

**CREP Acreage Is Concentrated in Illinois and Maryland**



Data as of October 2000.  
Economic Research Service, USDA

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Given the recent implementation of the CREP, state-level environmental results are not yet available. Consequently, program costs and benefits cannot be adequately evaluated. Instead, the focus here is on achievement of enrollment goals in relation to the level and type of incentives across state programs. But simply examining acreage enrolled in each state could be a misleading indicator of progress.

The indicators of progress under individual state programs will be influenced by several factors, such as how long state programs have been in operation and the size of each state's acreage enrollment goals. Enrollment goals can vary widely by state (e.g., Delaware's goal is 6,000 acres and other states have 100,000-acre targets), and some states have just recently implemented programs. To assess the response of landowners to enrollment incentives, USDA's Economic Research Service constructed an unofficial indicator of monthly progress towards enrollment goals. A state's acreage enrolled is divided by the acreage goal, and this figure is then divided by the number of months that each state's program has been in operation.

This progress indicator shows that the pace of enrollment varies considerably across the nine states for which adequate data exist. Illinois is the clear leader; New York, Oregon, and Washington have the slowest relative performance; and

Delaware, North Carolina, Ohio, Maryland, and Minnesota lie in the middle.

### *Which CREP Incentives Encourage Enrollment?*

The enrollment progress indicator implies that the total per-acre funding committed to the program by Federal and state authorities has little bearing on the rate of enrollment. The Illinois and Oregon CREP's, for example, provide the same level of per-acre funding, but show very different enrollment progress. Disparity in per-acre funding levels among states may reflect different land values, varying costs of implementing conservation practices, and different amounts of cost sharing.

Three types of incentives are generally provided to potential participants under the state CREP's. First, cost sharing by Federal and state governments minimizes or eliminates out-of-pocket costs to farmers of implementing conservation practices. Second, USDA offsets the opportunity cost of idling acreage by providing a base annual rental payment equal to the expected average rent for cropland with specific soils in each county. An additional rental-rate incentive, varying by state and conservation practice, is also provided by USDA. An additional rental-rate incentive of 20 percent, for example, indicates that the participant would receive a

total of 120 percent of the land's expected average rental rate based on agricultural uses.

Third, an up-front payment is provided in some states to induce enrollment. Since April 2000, USDA has provided a Signing Incentive Payment (SIP) of \$10 per acre per year of contract (up to 15 years) for specific practices under the continuous CRP signup. This SIP has been included in CREP agreements that have recently been signed or amended.

Some states also provide their own up-front payments, often a multiple of the annual per-acre rent. As a condition for such payments, some states require the participant to enter into an extended conservation contract or to provide a multiple-year or permanent easement after the CRP contract expires. Oregon took a particularly innovative approach to encouraging enrollment by offering up-front payments to all enrollees with adjoining land if half of the land along a 5-mile stream segment were enrolled prior to 2002. Hence, if a group of participants (or single participant) protects 50 percent of a continuous length of stream, all receive the bonus. However, enrollment progress in Oregon has been very slow due to programmatic difficulties and to concerns over potential land-use restrictions at the end of the contract.

### CREP Enrollment Progress May Be Unrelated to Total Per-Acre Funding Commitment

State	Date agreement signed	Land enrolled	Acreage goal	Enrollment progress index <sup>1</sup>	Estimated funding of CREP		
					Total	Federal	Other <sup>2</sup>
		Acres		Index	\$ per acre <sup>3</sup>		
Illinois	03/30/98	52,781	100,000	0.0170	2,500	2,020	480
Delaware	06/02/99	780	6,000	0.0080	1,667	1,333	333
N. Carolina	03/01/99	11,680	100,000	0.0060	2,750	2,210	540
Ohio	04/18/00	2,288	67,000	0.0060	3,000	2,493	507
Maryland	10/20/97	19,548	100,000	0.0050	1,950	1,700	250
Minnesota	02/19/98	10,637	100,000	0.0050	2,230	1,630	600
New York	08/26/98	327	5,000	0.0030	2,200	1,600	600
Oregon	10/17/98	2,319	100,000	0.0010	2,500	2,000	500
Washington	10/19/98	1,475	100,000	0.0006	2,410	1,990	420

1. (Actual enrollment/enrollment goal) divided by number of months state program has been in effect. Higher number indicates more rapid pace of enrollment. For example, a state that fully achieved its enrollment goal in two years would have an indicator of 0.04, and an indicator of 0.08 if goal was achieved in one year. 2. State governments and nongovernment organizations. 3. Committed funding over the life of the program.

Source: Farm Service Agency, USDA (as of October 2000) and USDA-State CREP agreements ([www.fsa.usda.gov/dafp/cepd/crep/crepstates.htm](http://www.fsa.usda.gov/dafp/cepd/crep/crepstates.htm)).

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**CREP Enrollment Progress Is Influenced by a Combination of Incentives**

State (ranked by enrollment progress)	Enrollment progress index <sup>1</sup>	Share of establishment costs covered by government <sup>2</sup>	Rental- rate incentive (above general CRP payment)	Signing incentive payment <sup>3</sup>	Requires a supplemental contract or permanent easement
-----Percent-----					
Illinois	0.0170	90-100	20-30	4.5	Yes
Delaware	0.0080	87.5	50-130	None	No
North Carolina	0.0060	75-100	70-100	4.5	Yes
Ohio	0.0060	90	55-75	2.5 or 6.25 <sup>4</sup>	Yes
Maryland	0.0050	87.5	80-100	None	No
Minnesota	0.0050	100	20	6	Yes
New York	0.0030	100	100	None	No
Oregon	0.0010	75-100	25-50	4 <sup>5</sup>	No
Washington	0.0006	87.5	50-60	None	No

1. (Actual enrollment/enrollment goal) divided by number of months state program has been in effect. Higher number indicates more rapid pace of enrollment. 2. Level of cost sharing varies by length of contract and other factors. 3. Generally a multiple of annual rental payment for permanent easement unless otherwise specified. 4. Plus \$10/acre/year. 5. If land enrolled meets specific criteria.

Source: Based on Federal-State CREP agreements. For more information:  
[www.fsa.usda.gov/dafp/cepd/crep/crepstates.htm](http://www.fsa.usda.gov/dafp/cepd/crep/crepstates.htm).

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Several states that rank highly in enrollment progress provide an up-front payment for those participating in permanent easements or other supplemental contracts. This raises the question of whether participants might be cash-strapped farmers who are willing to idle land for an immediate cash infusion. While farmers might generally want to avoid long-term land-idling commitments (to maintain flexibility in case market conditions change), an additional incentive is that permanent easements may qualify for certain Federal income and estate tax benefits. Illinois, North Carolina, Maryland, and Minnesota also provide state tax benefits for conservation practices for which the CREP may qualify. Hence, permanent easements may be a viable conservation option to offer producers.

The levels of rental-rate incentives and cost sharing do not appear to be strongly associated with enrollment progress. The Illinois and Minnesota CREP's, for example, provide the lowest rental-rate incentives, yet fare relatively well in enrollment. New York, on the other hand, with high rental-rate incentives and 100-percent cost sharing, ranks low in progress. Slow progress in New York may be due to implementation problems (e.g., a backlog in completing contracts) rather than a lack of producer response to economic incentives, but it may also indicate that CREP

rental rates, even with incentives, do not accurately reflect opportunity costs.

For example, land used to produce high-value commodities—such as dairy operations in the New York CREP area and many fruit and vegetable operations with-

in the Oregon and Washington CREP areas—may often command higher rents than the rental rates offered by the CREP. CREP rental rates may not reflect the higher opportunity cost of idling this land. On the other hand, even with Illinois' relatively modest rental rate, CREP enrollment progress in that state indicates the opportunity cost of participating is covered, or that rental rate incentives may be of secondary importance to participation. Illinois' success might also be a reflection of previous work with the "T by 2000" initiative, a state soil-erosion reduction program.

CRP rental rates are generally based on dry cropland rental values. CREP's incentives are designed to increase participation to levels needed to achieve desired results. However, they do not necessarily provide for full opportunity costs where nonagricultural factors, such as development potential, are present.

Oregon offers a range of cost sharing from 75 to 100 percent, though most acreage qualifies for only 75 percent, which may explain the state's low enrollment progress. Further information is

**CRP Update**

As of October 1, 2000, about 33.3 million acres were enrolled in the Conservation Reserve Program (CRP) under the general signups, the continuous CRP, and state CREP's. By comparison, another land conservation program that also counts wildlife habitat protection among its goals—the National Wildlife Refuge System—contains about 15 million acres in the continental United States.

USDA announced in May 2000 the results of the most recent (20th) general CRP signup, held in January-February. Of the nearly 3.5 million acres offered by landowners, about 2.5 million acres were accepted for enrollment. Montana, Texas, Washington, North Dakota, and Iowa (in order of magnitude) together accounted for about half of the accepted acres. Less than 10 percent of enrollment was land with contracts due to expire in 2000. This reflects, in part, the relatively small amount of expiring acres (420,000 acres).

About two-thirds of acreage enrolled in the 20th CRP signup was highly erodible land (defined here as land with an erodibility index of 8 or more), and the average erodibility index of accepted land was 13. This is slightly higher than for signup 18 (1998) and equal to signup 16 (1997). The Environmental Benefits Index—the targeting mechanism used to rank and select cropland to be included in the program—indicates that acreage enrolled in the most recent signup is expected to provide slightly greater environmental benefits than acreage in the previous signup. However, the per-acre cost of enrolled acreage climbed, to \$52.76 from \$45.50 in the last general signup and \$45.15 in signup 16. This may indicate rising marginal costs to producers of retiring land for conservation purposes.

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needed to clarify how the level of cost sharing and rental-rate incentives influence CREP enrollment.

Concerns about regulation could be an incentive for producers to undertake conservation measures. For example, Maryland's participation may be due in part to the heavy media attention given to Chesapeake Bay water quality problems, including outbreaks of *Pfiesteria*.

### Preliminary Conclusions

Enrollment progress under the existing state CREP's has been slow in some states. States cite a variety of reasons for the slow enrollment: the need for a broader definition of eligible land (e.g., to include hayland in New York, fruit and vegetable acreage in the Northwest); suspension of enrollment due to depletion of state funds or other reasons; and the need for staff or funds to market the program and complete CREP farm plans. Further, farmers may have waited to enroll until related program revisions that increased enrollment incentives were made public (which occurred in April 2000).

However, CREP incentives have played a role in encouraging land retirement for conservation purposes in some states. For example, in Maryland, almost half of total CRP enrollment has occurred under the CREP. In Delaware and North Carolina, CREP incentives have stimulated about 10 percent of total CRP enrollment in the 12 to 18 months that those programs have operated.

Given programmatic difficulties and limited data, it is difficult to draw clear lessons on the economics of the CREP. However, some preliminary conclusions may be drawn based on available contract data. In general, it appears that the way funds are allocated is more important than how much is allocated. For example, offers of up-front payments for permanent easements or contract extensions—but not necessarily high rental-rate incentives—are associated with greater enrollment.

That permanent easements appear to be popular under the program may reflect the desire of some enrollees to exit the sector, or an interest among some participants whose land has been flooded (e.g., in Illinois, North Carolina) for a more stable return on their land. Enrollment to date shows that higher rental rate incentives are not necessarily associated with greater enrollment, perhaps because CREP rental rates do not always reflect opportunity costs. Further information is needed to assess the extent to which greater cost sharing would raise CREP enrollment.

The lack of clear relationships between economic incentives and progress indicates that other, nonfinancial considerations, including the effectiveness of related state conservation efforts, may be affecting CREP enrollment progress. With the resolution of programmatic issues, clearer lessons may be discerned in the future with respect to the economics of CREP's. **AO**

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### Upcoming Reports—USDA's Economic Research Service

The following reports are issued electronically at 3 p.m. (ET) unless otherwise indicated.

#### December

- 4 *Outlook for U.S. Agricultural Trade*
- 7 *Food Security Assessment Tobacco Yearbook*
- 12 *World Agricultural Supply and Demand (8:30 a.m.)*
- 13 *Cotton and Wool Outlook (4 p.m.)*  
*Oil Crops Outlook (4 p.m.)\*\**  
*Rice Outlook (4 p.m.)*
- 14 *Feed Outlook (9 a.m.)\*\**  
*Wheat Outlook (9 a.m.)\*\**
- 20 *Agricultural Outlook\**
- 21 *Agricultural Finance and Income*
- 22 *U.S. Agricultural Trade Update*
- 27 *Livestock, Dairy, and Poultry (4 p.m.)*

\*Release of summary, 3 p.m.

\*\*Available electronically only