

Resources & Environment



Natural Resources Conservation Service, Iowa

New CRP Criteria Enhance Environmental Gains

Among its many provisions, the Federal Agriculture Improvement and Reform Act of 1996 (1996 Farm Act) continued the Conservation Reserve Program (CRP) up to a maximum of 36.4 million acres through the year 2002. Results suggest that the farmland acres accepted in the 15th signup, the first major CRP signup under the 1996 Farm Act, will provide greater environmental benefits and cost 22 percent less than the CRP historically.

As a voluntary agricultural land retirement program, the CRP provides participants with an annual per-acre rent and half the cost of establishing a conserving land cover—usually grass or trees—in exchange for retiring highly erodible and/or environmentally sensitive land from production for 10-15 years. The 15th signup, conducted in March 1997, was the largest CRP signup ever. Landowners and operators offered 23.3 million acres for enrollment, and USDA accepted 16.1 million. Acceptance was based on the ranking of offers using an environmental benefits index (EBI).

USDA will hold a 16th signup during October 14-November 14, 1997. Among the lands eligible are most of the approximately 10 million acres of existing CRP contracts not enrolled in signup 15 and scheduled to expire in 1997, 4.8 million existing CRP acres expiring in 1998, and other eligible acres not currently in the CRP. As in the 15th signup, EBI rankings will determine which offers will be accepted. However, in response to comments about the EBI, certain factors were modified by an interagency task force consisting of several USDA agencies, the Environmental Protection Agency, and the U.S. Fish and Wildlife Service.

15th Signup Rules Expanded Eligible Acres

In early 1997, USDA finalized rules for the long-term future of the CRP “to cost-effectively target the CRP to more environmentally sensitive acreage” (*Federal Register*, February 19, 1997). The new rules expanded the universe of eligible lands to more than 240 million acres, approximately 65 percent of U.S. cultivated cropland, compared with about 100 million acres of highly erodible cropland eligible in 1985 when the CRP began. The additional eligible lands were mostly cropland in national and state environmental priority areas, cropland adjacent to water bodies, cropped wetlands and adjacent upland, and cropland subject to conservation compliance but not formerly eligible under CRP erodibility criteria.

Producers who wished to enroll eligible land into the CRP, including eligible acres from the 21.4 million under CRP contracts then scheduled to expire in 1997, were given the opportunity to submit offers in

the 15th signup. As in earlier signups since 1991, offers were competitively ranked using an EBI. The EBI for the 15th signup was the sum of six environmental factors and a government cost factor.

Taking into account the 36.4-million-acre statutory enrollment limit, the 32.8 million acres remaining in the program at that time, and the then-impending expiration of 21.4 million acres later in 1997, USDA was authorized to enroll up to nearly 25 million acres. On May 22, USDA announced acceptance of 16.1 million acres of the approximately 23.3 million offered by producers for the 15th signup. To help determine overall acreage acceptance, USDA compared the EBI scores of the 15th signup offers to EBI scores of eligible acres likely to be bid over the next several years, and analyzed the costs and environmental benefits of progressive enrollment increments.

The establishment of 259 as an EBI cutoff for the 15th signup resulted in the acceptance of 16.1 million acres, which met the statutory 25-percent-per-county enrollment limitation. Changes in the EBI (discussed below) will likely result in a different cutoff value in future signups.

Of the acres accepted in the 15th signup, 4.4 million represented new acres not formerly enrolled in the program, and 11.7 million represented acres in CRP contracts then scheduled to expire in 1997. About 55 percent of existing CRP acres expiring in 1997 were re-enrolled, typically with planned improvements in vegetative cover for wildlife and reduced annual rental costs. The regional distribution of accepted acres was similar to the historic CRP except for small reductions in the

Over Half of Eligible Acres in 15th Signup Are Highly Erodible Lands

Land category	Eligible acres
	Million acres
Highly erodible cropland	142
Cropland in national priority areas	86
Cropland in state priority areas	24
Cropland adjacent to water bodies	13
Cropped wetlands and adjacent upland	8
Pastureland adjacent to water bodies	NA
Total CRP land eligibility *	240

NA = Not available.

* Excludes minor categories of eligible land and double-counting of acres falling into more than one category.
Source: Economic Research Service, based on Farm Service Agency analysis, USDA.

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The 15th CRP Signup: Environmental Benefits Index

A national environmental benefits index (EBI) has been used to prioritize and rank CRP offers since the 10th signup in 1991. The EBI was developed consistent with section 1234(c)(3) of the Food Security Act of 1985 which provided that “in determining the acceptability of offers the Secretary may take into consideration the extent to which enrollment of the land that is the subject of the contract offer would improve soil resources, water quality, wildlife habitat, or provide other environmental benefits.”

The EBI, which is currently the sum of six ranked environmental factors plus a cost factor, was developed by an inter-agency task force consisting of several USDA agencies, the Environmental Protection Agency, and the U.S. Fish and Wildlife Service. The EBI is not meant to be a rigid index over time, but may be adjusted and improved depending on the progress of signups, perceived deficiencies, and/or changed priorities.

When a CRP offer is submitted, USDA's Natural Resources Conservation Service provides objective data for each of the EBI factors for the associated land. At the close of a signup, the data for each offer are centralized and the EBI for each offer is consistently calculated. Each is then nationally ranked in comparison with all other offers, and those with the highest EBI's are accepted.

States also have the option of developing their own ranking factors to address particular concerns. In this case, the state receives an acreage allocation based on the national EBI ranking process, but actual acceptance within the state is based on how offers rank using the state ranking factors.

In the 15th signup, held in March 1997, the theoretical maximum EBI score was 600 points, based on the sum of the following six environmental factors and a 200-point cost factor:

- ***N1: Wildlife habitat benefits (100 points maximum).*** This factor was based on the formula $(N1A / 50) * (N1A + N1B + N1C + N1D + N1E + N1F)$.
 - *N1A (0-50 points)* corresponds to how beneficial the vegetative cover proposed by the landowner or operator is for wildlife;
 - *N1B (0-15 points)* relates to whether the offered land benefits reproduction, staging, or wintering of a Federal or state threatened, endangered, or candidate species;
 - *N1C (0-10 points)* evaluates the proximity of the offer to wetlands;
 - *N1D (0-10 points)* evaluates the proximity of the offer to other protected wildlife habitat;
 - *N1E (0-5 points)* corresponds to the size of the offer (larger contiguous blocks of land are generally more beneficial for wildlife); and
 - *N1F (0-10 points)* evaluates the ratio of upland acres to restored wetlands within the offer.
- ***N2: Water quality benefits from reduced water erosion, runoff, and leaching (100 points maximum).*** This factor was based on the formula $N2A + N2B + N2C + N2D$.
 - *N2A (0-30 points)* relates to whether the offered acres are located in a Federal or state-identified area where crop production contributes to ground water or surface water quality impairment;
 - *N2B (0-20 points)* evaluates the offer's contribution to ground water quality protection based on soil leachability, county pesticide and nitrogen leaching potential, and county population obtaining drinking water from wells;
 - *N2C (0-40 points)* evaluates the offer's contribution to surface water quality protection based on the site's sediment potential, county excess nitrogen levels, and watershed population; and
 - *N2D (0-10 points)* is based on water quality improvements associated with wetland enrollment in the offer.
- ***N3: On-farm benefits of reduced wind or water erosion (100 points maximum).*** This factor was proportional to the higher of the wind or water erodibility of the soils in the offer. The higher the erodibility, the higher the potential for erosion that can reduce soil productivity.
- ***N4: Long-term benefits of certain practices that will likely extend beyond the contract period (50 points maximum).*** This factor recognized that certain practices such as tree cover are likely to remain on the land beyond the 10-15 years of the CRP contract. Practices with the longest expected retention, such as new hardwood trees, received the most points.
- ***N5: Air quality benefits from reduced wind erosion (25 points maximum).*** This factor was proportional to the wind erodibility of the soils in the offer and the distance-weighted population that could be most affected by wind-blown dust from the land offered.
- ***N6: Benefits from enrollment in conservation priority areas when the offer significantly contributes to the priority area concern (25 points maximum).*** This factor awarded points to offers that were located within national or state CRP conservation priority areas established for wildlife, water quality, or air quality purposes—provided the points achieved for the corresponding national ranking factor (e.g. N1, N2, or N5) were at least 40 percent of the total possible points for that factor.
- ***N7: Government cost of the contract (200 points maximum).*** The scoring for this factor is not determined by the Secretary until after the conclusion of each signup. For the 15th signup, the cost factor was set at a 200-point maximum. Greater points were awarded to offers requesting lower annual rent. In addition, up to 10 points were awarded to offers with existing cover where no Federal outlay for vegetative cover establishment was required.

Lake States and Pacific regions, and small increases in the Mountain and Northern Plains regions.

The average EBI score was 307 for the acres enrolled in the 15th signup, 46 percent greater than the 210-average EBI of the historic CRP, owing mainly to improved wildlife habitat benefits and water quality benefits, and decreased rental costs due to lower bids by participants. Approximately 84 percent of accepted acres were in highly erodible fields, and nearly half of these acres had an erodibility index greater than 15. The average erodibility index for accepted acres was 16. Approximately 1.1 million of the accepted acres was devoted to new or existing trees, while most of the remainder will be covered with various grasses.

Included in the acres accepted in the 15th signup was over 790,000 acres of cropped wetland and associated acreage that will be restored, and over 652,000 acres that were enrolled in state water quality areas. Due to revised soil bid caps (the maximum annual rental amount USDA will pay a producer) and enhanced program competition, annual rental costs were reduced from an average of \$50 per acre under the historic CRP to \$39 on 15th-signup accepted acres. In addition, over 60 percent of rental payments requested by producers was below established USDA soil bid caps by an average of \$3 per acre.

The Continuous CRP Signup

Under authority of the 1996 Farm Act, USDA on September 4, 1996 began a continuous CRP signup (referred to as the 14th signup in fiscal 1997) of acreage devoted to specific practices designated by the Environmental Protection Agency. These include filter strips, riparian buffers, grassed waterways, field windbreaks, shelterbelts, living snow fences, salt-tolerant vegetation, shallow water areas for wildlife, and wellhead protection areas. These partial-field practices involve a relatively small amount of acreage, but provide disproportionately large environmental benefits over the 10-15-year contract length.

Producers wishing to enroll eligible acres devoted to these practices may do so at any time, avoiding the need to wait for an announced CRP signup period. If the producer is willing to accept no more than a maximum productivity-adjusted payment rate calculated by USDA's Farm Service Agency, these acres will automatically be accepted. In addition, special bonus payments may also be available to attract certain high-priority practices. As of April 1997, partial reporting indicated that approximately 78,000 acres had been enrolled in the continuous signup. Nearly 66 percent of these acres was filter strips or riparian buffers.

Enrollment in the continuous signup is expected to increase as attention is focused on this option through the USDA Conservation Initiative. The private sector and many state conservation agencies, in partnership with USDA, are taking steps to communicate the environmental protection benefits and producer advantages of filter strips and other practices that qualify for the continuous signup.

EBI Modified for 16th Signup

Taking into account the 36.4-million-acre CRP statutory enrollment limit, the 27-28 million acres in the program as of October—including lands enrolled in the 15th signup—and the 4.8 million acres that will expire in 1998, USDA has authority to enroll up to 13-14 million acres in the 16th signup. However, as in the 15th signup, actual acceptance likely

will be less as program managers reserve space for the continuous CRP signup and other considerations.

In response to review of the EBI used to rank offers for acceptance in the 15th signup, modifications to EBI factors for wildlife habitat, air quality, and cost in order to increase environmental effectiveness were made by an interagency task force and will be in effect for the 16th signup.

Nearly Three-fourths of Acres Accepted in 15th Signup Were Previously Enrolled in CRP

Region	Acres offered for enrollment	Accepted acres					
		Total	Formerly enrolled in CRP	Average rent	Existing or new tree cover	Wetland restoration	Average erodibility
		— 1,000 acres —	Percent	\$/acre/yr	— 1,000 acres —	Index	
Appalachian	499	349	90	55	56	0	32
Corn Belt	2,787	1,670	81	70	40	7	27
Delta	675	614	81	37	443	9	24
Lake States	1,490	637	75	52	55	40	13
Mountain	5,443	4,132	72	32	4	2	15
Northeast	100	90	71	43	3	0*	23
Northern Plains	6,026	5,050	68	36	5	724	10
Pacific	1,322	607	85	40	4	5	15
Southeast	782	585	86	37	441	1	15
Southern Plains	4,145	2,413	68	33	6	2	16
U.S.	23,269	16,147	73	39	1,058	790	16

* Northeast wetland restoration is about 100 acres.

Source: Economic Research Service, based on Farm Service Agency CRP summary tables, USDA.

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The 16th CRP Signup: Substantive Changes to the Environmental Benefits Index

Factor or subfactor	Modification	Motivation/Impact
Wildlife cover subfactor, N1a	Awards points for up to 5 different species of cover; under the 15th signup points were awarded for "mixed stands."	Provides definition and differentiation to applicants willing to adopt covers for wildlife habitat.
	Instead of awarding points based on predominance of cover, the minimum acreage of cover for scoring purposes is: 51 percent for existing covers; 70 percent for a mixture of existing and new covers; 90 percent for new covers; and 100 percent for tree practices.	Encourages enhancements to covers while recognizing the value of existing covers. An advantage to arid western states because much of the existing cover will be permitted to remain intact.
Enduring benefits factor, N4	Points for restoration of rare and declining habitat.	Rare and declining habitats are indicative of wildlife's future listing as a threatened or endangered species.
	Points for cultural resource areas (e.g., historic sites, certain tribal lands).	Consistent with a number of environmentally related and other laws recognizing historic and cultural resources.
	Points for shrub planting.	Shrub planting is a viable habitat for certain wildlife although its use under CRP has been limited.
	Points for non-CRP obligations, in order to maintain the functions of CRP practices after CRP contract expires.	Recognizes the efforts of state governments, private organizations such as The Nature Conservancy, and others.
Air quality factor, N5	Replaces factor with 3 subfactors, one of which will evaluate wind erosion impacts (which is also rescaled to achieve a fairer distribution of EBI point scores). Abandons ZIP codes in favor of county-based wind erosion and distance-weighted population subfactor.	Revision provides greater weight to rural areas. Removes soil loss tolerance which has no bearing on airborne matter.
	Adds subfactor for wind erosion soils.	Recognizes soils with a high percentage of fine material that is likely to be suspended in the air.
	Adds subfactor for air quality zones.	Evaluates areas in which agriculture impacts air quality or that are located within 50 miles of Class 1 air-quality areas (e.g., national parks with high-quality air standards).
Cost factor, N7	Adds subfactor to provide points for offers of less than the maximum rental rate for soils in the offer. Awards a point for every dollar below maximum rental rate, up to 15 points.	Could benefit producers in areas of higher cost land (such as Corn Belt and Lake States)

Source: Farm Service Agency, USDA.
Economic Research Service, USDA

Modifications to the wildlife habitat factor primarily involve adjustments to point values reflecting the wildlife benefits of different vegetative covers. In addition, a new practice (CP25) that rehabilitates degraded ecosystems has been added to encourage the restoration of rare and declining habitats.

The air quality factor has been redesigned to better reflect the offsite damages caused by cropland wind erosion. Previously the maximum score for this factor was 25 points. The maximum air quality factor

score will now be 35 points. Five of the additional points are for soils formed in volcanic or organic material that can play a large role in air quality problems in some regions. The other 5 additional points are for offers near Federal Class 1 Air Quality Areas (for example, national parks), or for offers near areas that exceed EPA's regulations on particulate matter concentrations—PM-10 nonattainment areas. These changes are expected to result in somewhat higher EBI scores in states such as Washington, Texas, and Colorado.

Previously, the cost factor awarded greater points to offers with lower absolute government cost (e.g., rental payments and cover establishment cost share). Now, in addition, producers will receive one additional point, up to a total of 15, for every dollar their bid is below USDA's maximum soil payment rate for their land. This could benefit producers in higher cost areas such as the Corn Belt and the Lake States regions.

Tim Osborn (202) 219-1030
tosborn@econ.ag.gov 