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Grassland Reserve Program, Environmental Assessment

Natural Resources Conservation Service

Farm Service Agency

United States Department of Agriculture

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United States Department of Agriculture



Farm Service Agency



Grassland Reserve Program Environmental Assessment

February, 2004



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BACKGROUND

I. Introduction

The Commodity Credit Corporation of the U.S. Department of Agriculture is publishing an interim final rule to implement the Grassland Reserve Program (GRP), authorized by the Farm Security and Rural Investment Act of 2002 (2002 Farm Bill) (Pub. L. 107-171, 115 Stat. 134 (May 13, 2002)), which amended Subtitle D, Chapter 2 of Title XII of the 1985 Food Security Act, 16.U.S.C. 3838 n through 3838 q. The Secretary has delegated authority to implement GRP jointly to the Administrator, Farm Service Agency (FSA) and the Chief, Natural Resources Conservation Service (NRCS). In addition, limited responsibilities associated with easement management and general program development have been delegated to the Forest Service (FS). A Notice of Funds Availability (NOFA) was published in the Federal Register on June 13, 2003 to make \$49.9 million available to begin implementing the GRP in accordance with the provisions of the 2002 Farm Bill.

The National Environmental Policy Act of 1969 (NEPA) requires that Federal agencies prepare Environmental Impact Statements (EIS's) for major federal actions significantly affecting the quality of the human environment. In addition, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR Parts 1500-1508) require Federal agencies to prepare Environmental Assessments (EA's) to assist them in determining whether they need to prepare an EIS for actions that have not been categorically excluded from NEPA. The CEQ has defined "major federal action" to include activities over which Federal agencies have control, including promulgation of regulations in which they exercise discretion.

The proposed action under consideration here involves rulemaking, and no site-specific or ground-disturbing actions will occur as an immediate result of implementing the proposal. Additional environmental review at subsequent stages of program implementation will be undertaken consistent with NEPA requirements.

II. Grassland Reserve Program Statutory Requirements

GRP is a voluntary program to assist landowners in restoring and conserving:

- Grassland, land that contains forbs, or shrubland (including improved rangeland and pastureland); or
- Land that:
 - Is located in an area that has been historically dominated by grassland, forbs, or shrubland; and
 - Has potential to serve as habitat for animal or plant populations of significant ecological value if the land is:
 - Retained in the current use of the land; or
 - Restored to a natural condition indigenous to the locality; or
- Land that is incidental to these lands if necessary for the efficient administration of an agreement or easement.

To accomplish this, Congress authorized the Secretary of Agriculture to protect land using permanent and 30-year easements, or easements for the maximum length allowed by State law, as well as 10-year, 15-year, 20-year or 30-year rental agreements. Congress also authorized the Secretary to enter into restoration agreements on the land covered by the easement or rental agreement. The easements and rental agreements must permit:

- common grazing practices;
- haying, mowing and harvesting for seed production subject to appropriate restrictions during the nesting season for birds in the local area that are in significant decline or are conserved in accordance with Federal or State law as determined by the NRCS State Conservationist; and
- fire rehabilitation and construction of fire breaks and fences.

Easements and rental agreements must prohibit the:

- production of crops (other than hay), fruit trees, vineyards, or any other agricultural commodity that requires breaking the soil surface; and
- conduct of any other activity that would disturb the surface of the land covered by the easement or rental agreement except those required by a restoration agreement.

In exchange for a permanent easement, the Secretary must make payments in an amount equal to the fair market value of the land less the grazing value of the easement. For other easements, the payments must be in an amount equal to 30 percent of the fair market value of the land less the grazing value of the land for the period for which the land is encumbered. For rental agreements, the Secretary must make payments in an amount that is not more than 75 percent of the grazing value of the land covered by the contract. In the case of eligible land that has never been cultivated, the Secretary is also authorized to make payments not to exceed 90 percent of the costs of carrying out measures and practices necessary to restore functions and values of that land. In the case of eligible land that has been restored, the Secretary is authorized to pay up to 75 percent of those costs.

The statute requires that the Secretary is to establish criteria to evaluate and rank applications for easements and rental agreements and in doing so, must emphasize support for

- grazing operations,
- plant and animal biodiversity, and
- grassland, land that contains forbs, and shrubland under the greatest threat of conversion.

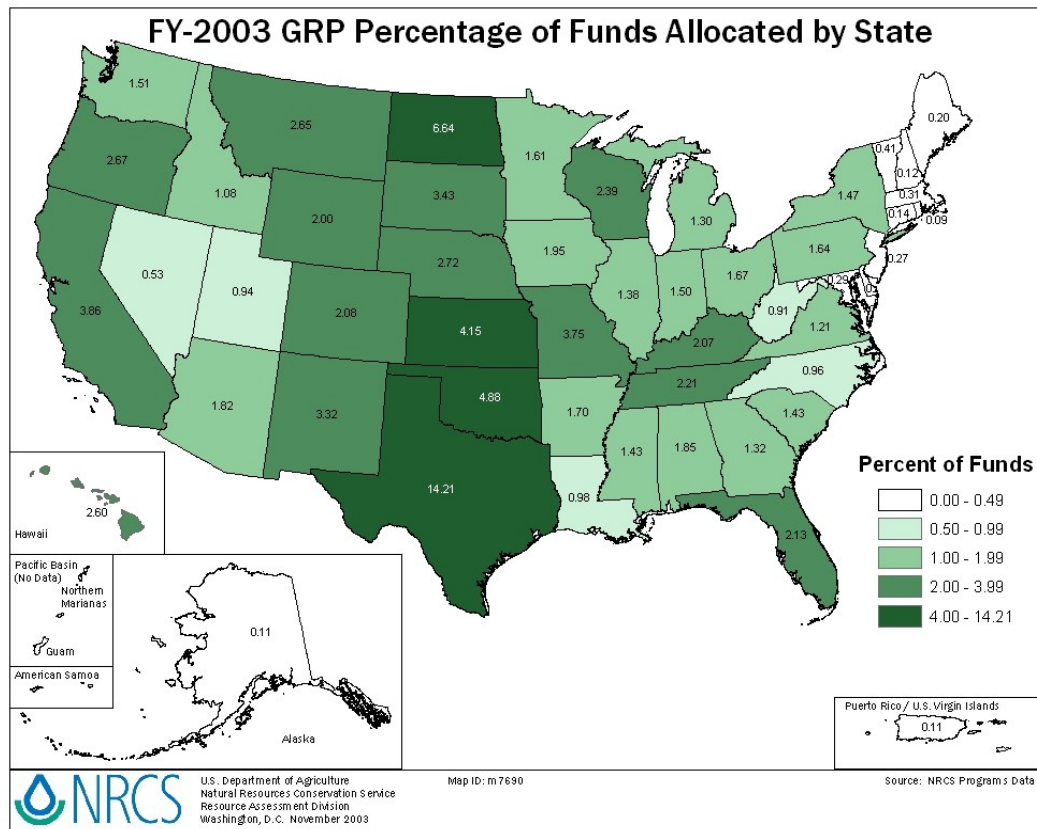
The 2002 farm bill states that a maximum of 2 million acres of restored or improved grassland, rangeland and pastureland can be enrolled in the GRP. In addition, not more than 60 percent of GRP funds are to be used to enroll permanent easements, 30-year easements and 30-year rental agreements, and not more than 40 percent of GRP funds are to be used to enroll 10-, 15-, and 20-year rental agreements. A total of \$254 million was authorized for the GRP for the period of fiscal years 2003 through 2007.

III GRP Fiscal Year 2003 Implementation

In fiscal year 2003, USDA carried out the GRP by publishing a NOFA in the Federal Register (68 FR 35360 (June 13, 2003). See Appendix A.) Approximately \$50 million dollars was made available to landowners through this NOFA.

Applications for participation were accepted on a continual basis from the date the NOFA was published through the end of the fiscal year at local USDA Service Centers. The available funds were divided into two pools. The funds were distributed to USDA State offices¹ in proportion to the number of grazing operations, the acres of pasture and rangeland under the threat of conversion, and biodiversity considerations. The remaining funds were initially held in a national reserve and distributed after program demand, expressed in terms of the number of applicants, acres, and estimated cost to enroll the land, and, ecological considerations, such as biodiversity and threat of grassland conversion, were known. Appendix B shows the percentage of available funds that went to landowners in each State pursuant to the NOFA. Figure 1 below is a map that illustrates the allocation of funds in FY 2003.

**Figure 1:
FY 2003 Allocation of GRP Funds**



¹ GRP is authorized in the 50 states and two territories of the United States. Thus, the term “state,” when used in this EA, includes the Pacific Basin and the Caribbean Basin.

As stated previously, the statute authorizing GRP requires the Secretary to establish criteria to evaluate and rank applications for easements and rental agreements. In doing so, the Secretary must emphasize support for

- grazing operations,
- plant and animal biodiversity, and
- grassland, land that contains forbs, and shrubland under the greatest threat of conversion.

The process followed to allocate funds among States took these factors into account, but it was recognized that allocating funds among contracts within States also required the flexibility to take into account diverse agricultural and ecological settings that exist within the United States and its territories. Therefore, the NRCS State Conservationists and the FSA State Executive Directors, with advice from the State Technical Committees, were charged with developing ranking criteria to be used to select the GRP applications to be funded within each State. To ensure the criteria set forth in the statute were appropriately addressed and to provide some consistency in the development of the criteria, the NRCS State Conservationists and FSA State Executive Directors were instructed to consider, at a minimum, the threat of conversion from grass to cropland; the threat of conversion from grass to non-agriculture use; the significance of the particular location; whether the land is part of an existing grazing operation; and whether the site serves as habitat that promotes and enhances plant and animal biodiversity, as determined by the NRCS State Conservationist, with advice from the State Technical Committee. These criteria were designed to give States the flexibility to determine state-specific criteria that would emphasize grasslands of State significance or locations of critical need based on the threat of conversion or biodiversity of plant or wildlife populations.

A conservation plan was required with both the easement and rental agreement enrollment options. In most cases, the conservation plan consisted of prescribed grazing and perhaps brush management, controlled burns or upland wildlife habitat management. (See Appendix D for a description of these conservation practices.)

PURPOSE AND NEED

The need to which USDA is responding by proposing action is the need to implement the GRP as authorized by the 2002 Act and in a manner that efficiently and effectively achieves the intent of Congress in authorizing the program. USDA has also identified a need to allow States the flexibility to determine state-specific criteria that emphasizes grasslands of State significance or locations of critical need based on the threat of conversion or biodiversity of plant or wildlife populations. This flexibility is important because of the differences in ecological concerns, threats of grassland conversion, and State, Tribal and local conservation programs that exist among the States and territories. Providing such flexibility enhances USDA's ability to address State grassland concerns, as well as enable States to use all available conservation programs to address grassland concerns in a coordinated manner that gives consideration to the entire ecosystem.

ALTERNATIVES

Introduction

GRP easements and rental agreements alone do not alter the physical environment at all. However, landowners may be required by the terms of GRP program participation to apply conservation practices to maintain the viability and sustainability of the grassland regardless of the grassland use or to restore grassland functions and values. In such cases, the conservation practices will affect the environment. Thus, this EA focuses on the effects of the conservation practices NRCS is most likely to require landowners to apply, either as a condition of the easement or rental agreement or as part of a restoration agreement. Because decisions about the allocation of GRP funds affect where conservation practices are likely to be applied, this EA considers alternatives related to how funds should be allocated. In addition, because USDA received feedback after completing the FY 2003 GRP sign-up that GRP should focus on restoring and protecting native and natural grasses, shrubs and forbs, this EA also considers the effects of alternatives related to emphasizing native and natural grasses.

Alternatives Analyzed

Alternative 1, “No Action”

Under the No Action alternative, the GRP would not be implemented. This is not a viable alternative if the program is to be implemented based on congressional authorization and appropriation, but is analyzed to provide a baseline against which the effects of the proposed action and other alternatives can be compared.

Allocation Alternatives Analyzed

Alternative 2, “Proposed Action”

The proposed action is to allocate available GRP funds to States in a manner similar to that used for the FY 2003 program. This alternative would allocate funds based on four factors that are given equal weight -- grassland conversions, grazing operations, biodiversity and program demand. Grassland conversion data would be obtained from the NRI and be divided equally between acres of pastureland converted, acres of rangeland converted, prime farmland used as pasture, and prime farmland used as rangeland. Data on the number of grazing operations in each State would be obtained from National Agricultural Statistics Service (NASS). Two types of biodiversity data would be included, with each given equal weight-- threatened and endangered species data obtained from the U.S. Fish and Wildlife Service Threatened and Endangered Species System (TESS), and rangeland data obtained from the NRI. Data for the final factor, FY 2003 program demand data, would be obtained from the Farm Service Agency.

Once States receive their allocation, FSA and NRCS would determine the distribution of funds within the State. States could allocate funds to regions based on natural resource priority, or

distribute funds for easements and rental agreements based on landowner interest in the various enrollment options, or establish funding pools. In any case, the State would ensure some emphasis was given to grazing operations, plant and animal biodiversity, and grassland, land that contains forbs, and shrubland under the greatest threat of conversion. If a State lacked funds to enroll an entire project, the applicant would be provided the opportunity to reduce the amount of land offered providing the ranking score were not lowered. If the applicant declined to adjust the offered acreage level, the State could accept the next eligible application on the list of unfunded applicants. This approach is similar to that used for the FY2003 program.

Alternative 3

Under this alternative, available GRP funds would be allocated among States based on the number of acres of grassland, rangeland and pastureland existing in each State in 1997. States would then establish a ranking process to allocate funds to specific program applicants in a manner similar to that described in Alternative 2.

Alternative 4

Under this alternative, available GRP funds would be allocated among States based on the number of acres of grassland, rangeland and pastureland the NRI reports were converted to other land uses from 1992 to 1997. States would then establish a ranking process to allocate funds to specific program applicants in a manner similar to that described in Alternative 2.

Alternative 5

Under this alternative, available GRP funds would be allocated among States based on the relative loss of rangeland acres from 1992 to 1997.

Alternatives Considered but Eliminated from Detailed Analysis

Initially, USDA considered alternatives that would focus allocations in the Midwestern and Great Plains portion of the Nation. This approach was considered because of the historic dominance of tall, mid- and short-grass prairies in that region. However, despite the value of these grasslands, there is no language in the GRP legislation indicating it should be focused solely on those grassland types, and there are grasslands and shrublands in other parts of the nation, as well, including

- Sagebrush steppes of the northern Rockies
- Palouse prairies of Oregon and Washington
- Florida scrublands
- Coastal grasslands of the Atlantic and Gulf coasts
- Chaparral and savanna in California
- Deserts of the Southwest and intermountain West
- Mountain shrublands

- Shrubland and tundra in Alaska
- Pastures, as long as they are not cultivated.

Because this alternative did not meet the need to implement the GRP in a manner that would achieve the intent of Congress in authorizing the program, USDA did not analyze the effects of this alternative.

USDA also initially considered an alternative that would have the National office select the easements and rental agreements that would be funded. However, because this alternative would not meet the need to give States the flexibility to determine State-specific criteria that emphasizes grasslands of State significance or locations of critical need based on the threat of conversion or biodiversity of plant or wildlife populations, USDA has not analyzed the effects of such an alternative in this EA.

In addition, USDA initially considered an alternative that would allocate available GRP funds among States based on the number of acres of grassland, rangeland and pastureland converted to urban or developed uses from 1992 to 1997. This alternative was not examined in detail because all the land enrolled using these criteria would have to be restored and it would be extremely expensive to do so. Congress limited enrollment of restored acres to 2 million, so a maximum of 2 million acres could be enrolled under this alternative. USDA does not believe Congress intended to limit GRP enrollment to 2 million acres, and further believes that implementing such an alternative would not be an effective use of the limited funds authorized. Therefore, USDA has not analyzed the effects of such an alternative in this EA.

Restoration Alternatives Analyzed

Alternative 6

Under this alternative, all acres that are covered by a restoration agreement would be restored to and maintained in a perennial native and natural plant community.

Alternative 7

Under this alternative, acres covered by a restoration agreement would be restored to and maintained in a perennial plant community dominated by a diverse mixture of introduced species.

Alternative 8

Under this alternative, acres covered by a restoration agreement would be managed in a manner that moves the covered acres toward a sustainable native and natural community. At a minimum, the objective would be to obtain and maintain a perennial plant community dominated by native and natural species with a minor amount of introduced species.

Alternatives Considered but Eliminated from Detailed Analysis

USDA considered an alternative that would allow restoration with annual plant communities or a mix of such communities. However, Congress chose in the legislation to permit grazing practices, including maintenance and necessary cultural practices, only if they are consistent with maintaining the viability of grassland, forb, and shrub species common to the locality. USDA determined that allowing an annual plant community would be inconsistent with the requirement to maintain the viability of such plant communities and therefore did not examine such an alternative in detail.

IMPACTS

Introduction

Grasslands differ in size, plant communities and animals present, soil types, precipitation, and other factors that define a grassland area. This unique and important resource can be found throughout the United States. Grassland ecosystems inherently provide and/or sustain important landscape functions and values. “Functions and values” is a phrase used to describe the normal and specific contributions grasslands make to the overall condition of the landscape ecosystem, and the desired qualities of the landscape that guide or influence attitude and behavior toward that landscape. Grasslands perform a variety of ecosystem functions as a result of their physical, chemical and biological attributes, and they range in a hierarchy from simple to complex. For example, grasslands provide ecological benefits such as nutrient cycling, storage of atmospheric carbon, and hydrologic cycling. Grasslands also have ecological value for wildlife habitat conservation, biodiversity and aesthetics. In addition, they have economic value since they directly support the livestock industry and recreational activities.² (See Appendix C for a list of grassland functions and values.)

In an effort to preserve natural grasslands, to maintain family farms and ranches, to reduce conversion of existing grasslands, and to protect grassland functions and values, Congress authorized the GRP to assist landowners in restoring and protecting eligible grasslands. Land under a GRP easement or rental agreement must be maintained in grass, forbs and shrubs, and though the grassland can be grazed, hayed, mowed, harvested for seed production and rehabilitated with fire and fencing, it cannot be converted to other land uses.

² Connor, Seidl, VanTassell, and Wilkins, "United States Grasslands and Related Resources: An Economic and Biological Trends Assessment." All the information in this paragraph is drawn from the Executive Summary of the report.

Landowners participating in the GRP may be required to apply conservation practices that will sustain or restore the grassland functions and values. Up to two million acres of grassland may be restored in a manner that provides for

- the sustainability and viability of the grassland;
- sufficient ground cover to protect the soil from wind and water erosion; and
- forage production for grazing animals and wildlife habitat.

Restoration agreements will include cost-share assistance for installing practices to restore or protect the functions and values of the grassland and shrubland. (See Appendix C for a list of grassland functions and values.) In addition to reestablishing desirable perennial plant communities, restoration practices may include practices associated with grazing management or other management activities designed to preserve grassland acreage, such as controlled burns.

In 1999, NRCS identified approximately 280 million acres of rangeland and 75 million acres of pastureland nationwide that were in need of conservation treatment to address resource concerns that degraded their quality and long-term productivity. Table 1 identifies the number of grassland acres within each State that require treatment, the percentage of acres within the State needing treatment, and the percentage those acres represent of nationwide grasslands needing treatment. For example, Table 1 indicates there are 73.5 million grassland acres in Texas that are in a degraded condition and require conservation treatment. This represents 66 percent of all Texas grasslands, and 20.7 percent of the U.S. grasslands that require treatment. However, GRP funds are limited. A total of \$254 million was authorized for GRP through FY 2007, some of which has already been obligated for the FY 2003 program. Additional funds were transferred to cover other program expenses as a result of the Omnibus Appropriations Acts of 2003 and 2004. Cost-share for restoration draws on the limited funds that are available and could otherwise be used to protect existing high quality grassland. In addition, the legislation limits restoration to 2 million acres. Because of this and because program demand is so high, it is unlikely that even that many acres will be covered by GRP restoration agreements. Indeed, under the 2003 NOFA, very few acres to be covered by restoration agreements were either offered or accepted into the program.

Nonetheless, the application of the conservation practices NRCS requires either through the terms of the easement or rental agreement or under a restoration agreement is the only aspect of the GRP with the potential to affect the environment. Thus, this EA focuses on the effects of the conservation practices NRCS is most likely to require landowners to apply to sustain or restore the grassland functions and values.

**Table 1:
Acres by State Needing Restoration**

(Source: 1997 NRI)

State	Total Needs (Acres)	Percent of State Total	Percent of US Total	State	Total Needs (Acres)	Percent of State Total	Percent of U.S. Total
Alabama	2,446,750	0.68	0.69	New York	540,671	0.20	0.15
Alaska	2,860,960	N/A	0.81	North Carolina	1,229,422	0.60	0.35
Arizona	19,247,374	0.59	5.43	North Dakota	7,419,611	0.63	2.09
Arkansas	3,840,610	0.71	1.08	Ohio	1,327,330	0.66	0.37
California	13,631,115	0.71	3.84	Oklahoma	15,193,285	0.69	4.28
Colorado	15,332,630	0.59	4.32	Oregon	9,743,915	0.87	2.75
Connecticut	25,719	0.23	0.01	Pacific Basin	5,739	N/A	0.00
Delaware	6,850	0.29	0.00	Pennsylvania	1,221,297	0.66	0.34
Florida	3,776,722	0.51	1.06	Puerto Rico	412,927	0.70	0.12
Georgia	1,368,743	0.48	0.39	Rhode Island	1,982	0.08	0.00
Hawaii	773,700	0.74	0.22	South Carolina	481,574	0.40	0.14
Idaho	6,814,132	0.87	1.92	South Dakota	18,295,621	0.76	5.16
Illinois	1,100,459	0.44	0.31	Tennessee	2,589,086	0.52	0.73
Indiana	900,354	0.49	0.25	Texas	73,516,532	0.66	20.72
Iowa	2,657,840	0.74	0.75	Utah	9,416,888	0.82	2.65
Kansas	10,332,019	0.57	2.91	Vermont	266,215	0.79	0.08
Kentucky	4,577,973	0.81	1.29	Virginia	2,058,130	0.69	0.58
Louisiana	1,612,599	0.61	0.45	Washington	4,668,998	0.66	1.32
Maine	92,347	0.75	0.03	West Virginia	1,100,736	0.72	0.31
Maryland	234,435	0.49	0.07	Wisconsin	1,428,460	0.48	0.40
Massachusetts	75,290	0.63	0.02	Wyoming	17,899,581	0.63	5.05
Michigan	674,220	0.33	0.19				
Minnesota	2,596,432	0.76	0.73	Total	354,759,465		100.0
Mississippi	2,128,843	0.58	0.60				
Missouri	9,215,738	0.84	2.60				
Montana	24,266,075	0.60	6.84				
Nebraska	21,071,305	0.85	5.94				
Nevada	5,810,177	0.67	1.64				
New Hampshire	47,280	0.50	0.01				
New Jersey	86,450	0.78	0.02				
New Mexico	28,336,324	0.70	7.99				

Similar conservation practices will be applied under each of the allocation alternatives, but the location in which those practices will be applied will vary. In addition, the potential number of grassland acres requiring restoration may vary, depending on the location of the GRP acres and the restoration needs in those areas. The effects of conservation treatments may also vary somewhat from location to location depending on the presence of special resources of concern in

a particular state, such as migratory birds or endangered or threatened species. While effects on these resources may be described in general terms at the national level, most will be considered at the State or local level as part of the NRCS environmental evaluation process. This is particularly true for endangered and threatened species, historic preservation, essential fish habitat and other resources that are protected by special requirements that involve consultation. NRCS will consult on a State or site-specific level as needed and appropriate, to ensure GRP actions do not adversely affect threatened or endangered species, essential fish habitat, cultural resources, or any other protected resources.

For example, to ensure compliance with the Endangered Species Act, State Conservationists will invite representatives of the U.S. Fish and Wildlife Service (FWS) and NOAA Fisheries (previously the National Marine Fisheries Service), as applicable, to all State Technical Committee meetings and involve them in the development of program criteria. NRCS will also conduct additional programmatic consultations with FWS and NOAA Fisheries at the State level as needed to ensure implementation of the GRP is not likely to adversely affect species listed as endangered or threatened or species proposed for listing as endangered or threatened or designated critical habitat. Such consultation will also be used to identify ways the GRP might further the conservation of protected species and to identify situations in which no site-specific consultation would be needed.³ In addition, site-specific consultation will be conducted as needed to avoid adversely affecting any protected species or habitat.

Grassland conditions can degrade and require conservation treatment for a number of reasons, such as overgrazing, over-rest, drought, or an increase of invasive plant species, such as brush encroachment or invasion of weeds. When this occurs, the grassland fails to fulfill its ecosystem functions and values. For example, the habitat may not be able to support sustainable wildlife populations. The grasslands may also be less drought resistant and provide less forage for grazing, harming the economic value of the grassland.

In most cases, the full range of functions and values of these grasslands can be restored using a limited number of conservation practices. The following table identifies the conservation practices used most frequently across the U.S. to restore and maintain healthy grasslands.

³ In addition to situations in which NRCS determined there would be no effect on protected species or habitat, site-specific consultation should not be needed when NRCS and FWS or NMFS agree a category of proposed actions is not likely to adversely affect a protected species or habitat and NRCS obtains an incidental take statement based on that agreement.

**Table 2:
Most Frequently Used Grassland Conservation Practices**

Practice Name	Practice Number ⁴
Brush Management	314
Fence	382
Nutrient Management	590
Pasture/Hayland Planting	512
Pest Management	595
Pipeline	516
Prescribed Burning	338
Prescribed Grazing	528A
Range Planting	550
Spring Development	574
Upland Wildlife Habitat Management	645
Watering Facility	614

NRCS has developed network diagrams depicting the chain of effects resulting from the application of each practice. Each of the diagrams first identifies the typical setting in which the practice is applied. This includes identification of the predominating land use and the concerns that trigger use of the practice. The diagrams then identify the practice used to address the resource concerns. Immediately following the practice, there is a description of the immediate physical actions that occur to implement the practice. From there, the diagrams depict the occurrence of the direct, indirect and cumulative effects of the practice. Effects are qualified with a "+" or a "-" which denotes an increase ("+") or decrease ("-") in the effect. Pluses and minuses do not equate to good and bad or positive and negative. Only the general effects that are considered to be the most important ones from a national perspective are illustrated. The network diagrams, a photo, and information about each of these practices is found in Appendix D, including identification of the resource concern the practice is intended to mitigate.

These conservation practices listed in Table 2 are generally designed to provide feed and water for livestock production; enhance wildlife food and habitat; enhance plant biodiversity; protect air, soil, and water resources; and provide a basis for diversifying farm income.

Practices frequently used to carry out these functions involve manipulation of livestock numbers, grazing intensity, duration, and distribution. Other practices used to augment these are clipping, crop rotation, drainage, fertilization and addition of soil amendments, irrigation, land clearing, mechanical harvest, pest control, vegetative plantings, rock picking, selection and/or protection of plant species, tillage, brush management, watering facility development, and livestock use exclusion.

⁴ Practice numbers are assigned by NRCS for eases of reference and are found in the NRCS National Handbook of Conservation Practices.

In addition to the primary effects mentioned above, other effects, both positive and negative, may occur. Improved plant growth and condition can result from controlling erosion on steep slopes and around feed areas. The increase in plant cover protects streams, ponds, and other water supplies from sediment and other possible contaminants, as well as providing food for livestock and wildlife and decreased potential for wind erosion and particulate matter generation. Soil condition may be improved, resulting in increased nutrient cycling, organic matter, and carbon sequestration. Equipment, labor, materials, and maintenance may result in added costs to the producer in order to provide water, erosion control, and other associated conservation measures and controls.

The direct effects can lead to indirect effects. Controlled access to sensitive areas should lead to a reduction in contaminants, pathogens, and sediments in receiving waters, as well as protection and productivity of desired plant species. Development of water facilities and mechanisms for providing source water for livestock leads to an increase in animal health and production and sometimes benefits wildlife. These same practices may interfere with natural water flow and/or enhance saltwater intrusion and possibly allow potential contaminants into water bodies. Some wildlife species may also be negatively affected.

Indirect effects lead to cumulative effects such as income stability for producers and communities, improved water quality, habitat suitability, and human and animal health.

Acres of grasslands and grassland conversion trends referenced in the discussion of impacts below are based on data from the 1992 and 1997 National Resource Inventory (NRI). The NRI is a statistically-based sample of land use and natural resource conditions and trends on U.S. nonfederal lands, conducted by NRCS in cooperation with Iowa State University's Statistical Laboratory. Data are collected at scientifically selected sample sites throughout the continental United States, Puerto Rico and the Virgin Islands. Data collection methods include photo-interpretation and other remote sensing methods, USDA field records, soil survey and wetland inventory maps and reports, plus other ancillary materials. Lands are identified in the NRI using two criteria—type of land cover and type of land use. Land cover refers to the type of vegetation or kind of material that covers the land surface; land use refers to the type of human activity that is centered on the land. NRI has direct correlation with soils data, which permits analysis of resources in relation to the capability of land and in terms of soil resources and conditions. Grassland conversions involve changes to land cover and in land use, so it is appropriate to use NRI data to identify grassland conversion rates, total acres of grasslands in each State and other statistical data needed to make decisions about the allocation of funds to each State (USDA/NRCS 2000). The NRI does not gather data specifically on "grasslands." Instead, the NRI collects data on "pastureland" and "rangeland." The NRI defines "pastureland" as a land cover or use of land that is managed primarily for the production of introduced forage plants for livestock grazing. Pastureland cover may consist of a single species in a pure stand, a grass mixture, or a grass-legume mixture. Management usually consists of cultural treatments such as fertilization, weed control, reseeding or renovation, and control of grazing. For the NRI, "pastureland" includes land that has a vegetative cover of grasses, legumes, and/or forbs, regardless of whether or not it is being grazed by livestock. The NRI defines "rangeland" as a land cover or use of land on which the climax or potential plant cover is composed principally of native grasses, grass-like plants, forbs or shrubs suitable for grazing and browsing, and

introduced forage species that are managed like rangeland. This would include areas where introduced hardy and persistent grasses, such as crested wheatgrass, are planted and practices such as deferred grazing, burning, chaining, and rotational grazing are used, with little or no chemicals or fertilizer being applied. Grasslands, savannas, many wetlands, some deserts, and tundra are considered to be rangeland. Certain communities of low forbs and shrubs, such as mesquite, chaparral, mountain shrub, and pinyon-juniper, are also included as rangeland. Taken together, “pastureland” and “rangeland” as used in the NRI constitute “grasslands” as defined in the GRP.

While data is available from the 1982 and 1987 NRIs, data from the 1992 and 1997 NRIs is used in this analysis because major land retirement programs were implemented during the 1990 farm bill that may have influenced land conversion trends. NRI data from 1992 and 1997 is considered representative of current land use conversion trends.

Alternative 1, “No Action”

Historically, grasslands occupied approximately one billion acres in the U.S., which is about one-half the landmass of the contiguous United States. In the 100 years from 1850 to 1950, grasslands west of the Mississippi River declined by an estimated 260 million acres, with the majority converted to cultivated cropland. In the 40 years from 1950 to 1990, another estimated 27.2 million acres of grassland were lost. About 36 percent of these recent losses were conversions of grasslands to uses other than cropland. Although the rate of conversion has declined since 1990, grasslands are still being converted annually. NRI data collected from 1982 through 1997 and shown in Appendix E, indicates that 22,776,300 acres of grasslands were converted over that period.⁵ The data show that in some States, many grassland acres were converted. In other States, fewer grassland acres were lost, but those acres represented a greater proportion of grasslands in the State. For example, from 1982 through 1997, Missouri lost nearly 2 million acres of grasslands, which was 15 percent of the grasslands it had in 1987. During the same period, Vermont only lost 108,100 acres of grassland, but that loss represented nearly 25 percent of the grasslands Vermont had in 1987. According to the NRI, all States but Louisiana and North Carolina showed a decline from 1982 through 1997 in either rangeland, pastureland or both, and the increases in those two States were small. Louisiana increased its grassland acres by almost 96 acres, which represented a 3.7 percent increase over the 15 year period, and North Carolina increased its grassland acres by about 76 acres, which represented a 3.9 percent increase.

Table 3 contains information excerpted from the 2001 NRI. It shows that both pastureland and rangeland have continued their decline into 2001, while developed land has increased steadily since 1982. No doubt the growth in human population and per capita income has been a catalyst for the ever-increasing threat to the traditional use of grasslands. Other pressures stem from an aging population of grassland owners, combined with the longest economic boom in U.S.

⁵ Summary Report, 1997 National Resources Inventory, Revised December 2000, http://www.nrcs.usda.gov/technical/NRI/1997/summary_report/table2.html.

Table 3:
U.S. Surface Area by Selected Land Use and Year
(in Millions of Acres, with Margins of Error)
(Source: NRI)

Year	Cropland	CRP Land	Pastureland	Rangeland	Developed Land
1982	420.4 ± 2.0	0 *	131.4 ± 1.3	414.5 ± 4.3	72.8 ± 0.7
1987	406.2 ± 2.0	13.8	127.2 ± 1.2	409.3 ± 4.3	79.0 ± 0.8
1992	381.6 ± 2.0	34.0	125.4 ± 1.2	405.9 ± 4.3	86.5 ± 0.8
1997	376.4 ± 2.0	32.7	119.5 ± 1.2	404.9 ± 4.3	97.6 ± 0.9
2001	369.6 ± 2.3	31.8	116.9 ± 1.7	404.7 ± 4.4	106.3 ± 1.1

* CRP was not implemented until 1985.

history, advances in technology and other socio-economic changes. There is no reason to expect this trend will change in the near future; thus, it is reasonable to conclude that without GRP, pastureland and rangeland acreage would continue to decline and grassland would continue to be converted to other land uses, particularly developed uses. The loss of existing grasslands would lead to further declines in plant diversity and adversely impact grassland bird species, and other animals that rely on grassland habitats. The decrease in grass cover could affect nesting, brooding and rearing of certain bird species and could also affect other wildlife species that rely on the grasslands for food and cover. All grasslands, no matter where they are located across the United States, provide habitat to plant and animal species unique to their areas. Some of these species are abundant, while some may be threatened or endangered, or species of concern. Regardless of where they are found, grasslands provide the habitat many birds and animal species require to exist. If GRP were not implemented, opportunities would also be lost to improve and maintain the quality of remaining grasslands by applying conservation practices such as prescribed grazing. Depending on how the land was converted and what use was made of the land, there would likely be increased wind and water erosion, adverse impacts on air and water quality and quantity, and a reduction in the diversity of native and natural grasses, forbs and shrubs common to each specific area. The conversion of grasslands would also result in the loss of open space and increased land fragmentation.

While other programs exist that enable landowners to enter into easements that benefit the land and grassland owners, such as the Wetlands Reserve Program, the FWS Partners Program and Nature Conservancy easement programs, few such programs recognize the value of grazing or even allow grazing at all. Thus, without GRP, there would continue to be a decline in grazing

land available to ranchers, resulting in adverse impacts to both the livestock industry and the economy in ranching communities.

Allocation Alternatives Analyzed

Alternative 2, “Proposed Action”

The proposed action is to allocate available GRP funds to States in a manner similar to that used for the FY 2003 program. This alternative would allocate funds based on four factors that are given equal weight -- grassland conversions, grazing operations, biodiversity and program demand. Grassland conversion data would be obtained from the NRI and be divided equally between acres of pastureland converted, acres of rangeland converted, prime farmland used as pasture, and prime farmland used as rangeland. Data on the number of grazing operations in each State would be obtained from NASS. Two types of biodiversity data would be included, with each given equal weight-- threatened and endangered species data obtained from the FWS Threatened and Endangered Species System (TESS), and rangeland data obtained from the NRI. Data for the final factor, FY 2003 program demand data, would be provided by FSA.

Once States receive their allocations, FSA and NRCS would determine the distribution of funds within the State. States could allocate funds to regions based on natural resource priority, or distribute funds for easements and rental agreements based on landowner interest in the various enrollment options, or establish funding pools. In any case, the State would ensure some emphasis was given to grazing operations, plant and animal biodiversity, and grassland, land that contains forbs, and shrubland under the greatest threat of conversion. If a State lacked funds to enroll an entire project, the applicant would be provided the opportunity to reduce the amount of land offered providing the ranking score were not lowered. If the applicant declined to adjust the offered acreage level, the State could accept the next eligible application on the list of unfunded applicants. This approach is similar to that used for the FY 2003 program.

If demand were not a consideration, than the States receiving the highest percentage of funds in FY 2003 might be expected to receive the highest allocations in FY 2004 through FY 2007. In that case, the ten States receiving the most funds would be Texas, North Dakota, Oklahoma, Kansas, California, Missouri, South Dakota, and New Mexico, Montana, and Nebraska. (See Table 4.)

Table 4:
Allocations Based on FY 2003 Funding
(Ordered by Greatest to Least Percent of Funds)

State	Percent of Total FY 2003 Funds		State	Percent of Total FY 2003 Funds
Texas	14.73		Washington	1.44
North Dakota	6.32		New York	1.40
Oklahoma	4.64		Mississippi	1.38
Kansas	4.50		Illinois	1.29
California	3.76		Georgia	1.27
Missouri	3.57		Michigan	1.22
South Dakota	3.26		West Virginia	1.19
New Mexico	3.16		Virginia	1.15
Montana	2.86		Idaho	1.03
Nebraska	2.83		Louisiana	0.94
Oregon	2.53		North Carolina	0.92
Hawaii	2.48		Utah	0.89
Colorado	2.44		Vermont	0.39
Kentucky	2.39		Maryland	0.31
Wyoming	2.30		Massachusetts	0.30
South Carolina	2.28		New Jersey	0.26
Wisconsin	2.27		Maine	0.19
Florida	2.10		Rhode Island	0.16
Tennessee	2.10		Connecticut	0.15
Arizona	1.87		New Hampshire	0.13
Iowa	1.87		Puerto Rico	0.11
Alabama	1.76		Alaska	0.10
Ohio	1.59		Nevada	0.07
Indiana	1.58		Delaware	0.00
Pennsylvania	1.56			
Minnesota	1.53			
Arkansas	1.52			

Table 5:
Allocation Percentages Based On Share of Acres Offered In FY 2003
(Ordered by Greatest to Least Percent of Funds)

State	Percent of All Acres Offered		State	Percent of All Acres Offered
Texas	30.90		Illinois	00.22
Colorado	12.07		Tennessee	00.19
South Dakota	08.76		Pennsylvania	00.17
New Mexico	05.99		New York	00.17
Kansas	04.92		South Carolina	00.15
Nebraska	04.45		Michigan	00.11
Oklahoma	03.80		Virginia	00.05
Oregon	03.63		Arkansas	00.05
Missouri	03.42		West Virginia	00.04
North Dakota	03.42		Maryland	00.04
California	02.97		Vermont	00.04
Washington	02.67		Alaska	00.03
Idaho	01.95		New Jersey	00.03
Wyoming	01.60		Connecticut	00.03
Utah	01.23		Puerto Rico	00.02
Arizona	00.82		North Carolina	00.02
Ohio	00.70		Maine	00.01
Minnesota	00.60		New Hampshire	00.00
Montana	00.55		Massachusetts	00.00
Alabama	00.52		Rhode Island	00.00
Nevada	00.46		Delaware	00.00
Iowa	00.45			
Mississippi	00.40			
Hawaii	00.40			
Florida	00.38			
Indiana	00.36			
Louisiana	00.34			
Georgia	00.34			
Kentucky	00.29			
Wisconsin	00.24			

Table 5 lists the States in order of the share each State had of the total acres offered for protection nationwide under GRP in FY 2003. The number of acres offered is a good indicator of demand. Based on the information in Table 5, many of the same States would receive funds whether or not demand was a consideration. For example, Texas had the greatest share of offers and also received the greatest share of FY 2003 funds. South Dakota, New Mexico, Kansas, Nebraska, Oklahoma, Oregon, Missouri and North Dakota also show up among the top ten States of both lists. California is not in the top 10 of the demand list, though it is in the top 11. It made the top 10 listed in Table 5. Colorado made the top of the demand list, though it did not receive one of the highest shares of FY 2003 funds. Thus, it is likely that under this alternative, most of the States will receive a portion of funds in FY 2004 through 2007 similar to the portion they received in FY 2003. Information in Table 1 indicates that many of these same States also have the greatest need for conservation practices to improve the condition of their grasslands. Thus, it is likely that the small number of acres covered by restoration agreements will be located within these States.

Conservation practices to restore and maintain the sustainability and viability of grasslands will be applied to acres covered by GRP easements or rental agreements. Thus, the States identified near the top of Tables 4 and 5, will obtain the greatest benefits from GRP in terms of improved wildlife habitat and livestock forage, as well as improvements in the other functions and values identified in Appendix C and discussed in the Introduction to Impacts.

Alternative 3

Under this alternative, available GRP funds would be allocated among States based on the number of acres of grassland, rangeland and pastureland existing in each State in 1997. States would then establish a ranking process to allocate funds to specific program applicants in a manner similar to that described in Alternative 2. While there are some differences, this alternative would result in many of the same States receiving the majority of GRP funds as under the proposed action. Texas would receive 21 percent of available funds -- by far the largest share of funds. The next highest share would be received by New Mexico, which would receive 7.6 percent of the funds, then by Montana, Arizona and Wyoming, Colorado, Nebraska, South Dakota, Oklahoma, and California with percentages ranging from 7.6 to 3.7. Taken together, these 10 States would receive about 70 percent of the available GRP funds if this alternative were implemented. Figure 2 and Table 6 provide more information on the percentage of funds each State would receive under this alternative. Because they would receive the majority of funds, these States would also obtain the greatest benefits from GRP in terms of improved wildlife habitat and livestock forage, as well as improvements in the other functions and values identified in Appendix C and discussed in the Introduction to Impacts.

Figure 2:
State Allocations of GRP Funds Based on 1997 Grassland Acres
 (Source: NRI)

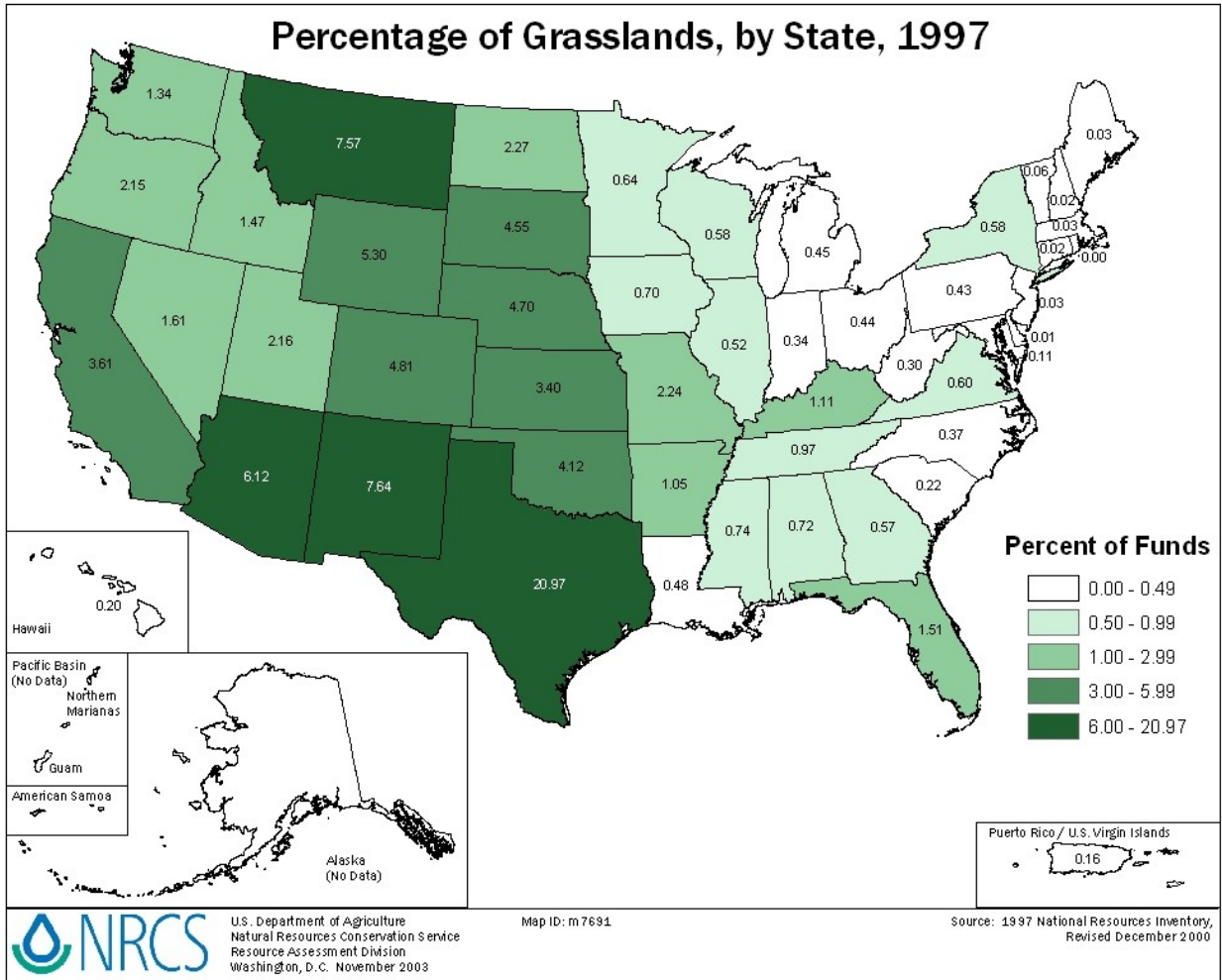


Table 6:
Allocations Based on State Share of U.S. Grasslands in 1997
(Ordered from Greatest to Least Percent of Funds)
 (Source: NRI)

State	Total 1997 Grassland Acres in State	Percent of GRP Funds Received		State	Total 1997 Grassland Acres in State	Percent of GRP Funds Received
Texas	111,659,100	21.23		New York	2,721,500	00.52
New Mexico	40,220,300	07.65		Louisiana	2,662,500	00.51
Montana	40,193,400	07.64		Illinois	2,502,000	00.48
Arizona	32,395,600	06.16		North Carolina	2,038,500	00.39
Wyoming	28,448,000	05.41		Michigan	2,032,300	00.39
Colorado	25,785,100	04.90		Ohio	2,006,300	00.38
Nebraska	24,889,600	04.73		Pennsylvania	1,844,900	00.35
South Dakota	23,984,600	04.56		Indiana	1,830,000	00.35
Oklahoma	21,995,500	04.18		West Virginia	1,526,500	00.29
California	19,318,100	03.67		South Carolina	1,196,500	00.23
Kansas	18,049,800	03.43		Hawaii	1,044,600	00.20
North Dakota	11,818,200	02.25		Puerto Rico	588,200	00.11
Utah	11,428,300	02.17		Maryland	478,000	00.09
Oregon	11,247,000	02.14		Vermont	338,300	00.06
Missouri	10,936,200	02.08		Maine	123,400	00.02
Nevada	8,651,400	01.64		Massachusetts	119,000	00.02
Idaho	7,815,300	01.49		Connecticut	111,800	00.02
Florida	7,459,600	01.42		New Jersey	111,000	00.02
Washington	7,050,100	01.34		New Hampshire	93,800	00.02
Kentucky	5,685,500	01.08		Rhode Island	25,200	00.00
Arkansas	5,389,300	01.02		Delaware	23,700	00.00
Tennessee	4,989,600	00.95		Alaska	N/A	N/A
Mississippi	3,679,300	00.70		Pacific Basin	N/A	N/A
Alabama	3,601,800	00.68				
Iowa	3,572,000	00.68				
Minnesota	3,434,300	00.65				
Virginia	2,995,300	00.57				
Wisconsin	2,994,200	00.57				
Georgia	2,864,600	00.54				

Alternative 4

Under this alternative, available GRP funds would be allocated among States based on the number of acres of grassland, rangeland and pastureland converted to other land uses from 1992 to 1997 relative to nationwide conversions. States would then establish a ranking process to allocate funds to specific program applicants in a manner similar to that described in Alternative 2. Compared to alternatives 2 and 3, this alternative would result in a different mix of States receiving the greatest share of GRP funds. Table 7 shows that Texas would still receive the most funds, but its share would be less than under Alternatives 2 and 3. Missouri, Kentucky, Florida, California, New Mexico, Montana, Michigan, Tennessee and New York would also fall within the top 10 GRP States under this alternative. This is the only alternative in which any Eastern States appear at the top of the list. If grassland conversions within the State were the basis for making allocations instead, even more East Coast States would be priorities for GRP funding. This is because there are so few grassland acres in those States to begin with, so the converted acres constitute a large percentage of the remaining grasslands. (See Appendix G.)

Alternative 5

Under this alternative, available GRP funds would be allocated among States based on the relative loss of rangeland acres from 1992 to 1997. This alternative would tend to enroll more native grasslands than the other alternatives because, by definition, rangeland is land on which the climax or potential plant cover is composed principally of native grasses, grass-like plants, forbs or shrubs suitable for grazing and browsing, and introduced forage species that are managed like rangeland. This alternative would also limit the States that would receive GRP funding more than the other alternatives, because 26 States have no rangeland at all. (See Appendix E.) Also, seven States, including Texas, actually increased rangeland acreage between 1992 and 1997, though the increases were rather small. The Caribbean had the greatest increase during the period—3.5 percent, followed by Nevada with a 1.4 percent increase. Table 8 lists the States in order from the greatest percentage loss of rangeland between 1992 and 1997 to the least. The States shown in blue are the seven States that had an increase in rangeland over the period, and the States shown as having 0 percent change had no rangeland either in 1992 or 1997. If this alternative were selected, Missouri would receive the most GRP funds, followed by Florida, Oregon, North Dakota, New Mexico, Utah, South Dakota, Arizona, Oklahoma, and Montana. If the allocations were made based on the loss experienced in each State relative to the loss experienced Nationwide, this would change somewhat and New Mexico, Florida, Arizona, Montana, North Dakota, South Dakota, Oregon, Utah, Oklahoma and Nebraska would receive the most GRP funds. With the exception of Missouri and Nebraska, the top States are the same regardless of which approach to rangeland conversions is applied. This is largely because only 17 States actually lost grassland acres over the five year period considered. One of the biggest differences between this alternative and the all the others is that Texas would likely receive little or no GRP funding under this alternative because of its increase in rangeland over the period.

Table 7:
Allocations of GRP Funds Based on State Share of Total Grassland
Conversions to Other Land Uses, 1992-1997
(Ordered From Greatest to Least Percent of Funds)

State	State Share of GRP Funds Based on US Conversions of 1992 Grasslands		State	State Share of GRP Funds Based on US Conversions of 1992 Grasslands
Texas	10.47		Colorado	1.34
Missouri	9.12		Nebraska	1.32
Kentucky	5.22		Indiana	1.31
Florida	4.59		Washington	1.30
California	4.12		Caribbean	1.24
New Mexico	3.15		Kansas	1.16
Montana	3.03		North Carolina	1.00
Michigan	3.02		Utah	0.98
Tennessee	2.93		West Virginia	0.96
New York	2.78		Idaho	0.96
Minnesota	2.76		Louisiana	0.76
Mississippi	2.69		Wyoming	0.60
Ohio	2.66		Maryland	0.56
Pennsylvania	2.65		South Carolina	0.56
Iowa	2.63		Nevada	0.40
Georgia	2.47		Maine	0.26
Oklahoma	2.34		Massachusetts	0.22
Arkansas	2.34		New Jersey	0.18
South Dakota	2.22		Vermont	0.16
Alabama	2.21		Connecticut	0.13
North Dakota	2.10		Hawaii	0.08
Illinois	2.02		New Hampshire	0.04
Virginia	1.85		Rhode Island	0.01
Arizona	1.83		Delaware	0.00
Wisconsin	1.78		Alaska	
Oregon	1.46			

Table 8:
Allocations of GRP Funds Based on Loss of Rangeland Acres,
1992-1997
(Ordered From Greatest to Least Percent of Funds)

State	Percent Loss/ Gain within the State 1992 through 1997		State	Percent Loss/ Gain within the State 1992 through 1997
Missouri	13.19		Georgia	0
Florida	10.49		Illinois	0
Oregon	1.93		Indiana	0
North Dakota	1.88		Iowa	0
New Mexico	1.36		Kentucky	0
Utah	1.19		Maine	0
South Dakota	0.92		Maryland	0
Arizona	0.81		Massachusetts	0
Oklahoma	0.80		Michigan	0
Montana	0.62		Minnesota	0
Kansas	0.44		Mississippi	0
Alabama	0.41		New Hampshire	0
Nebraska	0.36		New Jersey	0
Hawaii	0.30		New York	0
Idaho	0.26		North Carolina	0
Washington	0.04		Ohio	0
Wyoming	0.04		Pennsylvania	0
Arkansas	0.26		Rhode Island	0
Colorado	0.45		South Carolina	0
Texas	0.65		Tennessee	0
Louisiana	0.98		Vermont	0
California	1.12		Virginia	0
Nevada	1.38		West Virginia	0
Caribbean	3.50		Wisconsin	0
Connecticut	0			
Delaware	0			

Restoration Alternatives Analyzed

Alternative 6

Under this alternative, all acres that are covered by a restoration agreement would be restored to and maintained in a perennial native and natural plant community. This alternative has the potential to provide the greatest diversity of plants and animals and habitat structure. It also has the potential to provide increased water quantity and improved water quality for groundwater recharge and community water supplies. Requiring perennial native and natural plant communities to be restored would provide a sustainable, resilient forage supply for herbivores and would mitigate the impact of ecological catastrophe on the ecosystem. It would provide protection of the soil resource from wind and water erosion, maintain open space and aesthetics, and provides economic value directly supporting the grazing industries and recreation activities. This alternative also has the potential to enhance air quality through carbon sequestration and reductions in soil erosion. This alternative also has the potential to enhance soil quality. On the other hand, there are cases in which grasslands have become so badly degraded that it is not feasible to restore native and natural plant communities, particularly in the short-term. In such a situation, this alternative could result in continuing or increased soil erosion, reduced air quality and water infiltration and further reduced wildlife habitat and forage supply. It could adversely affect the livestock industry, lead to increased vulnerability of the grasslands to invasive species, and continue the cycle of declining quality. This alternative would have the greatest potential benefits if implemented for grasslands that are not already severely degraded.

Alternative 7

Under this alternative, acres covered by a restoration agreement would be restored to and maintained in a perennial plant community dominated by a diverse mixture of introduced species. This alternative would result in many of the same benefits as Alternative 6, including the potential to provide diversity of plants, animals, and habitat structure, and increased quantity and improved quality forage for livestock. It also has the potential to provide increased water quantity and improved water quality for groundwater recharge and community water supplies, to protect the soil resource from wind and water erosion, and provide open space and aesthetics. This alternative would also provide economic value directly supporting the grazing industries and recreation activities, and has the potential to enhance air quality and soil quality. In addition to these benefits, this alternative also would provide perennial vegetation alternative when native cultivars are not available or are not feasible to re-establish, particularly in the short-term. Use of introduced species could help reverse encroachment by invasive species and protect soil, air, and water resources in the short-term as well as the long-term. Maintaining a diverse mixture of introduced plant species, particularly if properly managed, can increase wildlife habitat value for particular or multiple species, at the same time contributing to the viability of the livestock industry when native grasses are not available or it is not feasible to re-establish native or natural conditions.

Alternative 8

Under this alternative, acres covered by a restoration agreement would be managed in a manner that moves the covered acres toward a sustainable native and natural community. At a minimum, the objective would be to obtain and maintain a perennial plant community dominated by native and natural species with a minor amount of introduced species. This alternative provides all the benefits of the other alternatives, but also allows immediate reversal of severely degraded grassland conditions through the use of a diverse mix of introduced species. As a result, this alternative has the potential to provide diversity of plants, animals, and habitat structure, to increase the quantity and improve the quality of forage for livestock. It would provide a perennial vegetation alternative when native cultivars are unavailable or are not feasible to immediately re-establish. It has the potential to provide increased water quantity and improved water quality for groundwater recharge and community water supplies and would protect the soil resource from wind and water erosion. This alternative would also provide open space and aesthetics, as well as economic value directly supporting the grazing industries and recreation activities. In addition, like the other alternatives, this one has the potential to enhance air quality and soil quality.

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REFERENCES

The State of the Nation's Ecosystems. 2002. The H. John Heinz III Center for Science, Economics and the Environment. Cambridge University Press.
<http://www.heinzctr.org/ecosystems/report.html>.

USDA-NRCS, Grazing Lands Technical Institute. 1997. National Range and Pasture Handbook.

Wildlife Management Institute. 2001. How Much is Enough for 2002?: A Regional Wildlife Habitat Needs Assessment for the 2002 Farm Bill. Washington, DC. (January).

Heard, L. P., A. W. Allen, L. B. Best, S. J. Brady, W. Burger, A. J. Esser, E. Hackett, D. H. Johnson, R. L. Pederson, R. E. Reynolds, C. Rewa, M. R. Ryan, R. T. Molleur, and P. Buck. 2000. A comprehensive review of Farm Bill contributions to wildlife conservation, 1985-2000. W. L. Hohman and D. J. Halloum, editors. USDA Natural Resources Conservation Service, Wildlife Habitat Management Institute, Technical Report, USDA/NRCS/WHMI-2000.

Connor, Seidl, VanTassell, and Wilkins. 2001. United States Grasslands and Related Resources: An Economic and Biological Trends Assessment" (June).

USDA-NRCS. National Resource Inventory and State of the Land.
http://www.nrcs.usda.gov/technical/nri_data.html.

W.T. Sexton, A.J. Malk, R.C. Szaro, and N.C. Johnson (eds.), Ecological Stewardship: A Common Reference for Ecosystem Management, Volumes I and III. 1999. New York: Elsevier Science.

APPENDICES

Appendix A – Notice of Availability of Funds for Grassland Reserve Program

Appendix B – Percentage of Fiscal Year 2003 GRP Funds Received Per State

Appendix C – List of Grassland Functions and Values

Appendix D – GRP Conservation Practice Photos and Network Diagrams

Appendix E – Changes in Grassland Acres by State, 1982 Through 1997

Appendix F – FY 2003 Contracts and Acres Offered and Accepted

Appendix G – State Grasslands Converted To Other Uses