

**ENVIRONMENTAL ASSESSMENT
EQIP - LESSER PRAIRIE CHICKEN GPA
2002**

INTRODUCTION

This environmental assessment (EA) is being prepared by the United States Department of Agriculture Natural Resources Conservation Service (NRCS) to comply with the requirements of the National Environmental Policy Act of 1969 and implementing regulations at 40 CFR Parts 1500-1508. The EA will assist NRCS in determining whether the proposed action will have a significant impact on the quality of the human environment and therefore requires preparation of an Environmental Impact Statement.

NEED FOR PROPOSED ACTION:

Purpose of and Need for Action: There is a need in the Lesser Prairie Chicken (LPC) Geographic Priority Area (GPA) to provide habitat for the LPC and improve rangeland productivity for domestic livestock production. The purpose of meeting these needs is to stabilize or increase current LPC populations.

Background:

Throughout the GPA, the Lesser Prairie Chicken (*Tympanuchus pallidicinctus*) can be found in fluctuating numbers. There are conflicting thoughts as to the reasons for the bird's continual rises and falls in population. Early ideas concluded that the conversion of rangeland to cropland caused LPC populations to decline. This view can be disputed by the record number of prairie chickens in the early eighties when farmers were growing crops "fence row to fence row". In the late 1980's many acres of cropland were enrolled in the Conservation Reserve Program (CRP) and planted to Weeping Lovegrass, greatly reducing the production of food grains in the area. Prairie chicken numbers declined during this time. Yet another school of thought dictates that LPC populations are closely related to moisture and drought cycles. Even though the exact reasons for the bird's frequent rises and declines in population numbers are not known, most parties agree that LPC habitat should not be heavily grazed by domestic livestock on a continual basis.

Remaining LPC populations tend to be in areas composed of sandy or sandy loam soils having tall grasses interspersed with shinnery oak. Healthy rangeland with large clumps of sand and/or big bluestem and shinnery oak, making up no more than 35% of the vegetative cover, provides nesting habitat for the LPC. Traditional yearlong grazing, coupled with drought cycles, results in the degradation of habitat. Conservative grazing and occasional rest from use by livestock helps to maintain critical nesting habitat. Nesting habitat is thought to be a major factor limiting growth of the population of the LPC.

There are approximately 3,000,000 acres of rangeland located in the project area. Approximately 85 percent of the occupied prairie chicken range is privately owned or state leased land. The New Mexico Department of Game and Fish owns approximately 21,000 acres dedicated to prairie chickens within the project area. There are approximately 125 ranchers in the proposed project area. There are no known limited resource producers within the GPA

boundary. Ranches range in size from 400 acres to 200,000 acres and are primarily cow-calf operations.

The GPA is a broad, gently tilted plain that slopes in a south-southeasterly direction. Numerous depressions, or playa lakes, dot the area. The sandhills in the central part of the project area break up the generally smooth, nearly level plain. The project area has a semiarid, continental climate and receives 14 to 17 inches of annual precipitation most of which is received during the summer months in brief and often heavy thunderstorms.

Water is perhaps the most precious resource in the GPA. Most of the area lies above the Ogallala formation, the water-bearing strata presently being tapped for domestic use and irrigation. Most areas having sufficient water for irrigation have been tilled and are used for crop production. Limited livestock water distribution on the rangeland areas prevents ranchers from utilizing rotational grazing systems.

The Lesser Prairie Chicken is a candidate for inclusion as a threatened species on the Threatened and Endangered Species List.

ALTERNATIVES

Alternative 1. No Action

Alternative 2. Proposed Action: Use NRCS Environmental Quality Incentives Program (EQIP) authorities to assist ranchers within the Lesser Prairie Chicken GPA with the installation of rangeland management systems and practices that will stabilize or enhance habitat for the Lesser Prairie Chicken. Management and structural practices may include any or all of the following: Prescribed Grazing, Upland Wildlife Habitat Management, Livestock Water Development, Fencing, Brush Management, Range Seeding, Prescribed Burning, Tree and Shrub Planting, Wildlife Water Facilities.

SCOPING OF ISSUES FOR UNIQUE AND PROTECTED RESOURCES IN THE AREA:

NRCS conducted a review of the area to identify unique and protected resources and other special issues of concern. Members of the public had an opportunity to provide comments and identify concerns during local workgroup meetings sponsored by Central Curry, Lea, and Roosevelt Soil and Water Conservation Districts held November 22, 1999, August 23, 2000, and October 16, 2000. Habitat requirements and GPA participation criteria were developed at these meetings. No controversy about the need for action or the actions themselves was raised during these meetings, and no resources or issues of concern were identified during the meetings by NRCS or other Federal or State agencies but those discussed in this EA.

Threatened and Endangered Species and Species of Concern: A record search shows there are three animal species within the GPA listed as endangered (Black-footed Ferret, Interior Least Tern, Whooping Crane), three listed as threatened (Bald Eagle, Mountain Plover, Pecos Bluntnose Shiner), and three listed as candidate (Black-tailed Prairie Dog, Swift Fox, Lesser Prairie Chicken). NRCS has determined that the ferret, tern, Bald Eagle and Pecos Bluntnose shiner will not be affected. The Plover, prairie dog, swift fox and lesser prairie dog may be affected by alternatives or action considered in this EA. Consultations with FWS will be completed prior to implementation.

Cultural Resources and Historic Properties: NRCS completed a search of cultural resource records and determined that 273 sites are present within the boundaries of the GPA. Prior to the installation of any practices determined to be undertakings, a cultural resources consultation will be conducted as required by Section 106 of the National Historic Preservation Act. Cultural resource sites will be identified and avoided.

Wetlands: There are no perennial streams or rivers within the GPA. Wetlands within the GPA consist of shallow depressions known as playas. These areas catch and hold flood water for short periods of time and will not be effected by practices completed through this GPA.

IMPACTS AND EFFECTS OF ALTERNATIVES:

Table 1 compares the overall effects of each of the alternatives discussed below.

Alternative 1. No Action

Ranchers will continue to use traditional ranching practices as they have for many years. This could include yearlong grazing of large pastures with heavy stocking rates and hauling water to pastures where wells are nonexistent or no longer productive. Depending upon weather cycles and precipitation, these traditional ranching practices will not lead to improved habitat for the Lesser Prairie Chicken.

Alternative 2. Proposed Action

There are approximately 3 million acres of rangeland within this GPA, most all of which could benefit from improved rangeland management techniques and facilitating practices. Productive rangeland will benefit both the livestock producer through the production of greater quantities of usable forage and the Lesser Prairie Chicken by providing more nesting habitat and cover.

Prescribed Grazing will be included in every EQIP plan developed under the GPA. It will consist of a flexible schedule of herd movements, which will defer pastures from domestic livestock grazing for various lengths of time. Grazing management will be designed to provide residual grass cover in spring for critical nesting habitat.

Upland Wildlife Habitat Management will also be included in every EQIP plan. This practice includes creating, maintaining, or enhancing areas to provide food, shelter and water for upland wildlife species.

Livestock Water Development includes practices such as wells, livestock pipeline, and troughs that provide water for use by livestock. Livestock wells are normally drilled to a depth known as “red bed” which, depending on the area is at a depth between 100 and 400 feet. Livestock pipeline is normally PVC pipe installed in a trench at least 15 inches deep but not over 24 inches deep. Livestock troughs are made with 3/16th-inch steel with concrete bases. Most are 60 feet in circumference and two feet deep, holding approximately 4300 gallons.

Fencing will consist of either steel t-posts installed every 16 to 20 feet with four strands of barbed wire or permanent power fence consisting of two wires, only the top one energized, with posts approximately every 50 feet.

Brush Management includes removing or reducing brush species that are present on rangeland at densities undesirable for livestock or wildlife. Shinnery oak may be controlled in areas where it exceeds 40% canopy cover by applying tebuthiuron at a rate of ½ to 1 lb. per acre as per the Chemical Weed and Brush Control Guide for New Mexico Range Lands, publication 400 B-17. The 40% figure for shinnery oak was agreed to and is found in the guidelines for LPC management developed by the LPC Interstate Working Group. Recent surveys within the GPA indicate that there are probably few areas having this degree of shinnery oak infestation. Where mesquite exceeds 25% cover, either chemical or mechanical control may be used. Mechanical grubbing involves uprooting the plant and cutting it off below the bud zone. Range seeding to control soil erosion following the soil disturbance will follow mechanical grubbing. Chemical control of mesquite is accomplished with triclopyr and/or clopyralid at ¼ to ½ pound per acre. In some areas, sand sagebrush cover exceeds 35% and may be controlled using 2,4-D at 1 to 2 lb./acre or tebuthiuron at ½ to ¾ lb./acre.

Range Seeding includes the establishment of a cover crop into which native grasses are drilled. Weeds that are detrimental to grass establishment or cause problems when they break loose and blow away are controlled through the use of herbicides or shredding. Complete deferment from use by domestic livestock is required during the first two growing seasons following grass planting to allow establishment.

Prescribed Burning may be used on certain pastures within the GPA. This will be done only when conditions are within prescribed parameters and soil moisture conditions are favorable for rapid regrowth of vegetation.

Tree and Shrub Planting may be used to establish native species, such as Fourwing Saltbush, Sand/Native Plum, Winterfat, New Mexico Foresteria, and Skunkbush Sumac. This practice involves planting bare-root or tubling shrubs, installing plastic weed barrier, and drip irrigation where water is available.

Wildlife Watering Facilities may be installed in areas that are far from available water. These will consist of fiberglass tanks 8 to 10 feet in diameter by two feet deep with a fiberglass lid that serves to catch and retain the water. A detachable drinking area will allow wildlife access to the water. These guzzlers will be installed in areas that have no permanent water available.

DISCUSSION OF IMPACTS AND EFFECTS OF ALTERNATIVE NO. 2

If Alternative 2 were implemented, there would be impacts to rangeland species composition, forage production, and wildlife habitat. As indicated above, steps would be taken on a site-specific basis to insure no cultural resources or historic or traditional properties are adversely affected.

Prescribed grazing will result in pastures being deferred and an increase in the health and vigor of the grasses. Deferment of specific pastures containing lek and nesting sites will aid the prairie chicken by producing and maintaining residual tall grasses in spring to provide food and cover during nesting and young rearing. Livestock producers will benefit from improved pasture management and forage production due to the production of more usable forage. It is estimated that 120,000 acres of rangeland will be enrolled in this five-year EQIP GPA and have a prescribed grazing system implemented.

Upland Wildlife Habitat Management will assure that habitat is maintained for the LPC. This practice may include development of wildlife food strips and shrub plantings. Wildlife food plots are strips of plowed ground that are planted annually to wildlife food crops such as millet or milo. The addition of food and cover will be beneficial to the LPC. Perhaps the greatest effect on LPC habitat will be obtained through prescribed grazing and pasture deferment. Using the New Mexico NRCS Wildlife Habitat Evaluation Guide (WHEG) for Lesser Prairie Chicken as an indicator of habitat suitability, the score for a typical acreage enrolled in the EQIP will improve approximately 18% (from 0.60 to 0.78 with 1.0 being the top score). Like Prescribed Grazing above, approximately 120,000 acres will be planned for Upland Wildlife Habitat Management.

Livestock Water Development may be used to place needed livestock watering sites in pastures that currently do not have water available. This will allow ranchers to utilize the available forage more consistently and defer pastures while livestock use occurs in other pastures. Due to the infrequent availability of ground water in the GPA, it is assumed that most of the water developments will consist of pipeline from an existing well and a trough. It is estimated that 30 such systems will be completed through this EQIP program in five years.

Fencing will allow ranchers to divide large pastures into more manageable units, which will enable them to rotate livestock more effectively in order to better utilize the available forage. Cross fencing will also enable ranchers to defer pastures that contain prairie chicken nesting sites. Boundary fences will not be cost-shared through the program. Approximately 130,000 feet of cross fencing will be completed during the five-year EQIP program. Due to the uneven topography of much of the area, most of the fence will be four-wire barbed, as permanent power fence is difficult to install in such terrain.

Brush Management will be used to reduce the canopy cover of brush species where it exceeds acceptable limits. Controlling brush will allow the grass component of the ecosystem to quickly return and better express itself. In areas of severe brush infestation, grazing deferment alone will do little to change the composition of vegetation species making up the site. It is estimated that 10,000 acres of brush control, mostly mesquite, will be completed through this EQIP program.

Range Seeding will be used to reclaim cropland that is no longer under production or to revegetate sites following mechanical brush control. In the event that a rancher is no longer planning to farm a given cropland field, reseeding will be used to establish native mid and tall grass species, such as Sand and Little Bluestem and Indiangrass. Establishment of these species will provide beneficial habitat for the LPC. Approximately 3,000 acres will be seeded during this five-year program.

Prescribed Burning may be used to stimulate the grass component of certain sites and reduce the amount of dead litter on the soil surface. Burning may also be used to lower the successional state of a given site, making it more suitable for Prairie Chicken nesting and foraging. Burning will stimulate the establishment of new grass and forb seedlings, which will lead to an increase in insect populations. This practice is highly dependent upon springtime weather conditions and it is probable that burns may be planned but never carried out due to the soil moisture conditions and weather. It is estimated that up to 5,000 acres may be burned under prescription through this program.

Tree and Shrub Planting may be used to establish permanent cover to enhance wildlife habitat for Lesser Prairie Chickens as well as other wildlife species. Native species, such as Fourwing

Saltbush, Sand/Native Plum, Winterfat, New Mexico Foresteria, and Skunkbush Sumac will be used. Establishment of native shrubs will improve wildlife habitat by providing food and cover for wildlife species. Many areas within this GPA had shrubs throughout but most have been removed through yearlong grazing over the last 100 years. This practice will attempt to restore these native shrubs. Hopefully, at least 20 shrub planting projects will be completed through this program.

Wildlife Watering Facilities may be installed in areas that are far from available water. This will help to spread wildlife populations throughout a ranch or group of pastures. By providing available water in areas not now having water, ranchers will be allowing many wildlife species to inhabit areas that they don't presently use. During drought, a permanent water source may insure survival of groups prairie chickens.

All practices planned and completed through this EQIP program will be in compliance with current NRCS standards and specifications.

The estimated cost for implementation of this alternative is estimated to be \$800,000 for the five-year program.

TABLE 1, ALTERNATIVE 2.

Practice	Treatment with NRCS EQIP Assistance Alone	Treatment by Landowner Initiative, Other Agency Assistance and NRCS Cumulatively
Prescribed Grazing	120,000 acres	180,000
Upland Wildlife Habitat Management	120,000 acres	180,000
Livestock Water Development	30 water systems	35 systems
Fencing	130,000 feet	200,000 feet
Brush Management	10,000 acres	12,000 acres
Range Seeding	3,000 acres	3,500 acres
Prescribed Burning	5,000 acres	5,000 acres
Tree and Shrub Planting	20 plantings	22 plantings
Wildlife Watering Facilities	10 facilities	12 facilities

TABLE 2, COMPARISON OF ALTERNATIVES

Alternatives	Improved Rangeland	Wildlife Habitat Evaluation Guide LPC	
		Score	% Improvement
1. No Action	20,000 ac.	0.60	0%
2. Proposed Action EQIP GPA	120,000 ac.	0.78	18%

PERSONS AND AGENCIES CONSULTED

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Attendees of Local Work Group Meetings
Local Work Group Minutes (attached)

REFERENCES:

NRCS Section IV – Standards and Specifications

LPC Interstate Work Group report – In NRCS State Office

FWS Endangered Species – County list – web site

NM Dept. Game and Fish – BISON-M Species accounts – web site

State Historic Preservation Office data – web site

**Finding of No Significant Impact
for the Implementation of EQIP
in the Lesser Prairie Chicken GPA**

Introduction

The Lesser Prairie Chicken GPA is a federally assisted action under the Environmental Quality Incentives Program (EQIP), with assistance from the Natural Resources Conservation Service (NRCS). An environmental assessment was undertaken in connection with the development of this proposed action. This assessment was conducted in consultation with local, state, and federal agencies. Data developed during the assessment are available, upon request, from:

U. S. Department of Agriculture
Natural Resources Conservation Service
Portales Field Office
Portales, NM 88130

The Environmental Assessment (EA) is attached for reference.

Determination of Significance

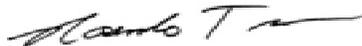
Table 1. Determination of Significance of Proposed Action

CONTEXT	INTENSITY	REASON FOR NON SIGNIFICANCE
Rangeland Productivity	Permanent Improvement on 120,000 acres	Small acreage (4%) compared to project area
LPC Habitat – WHEG score from 0.6 to 0.78.	18% Improvement on 120,000 acres of habitat	Small acreage (4%) compared to project area

Other considerations related to context and intensity are discussed as follows. Ranches are similar in the proposed area and are not unique to other ranches in the state. No issues or concerns have been expressed at any public meetings, so controversy is small. Results of actions are known from past experience in the area, thus uncertainty and risk are low. There will be no impact to National Register of Historic Places or cultural resources. Consultations on effects to endangered species and candidate species will be done with the FWS, prior to implementation. No national, state, local, or tribal laws will be violated by this action.

Finding of No Significant Impact:

This finding is based on the evidence presented in the environmental assessment of impacts and alternatives for this geographic priority area. Based on the assessment and the reasons given in Table 1, I find that the alternatives analyzed in the EA will have no significant impact on the quality of the human environment. Therefore, an environmental impact statement will not be prepared.



ROSENDO TREVINO
State Conservationist

December 20, 2001

Date