

DECISION RECORD

Reference: Environmental Assessment (EA) for Grazing Authorization, NM-060-00-169

Comments from the New Mexico Natural History Institute, Forest Guardians, Wildlife Management Institute, and the New Mexico Department of Game and Fish were received. Changes and clarifications as a result of these comments are as follows:

1. Comments regarding the need and analysis for more alternatives were received, and have been incorporated into the final document. One alternative is based on monitoring data that evaluates vegetative height/ structure for lesser prairie chicken nesting (Robel).
2. North pasture has not been treated and is predominately made up of shrubs (50.96% veg. cover) with a significant amount of bare ground and litter.

Decision: It is my decision to authorize the issuance of a ten year grazing permit on the Sand Ranch allotment #65043. The permit will authorize 591 AU's permitted use at 68% public land totaling 4823 AUM's, and a grazing lease on allotment #65547 for 1 AU at 100% public land for 12 AUM's.

The attached rangeland use agreement will be implemented allowing, 530 AU's active use (4325 AUM's) and 61 AU's (497 AUM's) in voluntary non use from March 1 to the last day of February each year at 68% public land.

The continuation of reduced livestock numbers is needed due to the concern of declining habitat conditions for the Lesser Prairie chicken within a portion of the allotment within the shinnery oak dune plant community. Along with the rangeland use agreement, a grazing management plan will be implemented which will allow seasonal rest for pastures on rotational basis.

Any additional mitigation measures identified in the environmental assessment impacts sections of the referenced EA have been formulated into stipulations, terms and conditions

Terms and Conditions:

The following are terms and conditions specific to Lesser Prairie chicken pastures as outlined in the EA. Changes to these terms and conditions may be initiated by either party through the consultation coordination process.

1. Robel's vegetative monitoring methodology which has been approved by the five state Lesser Prairie Chicken Interstate Working Group will be implemented to measure lesser prairie chicken habitat requirements. Specific parameters include:

Shrub coverage - 25 to 30% composition of entire vegetative community.
Forb coverage - 10 to 15% composition of entire vegetative community.
Grass coverage - 60% composition of entire vegetative community; 10% with a visual obstruction reading (VOR) > or equal to 3.0 decimeters, an average VOR of 1.0 decimeter.

Note: It is important to understand that these parameters in certain pastures may not be met until the habitat has time to respond to the new grazing management practices. As long as improvement is being made in those pastures, then changes should not be necessary. If prairie chicken habitat requirements are not being improved as a result of livestock grazing practices, changes will be necessary.

2. Vegetative monitoring utilizing the Robel Pole will be conducted on an annual basis within those LPC pastures that are in question of meeting the habitat parameters. This range evaluation will be conducted between the BLM and the permittee. An adaptive grazing management approach will be taken to where annual changes in livestock numbers or use within pastures will fluctuate depending upon the range evaluation.

3. Additional livestock grazing management changes may be required as a result of periods of abnormal climatic patterns and the vegetative condition resulting from these climatic changes in cooperation and coordination with the permittee.

If you wish to protest this proposed decision in accordance with 43 CFR 4160.2, you are allowed 15 days to do so in person or in writing to the authorized officer, after the receipt of this decision. Please be specific in your points of protest. In the absence of a protest, this proposed decision will become the final decision of the authorized officer without further notice, in accordance with 43 CFR 4160.3. A period of 30 days following receipt of the final decision, or 30 days after the date the proposed decision becomes final, is provided for filing an appeal and petition for the stay of the decision, for the purposes of a hearing before an Administrative Law Judge (43 CFR 4.470.).

The appeal shall be filed with the office of the Field Office Manager, 2909 West Second, Roswell, NM, 88201, and must state clearly and concisely your specific points.

Signed by T. R. Kreager
Assistant Field Manager

6/21/01
Date

**ENVIRONMENTAL ASSESSMENT
for
GRAZING AUTHORIZATION**

**ALLOTMENT 65043 SECTION 3 and
ALLOTMENT 65547 SECTION 15**

EA-NM-060-99-169

MAY, 2001

**U.S. Department of the Interior
Bureau of Land Management
Roswell Field Office
Roswell, New Mexico**

Environmental Assessment for Grazing Allotments 65043 and 65547

I. Background

A. Introduction

When authorizing livestock grazing on public range, the Bureau of Land Management (BLM) has historically relied on a land use plan and environmental impact statement to comply with the National Environmental Policy Act (NEPA). A recent decision by the Interior Board of Land Appeals, however, affirmed that the BLM must conduct a site-specific NEPA analysis before issuing a permit or lease to authorize livestock grazing. This environmental assessment fulfills the NEPA requirement by providing the necessary site-specific analysis of the effects of issuing a new grazing permit for the lease on Allotments 65043 and 65547.

The scope of this environmental assessment is limited to the effects of issuing a new grazing permit and lease on Allotments 65043 and 65547. Over time, the need could arise for subsequent management activities which relate to grazing authorization. These activities could include vegetation treatments (e.g., prescribed fires, herbicide projects), range improvement projects (e.g., fences, water developments), and others. Future management actions related to livestock grazing would be addressed in project-specific NEPA documents as they are proposed.

B. Purpose and Need for the Proposed Action

The purpose of issuing a new grazing lease would be to authorize livestock grazing on public range on Allotments 65043 and 65547. The permit and lease would be needed to specify the types and levels of use authorized, and the terms and conditions of the authorization pursuant to 43 CFR 4130.3, 4130.3-1, 4130.3-2 and 4180.1.

C. Conformance with Land Use Planning

Upon review of the Roswell Resource Management Plan/Environmental Impact Statement (Bureau of Land Management 1997), the proposed action was found to conform with the Record of Decision as required by 43 CFR 1610.5-5.

D. Relationships to Statutes, Regulations, or Other Plans

The proposed action and alternatives are consistent with the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1700 et seq.); the Taylor Grazing Act of 1934 (43 U.S.C. 315 et seq.), as amended; the Clean Water Act (33 U.S.C. 1251 et seq.), as amended; the Endangered Species Act (16 U.S.C. 1535 et seq.) as amended; the Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.); Executive Order 11988, Floodplain Management; and Executive Order 11990, Protection of Wetlands.

II. Proposed Action and Alternatives

A. Proposed Action

Authorize the grazing permit and lease on allotment #65043 for 591 AU's permitted use at 68% public land totaling 4823 AUMs and a grazing lease on allotment #65547 for 1 AU at

100% public land for 12 AUMs. Under the proposed action, a 3-herd management scheme would be implemented as outlined in Attachment 1.

A Rangeland Use Agreement would be developed and implemented, allowing active use for 530 AU's and 61 AU's non-use. The grazing of pastures would be as outlined in the attached grazing scheme 1. Climatic conditions or a decline in resource objectives may affect this schedule, therefore livestock movements between pastures may vary as much as two weeks.

B. Change livestock management alternative:

Alternative Number 1

Authorize the grazing permit and lease on allotment #65043 for 591 AU's permitted use at 68% public land totaling 4823 AUMs and a grazing lease on allotment #65547 for 1 AU at 100% public land for 12 AUMs. Under this alternative, a 3-herd management scheme would be implemented as outlined in Attachment 1a. The difference between this alternative and the proposed action is the number of livestock in the three herd units and the length of time and season, livestock are allowed in key prairie chicken pastures.

Under this alternative a Rangeland Use Agreement would be developed and implemented, allowing active use for 530 AU's and 61 AU's non-use. The grazing of pastures will be similar to the other grazing schedule, but a change in the number of head in HERD #2 will change from 150 to 120 and HERD #3 will go from 180 to 210. There will also be a change in the number of head tied to the Hillburn and Crowley pastures. Under this alternative there will be 60 head in Crowley and 80 head allowed in the Hillburn pastures. Climatic conditions or a decline in resource objectives may affect this schedule, therefore livestock movements between pastures may vary as much as two weeks.

Alternative Number 2

Authorize the grazing permit and lease on allotment #65043 is for 591 AU's permitted use at 68% public land totaling 4823 AUMs and a grazing lease on allotment #65547 for 1 AU at 100% public land for 12 AUM's. Under this alternative, a 3-herd management scheme would be implemented as outlined in Attachment 1b. The difference between this alternative, the permittee proposed action, and alternative 1 is the number of livestock in the three herd units and the length of time and season, livestock are allowed in key prairie chicken pastures.

Under this alternative a Rangeland Use Agreement would be developed and implemented, allowing active use for 470 AU's and 121 AU's non-use. The grazing schedule set forth in alternative 2 would be implemented, with the exception of 60 less animal units in herd number 1 (see attachment 1b). This AU decrease will ensure

lighter use in these pastures that still support lesser prairie chickens. It will also increase management flexibility in case a pasture around active booming grounds is needed to be deferred for longer periods of time due to climatic conditions a decline in resource objectives, or a change in lesser prairie chicken lek sites. Pasture deferment on the eastern side of the allotment would consist of one pasture being deferred from April 1 to September 30 of the following year. This deferment period will be rotated on an annual basis, to allow pastures two complete growing seasons rest. Livestock movements between pastures may vary as much as two weeks.

Alternative Number 3 – Past Management Alternative

Authorize the grazing permit and lease on the Sand Ranch, allotments # 65043 and 65547. The grazing permit on allotment #65043 would be for 591 AU's active use at 68% public land for 4823 AUMs and the grazing lease on allotment #65547 for 1 AU at 100% public land for 12 AUMs. Specifically, to authorize a grazing permit and lease based on the above livestock numbers from March 1 to the last day of February of each year at 68% and 100% public land, and implementing past livestock management practices.: refer to the livestock management portion under the **affected resources section** to understand the past livestock management practices and changes that have taken place with the new permittee prior to this environmental assessment being completed.

Alternative Number 4 – Adaptive Management Alternative

Authorize a grazing permit and lease on the Sand Ranch allotments # 65043 and 65547 in relation to annual precipitation patterns. The grazing permit on allotment #65043 would not exceed 591 AU's active use at 68% public land for 4823 AUMs and the grazing lease on allotment #65547 for 1 AU at 100% public land for 12 AUMs. Specifically, to authorize a grazing permit and lease based on annual precipitation from March 1 to the last day of February of each year at 68% and 100% public land, while implementing a pasture rest rotation system as described in alternative 2. The following is a table describing the number of Animal Units in relation to annual precipitation patterns.

Annual Precipitation	< 9 inches	< 9 -12 inches	> 12 inches
Animal Units	400	475	591
Animal Months	3625	4350	4823

To ensure adequate vegetative cover is available, the annual precipitation schedule will be from August 1, to July 31. Changes in livestock numbers will be made after July 31.

If severe drought conditions exist (less than 6 inches of measurable precipitation during the time periods described above), than those pastures having active booming grounds

will be deferred from grazing until such time the vegetation has a chance respond. Field inspections in cooperation with the permittee will take place prior to removing livestock or allowing livestock back into the deferred pastures. Due to the lack of precipitation data on a localized basis for each allotment this may affect and the amount of manpower it takes to monitor precipitation data, this alternative will not be considered at this time.

Alternative 5 – Removal of Public AUM's Alternative

Under this alternative a grazing permit would be authorized on allotment #65043 for 591 AU's permitted use at 68% public land totaling 4823 AUMs and a grazing lease on allotment #65547 for 1 AU at 100% public land for 12 AUMs. Under this alternative, The AUM's tied to the shinnery oak pastures (lesser prairie chicken habitat) on public lands that do not meet LPC nesting habitat parameters, would move into temporary non-use. Since fragmentation of the land status occurs within these pastures, only the state and private land AUM's would be authorized to graze in those pastures. Specifically to authorize allotment 65043 to run 540 AU's (4,211 AUM's) active use and 51 AU's (612AUM's) inactive use and authorize a grazing lease on allotment #65547 for 1 AU at 100% public land for 12 AUMs from March 1 to the end of February each year. The following pasture are considered LPC pastures, and no public AUM's would be authorized for those pastures not meeting LPC nesting habitat parameters until such time monitoring data shows the area will support livestock grazing while maintaining the habitat necessary for nesting.

LPC Pastures for allotment 65043: Meadows, Eastfall, S-1 Small North, S-3, S-4, S-5, S-6 Big North, S-7, West Heights, West North, East North, West Hillburn, East Hillburn, West Crowley, and East Crowley.

Monitoring data indicates that two pastures within the old Savory system are not meeting the height structure parameter needed for LPC nesting. Therefore the reduction in AUM's mentioned above will come from these two pastures. S-1 (small north), and S-6 (big north) will only be authorized to run 1AU's (12 AUM's) from March 1 to the end of February each year.

The 3 herd management scheme would be implemented as outlined in Attachment 1a. However, the reduction of livestock numbers and the deferment of use in the Small and Big North pastures would be excluded from the rotation system.

Terms and Conditions of the permit common to all alternatives:

The following are terms and conditions specific to all alternatives. Any changes to these terms and conditions may be initiated by either party through the consultation and coordination process.

1. Grazing use will be in accordance with the approved Rangeland Use Agreement, variance from the agreement must have written approval from BLM.
2. Robel's vegetative monitoring methodology which has been approved by the five state Lesser Prairie Chicken Interstate Working Group will be implemented to measure lesser prairie chicken habitat requirements. Specific parameters include:
 - Shrub coverage - 25 to 30% composition of entire vegetative community.
 - Forb coverage - 10 to 15% composition of entire vegetative community.
 - Grass coverage - 60% composition of entire vegetative community; 10% with a visual obstruction reading (VOR) > or equal to 3.0 decimeters, an average VOR of 1.0 decimeter.Note: It is important to understand that these parameters in certain pastures may not be met until the habitat has time to respond to the new grazing management practices. As long as improvement is being made in those pastures, then changes should not be necessary. If prairie chicken habitat requirements are not being improved as a result of livestock grazing practices, changes will be necessary.
3. Livestock grazing management changes may be required as a result of periods of abnormal climatic patterns and the vegetative condition resulting from these climatic changes.
4. A range evaluation will take place every three years and adjustments will be made if necessary.

C. No Permit/Lease authorization alternative:

This alternative, if selected, would be to not issue a new grazing permit and lease for the Sand Ranch allotments #65043 and 65547. No grazing would be authorized on federal land under this alternative. The No Grazing alternative was considered, but not chosen in the Rangeland Reform Environmental Impact Statement (EIS) Record of Decision (ROD) (p. 28). The elimination of grazing in the Roswell Field Office Area was considered but eliminated by the Roswell RMP/ROD (pp. ROD-2).

III. Affected Environment

General Setting

This allotment lies within the Roswell Grazing District established subsequent to the Taylor Grazing Act. Grazing authorization on Public Lands inside the Grazing District Boundary is governed by Section 3 of the Taylor Grazing Act. Livestock numbers for the allotment are controlled under this Section 3 permit, the allottee is billed for the amount of forage available for livestock on federal lands.

The Sand Ranch Inc. allotment #65043 is located approximately 35 miles east of Roswell and to the north of U. S. Highway 380. The eastern portion of the allotment lies within the northern portion of the Mescalero Sands area and in the Caprock Wildlife Management Area.

In 1988 - 89 Sand Ranch Inc. acquired the Marley Savory pasture (part of allotment #65051), the Caprock allotment #65046 and the Hilburn allotment #65047; these allotments were combined with the Sand Ranch Inc. allotment #65043 in 1990. The current pasture and land status for Sand Ranch is shown in Attachment 1. The approximate acreage for the Sand Ranch is 43,877 acres with 38,694 acres of public land.

In general it is recognized that the range condition for pastures in the allotment have improved from 1980 to the present. Ground cover including litter and vegetation is satisfactory in most areas within the allotment. Vegetative diversity is present and improving. In June 1995, the Ranch and BLM established additional monitoring study sites to better assess the resource conditions on the allotment. These studies, as well as the existing studies, were last read in 1999 by BLM and ranch personnel. The results of these studies are incorporated in the data used for this assessment. The Robel method was also implemented in some pastures to augment existing study data in relation to lesser prairie chicken habitat requirements. (Attachment 3)

Droughty conditions have occurred in this area over the last ten years. This has raised concern with resource conditions versus traditional livestock management practices. The previous permittee grazed the allotment with 591 to 806 AU's from 1991 to 1996. In 1997 the previous permittee incorporated additional private and state leased lands within the allotment and increased the permitted use to 700 AU's.

In 1998 the ranch was sold to the present permittee. Shortly after acquiring the ranch the new permittee requested the private and state leased lands in the southeast part of the ranch be withdrawn from the public allotment. This set the permitted use level at 591 AU's, however the 700 AU's were authorized until March 1, 1999.

Historically the lack of grazing schemes coupled with grazing at the higher levels without reductions during the droughty periods has affected the vegetative resources within the allotment. Range condition, range trend and ground cover has declined somewhat during the droughty period. Vegetative diversity is still high within the allotment.

In response to resource concerns, the permittee has reduced livestock numbers to 464 AU's this year, agreed to defer some pastures from grazing and implement a grazing scheme that allows all pastures some rest during the growing season.

The following resources or values are not present or would not be affected by the authorization of livestock grazing on Allotment #65043; Prime/Unique Farmland, Cultural Resources, Native American Religious Concerns, Wild and Scenic Rivers, Hazardous Wastes, water quality, riparian/wetlands, floodplains, Areas of Critical Environmental Concern, and Minority/low Income populations.

Cultural inventory surveys would continue to be required for federal actions involving surface disturbing activities except where criteria to exempt surveys are met. Eligible and potential eligible sites would continue to be protected from damage or archaeologically treated to mitigate damage.

The impact of the proposed action and alternatives to minority or low-income populations or communities has been considered and no significant impact is anticipated.

A. Affected Resources

1. Soils: There are several soil units on this allotment including; Faskin (FaA), Faskin-Malstrom association (FMA), Roswell-Jalmar (RPD), Chispa-Malstrom association (CMB), Ratliff-Redona association (RBA), Jalmar-Roswell-Pyote association (JRC), and the Roswell (Ro).

The majority of these soils exhibit moderate permeability. Their available water capacity runs from moderate to high. Runoff characteristics vary from slow to medium. Water erosion hazard for the soils is slight to moderate. While soil blowing hazard is generally very high. For detailed soil information, please refer to the Soil Survey of Chaves County, New Mexico, Northern Part, published by the Natural Resource Conservation Service (NRCS). A copy of these publications may be reviewed at the BLM Roswell Field Office or a local NRCS office.

The allotment is in the Canadian Plains Major Land Resource Area. Principal range sites are Sand Hills CP-2, Deep Sand CP-2, Sandy Loam CP-2 and Sandy Plains CP-2. There are minor inclusions of Shallow Sand CP-2 and Loamy CP-2 within the allotment. The mapped Sand Hills and Deep Sand range sites may contain upto 40 - 45 percent of other sites as inclusions.

2. Vegetation:

There are three primary ecological (range) sites on this allotment; Deep Sand CP-2, Sand Hills CP-2, Sandy Loam CP-2 and Sandy Plains CP-2. The potential plant community for these ecological sites include; sand bluestem, little bluestem, sand dropseed, plains bristlegrass, sand paspalum, black grama, three awn and blue grama. Shrub species which occur are shinnery oak, sand sagebrush, and some mesquite. There have been vegetative monitoring studies done on this allotment from 1981 through 1999. Data at that time placed the public lands in a mid ecological rating.

The present plant community is primarily warm season perennial grasses and forbs with a shrub component of shinnery oak and mesquite. There are some cool season grasses present in some areas of the allotment. Dominant grass species include little bluestem, sand bluestem, sand dropseed, mesa dropseed, spike dropseed, three awns, black grama, hairy grama, fall witch grass, red lovegrass, sand lovegrass and sand paspalum. The shrub community is primarily shinnery oak, mesquite, sand sage along with broom snakeweed. Forbs include croton, globemallow, western ragweed, blackfoot daisy, Indian rushpea and numerous annual forbs.

Shinnery oak control has been done on the following pastures: Headquarters (1983), Westfall (1984), Eastfall (1986), Meadows (1988), Savory Cells 3 and 4 (1988), Hilburn (1992) and West Heights (1993). Mesquite control was done on private land in the southern part of West Heights in 1993. The shinnery oak control changed the vegetative aspect of the treated pastures from shinnery oak to grassland.

The RMP/EIS established resource objectives for the various plant community types. Refer to the attached Data Summary Tables (Attachment #2) which depict the allotment community average as it relates to the Desired Plant Community objectives for the Shinnery Oak Dune community and the Grassland Communities. The percentages of grasses, forbs, and shrubs actually found at a particular location will vary with recent weather conditions, past resource uses and the potential of the site.

The current vegetative resources on this allotment have been affected by the droughty conditions, the higher livestock levels and the absence of a specific grazing scheme that allows for rest periods. Under a normal precipitation regime this would be adequate to support multiple use objectives and continue the improvement in rangeland trend. The data used for this assessment is available at the Roswell Field Office.

3. Wildlife:

The Sand Ranch allotment (65043 & 65547) are located within the Caprock Wildlife Habitat Area (WHA). This WHA diverse habitat for more than 54 birds species, 33 species of mammals, and 36 species of reptiles and amphibians.

Raptors that are frequently associated with the vegetation types on this allotment are the red-tailed hawk, swainson's hawk, ferruginous hawk, roughlegged hawk, common nighthawk, and the american kestrel.

Upland game bird species known to occur within th allotment include the lesser prairie chicken, scaled and bob white quail, and the mourning dove.

Other bird species that are usually observed are the turkey vulture, roadrunner, chihuahuan raven, great-horned owl, burrowing owl, northern flicker, loggerhead shrike, western meadowlark, western kingbird, pyrrhuloxia, horned lark, scissor-tailed flycatcher and numerous other passerine birds.

At least 33 species of mammals occur on or utilize this allotment. The diversity of small mammals provide an excellent prey base for carnivores such as the coyote, gray fox, bobcat, raccoon, badger, hooded skunk and striped skunk.

Mammals that provide a prey base include the black-tailed jack rabbit, desert cottontail, spotted ground squirrel, pocket mice, deer mouse, kangaroo rats, northern grasshopper mouse, harvest mice, and the white throated woodrat.

Two big game species that occur the allotment are pronghorn antelope and mule deer.

There have been reported sightings and documentation of the whitetail deer

Reptiles and amphibians that inhabit the area are the dune sagebrush lizard, southern prairie lizard, lesser earless lizard, side-blotched lizard, longnose leopard lizard, sixlined racerunner, tree lizard, skinks, western diamond back, western rattlesnake, coachwhip, spadefoot toads, western box turtle, and the yellow mud turtle.

4. Threatened/Endangered Species

Federal threatened, endangered and candidate species as well as state-listed threatened or endangered species potentially occurring within the proposed project area will be analyzed in this document.

There are no known Federal threatened and endangered species or critical habitat within the allotment.

However, there are several Federal Candidate and State listed species that may occupy or utilize the area. These include the swift fox, mountain plover, lesser prairie chicken, sand dune lizard and the black-tailed prairie dog. For a detailed description of the range, habitats, and potential threats to the swift fox refer to the Biological Opinion (AP11-38) in the RMP.

Special Status Species Known to Occur on this Allotment:

Sand Dune Lizard (State Threatened)

The State Threatened sand dune lizard only occurs in the southeastern corner of New Mexico and the western region of Texas. Within that range its habitat is restricted to active sand dunes and their peripheries (Degenhardt and Jones 1972). Shinnery oak is the dominate plant species that surrounds the top edge of the active sand dune, with a small composition of grasses inside the blowout area.

During 1991 a study was begun to examine the effects of the removal of shinnery oak on lizard habitat. Through five years of research it was demonstrated that there were 70%-94% fewer lizards in treated pastures as compared to non-treated pastures. As a result, the use of herbicides within suitable sand dune lizard habitat (blowouts) will be avoided.

There are scattered shinnery oak dunes blowouts or dune complexes throughout the allotment that provide habitat for the sand dune lizard.

Mountain Plover (Federally Proposed as Threatened)

The mountain plover has been petitioned to be listed as a federally listed threatened species under the Endangered Species Act. Until a determination is made by the USFWS, actions occurring within this species range and habitat must be analyzed and treated as listed species.

The mountain plover is associated with shortgrass and shrub-steppe landscapes throughout its breeding and wintering range. Historically, on the breeding range, it occurred on nearly denuded prairie dog towns (Knowles et al. 1982, Olson-Edge and Edge 1987) and in areas of major bison concentration. All of the endemic grassland birds evolved within a grassland mosaic of lightly, moderately, and heavily grazed areas, and mountain plovers are considered to be strongly associated with sites of heaviest grazing pressure, to the point of excessive surface disturbance (Knopf and Miller 1994, Knopf 1996b). Short vegetation, bare ground, and a flat topography are now recognized as habitat-defining characteristics at both breeding and wintering locales. Most mountain plovers breed in Colorado and Montana; breeding also occurs in Wyoming, New Mexico, Arizona, Nebraska, Utah, Kansas, Oklahoma, and Texas.

Surveys: Information was taken from the Federal Register Notice and the Roswell RMP. Statewide surveys have been conducted as well as area surveys by S. Williams. No known breeding populations or wintering locales have been found. Specific surveys for this action were not conducted since recent surveys in May and June of 1998 were completed.

Lesser Prairie Chicken (Federal Candidate)

Several years ago a petition was filed with the U. S. Fish and Wildlife Service (FWS) to list the prairie chicken as threatened. On June 1, 1998 the FWS announced a finding for the petition. After review of all available scientific and commercial information, the Service finds that listing this species is warranted but precluded by other higher priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants. The lesser prairie chicken is added to the Service's candidate species list.

In southeastern New Mexico, lesser prairie chickens exist in the shrub-dominated Plains Bluestem Subtype by using mixed stands of tall grass and shinnery oak.

Lesser prairie chickens rely upon a variety of habitat types within the shinnery oak tall grass community. Seasonal habitat requirements vary from season to season and are often overlapping. This specific allotment contains nesting habitat, booming areas (leks), brood habitat and foraging habitat.

As with most wildlife species, especially upland game birds, precipitation plays a large role in population fluctuations and habitat conditions. Precipitation patterns have fluctuated drastically for the last twenty years. During the middle eighties precipitation was above normal and chicken populations were high. Except for two years, precipitation has been well below normal during the 1990's.

Population Monitoring Data

The Roswell Field Office has actively monitored prairie chicken booming grounds, population trends and habitat since the early seventies. Historically in New Mexico, the LPC occupied most of the eastern plains. However, numbers and occupied range of the species are much reduced since pre-settlement times; apparently in response to prolonged heavy grazing and brush control in combination with the great droughts of the 1930's and 1950's. It has been reported that currently the LPC occupies approximately one half their original range in New Mexico.

Since the early 1970's LPC populations have fluctuated up and down with the highest period occurring during the middle 1980's. This allotment has 46 leks that have been surveyed since the early 70's. They are all located on the eastern two-thirds of the allotment. The attached Lek survey results (Attachment #3) of the leks found on this allotment (See enclosed Allotment map with Lek sites) are indicative of the entire Roswell prairie chicken area. The chicken population experienced a dramatic decline starting in the early 1990's.

Black-tailed Prairie Dog (Federally Proposed as Threatened)

The prairie dog was petitioned to be listed as a federally listed threatened species under the Endangered Species Act. After an extensive review, a determination was made by the USFWS, to place this species in the candidate status and will be reviewed every year. This candidate status species are not granted any protection under the Endangered Species Act, but it is BLM policy to manage in such a manner to keep these species from becoming listed. There for it will be analyzed in this document.

The black-tailed prairie dog is a highly social animal that lives in colonies or towns which cover from one acre to tens of thousands of acres of grassland habitat. This species is widespread throughout the high plains area in Arizona, New Mexico, Oklahoma, Texas, Kansas, Nebraska, Colorado, the Dakotas, Montana, and Wyoming.

Numerous ungulate species seek out and take advantage of the highly nutritional vegetation created by prairie dogs continuously clipping it. Besides attracting ungulates, prairie dogs and their colonies also are used by a wide variety of other species of wildlife. A number of species prey on dogs, and in the case of the black-footed ferret, became very specialized in killing this communal rodent. Because to black-tailed prairie dog influences ecosystem functions through its activities in unique and significant ways, it is considered by some as a keystone species of the prairie grasslands.

There are no known prairie dog towns within this allotment, however there are grassland islands interspaced within the shinnery oak dune plant community that may provide suitable habitat. Adjacent allotments with similar habitat types due have active prairie dog towns.

5. Livestock Management

This allotment recently transferred to a new owner. The permittee runs a cow-calf operation. The permitted use level is 591 cows however, the previous permittee ran an additional 209 cows from 1990 to 1995 under an annual temporary nonrenewable use authorization. In the present operation and prior to this time most pastures are grazed continually, except during off-shinnery periods, by small to moderate size herds. This short period of non-grazing does not provide significant benefits in promoting plant rest and growth.

The cattle are moved about mid March, when shinnery oak is toxic, for a 45 - 60 day period to pastures that have been treated. In the past Headquarters, Eastfall and Savory Cells 3 & 4 were used for off-shinnery grazing. Based on discussions with the permittee it is anticipated that changes will be made to the historical use pattern. (See grazing scheme attachment 1).

In the past, the practice of continual grazing and supplemental feeding along roads promoted heavy to severe utilization levels patterns on the western portions of all pastures on the east side of the allotment.

In response to resource concerns, the permittee has reduced livestock numbers to 464 AU's this grazing year (1999-2000), and has agreed to defer two pastures from grazing and implement a grazing scheme that allows all pastures some rest during the growing season.

Recently Crowley, Hilburn and North pastures were divided with an electric fence to create additional pastures for greater flexibility.

6. Visual Resources:

The allotment is located in a Class IV Visual Management Area. The Class IV rating means that contrasts may attract attention and be a dominant feature in the landscape in terms of scale. However, the changes should repeat the basic elements of the landscape.

7. Air Quality:

The allotment is in a Class II area for the Prevention of Significant Deterioration of air quality as defined in the federal Clean Air Act, which allows a moderate amount of air quality degradation. Air quality is generally good, Winds are typically southeasterly during the summer, and becoming southwesterly in the winter and early spring. Winds average 10 miles per hour in the fall and 16 miles per hour in the spring, with peak velocities reaching 50 miles per hour. These conditions rapidly disperse air pollutants in the region.

8. Recreation:

Recreation opportunities are focused around hunting and watchable wildlife. Mule deer, antelope, and game birds, such as quail and dove are taken during hunting seasons. This ranch is used by birders to observe prairie chickens during their lek courtship displays. Legal and physical access to public lands located on this allotment are through state lands, county maintained roads and roads existing on public lands. Off Highway Vehicle designation for public lands within this allotment are classified as "Limited" to existing roads and trails.

9. Caves and Karst:

A complete significant cave or karst inventory has not been completed for the public lands located in this grazing allotment. Presently, no known significant caves or karst features have been identified within this allotment. If at a later date, a significant cave or karst feature is located on public lands within this allotment, that cave or feature may be fenced to exclude livestock grazing and Off Highway Vehicle Use. A separate Environmental analysis would be prepared to construct this enclosure fence.

10. Special Designated Areas

Mathers Research Natural Area (RNA) – This area consists of approximately 242 acres of public land on the eastern side of the allotment. A decision in the Roswell RMP for this area is increase the area closed to livestock grazing from the current 91 acres to approximately 195 acres. Livestock grazing in the RNA will be allowed east of the access road and south of the east-west fence that roughly follows the south boundary of the RNA.

Recently the Mathers area has been renamed or re-designated as an Instant Study Area. It was not recommended as a Wilderness Area due to its small size and therefore did not meet the criteria.

IV. Environmental Impacts

It is important to note that under the proposed action and all alternatives, impacts to vegetation and wildlife will occur and regardless of the number of head permitted, a rest rotation system must be implemented to allow for mature bunch grasses to develop, not only for lesser prairie chicken nesting habitat, but for seed head development and propagation which will improve overall rangeland health.

Impacts common to all alternatives:

Under all alternatives, there would be minimal impacts to the sand dune lizard due to the dispersal of livestock. Areas where there is a concentration of livestock (waterings and fence corners) the habitat may be of lower quality, but these areas are small in nature. Range improvements (pipelines) may enhance lizard habitat by creating open dunal areas that are usually bordered by shinnery oak.

There will be no affect to the proposed threatened black-tailed prairie dog and Mountain plover since no known populations exist within the area. Potential habitat does occur but the proposed action and alternatives would not impact these areas from becoming utilized or inhibited.

Impacts the to the Mathers RNA or ISA would remain the same under all alternatives since the expansion of the area closed to livestock grazing is not proposed in any of these alternatives. This expansion will be addressed at a later time.

A. Impacts from the Proposed Action

1. Soils:

There should be minor changes in the soil condition resulting from initiation of the permittee proposed action. There should be improvements in the soil holding capabilities due to increased litter and vegetative cover resulting from a pasture rest rotation system.

2. Vegetation:

It is expected that the number of plant species found within the allotment will remain the same, however, there may be small changes in the percentages of these species. It is expected that cool season grasses will increase in some pastures due to the scheduled deferment periods. There should be an increase in the amount of standing vegetation in the shinnery oak and other community types from the proposed action. Standing grass height on the bluestem species should improve. Overall, positive impacts would result to vegetation by providing additional rest during the growing season through pasture rotation and limited use of some pastures each year.

3. Wildlife:

Under the proposed action, impacts created by livestock grazing would be reduced but very similar to the other alternatives for most wildlife species. Wildlife dependent upon a certain amount of ground cover, standing biomass, and litter should benefit due a required rest rotation system.

4. Threatened/Endangered Species:

Under the proposed action there would be no impacts to Federal threatened and endangered species since there are no known T/E occurrences within this allotment.

Special Status Species Known to Occur on this Allotment:

Impacts to the dune lizard will be the same as the proposed action

There would be positive impacts to the prairie chicken in the shinnery oak pastures on the eastern two-thirds of the allotment due to the potential for increased grass (bluestem) cover needed for nesting habitat. These impacts would result from pastures being rested long periods of time and would take in to account not only the growing season but utilization of dormant grasses leading up to the next years nesting season.

5. Livestock Management:

There will be major changes in the grazing management on this allotment. The allotment will continue to be run as a cow/calf operation. The herd will be separated into three herds and rotated through the pastures. Each pasture will receive some rest during the growing

season. Pastures used as off shinnery will receive rest during most of the growing season. Limited use will occur during the periods needed to work the livestock.

The proposed action will require more involvement by the permittee ensuring the livestock are moved at the appropriate seasons of the year and that the water facilities are operational and functional for livestock use when the livestock are in the pastures.

6. Visual Resources:

Livestock grazing under this alternative would not affect the form or color of the landscape, or the primary aspect of the vegetation within the allotment. The density of tall wavy grasses may decrease but the overall landscape would not change that rapidly.

7. Air Quality:

The impacts to air quality would not change from the current situation. A minor amount of air quality degradation would continue.

8. Recreation:

Grazing would have little or no affect on the recreational opportunities. Legal access to this parcel of public land would still remain available.

9. Significant Cave/Karsts:

No known significant caves or karst features are known to exist on the public lands located within this allotment. Grazing would not affect the karst resources.

Impacts would be the same as under the Proposed Action.

B. Impacts from the Change Livestock Management Alternative # 1

Impacts under this alternative, impacts would be very similar for the nine elements described above in the permittee proposed alternative. Under this alternative, the reduction of 30 head in herd #2, and the changes in use for the Hillburn and Crowley pastures will minimize the negative impacts by decreasing the amount of utilization on key nesting grass species therefore improving lesser prairie chicken habitat and populations in a more accelerated manner.

C. Impacts from the Change Livestock Numbers Alternative # 2

1. Soils:

Minor but substantial changes in the soil condition would result from this alternative. An anticipating increase in soil holding capabilities is expected as a result of the increase in litter and vegetative cover.

2. Vegetation:

It is expected that the number of plant species found within the allotment will remain the same, however, there may be small changes in the percentages of these species. There should be a substantial increase in the amount of standing vegetation in the shinnery oak and other community types resulting from this alternative. Standing grass height on the bluestem species should improve. Overall, positive impacts would result to vegetation by decreasing utilization levels, and providing additional rest during the growing season through a pasture rotation system.

3. Wildlife:

Under this alternative, wildlife impacts would be similar to those under the permittee proposed and alternative number one. Competition for vegetative resources would be lessened therefore positive impacts would potentially result.

4. Threatened/Endangered Species:

Under this alternative there would be no impact to Federal threatened and endangered species since there are no known T/E occurrences within this allotment.

Special Status Species Known to Occur on this Allotment:

This alternative would have the least amount of impact to the lesser prairie chicken and its habitat. There would be positive impacts to the prairie chicken compared to the proposed action and other alternatives sense management practices would be more conducive towards lesser prairie chicken management. Under this alternative, the reduction of permitted livestock along with a pasture rest rotation system would promote bunch grass development and would ensure lighter utilization levels on key species, thereby leaving enough dormant grasses for nesting habitat. This alternative would also allow pastures within the prairie chicken habitat area to be rested for longer periods if needed and would not degrade the existing pastures the livestock would be in.

5. Livestock Management:

Under this alternative there will be major changes in the grazing management on this allotment. The allotment will continue to be run as a cow/calf operation. The herd will be separated into three herds and rotated through the pastures. Each pasture will receive some rest during the growing season. Pastures used as off shinnery will receive rest

during most of the growing season. Limited use will occur during the periods needed to work the livestock.

This alternative will require more involvement by the permittee ensuring the livestock are moved at the appropriate seasons of the year and that the water facilities are operational and functional for livestock use when the livestock are in the pastures.

6. Visual Resources:

There would be no change in the visual resources.

7. Air Quality:

There would probably be less dust and blowing sand under this alternative, but would be negligible when considering the area as a whole.

8. Recreation:

There would be no change to Recreation activity, primarily hunting from implementing this alternative.

9. Significant Cave/Karsts:

Impacts would be the same as under the Proposed Action.

Alternative # 3 - Past Management Practices

1. Soils:

Under a normal precipitation regime the level of permitted use described under this alternative has not had any adverse impact to the current soil conditions. Some soil loss would continue to occur due to the windy conditions that prevail in this region during parts of the year. If vegetative cover remains stable soil loss may be minimized.

Continued grazing at the full level (591 AU's) of permitted use during droughty periods will adversely affect vegetative ground cover. These changes in vegetative ground cover are linked to the amount and timing of precipitation events. To minimize the adverse affects, it is necessary to reduce livestock numbers, especially during periods of drought.

2. Vegetation:

The continuance of the permitted use at the 591 use level authorized by the expiring permit is not anticipated to have any adverse impact to the current vegetative conditions under a normal precipitation regime. The vegetation will continue to be grazed and trampled by

domestic livestock as well as other herbivores such as well rabbits, rodents and insects. Under this alternative and a normal precipitation regime, it is not anticipated that a significant change in the vegetative composition or amount available for livestock use will occur. Going back to the past livestock management practices is not anticipated to alter the vegetative composition. Ecological condition and trend is expected to remain stable or improve over the long term at this permitted number.

Grazing at this level in droughty periods will adversely affect some of the vegetative resources. Bunch type grasses (bluestem and dropseed species) will be grazed to a greater extent thus, reducing residual growth that is necessary for desirable lesser prairie chicken habitat. These adverse affects can be minimized during these droughty periods by reducing livestock numbers during these conditions.

3. Wildlife:

Domestic livestock will continue to utilize vegetative resources needed by a variety of wildlife species for life history functions within this allotment. The magnitude of livestock grazing impacts on wildlife is dependent upon the species of wildlife being considered, and its habitat needs. In general, livestock stocking rate adjustments have been made in the past to minimize the direct competition for those vegetative resources needed by a variety of wildlife species. Cover habitat for wildlife will remain the same as the existing situation.

Maintenance and operation of existing waterings will continue to provide dependable water sources for wildlife, as well as livestock.

4. Threatened/Endangered Species:

Under this alternative there would be no impacts to Federal threatened and endangered species since there are no known T/E occurrences within this allotment.

Special Status Species Known to Occur on the Allotment:

Under this alternative, significant impacts to the lesser prairie would continue, especially during drought conditions. The eastern two-thirds of the allotment provides habitat for the lesser prairie chicken in the form of booming grounds, brood rearing, foraging and most importantly nesting habitat with shinnery oak/bluestem areas, but without a rest rotation system and strict monitoring of livestock use, these areas may increasingly become negatively impacted. Nesting habitat is sensitive to livestock grazing practices and is the most critical limiting factor being looked at in regards to livestock grazing. . This alternative would not allow the quantity and quality of nesting habitat to become available. This is especially true for the eastern side of the allotment where a few booming grounds remain active. Booming grounds are not easily impacted unless mineral and salt blocks are located directly on the leking area. Brood rearing habitat would not be impacted by the proposed action, since open shinney oak motts with limited amounts of grass cover is required.

5. Livestock Management:

Under the past management alternative there would be no impacts to the current livestock management system. The allotment would be able to increase livestock numbers and the operator would prosper for the short term.

6. Visual Resources:

Livestock grazing under this alternative would not affect the form or color of the landscape, or the primary aspect of the vegetation within the allotment. The density of tall wavy grasses may decrease but the overall landscape would not change that rapidly.

7. Air Quality:

The impacts to air quality would not change from the current situation. A minor amount of air quality degradation would continue.

8. Recreation:

Grazing would have little or no affect on the recreational opportunities. Legal access to this parcel of public land would still remain available.

9. Significant Caves/Karst:

Same as the proposed action

Alternative Number 4 – Adaptive Management

Impacts as a result of this alternative will not be analyzed due to the feasibility and accuracy of implementing this alternative.

Alternative 5 – Removal of Public AUM's Alternative

Impacts under this alternative, impacts would be very similar for the nine elements described in the permittee proposed alternative and alternative number 1. Under this alternative, the removal of public land AU's from Big and Small north would improve LPC nesting habitat more rapidly and reduce negative impacts from livestock by decreasing the amount of utilization on key nesting grass species in the other pastures therefore improving lesser prairie chicken habitat and populations in a more accelerated manner.

E. Impacts of the No Livestock Grazing Alternative.

The No Livestock Grazing Alternative has been previously analyzed at the National level in the Rangeland Reform '94 EIS and in the Roswell RMP/EIS. An in depth analysis of this alternative will not be made in this document. General impacts under this alternative would include no new rangeland improvement and the removal of existing rangeland improvements unless a determination was made that they were beneficial to other uses. Since no grazing authorizations on public lands would be permitted, livestock operators grazing lands adjoining Federal lands would be responsible for preventing the unauthorized use of these Federal lands. The BLM would not fence these lands. Rangeland administrative emphasis would shift to issuing crossing permits to or from nonfederal land in-holdings and resolving unauthorized use.

V. Cumulative Impacts

A cumulative impact is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7).

The analysis of cumulative impacts is driven by major resource issues. The action considered in this environmental assessment (EA) is the authorization of livestock grazing on Allotment 65043, and the major issue includes:

The protection of special status threatened or endangered species and its habitat within the allotment area, primarily the lesser prairie chicken. The incremental impact of issuing a grazing permit on these resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resource include: Livestock authorization on other allotments within the adjacent shinnery oak dune habitat type, some oil and gas development and activities, rights-of-ways dissecting the area, and recreational use, primarily hunting and subsequent cross country driving.

All authorized activities which occur on BLM land can also take place on state and private lands, with the possibility of decreased management towards resource these resource concerns. Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range and yearlong livestock grazing in the last century are still being addressed today and may continue on adjacent land owners.

The proposed action and alternatives 1 & 2 would not add incrementally to the cumulative impacts to sensitive species or to the overall rangeland health. The conclusion that impacts to these resources from grazing authorization would not be significant are discussed in Section IV of the EA. Under alternatives 1, and especially 2, negative incremental impacts would be expected to be less than under the Proposed Action because the allotment would be more intensively managed and take into account lesser prairie chicken habitat needs.

If the No-Grazing alternative were chosen, some adverse cumulative impacts to resource would be eliminated, but others would continue. Grazing would no longer be available as a vegetation management tool, and BLM lands within the allotment would be less intensively managed. For example, preferred grasses (bluestems) would likely to become decadent without some livestock use.

VI. Residual Impacts

The area has been grazed by livestock since the early part of the 1900's if not longer. Recent vegetative monitoring studies have shown that grazing , at the current permitted numbers of animals, is sustainable. If the mitigation measures are enacted, then there would be no residual impacts to the proposed action

VII. Mitigating Measures And/Or Permit/Lease Conditions

Vegetation monitoring studies will continue to be conducted and the permitted numbers of livestock will be adjusted if necessary. If new information surfaces that livestock grazing is negatively impacting other resources, action will be taken to mitigate the impacts.

VIII. Fundamentals of Rangeland Health

The fundamentals of rangeland health are basic components of healthy rangelands and guiding principles for the development of standards and guidelines for livestock grazing. The fundamentals are identified in 43 CFR §§4180.1 and pertain to watershed function, ecological processes, water quality and habitat for threatened and endangered (T&E) species or other special status species. Based on the best available data and professional judgement, this EA addresses the fundamentals of Rangeland Health.

Field Office Staff Involvement/Review

John Spain - Rangeland Management Specialist, Pat Flannary - Archeologist
Rand French - Wildlife Management Biologist
Jerry Ballard - Outdoor Recreation Planner
Jim Schroeder - Watershed Specialist

FINDING OF NO SIGNIFICANT IMPACT/RATIONALE

FINDING OF NO SIGNIFICANT IMPACT: I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined the proposed action or alternatives will not have significant impacts on the human environment and that preparation of an Environmental Impact Statement (EIS) is not required.

Rationale for Recommendations: The actions discussed within this EA would not result in any undue or unnecessary environmental degradation. The proposed action and alternatives will be in compliance with the Roswell Resource Management Plan and Record of Decision (October, 1997).

T. R. Kreager,
Assistant Field Office Manager - Resources

Date