



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Pecos District
Roswell Field Office
2909 W. Second
Roswell, New Mexico 88201

In reply refer to:
NM510(4160)

Certified Mail No 7099 3220 0002 6402 1762

Ramos Land and Cattle Co.
c/o Juan Ramos
P. O. Box 405
Dexter, NM 88230

NOTICE OF PROPOSED DECISION EA#NM-510-2005-0026

Dear Mr. Ramos:

The Roswell Field Office has completed an Environmental Assessment EA#NM-510-2005-0026 for the renewal of a ten year grazing permit/lease for the Allotments #665094 and #65095. The environmental assessment and the Finding of No Significant Impacts (FONSI) were sent to the permittee/lessee and all recognized interested public for a thirty (30) day comment period. Comments were received from the New Mexico Department of Game and Fish on the above referenced environmental assessment (EA); the comments were reviewed and the environmental assessment was revised.

My proposed decision is to implement the proposed action as described in the Environmental Assessment EA#NM-510-2005-0026 Alternative A, Proposed Action:

The proposed action is to authorize to:

1. The Ramos Land and Cattle Co. a ten (10) year grazing permit on the Otto Brittain Sec 3 allotment # 65094 for 138 animal units (AUs), this corresponds to 1073 animal unit months (AUMs) at 65 percent public land; the current suspended use for 18 animal units for 137 animal unit months would continue. Active permitted use on Allotment 65094 would be for 120 animal units (AUs), this corresponds to 936 animal unit months (AUMs) at 65 percent public land.
2. The Ramos Land and Cattle Co. a ten (10) year grazing lease on the Otto Britain Sec 15 allotment #65095 would be for four (4) animal units (AUs), this corresponds to 48 animal unit months (AUMs) at 100 percent public land

Rationale

Resource conditions on the allotment are sufficient and sustainable to support the level of use outlined in the ten (10) year grazing permit and the ten (10) year grazing lease.

Right of Protest and Appeal

Any applicant, permittee, lessee or other interested publics may protest a proposed decision under Sec. 43 CFR 4160.1 and 4160.2, in person or in writing to the Field Office Manager, 2909 West Second, Roswell, NM 88201 within 15 days after receipt of such decision. The protest, if filed, should clearly and concisely state the reason(s) why the proposed decision is in error.

In accordance with 43 CFR 4160.3 (a), in the absence of a protest, the proposed decision will become the final decision of the authorized officer without further notice unless otherwise provided in the proposed decision.

In accordance with 43 CFR 4160.3 (b) upon a timely filing of a protest, after a review of protests received and other information pertinent to the case, the authorized officer shall issue a final decision.

Any applicant, permittee, lessee or other person whose interest is adversely affected by the final decision may file an appeal in accordance with 43 CFR 4.470 and 43 CFR 4160.3 and 4160 .4. The appeal must be filed within 30 days following receipt of the final decision, or within 30 days after the date the proposed decision becomes final. The appeal may be accompanied by a petition for a stay of the decision in accordance with 43 CFR 4.471 and 4.479, pending final determination on appeal. The appeal and petition for a stay must be filed in the office of the authorized officer, as noted above. The appellant must serve a copy of the appeal by certified mail on the Office of the Solicitor, U.S. Department of the Interior, P. O. Box 1042, Santa Fe, NM 87504 and person(s) named [43 CFR 4.421(h)] in the Copies sent to: section of this decision.

The appeal shall clearly and concisely state the reasons why the appellant thinks the final decision is in error, and otherwise complies with the provisions of 43 CFR 4.470.

Should you wish to file a petition for a stay, see 43 CFR 4.471 (a) and (b). In accordance with 43 CFR 4.471(c), a petition for a stay must show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied.
- (2) The likelihood of the appellant's success on the merits.
- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.

As noted above, the petition for stay must be filed in the office of the authorized officer and served in accordance with 43 CFR 4.473. If a petition for stay is not granted, the decision

will be put into effect following the 30-day appeal period. Appeals can be filed at the following address:

Field Office Manager
Bureau of Land Management
Roswell Field Office
2909 West Second Street
Roswell, NM 88201

Any person named in the decision that receives a copy of a petition for a stay and/or an appeal see 43 CFR 4.472(b) for procedures to follow if you wish to respond.

If you have any questions, feel free to contact me at 505-627-0272.

Sincerely,

T. R. Kreager
Assistant Field Manager, Resources

Copies sent to (by certified mail):

Planning & Environmental Service 7099 3220 0002 6402 2486
Attn: PLAC
P. O. Box 1817
Roswell, NM 88202-1817

NM Department of Game and Fish 7099 3220 0002 6402 2509
Attn: Jan Ward
P. O. Box 25112
Santa Fe, NM 87504

Forest Guardians 7099 3220 0002 6402 1748
Attn: John Horning
312 Montezuma Suite A
Santa Fe, NM 87501

Audubon Society 7099 3220 0002 6402 1755
Attn: David Henderson
P. O. Box 9314
Santa Fe, NM 87504

NM Cattle Growers' Assn 7099 3220 0002 6402 1724
Attn: Caren Cowan
P. O. Box 7514
Albuquerque, NM 87194

Center for Biological Diversity 7099 3220 0002 6402 1731
P. O. Box 710
Tucson, AZ 85702

New Mexico Stat Land Office 7099 3220 0002 6402 2493
Attn: Robyn Tierney
P. O. Box 1148
Santa Fe, NM 87504

ENVIRONMENTAL ASSESSMENT CHECKLIST

EA Number: NM-510-2005-0026 Serial No.: Preparer: John Spain			Action Type: Grazing Permit Renewal Project Name: Allotments 65094 & 65095		
Resource / Activity	Not Present	Not Affected	**May Be Affected	Reviewer	Date
Air Quality*			√	/s/ Michael McGee Hydrologist	1/18/05
Floodplains*			√		
Soils/Watershed			√		
Water Quality- Drinking/Ground*			x	/s/ Michael McGee Hydrologist/Geologist***	1/18/05
Vegetation			√	/s/ Joseph M. Navarro Rangeland Management Spec	02/01/05
Livestock Grazing			√		
Invasive, Nonnative Species*			x	s/ Joseph M. Navarro Range Mgmt Spec/Nox. Weed Spec	02/01/05
Wastes, Hazardous or Solids*				Hazardous Waste Spec.	
Prime/Unique Farmlands*	X			Irene M. Gonzales Realty Specialist	1/17/2005
Lands/Realty/ROW		X			
Fluid Minerals				Pet Eng/Geologist/Sur. Prot. Spec.	
Mining Claims	√			/s/ Jerry Dutchover Geologist	02/23/05
Mineral Materials		√			
Threatened or Endangered Species*	√			/s/ Rand French Wildlife Biologist	3/2/05
Wetlands/Riparian Zones*	√				
Wildlife Habitat			√		
Native American Religious Concerns*		X		Pat Flanary	3/02/05
Cultural Resources*		X		Archaeologist	
Areas of Critical Environmental Concern*	X			Howard Parman	3/9/05
Low Income & Minority Population Concerns		X		Planning & Env. Coordinator	
Wild/Scenic Rivers*	X			Bill Murry Outdoor Recreation Planner/NRS	3/7/05
Wilderness*	X				
Cave/Karst Resources			X		
Outdoor Recreation		X			
Visual Resources			X		
Access/Transportation		X			
				Environ. Prot. Spec. Richard G. Hill	4/14/05

* "Critical Element" - must be addressed in all NEPA documents.

** "Affected Element" - must be addressed in the attached Environmental Assessment.

*** "Hydrologist/Geologist" – Hydrologist will be the primary lead for "Water Quality- Drinking/Ground" with Resource projects such as fire, fuels, and grazing EA's etc... The Petroleum Geologist will be the primary lead for "Water Quality- Drinking/Ground" with Minerals or oil and gas projects such as Application For Permit To Drill and Sundry Notices etc...

FINDING OF NO SIGNIFICANT IMPACT AND RATIONALE

EA No. NM-510-2005-0026

Finding of No Significant Impact:

I have reviewed this environmental assessment for Allotments 65094 and 65095, including the explanation and resolution of any potentially significant environmental impacts. I have determined that the proposed action and 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 proposed action and alternatives would not result in any undue or unnecessary environmental degradation. The proposed action will be in compliance with the Roswell Approved Resource Management Plan and Record of Decision (October 1997).

/s/T. R. Kreager

3/23/05

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

Date

ENVIRONMENTAL ASSESSMENT

For

Section 3 and Section 15

GRAZING AUTHORIZATION

For

ALLOTMENTS 65094 and 65095

Township 11 South, Range 26 East
Sections 1, 3, 4, 9, 12 (part)
Sections 10 and 11 (all)

EA-NM-510-2005-0026

January 2005

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

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 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 on Allotment 65094 and 65095.

The scope of this environmental assessment is limited to the effects of issuing a new grazing permit on Allotment 65094 and a grazing lease on Allotment 65095. Over time, the need could arise for subsequent management activities which relate to grazing authorization. These activities could include a management plan, vegetation treatments (e.g., prescribed fires, herbicide projects), range improvement projects (e.g., fences, water developments), and others (e.g., wildlife habitat improvement projects). Future rangeland 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 permit would be to authorize livestock grazing on public land on Allotments 65094 and 65095. The permit/lease 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

The proposed action conforms with the Roswell Approved Resource Management Plan (RMP) and Record of Decision (BLM 1997) as required by 43 CFR 1610.5-3.

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 - Current Livestock Management

The proposed action is to issue Ramos Land and Cattle Co. a ten-year permit and lease to graze cattle on Allotments 65094 and 65095. Total permitted use on Allotment 65094 would be for 138 animal units (AUs), this corresponds to 1073 animal unit months (AUMs) at 65 percent public land; the current suspended use for 18 animal units for 137 animal unit months would continue. Active permitted use on Allotment 65094 would be for 120 animal units (AUs), this corresponds to 936 animal unit months (AUMs) at 65 percent public land.

Permitted use on Allotment 65095 would be for four (4) animal units (AUs), this corresponds to 48 animal unit months (AUMs) at 100 percent public land.¹

There would be no change from current livestock management as conducted by the permittee, or to existing range improvements already in place. An allotment management plan (AMP) and/or future projects or activities identified by the permittee or the BLM can still be considered for implementation; these proposals would be analyzed with environmental assessments prior to implementation. Rangeland monitoring would continue on the allotment and changes to livestock management would be made as necessary. If new information surfaces that livestock grazing is negatively impacting other resources, action will be taken to mitigate those impacts.

B. No Grazing Alternative

Under this alternative no grazing would be authorized on federal lands and new grazing permit and lease would not be issued for Allotments 65094 and 65095.

C. Change Permitted Active Use Livestock Numbers or Management

Under this alternative the permitted active use livestock numbers for allotment #65094 would be reduced. The livestock numbers associated with this reduction would either be placed into suspended use or into temporary nonuse (if a rangeland agreement with the permittee is successfully negotiated). This alternative will not be analyzed, based on the following rationale.

The long term monitoring data through 2001 was evaluated prior to this environmental assessment using the established RFO protocols. These protocols utilize forage yield and range condition ratings and the similarity index ratings to verify sustainable use. A forage quality factor (to limit allocation of moderate to low value forage plants) was also used. The overall evaluation is line with the current active permitted use (120 AUs).

¹ For a cattle operation, an animal unit (AU) is defined as one cow with a nursing calf or its equivalent. An animal unit month (AUM) is the amount of forage needed to sustain that cow and calf for one month.

This review also considered the drought conditions that begin surfacing about 1999-2000 and the permittee's responses to these conditions. Although licensed use (billed use) remained at the upper level of the active permitted use (120 AUs), actual livestock numbers on the allotment were below that level. Management actions were being taken to balance the use with the resources.

All available data sets (production, ground cover, plant frequency) as well as the associated indices derived from the data were used in the evaluation. The resource conditions are stable and will support the permitted use level.

III. AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

A. General Setting

This BLM grazing allotment 65094 is within the boundaries of the Roswell Grazing District established subsequent to the Taylor Grazing Act (TGA); allotment 65095 lies outside the Roswell Grazing District. Grazing authorization on public land inside the boundary is governed by Section 3 of the TGA; this land outside the boundary is covered under Section 15 of the TGA.

The allotments are located in Chaves County about 10 miles east of Roswell, New Mexico north of U. S. Highway 380 along Alamo Road. The New Mexico National Guard Training Facility is located in the northern part of allotment 65094 and extends into the southern portion of allotment 65095. At the present, training activities have had minimal impacts on livestock grazing operation.

The climate is semi-arid with normal annual temperatures ranging from 20°F to 95°F at Bitter Lake National Wildlife Refuge. Observed minimum and maximum temperatures were -22°F and 113°F, respectively. Average annual precipitation is 11.6 inches, primarily as rainfall. Annual precipitation has ranged from 3.11 inches to 21.08 inches.

B. Affected Resources

The following resources or values are not present or would not be affected by the authorization of livestock grazing on Allotments 65094 and 65095: Areas of Critical Environmental Concern, Cultural Resources, Native American Religious Concerns, Prime or Unique Farmland, Minority/Low Income Populations, Hazardous or Solid Wastes, Wild and Scenic Rivers, and Wilderness. Affected resources and the impacts resulting from livestock grazing are described below.

1. Livestock Management

Affected Environment

Allotment 65094 is grazed yearlong by cattle. Grazing is by a cow/calf operation. The BLM sets livestock numbers on this allotment.

Allotment 65094 has two pastures and a trap (see map). The allotment includes approximately 5,096 acres of federal land, 703 acres of private land; 1,709 acres of State land and 282 acres of Department of Defense land. The public land is generally well blocked. The allotment is grazed yearlong using a single herd rotation system. Since March 2003 active grazing use has ranged from 50 AUs to total non-use to align grazing use with resource conditions (drought).

Two rangeland monitoring studies have been in place on this allotment (65094) since 1981. More information on these study sites is found under the Vegetation section of this document.

Allotment 65095 is grazed yearlong by cattle and horses. Grazing is by a cow/calf operation. This allotment is a Section 15 allotment and BLM sets the livestock numbers for only the public land within the allotment; the livestock operator controls the overall livestock numbers on the allotment.

The allotment includes approximately 428 acres of federal land, 1,923 acres of private land, and 16,872 acres of State land. The public range is scattered.

Environmental Impacts

Under the Proposed Action, livestock would continue to graze public land within the allotment. Existing pasture configurations and water developments would remain the same. Livestock management would still follow the single herd rotation system.

Under Alternative B, there would be no livestock grazing authorized on public lands. The public land would have to be fenced apart from the private land or livestock would be considered in trespass if found grazing on public lands (43 CFR 4140.1(b)(1)). The expense of fencing would be borne by the private landowner.

Cumulative impacts of the grazing and no grazing alternatives were analyzed in Rangeland Reform '94 Draft Environmental Impact Statement (BLM and USDA Forest Service 1994) and in the Roswell Resource Area Draft RMP/EIS (BLM 1994). The No Livestock grazing alternative was not selected in either document.

2. Vegetation

Affected Environment

Both allotments are within the Grassland community as identified in the Roswell RMP. The distinguishing feature for the grassland community is that grass species typically comprise about 75% or more of the potential plant community. There are small inclusions of the Mixed Desert Shrub community; these are located on the gravelly knolls scattered through the allotment.

Grasslands are intermixed with all community types. Tobosa grass (*Pleuraphis mutica*), burrograss (*Scleropogon brevifolius*), sand dropseed (*Sporobolus cryptandrus*), alkali sacaton (*Sporobolus airoides*), three-awn (*Aristida* spp.), black grama (*Bouteloua*

eripoda), gyp grama (*Bouteloua breviseta*), bush muhly (*Muhlenbergia porteri*) and fluffgrass (*Dasyochloa pulchella*) are common. Tobosa grass is the dominant species. The grassland sites also have a fourwing saltbush (*Atriplex canescens*), broom snakeweed (*Gutierrezia sarothrae*) shrub, or cacti (*Opuntia* spp.) component.

General objectives or guidelines for the vegetation community (except for riparian/wetlands) are described in the Roswell Approved RMP and Record of Decision (BLM 1997) and the Roswell Draft RMP/EIS (BLM 1994).

Rangeland monitoring studies were established in two key areas within allotment 65094 in the early 1980's. These study data serve as the basis for range trend analysis, ecological (range) condition ratings, track vegetation changes and assists in the evaluation and comparison of stocking rates. Allotment 65095 has no long term monitoring data however the conditions are very similar to those on allotment 65094.

All study sites are in the Loamy SD-3 ecological (range site), however Gyp Upland sites are intermingled with the loamy sites. . Ecological site descriptions are available for review at the Roswell BLM office or any Natural Resources Conservation Service office or may be accessed at www.nm.nrcs.usda.gov.

The traditional range condition methodology compares collected rangeland monitoring information with the potential vegetation community in terms of species composition by weight. The rating is based on a scaled of 0 to 100 with 100 being the potential representative site.

The National Resource Conservation Service (NRCS) has recently revised the methodology for comparing the existing vegetation community with the potential vegetation community and to aid in the determination of ecological condition. This methodology is called the Similarity Index (SI) the BLM is currently incorporating this revision into the monitoring and evaluation processes. The SI compares existing vegetation data (collected from rangeland monitoring) with the potential vegetation community described in the NRCS ecological site guide for that site. The index is based on a scaled of 0 to 100 with 100 being the actual representative site. For the Loamy SD-3 ecological (range) site, the normal year production is about 900 pounds per acre. The index takes into account vegetation species present and the relative amount of production for each species when compared to the potential for the ecological site.

Note: The individual ecological site guides are very broad and often cover several soil associations and that may support several different plant communities that differ in both plant composition and production potential. These differences must be factored in when evaluating the indices associated with both the range condition and similarity index. The similarity index rating because of the tie with production (lb/ac) may be influenced by precipitation. The ratings for individual years may vary significantly due to precipitation; this variability may be reduced by using the long term moving averages as shown on the production data sheets at the end of this document.

The RFO is currently in the process of integrating the revised methodology into current monitoring and evaluation processes. The traditional range condition rating method

(used from 1980 to 1998) is retained for comparison purposes. This data is included at the end of this document.

Vegetative production is influenced by many factors; however, precipitation in amount and timing is the most critical factor. Southeast New Mexico has been in a drought stage the last few years.

The long term vegetative production, ground cover and trend data for the allotment is shown at the end of this document. Range monitoring data indicate that the vegetation is sustainable to meet multiple resource requirements and forage at the permitted use level under the Proposed Action. The sample size for the data collected in fiscal years 1990 and 1995 was 100 points for ground cover and 10 plots for production (in determining range condition and the similarity index instead of the normal 300 points/30 plots normally collected. Due to the differential in sampling size caution must be used in the interpretation of the data.

Noxious and Invasive Weeds: Noxious weeds affect both crops and native plant species in the same way, by out-competing for light, water and soil nutrients. Losses are attributed to decreased quality and quantity of agricultural products due to high levels of competition from noxious weeds and infestations. Noxious weeds can negatively affect livestock productivity by making forage unpalatable to livestock thus decreasing livestock productivity and potentially increasing producer's feed costs. Potential noxious weed species include musk thistle and Russian knapweed. There are known populations of noxious weeds on the allotment: goldenrod (*Solidago canadensis*) is considered a noxious weed and is on the Noxious Weed List for the State of New Mexico.

Environmental Impacts

Under the Proposed Action, grassland vegetation would continue to be grazed and trampled by livestock in all pastures, primarily the key grass species in each range site. Upland sites would reflect a static ecological condition trend at the existing permit level. In the long term, upland vegetation would continue to improve in all pastures from the implementation of a rest-rotation system.

Noxious and Invasive Weeds: Cattle stocked on the allotment, supplemental feeds, and a variety of equipment may unintentionally contribute to the establishment and spread of noxious weeds. Noxious weed seed could be carried to and from the allotment by livestock, feed and equipment. The main mechanism for seed dispersion is by equipment that was previously used in noxious weed-infested areas.

Infestation of noxious weeds can have a potentially disastrous impact on biodiversity and natural ecosystems. In order to combat the negative effects of noxious weeds on crop land, grazing land and waterways, herbicidal and other weed control strategies can be implemented at further costs to producers and government agencies. Increased costs to producers are eventually borne by consumers. The potential for the dissemination of invasive and noxious weed seed on public land would remain low on the allotment due to the limited use of the land and increased public awareness of the noxious weed problem. Any populations of noxious weeds found on the allotment would

be treated according to prescribed control methods for the particular species encountered.

Under Alternative B, no impacts to vegetation resources would occur on public land from authorized livestock grazing. Vegetation cover would increase over the long term in some areas. Grasslands in the uplands would increase in cover and composition, but composition would be tempered by broom snakeweed somewhat dominating the shrub component.

3. Soil

Affected Environment

The Soil Survey of Chaves County, New Mexico, Southern Part (USDA Soil Conservation Service 1983) and the Soil Survey of Chaves County, New Mexico, Northern Part (USDA Soil Conservation Service 1983) were used to describe and analyze impacts to soils on Allotments 65094 and 65095. Soil through the area is classified as Holloman and Hollomex and exhibit a strong gypsum influence. There are two primary soil map units represented on the allotment (in order of predominance):

Holloman-Gypsum land complex, 3 to 5 percent slopes (HrC) occurs on the uplands over the majority of the allotment. Runoff is medium and the hazard of water erosion and soil blowing is moderate.

Holloman-Gypsum land complex, 3 to 5 percent slopes (HSE) occurs as a narrow band straddling a large draw in the southwest portion of the allotment. Runoff is rapid, the hazard of water erosion is severe, and the hazard of soil blowing is moderate.

Environmental Impacts

Under the Proposed Action livestock grazing would remove some of the cover of standing vegetation and litter. Soil compaction by trampling would occur along the livestock trails and around waters. If livestock management were inadequate, these effects could be severe enough to reduce infiltration rates and increase runoff, leading to greater water erosion and soil losses (Moore et al. 1979, Stoddart et al. 1975). Producing forage and protecting the soil from further erosion would then be more difficult. The greatest impacts of removing vegetation and trampling would be expected in areas of concentrated livestock use, such as trails, waters, feeders, and shade.

Under the Proposed Action, rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion.

Under Alternative B, any adverse impact from livestock grazing would be eliminated. However, it is possible that removing grazing animals from an area where they were a natural part of the landscape could result in poor use of precipitation and inefficient mineral cycling (Savory 1988). Bare soil could be sealed by raindrop impact, and vegetation could become decadent, inhibiting new growth. Therefore, the results of no grazing could be similar to those of overgrazing in some respects.

4. Water Quality

Affected Environment - Surface Water

The Pecos River does not cross the allotment although this allotment is adjacent to a river segment identified by the New Mexico Water Quality Control Commission (WQCC) which has specific designated uses and water quality standards. Segment 2206 is an 89-mile reach of the Pecos River from Salt Creek south to the Rio Penasco. The allotment drains to Segment 2206 via Comanche Draw, which empties to the river south of Salt Creek. Under the authority of the federal Clean Water Act, the WQCC (1995) designated uses for streams in New Mexico. Designated uses for Segment 2206 include irrigation, livestock watering, wildlife habitat, and secondary contact (e.g., wading). In addition, Segment 2206 has a warmwater fishery.

Environmental Impacts - Surface Water

In general, livestock grazing is considered a potential cause of nonpoint source pollution, with sediment as the primary contaminant. Livestock grazing on the allotment, however, is not expected to be significant cause of sediment loading to the Pecos River under any management alternative. The NMED conducted an intensive assessment of Pecos River water quality in 1997. They concluded that no water quality standards have been exceeded in the past ten years on Segment 2206 (NMED 1998a).

Bacteria and nutrients are other potential contaminants that can be related to livestock grazing. Elevated levels of ammonia may be noted, but livestock grazing on the allotment does not appear to have a significant impact on water quality.

Affected Environment - Ground Water

The allotment lies at the northern end of the Roswell Basin monitoring area (New Mexico State Engineer 1995, Wilkins and Garcia 1995). Ground water is found in the alluvial aquifer at depths ranging from less than 10 feet near the river, to more than 75 feet in the uplands (Hudson and Borton 1983). Yields of 100 gallons per minute or more are possible from the alluvium (Geohydrology Associates, Inc. 1978). Ground-water quality is generally acceptable for stock use, though data are limited.

Environmental Impacts - Ground Water

The WQCC has the primary responsibility for ground-water quality management in New Mexico. In their most recent report on water quality in New Mexico, the WQCC (1996) did not find livestock grazing on rangelands to be an important potential source of contamination to ground water.

Wilson (1981) also presented potential sources of ground-water contamination and the relative vulnerability of aquifers in New Mexico. He identified animal confinement facilities (e.g., dairies, feedlots) as potential sources of contamination elsewhere in New Mexico, including areas in the Pecos valley downstream from the allotment. Wilson did not identify livestock grazing on rangelands, however, as an important potential source of ground-water contamination.

Livestock grazing would not be expected to have a significant impact on ground-water quality under any management alternative. Livestock would be dispersed over the allotment, and the soil would filter potential contaminants.

Cumulative impacts to ground-water quality from grazing on Allotment 65094 and 65095 would be negligible. Grazing impacts would be insignificant when compared to other potential sources of contamination, such as mineral development, saline intrusion, and agriculture.

5. Wildlife

Affected Environment

The allotment provides a variety of habitat types for terrestrial wildlife species. The diversity and abundance of wildlife species in the area is due to the presence of a mixture of grassland habitat and mixed desert shrub vegetation.

Numerous avian species use the area during spring and fall migration, including nongame migratory birds. The Bitter Lake National Wildlife Refuge (BLNWR) is located northeast from the allotment, and serves as a major focal point for migratory birds (e.g., ducks, geese, sandhill cranes, water birds). The Bottomless Lakes State Park is located a few miles southwest from the allotment. Common bird species are mourning dove (*Zenaida macroura*), mockingbird, white-crowned sparrow, black-throated sparrow, blue grosbeak, northern oriole, western meadowlark, Crissal thrasher, western kingbird, northern flicker, common nighthawk, loggerhead shrike, and roadrunner. Raptors include northern harrier, Swainson's hawk (*Buteo swainsonii*), American kestrel (*Falco sparverius*), and occasionally golden eagle and ferruginous hawk (*Buteo regalis*).

Common mammal species using the area include mule deer (*Odocoileus hemionus*), pronghorn (*Antilocapra americana*), coyote (*Canis latrans*), gray fox, bobcat, striped skunk, porcupine, racoon, badger, jackrabbit (*Lepus californicus*), cottontail (*Sylvilagus audobonii*), white-footed mouse, deer mouse, grasshopper mouse, kangaroo rat, spotted ground squirrel, and woodrat.

A variety of herptiles also occur in the area such as yellow mud turtle, box turtle, eastern fence lizard, side-blotched lizard, horned lizard, whiptail, hognose snake, coachwhip, gopher snake, rattlesnake, and spadefoot toad.

Environmental Impacts

Under Alternative A, livestock grazing, if not properly managed, could continue to impact wildlife and habitat diversity by potential over-utilization of vegetation that provides forage, browse and cover for a variety of wildlife species. No significant impacts to wildlife and habitat as result from current management activities. Periodic changes to livestock use will occur when monitoring data indicates a necessary change to maintain and protect rangeland resources.

Under Alternative B, there would no longer be direct competition between livestock and wildlife for forage, browse and cover. Wildlife habitat would moderately improve. The

limitation for improvement would continue to be the existing invading species component (e.g., goldenrod, saltcedar (*Tamarix* spp.), snakeweed) affecting plant composition. Since livestock grazing would not be permitted, range improvement projects that benefit wildlife, such as water developments, would be abandoned. New range improvement projects that would also benefit wildlife habitat, such as brush control, may not be implemented because these projects are primarily driven and funded through range improvement efforts.

6. Threatened/Endangered and Special Status Species

Affected Environment

In southeastern New Mexico, the majority of bald eagles occur near water resources; although upland areas between the Pecos valley and the Capitan, White and Sacramento mountain ranges also support wintering eagles. Bald eagles are known to occur in the north and western portions of the planning area and along the Rio Bonito and Pecos River drainages, primarily during the winter months of November through March. Threats cited in the Final Rule for this species include the degradation of riparian and aquatic habitats, loss of large nesting trees, increasing human disturbance near suitable nesting habitat, reduced reproductive success due to the presence of pesticides and other contaminants, and injury or mortality due to fishing tackle. None of these threats are located within these allotments.

Therefore livestock grazing as a result of the grazing permit, will not affect, the bald eagle. It is expected that habitat and range condition would be maintained or improved by authorizing grazing conducive with vegetation production goals. Habitat for wintering bald eagles would not have significant negative impacts by livestock grazing since there is no presence of riparian habitats nearby, and no active or suitable nesting habitat.

Surveys have been conducted in New Mexico for the mountain plover by Lawry Sager in 1995, for the New Mexico Department of Game and Fish (Sager, 1996). No known breeding populations or wintering locales were found in the Roswell Field Office area. In addition, mountain plover surveys were conducted in 1998 at BLM selected sites by New Mexico Natural Heritage Program (DeLay & Johnson, 1998). No mountain plovers were observed at the sites. As mountain plovers prefer short vegetation and actually seek out grazed pastures, the cumulative impacts from grazing are not anticipated to adversely affect the bird. Grazing practices which maintain or improve ground cover to the greatest extent possible could decrease mountain plover habitat. The preferred alternative will continue to emphasize proper watershed management, but is unlikely to adversely affect this species or its habitat in the mixed desert shrub area. Since no known wintering locales or breeding sites have been found proper grazing management is not likely to jeopardize, destroy or adversely modify the habitat for the mountain plover. At present there is an active prairie dog town located on BLM and state land in the East Comanche pasture. Prairie dogs were removed from listing in August 2004, but current will not affect the expansion of this town .

Environmental Impacts

Under any of the alternatives, there would be no change to the bald eagle, the mountain plover or black-tailed prairie dog habitat.

7. Visual Resources Management

Affected Environment

The entire allotment is in a Class III area for visual resources management. In a Class III area, contrasts to the basic elements caused by a management activity may be evident and begin to attract attention in the landscape. The changes, however, should remain subordinate to the existing landscape.

Environmental Impacts

The basic elements of the landscape would not change within the allotment under any management alternative. Potential impacts to visual resources would be analyzed and mitigated as allotment management activities are proposed in the future.

8. Recreation

Affected Environment

County roads provide access to public, private, and state land within the allotment, legal public access is not limited. The BLM has designated off-highway vehicle use on public land in the area as limited to existing roads and trails.

General sightseeing, wildlife viewing and photography are non-consumptive recreational activities that may occur. Rock collectors find various minerals unique to the area, such as Pecos diamonds.

Environmental Impacts

Under the Proposed Action, there would be no direct negative impacts to recreational activities on public land. There could be potential conflicts between recreationists and ranching activities, depending on hunting seasons and livestock use in a given pasture. Vandals could damage range improvements.

Under Alternative B, no conflicts between ranching activities and recreational use would occur on public lands. Success of hunts and non-consumptive opportunities would remain the same or slightly improve. Vandalism could still occur to range improvements.

9. Cave and Karst

Affected Environment

This allotment is located within a designated area of medium Cave or Karst Potential. A complete significant cave or karst inventory has not been completed for the public land

located in this grazing allotment. Presently, no known significant caves or karst features have been identified within this allotment.

Environmental Impacts

Since no caves or major karst features have been identified on this grazing allotment, grazing would not affect these resources. If a significant cave or karst feature were discovered on public land within this allotment, that cave or feature may be fenced to exclude livestock and off-highway vehicle use.

10. Air Quality

Affected Environment

The allotment is in a Class II area for the Prevention of Significant Deterioration of air quality as defined by the federal Clean Air Act. Class II areas allow a moderate amount of air quality degradation.

Air quality in the region is generally good, with winds averaging 10-16 miles per hour depending on the season. Peak velocities reach more than 50 miles per hour in the spring. These conditions rapidly disperse air pollutants in the region.

Environmental Impacts

Dust levels resulting from allotment management activities would be slightly higher under the Proposed Action than Alternative B. The cumulative impact on air quality from the allotment would be negligible compared to all pollution sources in the region.

10. Oil/Gas and Rights of Ways

Affected Environment

During recent years there has been an increased interest in oil/gas exploration in the area within and surrounding the allotments. As new wells are drilled vegetation and soils are impacted. Newly drilled wells that are placed into production will reduce vegetation production and ground cover in the area of the pad. The associated activities of new roads and pipelines will also impact vegetation and ground cover.

Environmental Impacts

Approximately six (6) acres are affected by each new well; this includes the associated roads and pipelines. The current practice of utilizing existing roads for access to new pads and aligning associated pipelines to existing roads will minimize the disturbance to vegetation and ground cover. Non-producing well sites are reclaimed but the vegetation and ground cover will be affected on the site for a period of time.

12. Floodplains

Affected Environment

Portions of the allotment are located in the 100-year floodplain of the Pecos River floodplain. Portions of the allotment are located in Zone A or “Area of the 100-year flood”. The floodplain ranges in width from less than one-half mile to more than one mile in the area. Channel banks are generally stable, but are actively being cut in some locations. This is most likely due to entrenchment of the channel rather than disturbance associated with land use activities. The channel material is primarily a sand and gravel bed with small cobbles and silt. The stream gradient is relatively flat (0.25 percent).

For administrative purposes, the 100-year floodplain serves as the basis for floodplain management on public land. It is based on Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (1983). Current development on the floodplain consists of two-track roads and several miles of boundary fence in the area.

IV. 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 Allotments 65094 and 65095. 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 resources include: livestock authorization on other allotments within the area; oil and gas activities on the uplands; rights-of way crossings; and recreation use, particularly off-highway vehicles. All authorized activities which occur on BLM land can also take place on state and private lands.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and gas activities began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

The Proposed Action and Alternative B would not add incrementally to the cumulative impacts to threatened and endangered species, or to water quality.

V. Public Land Health

Public Land (Rangeland) Health assessments were completed on the allotment during 2003 and 2004. Based on the assessments and monitoring data a Determination was made that the public land within this livestock grazing allotment are in conformance with the Standards for Public Land Health and Guidelines for Livestock Grazing Management. A copy of these assessments can be accessed at <http://nm.blm.gov/rfo/index.htm>.

VI. MITIGATION MEASURES

Vegetation monitoring studies will continue if a new grazing permit were issued under the Proposed Action. Changes to livestock management would be made if monitoring data showed adverse impacts to the vegetation.

If new information surfaces that livestock grazing is negatively impacting other resources, action will be taken at that time to mitigate those impacts.

VII. RESIDUAL IMPACTS

Residual impacts are direct, indirect, or cumulative impacts that would remain after applying the mitigation measures. Residual impacts following authorization of livestock grazing would be insignificant if the mitigation measures are properly applied.

VIII. BLM TEAM MEMBERS

Dan Baggao, John Spain, Irene Gonzales-Salas, Jerry Dutchover, Rand French, Pat Flannery, Tim Kreager and Howard Parman.

IX. PERSONS AND AGENCIES CONSULTED

Chaves County Public Land Use Advisory Committee
Juan Ramos - Permittee
New Mexico Department of Game and Fish
New Mexico Energy, Minerals, and Natural Resources Department
- Forestry and Resource Conservation Division
New Mexico Environment Department - Surface Water Quality Bureau
New Mexico State Land Office
U.S. Fish and Wildlife Service - Ecological Services
U.S. Fish and Wildlife Service - Fishery Resources Office

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Production (lbs/ac) Data

VEGID: 441

65094 OTTO BRITTAIN

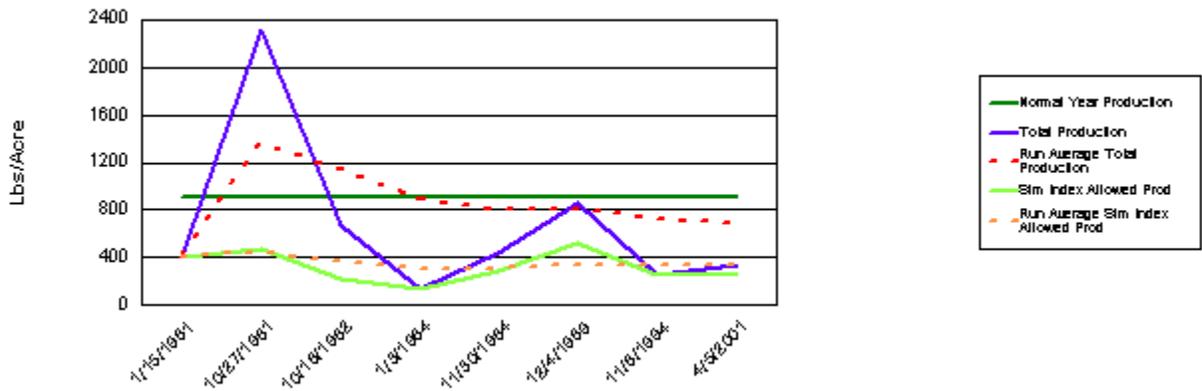
65094-EAST COMANCHE-

LOAMY SD-3

042CY007NM

Date	Range Cond.	Similarity Index	Normal Year Production	Total Production	Running Average Production	Sim Index Allowed Production	Running Average Sim Index Allowed Production
01/15/1981	56.90	44.67	900	411.00	411.00	402.00	402.00
10/27/1981	46.80	51.56	900	2,313.00	1,362.00	464.00	433.00
10/18/1982	30.00	24.33	900	679.00	1,134.33	219.00	361.67
01/03/1984	61.70	14.44	900	130.00	883.25	130.00	303.75
11/30/1984	60.40	32.56	900	432.00	793.00	293.00	301.60
12/04/1989	57.90	57.78	900	858.00	803.83	520.00	338.00
11/08/1994	43.50	28.89	900	260.00	726.14	260.00	326.86
04/05/2001	50.20	28.22	900	343.00	678.25	254.00	317.75

Production Data For Study Site



Production (lbs/ac) Data

VEGID: 442

65094 OTTO BRITTAIN

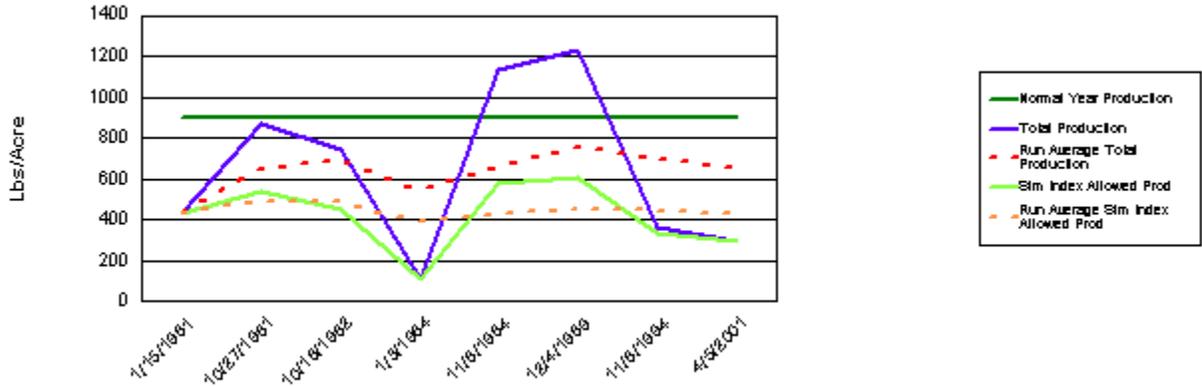
65094-WEST COMANCHE-

LOAMY SD-3

042CY007NM

Date	Range Cond.	Similarity Index	Normal Year Production	Total Production	Running Average Production	Sim Index Allowed Production	Running Average Sim Index Allowed Production
01/15/1981	64.40	48.33	900	435.00	435.00	435.00	435.00
10/27/1981	60.20	59.89	900	867.00	651.00	539.00	487.00
10/18/1982	52.30	50.56	900	744.00	682.00	455.00	476.33
01/03/1984	64.50	12.11	900	109.00	538.75	109.00	384.50
11/06/1984	60.50	64.22	900	1,132.00	657.40	578.00	423.20
12/04/1989	62.70	67.56	900	1,233.00	753.33	608.00	454.00
11/08/1994	79.50	37.22	900	365.00	697.86	335.00	437.00
04/05/2001	82.20	33.11	900	298.00	647.88	298.00	419.63

Production Data For Study Site



Live Vegetative Cover By Plant Type - Step Point Method

(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No 65094	Allotment OTTO BRITTAIN	Ecosite ID 042CY007NM	Ecosite Name LOAMY SD-3				Site Name 65094-EAST COMANCHE-D185
Location CHAVES	T. 0100S	R. 0260E	Sec. 29	QtrQtr NWNW	UTM-N	3698016.24931	
	County,	NM			UTM-E	563016.39321	
Soil Sur No NM644	Soil Map Unit HMA		Soil Tax Name HOLLOMEX		Soil Association HOLLOMEX-REEVES-		

Note: Data is Basal Cover Only

VEGID	DATE	PLANT TYPE	GENUS	PLANT CODE	% COVER	COV HITS	TOT PLOTS	
441	1/15/1981	Grass	BOUTELOUA	BOER4	0.33	1	303	
				BOGR2	0.99	3		
				ERIONEURON	ERPU8	0.33		1
				HILARIA	HIMU2	14.19		43
				MUHLENBERGIA	MUAR	0.33		1
				PANICUM	PAHA	3.63		11
				SCLEROPOGON	SCBR2	3.96		12
				SPOROBOLUS	SPCR	0.33		1
				TRIDENS	TRPI2	0.00		0
441	1/15/1981	Shrub		PPSS	0.00	0	303	
				GUTIERREZIA	GUSA2			
				OPUNTIA	OPUNT			
% Total Live Vegetative Cover					24.33			
441	11/30/1984	Grass	BOUTELOUA	BOER4	0.33	1	303	
				BOGR2	0.66	2		
				ERIONEURON	ERPU8	0.00		0
				HILARIA	HIMU2	4.95		15
				MUHLENBERGIA	MUAR	0.00		0
				PANICUM	PAHA			
					PAOB	0.33		1
				SCLEROPOGON	SCBR2	0.00		0
				SPOROBOLUS	SPCR			
				TRIDENS	TRPI2	0.33		1
441	11/30/1984	Shrub		PPSS	0.00	0	303	
				GUTIERREZIA	GUSA2			
				OPUNTIA	OPUNT			
% Total Live Vegetative Cover					6.67			
441	12/4/1989	Grass	ARISTIDA	ARIST	0.33	1	303	
			BOUTELOUA	BOGR2	0.66	2		
			ERIONEURON	ERPU8	0.33	1		
			HILARIA	HIMU2	1.98	6		
			MUHLENBERGIA	MUAR	0.33	1		
			PANICUM	PAHA	0.99	3		
				PAOB	0.33	1		
			SCLEROPOGON	SCBR2				
			SPOROBOLUS	SPCR				
				SPNE				
TRIDENS	TRMU							
	TRPI2	0.66	2					
% Total Live Vegetative Cover					21.00			

Live Vegetative Cover By Plant Type - Step Point Method

(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No	Allotment	Ecosite ID	Ecosite Name	Site Name	
65094	OTTO BRITTAIN	042CY007NM	LOAMY SD-3	65094-EAST COMANCHE-D185	
Location	T. 0100S	R. 0260E	Sec. 29	QtrQtr NWNW	UTM-N 3698016.24931
CHAVES	County,	NM		UTM-E 563016.39321	
Soil Sur No	Soil Map Unit	Soil Tax Name	Soil Association		
NM644	HMA	HOLLOMEX	HOLLOMEX-REEVES-		

Note: Data is Basal Cover Only

Allot No	Date	Plant Type	Species	Code	% Cover	Count	Total
441	11/8/1994	Grass	HILARIA	HIMU2	6.60	20	303
			MUHLENBERGIA	MUAR	0.66	2	
			PANICUM	PAHA	0.33	1	
			SCLEROPOGON	SCBR2	0.66	2	
			TRIDENS	TRPI2	0.33	1	
441	11/8/1994	Shrub		PPSS	0.33	1	303
			GUTIERREZIA	GUSA2	0.66	2	
			OPUNTIA	OPUNT	0.33	1	
% Total Live Vegetative Cover				30.93			
441	4/5/2001	Grass	ARISTIDA	ARIST	0.33	1	303
			BOUPELLOUA	BOER4	0.99	3	
				BOGR2	0.00	0	
			ERIONEURON	ERPU8			
			HILARIA	HIMU2	13.86	42	
			MUHLENBERGIA	MUAR	0.00	0	
				MUHLE	0.66	2	
			PANICUM	PAHA	0.00	0	
				PAOB	0.33	1	
			SCLEROPOGON	SCBR2	6.93	21	
			SPOROBOLUS	SPCR	0.00	0	
441	4/5/2001	Shrub		PPSS	0.00	0	303
			GUTIERREZIA	GUSA2	0.66	2	
			OPUNTIA	OPUNT	1.65	5	
% Total Live Vegetative Cover				25.41			

Live Vegetative Cover By Plant Type - Step Point Method

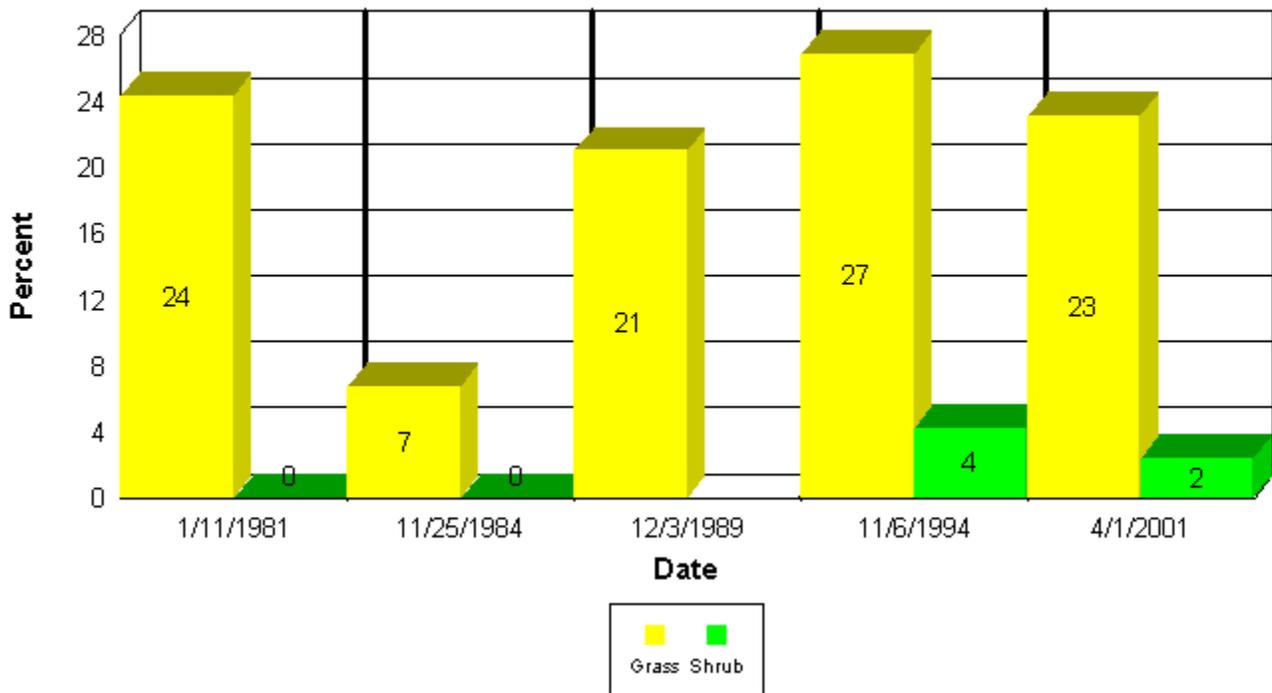
(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No	Allotment	Ecosite ID	Ecosite Name	Site Name
65094	OTTO BRITTAIN	042CY007NM	LOAMY SD-3	65094-EAST COMANCHE-D185
Location	T. 0100S	R. 0260E	Sec. 29	QtrQtr NWNW
	UTM-N			3698016.24931
CHAVES	County,	NM		UTM-E
				563016.39321
Soil Sur No	Soil Map Unit	Soil Tax Name	Soil Association	
NM644	HMA	HOLLOMEX	HOLLOMEX-REEVES-	

Note: Data is Basal Cover Only

Live Vegetative Cover By Plant Type



Live Vegetative Cover By Plant Type - Step Point Method

(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No 65094	Allotment OTTO BRITTAIN	Ecosite ID 042CY007NM	Ecosite Name LOAMY SD-3	Site Name 65094-WEST COMANCHE-D186		
Location CHAVES	T. 0100S	R. 0250E	Sec. 26	QtrQtr SENE	UTM-N 3697913.06754	UTM-E 558961.67151
Soil Sur No NM666	Soil Map Unit HrC		Soil Tax Name HOLLOMAN		Soil Association HOLLOMAN-GYPSUM LAND	

Note: Data is Basal Cover Only

VEGID	DATE	PLANT TYPE	GENUS	PLANT CODE	% COVER	COV HITS	TOT PLOTS
442	1/15/1981	Forb	PEREZIA	PENA	0.66	2	303
442	1/15/1981	Grass	BOUPELOUA	BOER4	0.99	3	303
				BOGR2			
			ENNEAPOGON	ENDE	0.66	2	
			ERIONEURON	ERPU8	0.33	1	
			HILARIA	HIMU2	26.73	81	
			MUHLENBERGIA	MUAR	0.66	2	
				MUAR2			
			PANICUM	PAHA	0.33	1	
			SCLEROPOGON	SCBR2	4.62	14	
			SPOROBOLUS	SPCR	0.00	0	
				SPNE	0.33	1	
442	1/15/1981	Shrub	EPHEDRA	EPHED	0.33	1	303
			GUTIERREZIA	GUSA2			
			OPUNTIA	OPUNT	0.66	2	
			PROSOPIS	PRGL2	0.00	0	
% Total Live Vegetative Cover					38.67		
442	11/6/1984	Forb	PEREZIA	PENA	0.00	0	303
442	11/6/1984	Grass	BOUPELOUA	BOER4	2.97	9	303
				BOGR2	0.33	1	
			ENNEAPOGON	ENDE	0.00	0	
			ERIONEURON	ERPU8			
			HILARIA	HIMU2	9.90	30	
			MUHLENBERGIA	MUAR	0.33	1	
				MUAR2	0.66	2	
			PANICUM	PAHA	0.33	1	
				PAOB	0.99	3	
			SCLEROPOGON	SCBR2	0.33	1	
			SPOROBOLUS	SPCR	0.66	2	
				SPNE	0.00	0	
442	11/6/1984	Shrub	EPHEDRA	EPHED	0.00	0	303
				EPTO	0.33	1	
			GUTIERREZIA	GUSA2	0.66	2	
			OPUNTIA	OPUNT			
			PROSOPIS	PRGL2	0.33	1	
% Total Live Vegetative Cover					18.67		

Live Vegetative Cover By Plant Type - Step Point Method

(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No	Allotment	Ecosite ID	Ecosite Name	Site Name
65094	OTTO BRITTAIN	042CY007NM	LOAMY SD-3	65094-WEST COMANCHE-D186
Location	T. 0100S	R. 0250E	Sec. 26	QtrQtr SENE
CHAVES	County,	NM		UTM-N 3697913.06754
				UTM-E 558961.67151
Soil Sur No	Soil Map Unit	Soil Tax Name	Soil Association	
NM666	HrC	HOLLOMAN	HOLLOMAN-GYPSUM LAND	

Note: Data is Basal Cover Only

442	12/4/1989	Grass	BOUPELOUA	BOER4	0.99	3			
			ENNEAPOGON	ENDE	0.33	1		303	
			HILARIA	HIMU2	7.59	23			
			SCLEROPOGON	SCBR2	0.33	1			
			SPOROBOLUS	SPCR					
			TRIDENS	TRPI2					
442	12/4/1989	Shrub	EPHEDRA	EPHED	0.33	1		303	
			GUTIERREZIA	GUSA2					
			PROSOPIS	PRGL2	0.99	3			
% Total Live Vegetative Cover					35.00				
442	11/8/1994	Grass	BOUPELOUA	BOER4	2.64	8		303	
			HILARIA	HIMU2	4.62	14			
			SCLEROPOGON	SCBR2	0.33	1			
			SPOROBOLUS	SPCR					
				SPNE	0.99	3			
442	11/8/1994	Shrub	PROSOPIS	PRGL2	0.99	3		303	
% Total Live Vegetative Cover					30.00				
442	4/5/2001	Forb	PEREZIA	PENA	0.00	0		303	
442	4/5/2001	Grass	BOUPELOUA	BOBR	0.99	3		303	
				BOER4	5.61	17			
				BOGR2	0.00	0			
			ENNEAPOGON	ENDE					
			ERIONEURON	ERPU8					
			HILARIA	HIMU2	13.53	41			
			MUHLENBERGIA	MUAR	0.00	0			
				MUAR2					
			PANICUM	PAHA					
				PAOB					
			SCLEROPOGON	SCBR2	3.30	10			
			SPOROBOLUS	SPCR	0.00	0			
				SPNE					
442	4/5/2001	Shrub	EPHEDRA	EPHED	3.30	10		303	
				EPTO	0.00	0			
			GUTIERREZIA	GUSA2					
			OPUNTIA	OPUNT	0.66	2			
			PROSOPIS	PRGL2	0.00	0			
% Total Live Vegetative Cover					27.85				

Live Vegetative Cover By Plant Type - Step Point Method

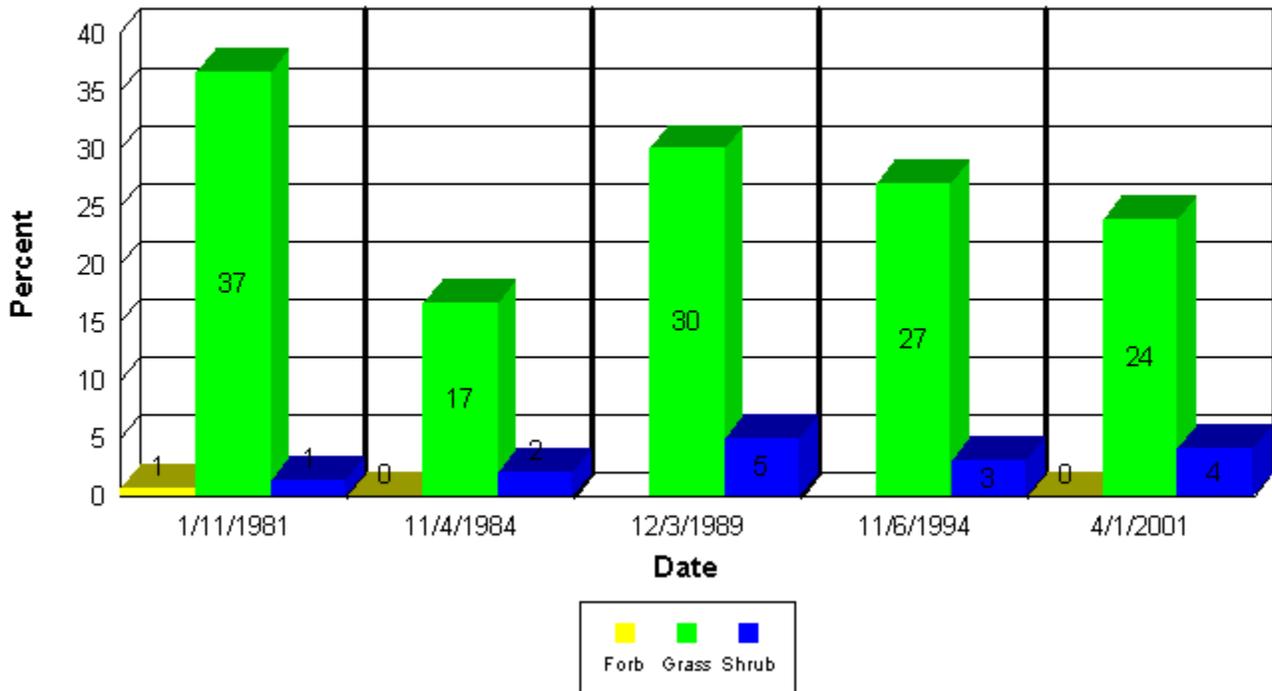
(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No	Allotment	Ecosite ID	Ecosite Name	Site Name	
65094	OTTO BRITTAIN	042CY007NM	LOAMY SD-3	65094-WEST COMANCHE-D186	
Location	T. 0100S	R. 0250E	Sec. 26	QtrQtr SENE	UTM-N 3697913.06754
CHAVES	County,	NM		UTM-E 558961.67151	
Soil Sur No	Soil Map Unit	Soil Tax Name	Soil Association		
NM666	HrC	HOLLOMAN	HOLLOMAN-GYPSUM LAND		

Note: Data is Basal Cover Only

Live Vegetative Cover By Plant Type

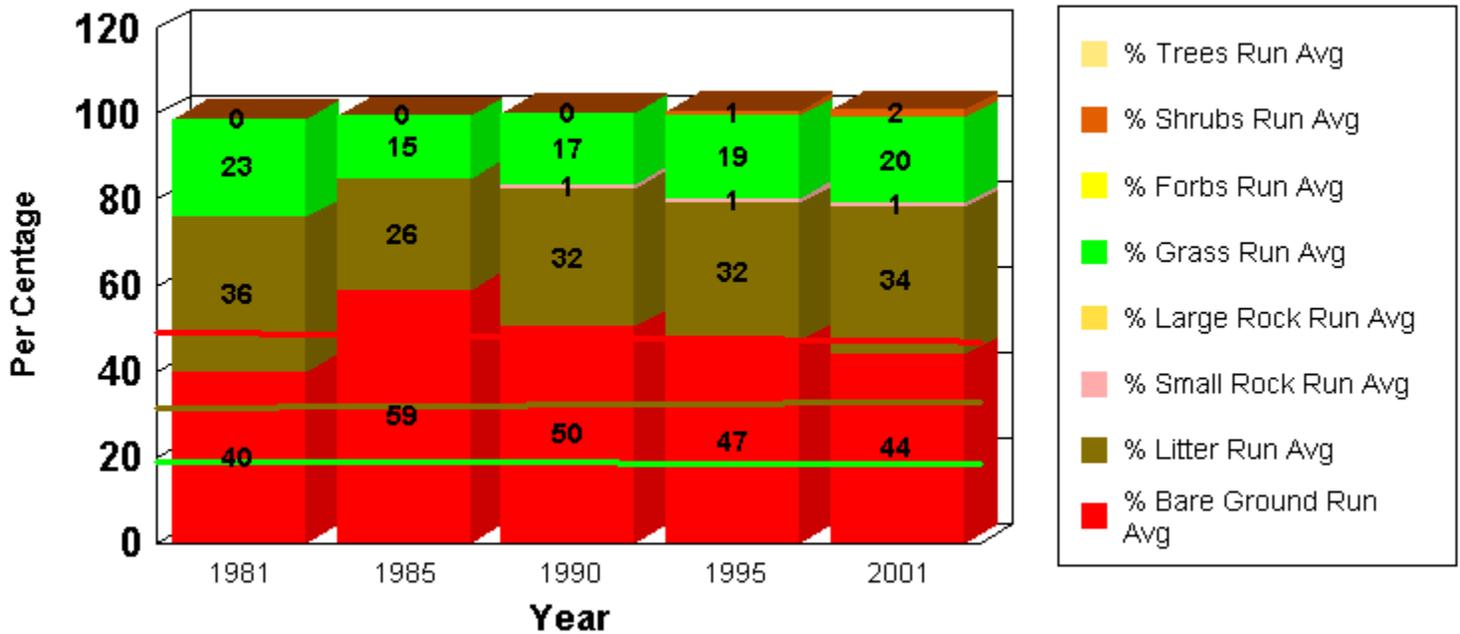


Location: Township: 0100S Range 0260E Section 29 QtrQtr: NWNW

Year	Bare Ground	Litter	Small Rock	Large Rock	Forbs	Grass	Shrubs	Trees	Running Average Bground	Running Average Litter	Running Average Srock	Running Average Lrock	Running Average Forb	Running Average Grass	Running Average Shrubs	Running Average Trees
1981	40.00	36.00				23.00	0.00		40.00	36.00				23.00	0.00	
1985	78.00	16.00				6.00	0.00		59.00	26.00				14.50	0.00	
1990	33.00	45.00	1.00			21.00			50.33	32.33	1.00			16.67	0.00	
1995	37.00	32.00				27.00	4.00		47.00	32.25	1.00			19.25	1.33	
2001	31.00	43.00				23.00	3.00		43.80	34.40	1.00			20.00	1.75	

Running Average Ground Cover Trends

With Trendlines

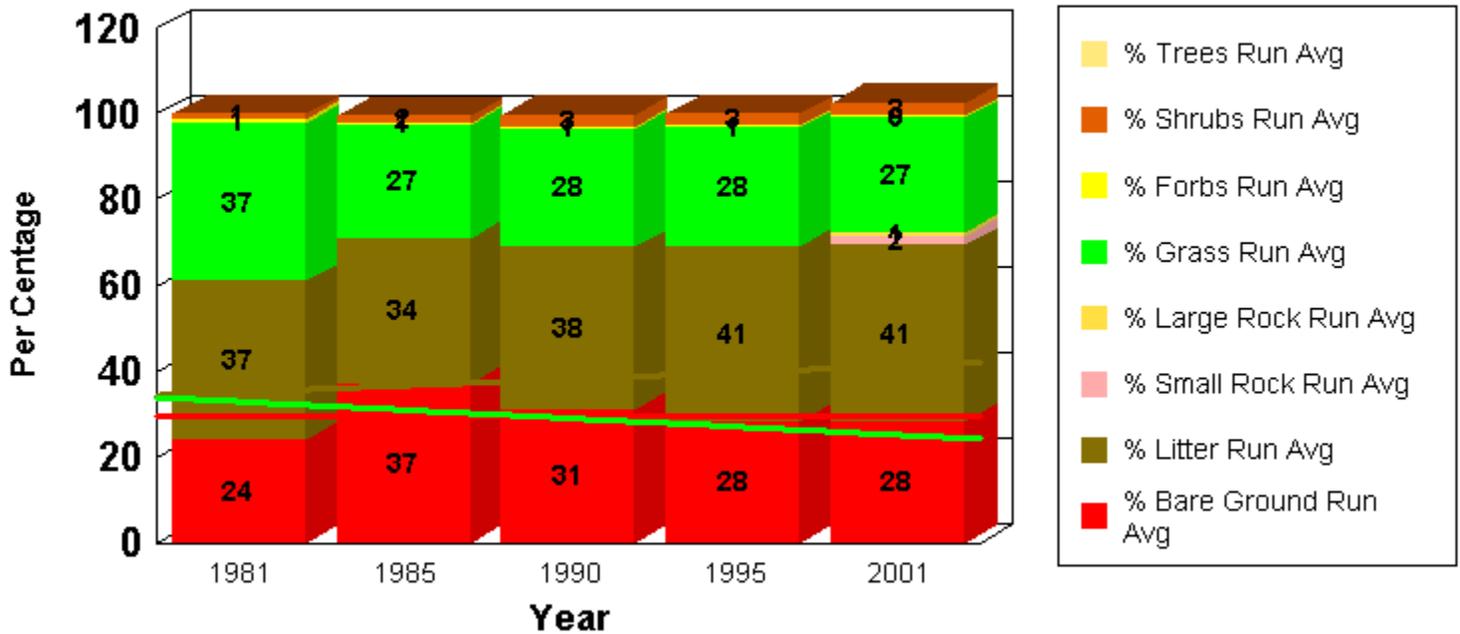


Location: Township: 0100S Range 0250E Section 26 QtrQtr: SENE

Year	Bare Ground	Litter	Small Rock	Large Rock	Forbs	Grass	Shrubs	Trees	Running Average Bground	Running Average Litter	Running Average Srock	Running Average Lrock	Running Average Forb	Running Average Grass	Running Average Shrubs	Running Average Trees
1981	24.00	37.00			1.00	37.00	1.00		24.00	37.00			1.00	37.00	1.00	
1985	50.00	31.00			0	16.00	2.00		37.00	34.00			0.50	26.50	1.50	
1990	19.00	46.00				30.00	5.00		31.00	38.00			0.50	27.67	2.67	
1995	20.00	50.00				27.00	3.00		28.25	41.00			0.50	27.50	2.75	
2001	28.00	42.00	2.00	1.00	0	24.00	4.00		28.20	41.20	2.00	1.00	0.33	26.80	3.00	

Running Average Ground Cover Trends

With Trendlines



Vegetative Frequency - Pace Point Method

(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No	Allotment	Ecosite ID	Ecosite Name	Site Name
65094	OTTO BRITTAIN	042CY007NM	LOAMY SD-3	65094-EAST COMANCHE-D185
Location	T. 0100S	R. 0260E	Sec. 29	QtrQtr NWNW
CHAVES		County,	NM	UTM-N 3698016.24931
Soil Sur No		Soil Map Unit	Soil Tax Name	Soil Association
NM644		HMA	HOLLOMEX	HOLLOMEX-REEVES-

VEGID	DATE	PLANT TYPE	GENUS	PLANT CODE	% Freq	# HITS	# PLOTS	
441	1/15/1981	Forb	ERODIUM	ERTE13	0.33	1	300	
			Grass	BOUTELOUA	BOER4	2.00	6	300
					BOGR2	4.00	12	300
				ERIONEURON	ERPU8	1.00	3	300
				HILARIA	HIMU2	40.00	120	300
				MUHLENBERGIA	MUAR	3.33	10	300
				PANICUM	PAHA	25.67	77	300
				SCLEROPOGON	SCBR2	19.67	59	300
				SPOROBOLUS	SPCR	1.33	4	300
					SPNE	0.33	1	300
			Shrub	EPHEDRA	EPHED	0.67	2	300
				GUTIERREZIA	GUSA2	1.00	3	300
						99.33	298	
		441	11/30/1984	Grass	BOUTELOUA	BOER4	6.67	20
	BOGR2				6.67	20	300	
				ERIONEURON	ERPU8	0.33	1	300
				HILARIA	HIMU2	34.00	102	300
				MUHLENBERGIA	MUAR	1.67	5	300
				PANICUM	PAOB	1.00	3	300
				SCLEROPOGON	SCBR2	16.00	48	300
				SPOROBOLUS	SPCR	2.00	6	300
				TRIDENS	TRMU	0.67	2	300
					TRPI2	23.33	70	300
	Shrub			EPHEDRA	EPTO	0.33	1	300
				GUTIERREZIA	GUSA2	7.33	22	300
						100.00	300	
441	12/4/1989			Forb	CROTON	CROTO	1.00	1
		UNKNOWN	PPFF		2.00	2	100	
		Grass	ARISTIDA	ARIST	2.00	2	100	
			BOUTELOUA	BOGR2	7.00	7	100	
			ERIONEURON	ERPU8	1.00	1	100	
			HILARIA	HIMU2	35.00	35	100	
			MUHLENBERGIA	MUAR	9.00	9	100	
			PANICUM	PAHA	10.00	10	100	
				PAOB	2.00	2	100	
			SCLEROPOGON	SCBR2	11.00	11	100	
			SPOROBOLUS	SPCR	3.00	3	100	
				SPNE	5.00	5	100	
				TRIDENS	TRMU	1.00	1	100
					TRPI2	7.00	7	100
Shrub	GUTIERREZIA	GUSA2	4.00	4	100			

Vegetative Frequency - Pace Point Method

(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No	Allotment	Ecosite ID			Ecosite Name		Site Name	
65094	OTTO BRITTAIN	042CY007NM			LOAMY SD-3		65094-EAST COMANCHE-D185	
Location	T. 0100S	R. 0260E	Sec. 29	QtrQtr	NWNW	UTM-N	3698016.24931	
CHAVES	County,		NM			UTM-E	563016.39321	
Soil Sur No	Soil Map Unit			Soil Tax Name		Soil Association		
NM644	HMA			HOLLOMEX		HOLLOMEX-REEVES-		

					100.00	100	
441	11/8/1994	Forb	UNKNOWN	PPFF	1.03	1	97
		Grass	HILARIA	HIMU2	65.98	64	97
			MUHLENBERGIA	MUAR2	8.25	8	97
			PANICUM	PAHA	2.06	2	97
			SCLEROPOGON	SCBR2	14.43	14	97
			TRIDENS	TRPI2	1.03	1	97
		Shrub		PPSS	3.09	3	97
			GUTIERREZIA	GUSA2	3.09	3	97
			OPUNTIA	OPUNT	1.03	1	97
					100.00	97	
441	4/5/2001	Grass	ARISTIDA	ARIST	0.99	3	303
			BOUPELLOUA	BOER4	6.27	19	303
			ERIONEURON	ERPU8	1.65	5	303
			HILARIA	HIMU2	55.12	167	303
			MUHLENBERGIA	MUHLE	0.99	3	303
			PANICUM	PAOB	2.31	7	303
			SCLEROPOGON	SCBR2	22.77	69	303
		Shrub	EPHEDRA	EPHED	1.32	4	303
			GUTIERREZIA	GUSA2	3.96	12	303
			OPUNTIA	OPUNT	2.64	8	303
			PROSOPIS	PRGL2	1.98	6	303
					100.00	303	

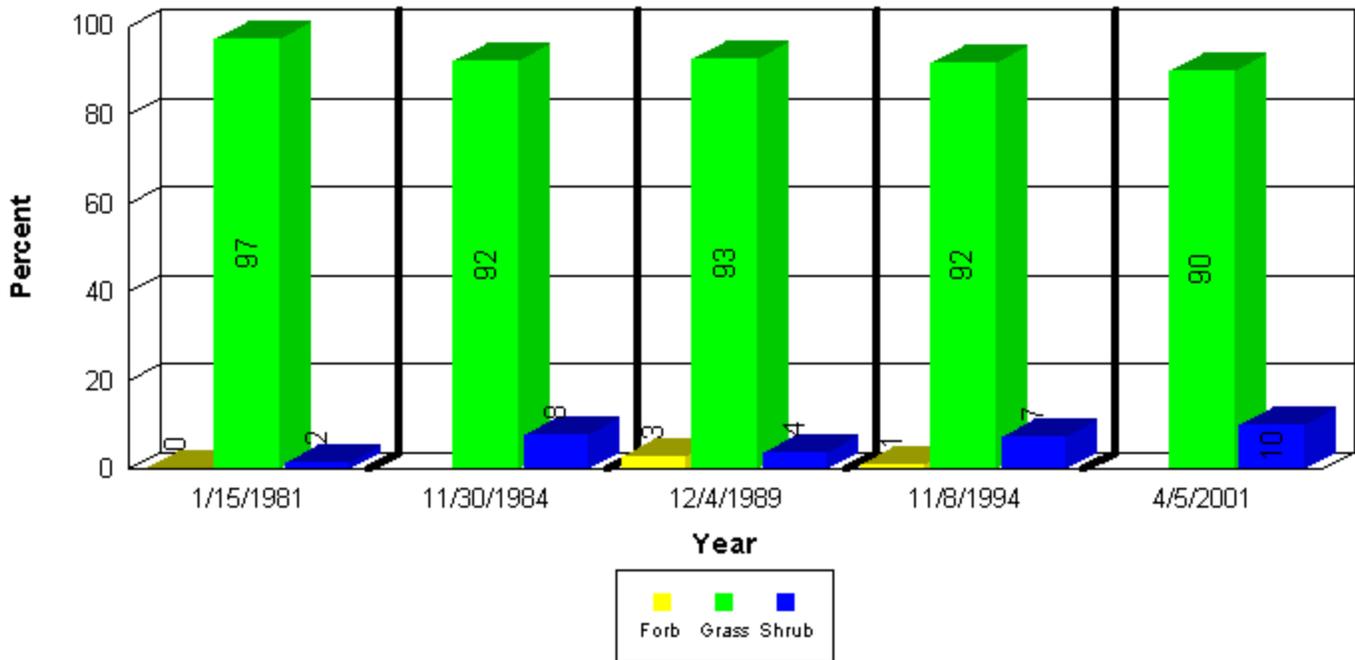
Vegetative Frequency - Pace Point Method

(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No	Allotment	Ecosite ID	Ecosite Name	Site Name
65094	OTTO BRITTAIN	042CY007NM	LOAMY SD-3	65094-EAST COMANCHE-D185
Location	T. 0100S R. 0260E	Sec. 29	QtrQtr NWNW	UTM-N 3698016.24931
CHAVES	County, NM			UTM-E 563016.39321
Soil Sur No	Soil Map Unit	Soil Tax Name	Soil Association	
NM644	HMA	HOLLOMEX	HOLLOMEX-REEVES-	

Plant Frequency By Plant Type



Vegetative Frequency - Pace Point Method

(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No	Allotment	Ecosite ID	Ecosite Name	Site Name
65094	OTTO BRITTAIN	042CY007NM	LOAMY SD-3	65094-WEST COMANCHE-D186
Location	T. 0100S	R. 0250E	Sec. 26	QtrQtr SENE
CHAVES	County,	NM		UTM-N 3697913.06754
Soil Sur No		Soil Map Unit	Soil Tax Name	Soil Association
NM666		HrC	HOLLOMAN	HOLLOMAN-GYPSUM LAND

VEGID	DATE	PLANT TYPE	GENUS	PLANT CODE	% Freq	# HITS	# PLOTS		
442	1/15/1981	Forb	LEPIDIUM	LEMO2	0.33	1	300		
			PEREZIA	PENA	2.33	7	300		
		Grass	SPHAERALCEA	SPHAE	0.67	2	300		
			BOUTELOUA	BOER4	8.00	24	300		
				BOGR2	1.33	4	300		
			ENNEAPOGON	ENDE	2.67	8	300		
			ERIONEURON	ERPU8	2.67	8	300		
			HILARIA	HIMU2	55.00	165	300		
			MUHLENBERGIA	MUAR	5.33	16	300		
				MUAR2	3.00	9	300		
			PANICUM	PAHA	2.00	6	300		
			SCLEROPOGON	SCBR2	13.00	39	300		
		SPOROBOLUS	SPCR	0.33	1	300			
			SPNE	1.00	3	300			
		Shrub	EPHEDRA	EPHED	0.67	2	300		
			GUTIERREZIA	GUSA2	0.67	2	300		
			OPUNTIA	OPUNT	0.67	2	300		
					99.67	299			
		442	11/6/1984	Grass	BOUTELOUA	BOBR	1.00	3	300
						BOER4	10.33	31	300
	BOGR2			2.00	6	300			
ENNEAPOGON	ENDE			3.00	9	300			
HILARIA	HIMU2			53.00	159	300			
MUHLENBERGIA	MUAR			3.67	11	300			
	MUAR2			3.00	9	300			
PANICUM	PAHA			2.33	7	300			
	PAOB			2.00	6	300			
SCLEROPOGON	SCBR2			9.67	29	300			
SPOROBOLUS	SPCR			4.00	12	300			
	SPNE			2.00	6	300			
Shrub	TRIDENS			TRPI2	1.00	3	300		
	EPHEDRA			EPTO	0.33	1	300		
	GUTIERREZIA			GUSA2	1.67	5	300		
	OPUNTIA			OPUNT	0.67	2	300		
	PROSOPIS			PRGL2	0.33	1	300		
						100.00	300		
442	12/4/1989			Forb	UNKNOWN	PPFF	1.00	1	100
				Grass	BOUTELOUA	BOER4	7.00	7	100
			BOGR2		2.00	2	100		
		ENNEAPOGON	ENDE	1.00	1	100			
		ERIONEURON	ERPU8	1.00	1	100			

Vegetative Frequency - Pace Point Method

(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No	Allotment	Ecosite ID	Ecosite Name	Site Name
65094	OTTO BRITTAIN	042CY007NM	LOAMY SD-3	65094-WEST COMANCHE-D186
Location	T. 0100S	R. 0250E	Sec. 26	QtrQtr SENE
CHAVES	County,	NM		
				UTM-N 3697913.06754
				UTM-E 558961.67151
Soil Sur No	Soil Map Unit	Soil Tax Name	Soil Association	
NM666	HrC	HOLLOMAN	HOLLOMAN-GYPSUM LAND	

442	12/4/1989	Grass	HILARIA	HIMU2	51.00	51	100
			MUHLENBERGIA	MUAR	4.00	4	100
				MUAR2	1.00	1	100
			PANICUM	PAHA	2.00	2	100
			SCLEROPOGON	SCBR2	4.00	4	100
			SPOROBOLUS	SPCR	6.00	6	100
			TRIDENS	TRPI2	3.00	3	100
		Shrub	EPHEDRA	EPHED	1.00	1	100
			GUTIERREZIA	GUSA2	12.00	12	100
			PROSOPIS	PRGL2	3.00	3	100
			YUCCA	YUGL	1.00	1	100
					100.00	100	
442	11/8/1994	Grass	BOUTELOUA	BOER4	16.00	16	100
				BOGR2	2.00	2	100
			HILARIA	HIMU2	45.00	45	100
			MUHLENBERGIA	MUAR	2.00	2	100
				MUAR2	1.00	1	100
			SCLEROPOGON	SCBR2	3.00	3	100
			SPOROBOLUS	SPCR	7.00	7	100
				SPNE	14.00	14	100
			TRIDENS	TRPI2	1.00	1	100
		Shrub	EPHEDRA	EPHED	1.00	1	100
			OPUNTIA	OPUNT	1.00	1	100
			PROSOPIS	PRGL2	7.00	7	100
					100.00	100	
442	4/5/2001	Forb	CIRSIUM	CIRSI	0.34	1	298
		Grass	ARISTIDA	ARIST	3.69	11	298
			BOUTELOUA	BOBR	5.70	17	298
				BOER4	26.85	80	298
			ENNEAPOGON	ENDE	8.05	24	298
			HILARIA	HIMU2	34.23	102	298
			MUHLENBERGIA	MUHLE	0.67	2	298
			SCLEROPOGON	SCBR2	8.05	24	298
			SPOROBOLUS	SPCR	0.67	2	298
		Shrub	EPHEDRA	EPHED	4.70	14	298
			GUTIERREZIA	GUSA2	4.03	12	298
			OPUNTIA	OPUNT	2.35	7	298
			PROSOPIS	PRGL2	0.67	2	298
					100.00	298	

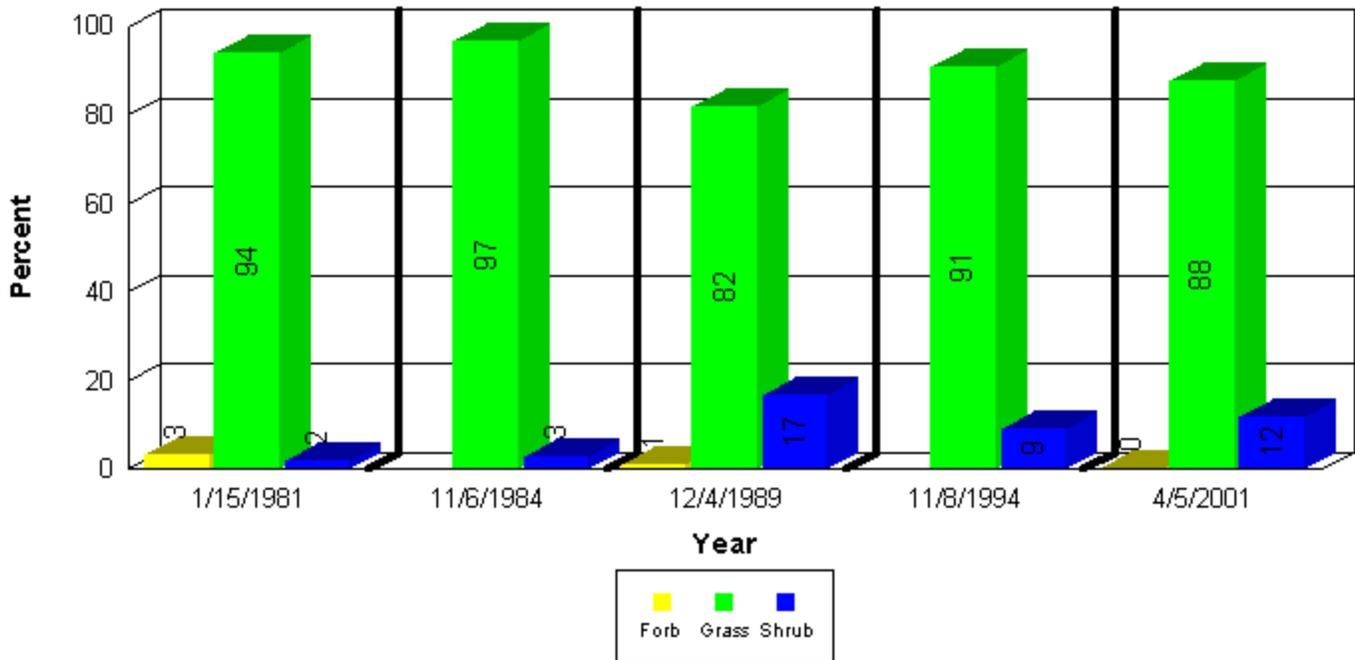
Vegetative Frequency - Pace Point Method

(Data Extracted From VMAP System)

Date Printed: 1/13/2005

Allot No	Allotment	Ecosite ID	Ecosite Name	Site Name			
65094	OTTO BRITTAIN	042CY007NM	LOAMY SD-3	65094-WEST COMANCHE-D186			
Location	T. 0100S	R. 0250E	Sec. 26	QtrQtr	SENE	UTM-N	3697913.06754
CHAVES	County, NM					UTM-E	558961.67151
Soil Sur No	Soil Map Unit	Soil Tax Name	Soil Association				
NM666	HrC	HOLLOMAN	HOLLOMAN-GYPSUM LAND				

Plant Frequency By Plant Type



Traditional Range Condition and Similarity Index Data

VEGID: 441

65094 OTTO BRITTAIN

65094-EAST COMANCHE-

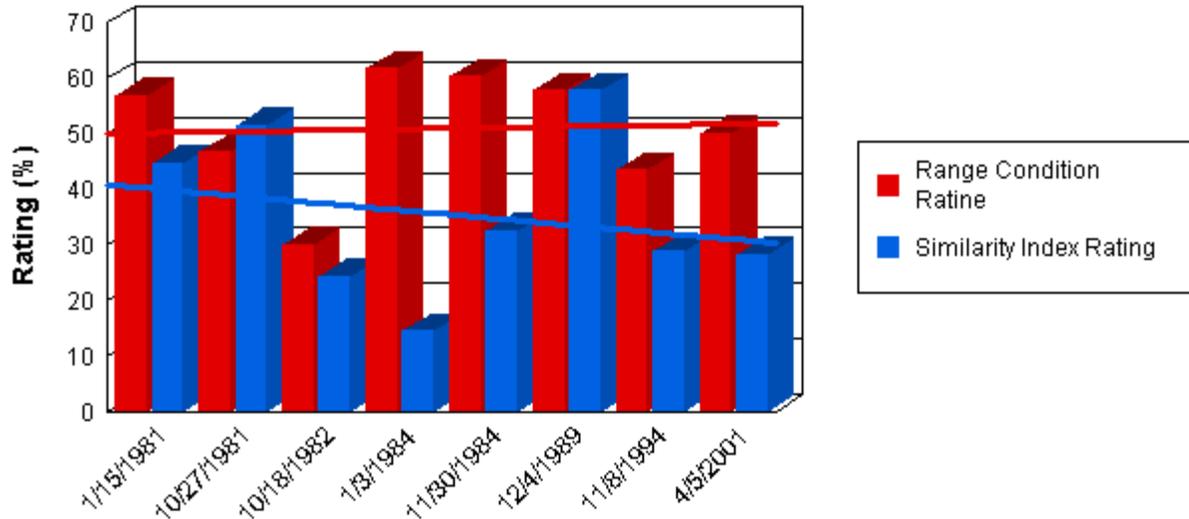
LOAMY SD-3

042CY007NM

Date	Range Cond.	Similarity Index	Total Production	Normal Year Production
01/15/1981	56.90	44.67	411.00	900
10/27/1981	46.80	51.56	2,313.00	900
10/18/1982	30.00	24.33	679.00	900
01/03/1984	61.70	14.44	130.00	900
11/30/1984	60.40	32.56	432.00	900
12/04/1989	57.90	57.78	858.00	900
11/08/1994	43.50	28.89	260.00	900
04/05/2001	50.20	28.22	343.00	900

Traditional Range Condition vs Similarity Index

With Trendlines



Traditional Range Condition and Similarity Index Data

VEGID: 442

65094 OTTO BRITTAIN

65094-WEST COMANCHE-

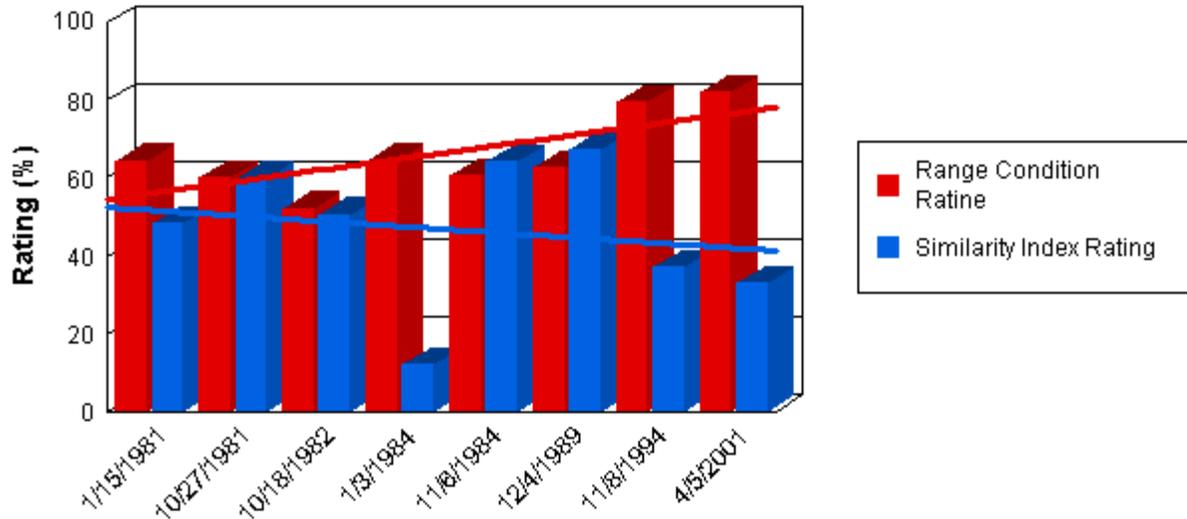
LOAMY SD-3

042CY007NM

Date	Range Cond.	Similarity Index	Total Production	Normal Year Production
01/15/1981	64.40	48.33	435.00	900
10/27/1981	60.20	59.89	867.00	900
10/18/1982	52.30	50.56	744.00	900
01/03/1984	64.50	12.11	109.00	900
11/06/1984	60.50	64.22	1,132.00	900
12/04/1989	62.70	67.56	1,233.00	900
11/08/1994	79.50	37.22	365.00	900
04/05/2001	82.20	33.11	298.00	900

Traditional Range Condition vs Similarity Index

With Trendlines



Allotment Weighted Average Range Condition and Similarity Index

NM060

Date Printed: 4/18/200

65094 OTTO BRITTAIN

Data Information presented below is based on the allotment weighted average of range condition and similarity index ratings for the years included in the allotment monitoring evaluations. The trendline is based on linear regression for each data set.

Year	Range Condition	Similarity Index
1981	60.31	46.34
1985	60.44	46.94
1990	60.08	62.22
1995	59.86	32.68
2001	64.74	30.44

Weighted Average Range Condition vs Similarity Index

