

**Allotment Evaluation (AE)
For
Mesa Rica Breaks (#869)**

Permittee		<u>Authorization Number</u> 3001545		
Livestock Use	Preference AUMs	<u>Allotment</u> 00869	<u>Active</u> 134	<u>Suspended</u> 0
	Period of Use	<u>Allotment</u> Mesa Rica Breaks	<u>Kind</u> 12 Cattle	<u>Season of Use</u> 03/01 - 02/28
	Kind of Livestock	Cow Calf		
	Percent Public Land	AUMs are authorized at 100% public land		
Allotment Profile	Physical Description	<p>Allotment 869 is located approximately 7 miles south southwest of Conchas, in San Miguel County, New Mexico. Elevation on this allotment is roughly between 4,400 and 5,200 feet. Landforms on the allotment include; uplands, escarpments and toeslopes. This allotment consists of four parcels.</p> <p>Five soil types are identified within the federal lands in this allotment. They include:</p> <p>Conchas-Latom association, undulating. These soils consist of loam and sandy loams, with rooting depths approximately 8 to 40 inches. Parent materials of sandstone and shale comprise these soils. Average annual precipitation is around 16 inches. Vegetation is characterized by blue grama, black grama, galleta, sideoats grama and little bluestem.</p> <p>Crews-Tricon association, undulating. These soils consist of silt loams, with rooting depths 8 to 40 inches. Parent materials of mixed material derived from sandstone and shale comprise these soils. Average annual precipitation ranges between 14 and 18 inches. Vegetation is characterized by blue grama, sideoats grama, little bluestem, New Mexico feathergrass, western wheatgrass, pinyon and juniper.</p> <p>Latom-Newkirk-Rock outcrop association, rolling. These soils consist of fine sandy loams and rock outcrops, with shallow rooting depths of approximately 13 to 20 inches. Parent material is sandstone. Average annual precipitation is around 14 inches. Vegetation is characterized by sideoats grama, blue grama, black grama and little bluestem</p> <p>Redona-Quay association, undulating. These soils consist of loams, with rooting depths over 60 inches. Parent materials of alluvium derived from sandstone and shale comprise these soils. Average annual precipitation is around 14 inches. Vegetation is</p>		

		<p>characterized by blue grama, black grama, vine-mesquite, sideoats grama, western wheat, yucca and galleta.</p> <p>Ustorthents-Rock outcrop complex, very steep. This soil is stony with variable depths and texture. Parent materials of sandstone and shale comprise this soil. Average annual precipitation is around 16 inches. Vegetation is characterized by sideoats grama, pinyon, juniper and oak.</p>																						
	Land Status Acreage	<table border="0"> <tr> <td><u>BLM</u></td> <td><u>State</u></td> <td><u>Private</u></td> </tr> <tr> <td>723</td> <td>0</td> <td>0</td> </tr> </table>	<u>BLM</u>	<u>State</u>	<u>Private</u>	723	0	0																
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	Management Objectives	The allotment is under a ‘Custodial’ (‘C’) management category. ‘C’ category allotments have evidence of a “not apparent” to “upward” long term trend, have no significant resource conflicts and have a low potential for improvement in vegetative production.																						
	Key Forage Species	blue grama, black grama, sideoats grama, New Mexico feathergrass, western wheatgrass, little bluestem and galleta																						
	Grazing System	Rotational grazing between state, private and BLM lands																						
Management Evaluation	Actual Use	<p>Actual use has not been reported, the following values are based of paid bill reports.</p> <table border="0"> <thead> <tr> <th><u>AUMs</u></th> <th><u>Year</u></th> </tr> </thead> <tbody> <tr><td>132</td><td>2007</td></tr> <tr><td>132</td><td>2006</td></tr> <tr><td>132</td><td>2005</td></tr> <tr><td>132</td><td>2004</td></tr> <tr><td>132</td><td>2003</td></tr> <tr><td>132</td><td>2002</td></tr> <tr><td>132</td><td>2001</td></tr> <tr><td>132</td><td>2000</td></tr> <tr><td>132</td><td>1999</td></tr> <tr><td>132</td><td>1998</td></tr> </tbody> </table>	<u>AUMs</u>	<u>Year</u>	132	2007	132	2006	132	2005	132	2004	132	2003	132	2002	132	2001	132	2000	132	1999	132	1998
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	Utilization	Due to the lack of staff utilization studies have not been conducted. During the assessment visit it was determined that the allotment was either receiving slight to moderate amounts of utilization.																						
	Climate	<p>The past water year (Oct. 1, 2007 – Sept. 30, 2008) the average temperature has been nearly average (0 to 1 degrees Fahrenheit above average) and precipitation has been nearly average (0 to 1 inches above average). This should provide average plant growth on cool season and warm season plants.</p> <p>During the past 10 years (1998-2007) the temperature has been at or above average and precipitation has been fluctuating annually, but it is important to note that between 2001 and 2004 the 12 month running average was below the annual average. (Based on the Northeastern Plains Climate Division, New Mexico from the Western Regional Climate Center.)</p> <p>Climate change is a concern not only in New Mexico but globally. “Effects of increasing atmospheric CO₂ levels on plants</p>																						

		<p>are predicted to cause dramatic changes in native vegetation. Global climate change may accelerate rates of plant extinction, while ecosystem structure and function may shift. Ecological response to global changes in climate could shift ecosystems (i.e., shrublands replacing grasslands) and have effects, not only to an individual species, but to the ecosystem itself by additions and deletions of vegetation species” (Johnson, H.B., and H.S. Mayeux. 1992. Viewpoint: A view on species additions and deletions and the balance of nature. Journal of Wildlife Management 45:322-333.)</p> <p>We anticipate that our monitoring efforts will help indicate vegetation shifts, allowing for management modifications to address global climate change.</p>
	Trend	<p>No long term trend plots have been established on this allotment. A Rangeland Health Matrix was completed on June 5, 2008. The actual survey forms are available within the allotment file. Below is a summation of the information gathered by the survey. Within the Rangeland Health Attributes are three different categories of indicators. The categories include; Soil and Site Stability, Hydrologic Function and Biotic Integrity. The percent of indicator score was created by multiplying an assigned value for departure from site descriptions/reference areas by the number of indicators at the level. Departure scores are categorized as: none to slight = 5, slight to moderate = 4, moderate = 3, moderate to extreme = 2 and extreme = 1. For example, if all indicators under Soil/Site Stability were rated none to slight (best condition), the equation would be $5(\text{score}) * 10 \text{ indicators} = 50 / 50 * 100 = 100\%$ similarity, or what is expected based on an Ecological Site Description. Standards for each individual category are met when they are rated Proper Functioning Condition or Functioning at Risk-Upward Trend. Not meeting standards are ratings of; Functioning at Risk-Static, Functioning at Risk-Downward Trend and Non Functional.</p> <p>Soil and Site Stability Three indicators were deemed None to Slight, five were deemed Slight to Moderate and two were deemed Moderate. Rating: 86%</p> <p>Hydrologic Function Four indicators were deemed None to Slight, four were deemed Slight to Moderate and two were deemed Moderate. Rating: 86%</p> <p>Biotic Integrity Seven indicators were deemed None to Slight, while two were deemed Slight to Moderate. Rating: 95%</p>

		<p>Overall Rating: 90%</p> <p>Soils were rated at Proper Functioning Condition, Biotic Flora was rated at Proper Functioning Condition and Biotic Fauna was rated at Proper Functioning Condition.</p> <p>Current livestock does not appear to be adversely affecting this allotment - all standards are being met.</p>
	Riparian	There is no riparian vegetation within this allotment.
	Wildlife	<p>Seasonal home ranges in the allotment include those for deer, mountain lion, black bear, bobcat, fox, coyote, small mammals, bats, raptors, turkey vulture, songbirds, and a variety of insects.</p> <p>Deer are grazers/browsers; however there is little dietary overlap between deer and cattle. Best management practices i.e. rotational grazing would ensure that forage production within this area can support both wildlife and livestock on a sustained basis.</p>
	Threatened and Endangered Species	It is determined that there are no federally listed threatened or endangered species likely to be found in the subject allotment. There is no designated critical habitat for any species listed by the USFWS within the allotment.
Conclusions and Recommendations		Overall, the vegetation appears to be in good condition with good diversity. It is recommended that grazing be renewed for another 10 years without any changes to the lease.

