

Determination of Public Land (Rangeland) Health for 65022 NE SAND CREEK RANCH

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on the assessments, it is my determination that the public land within the NE Sand Creek Ranch #65022 meets the Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard will not be addressed.

/s/ T. R. Kreager
Assistant Field Manager

6/28/2005
Date

Standards of Public Land Health

Evaluation of 65022 NE SAND CREEK RANCH

Allotment

[10/21/2004]

The Roswell Field Office conducted rangeland health assessments at one study site within the NE Sand Creek Allotment #65022. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data (if Available) was incorporated into and in support of the field assessment. The summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
65022-IDSU-C027 (*)	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for the public land on the NE Sand Creek Ranch, allotment #65022. Ten (10) of these assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with previous data collected on one location within the allotment were utilized to make rangeland health determinations. This allotment is in the "C" (custodial) management category due to the small amount of public land present.

The ecological site assessed is a SD-3 Gravelly with influences from a CP-2 Shallow Sand and some loamy. This area is within a transitional zone between the Southern Desert and Canadian Plains major land resource areas. This public land parcel lies on a level shallow sand upland in the area of the Haystack Mountain breaks and escarpments with a (TOF) Torriorhents-Philder-Rock soil phase on very steep slopes. No livestock are currently on this allotment but muledeer (*Odocoileus hemionus*) and pronghorn (*Antilocapra americana*) are the two ungulates observed along with some lagomorphs.

The majority of indicators assessed rated in the None to Slight to Slight to Moderate range. Soil and hydrologic attributes deviated only slightly. Indicators with these attributes exclusively; rills, water flow patterns, pedestaling, litter movement, soil surface resistance to erosion and loss or degradation, plant community composition and distribution relative to infiltration and runoff and physical/biological crusts all exhibit slight departures.

Bareground however was estimated at 50-60 percent approaching the upper end of the range expected, resulting in a Moderate rating. This suggests the recent drought period has contributed to the percentage of bareground.

Functional/structural groups remain for the most part intact. Production is favorable at the moment with black grama (*Bouteloua eriopoda*), tobosa (*Pleuraphis mutica*), burrograss (*Scleropogon brevifolius*), sand dropseed (*Sporobolus cryptandrus*) and bush muhly (*Muhlenbergia porteri*) in abundance and producing seed head or tillers. Shrubs such as four-wing saltbush (*Atriplex canescens*), winterfat (*Ceratoides lanata*), javelinabush (*Condalia* spp.) and skunkbush (*Rhus* spp.) are all present and provide adequate browse for wildlife. Creosote (*Larrea tridentata*) is common throughout with mesquite (*Prosopis glandulosa*) scattered. This contributes to a Moderate to Extreme rating for invasive plants, but is not presently compromising this site's potential. There is physical and biological crusting evident throughout with a few minor breaks in continuity and rates Slight to Moderate.

Hydrology - The bareground indicator rated as moderate. The amount of bareground has possibly increased due to recent dry conditions and wind and water erosion processes.

All other indicators rated as none to slight or slight to moderate which shows a healthy ecological condition. Silt, sand and gravel deposits of Quaternary eolian and piedmont outcrop in the area. Sandstone of the Santa Rosa Formation outcrops in the area. Gypsum, dolomite, and siltstone of the Yates Formation also outcrop in the area.

Wildlife - Evaluation of the integrity of the biotic community considered several indicators as attribute indices for the area of interest. Biotic indicators are interrelated with several other indicators, including soil/site stability, hydrologic function, and vegetation. Several indicators are singularly biotic and address the vegetative aspect of the ecological site description, such as functional/structural groups and plant mortality & decadence.

The composition of vegetation reflects current climatic conditions, e.g., drought for the past several years. Range site production and cover of a variety of preferred plant species for wildlife, such as forbs and woody browse species, and the availability of seed for food and regeneration, is moderated by climate and land use. Wildlife species and populations would reflect the change in vegetative composition and present habitat condition. With respect to Special Status Species, none are known to occur in the area of interest at this time and the Habitat and Population indicators are, therefore, rated None to Slight.

It is the professional opinion of the Assessment Team that the public land within the NE Sand Creek Ranch allotment meets the Upland and Biotic standards. There are no Riparian issues present, therefore this standard was not addressed. See site notes and recommendations for further information regarding this assessment.

The (*) indicates that the assessment had one or more indicator(s) rated moderate/extreme or extreme. These indicators are:

- Invasive Plants

These indicators by themselves are not enough to rate the site as not meeting a standard but may warrant future monitoring.

Recommendations: A recommendation for regular scheduled monitoring should be put into place. At present this is a very productive site and provides adequate forage and habitat for wildlife. Although creosote is common, there is no immediate threat of encroachment. Brush control may be an option in the future only if this shrub begins to dominate which is not the case at present.

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 65022-IDSU-C027

Legal Land Desc	SWSW 5 0070S 0270E Meridian 23	Acreage	296
Ecosite	042CY001NM GRAVELLY SD-3	Photo Taken	Y
Watershed	13060003220 FILLMORE		
Observers	NAVARRO/SPAIN	Observation Date	10/21/2004
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	TPD	Soil Taxon Name	TORRIORTHENTS
Texture Class	NM644 GR-FSL	Soil Phase	TORRIORTHENTS- PHILDER-ROC
Texture Modifier	NM644 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	9.43	NOAA Growing Season Precipitation	7.3
NOAA Avg Annual Precipitation	13.09	NOAA Avg Growing Season Precipitation	10.9
Disturbances and Animal Use:	There are no livestock presently.		

Part 2. Attributes and Indicators

Attribute	Indicators	Departure from Ecological Site Description/Ecological Reference Areas				
		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						

S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground			X		
Comments: Now estimated at 50%.						
S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments: Only slight deviation.						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount				X	
Comments:						
B	Annual Production				X	
Comments: 600-800 lbs/ac or kg/ha is the estimation.						
B	Invasive Plants		X			
Comments: Creosote is common throughout but is not inhibiting the site's potential.						
B	Reproductive Capability of Perennial Plants					X
Comments:						

S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical and biological crusts seen.					
B	Wildlife Habitat				X	
Comments:						
B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat					X
Comments:	None known to occur.					
B	Special Status Species Populations					X
Comments:	None known to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	5	4
H	Hydrologic	0	0	1	7	3
B	Biotic	0	1	0	7	5

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets

Soil		0	1	9
Hydrologic		0	1	10
Biotic		1	0	12

Site Notes: This site was gps'd and a trend plot was established. Photographs were taken also. The site is characteristic of a more loamy to sandy loam with plants indicative of these soil types. Creosote is common throughout whereas the 1979 inventory did not show this shrub present. The area is prime habitat for mule deer and pronghorn. There is an escarpment to the west and south which has shallow sandstone and more rockier influences, but not to the immediate site. No livestock were observed at the time of assessment. The entire assessment area and the allotment itself has large amounts of forage. All grass and other plants have established an enormous seed source.

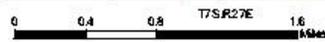
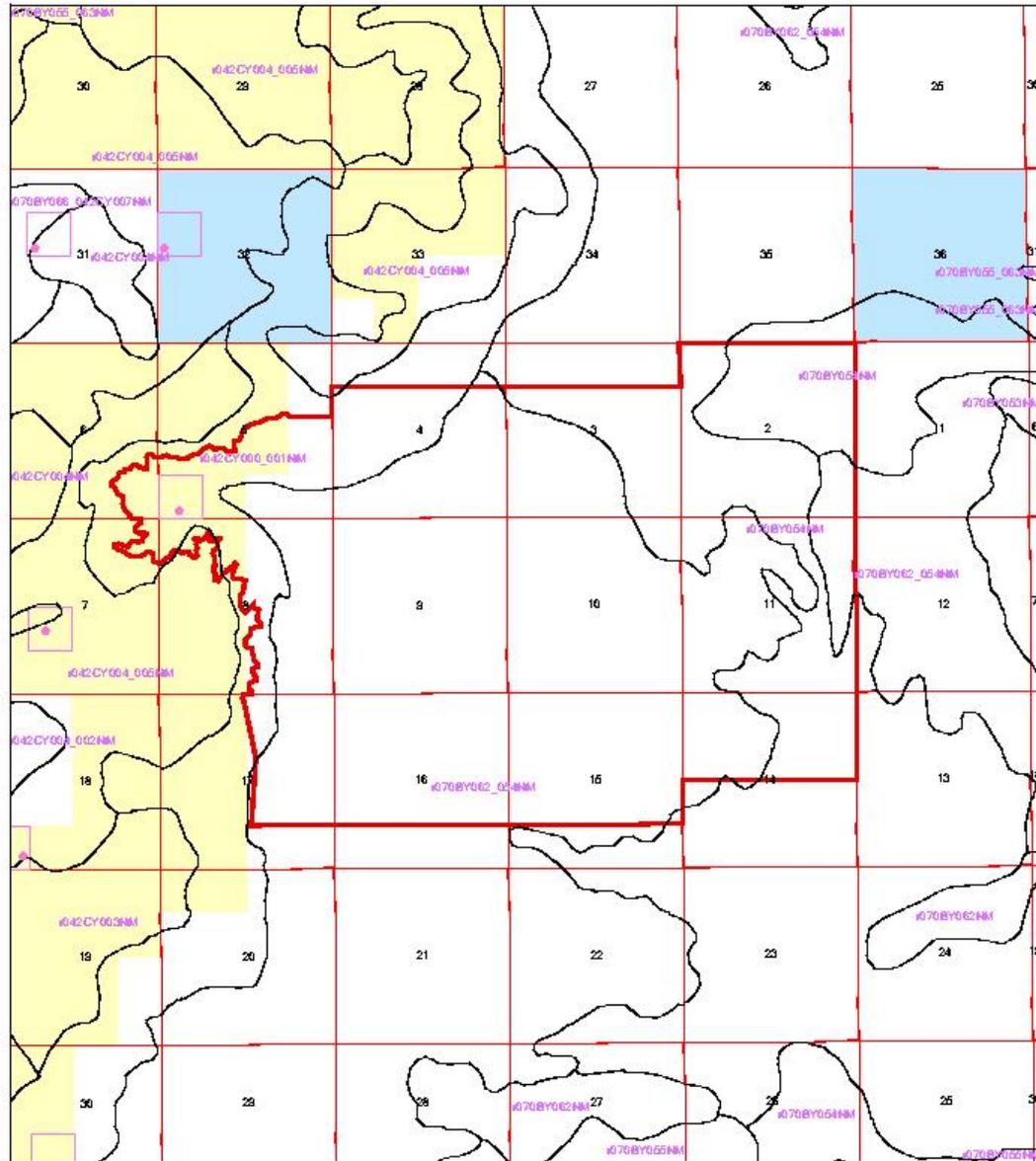




Rangeland Health Assessment

Ecological Sites

Allotment - 65022



- Study Plots
40 Acres
- Study Locations
- State
- Public
- Private

- Allotment Boundary
- Ecological Site Boundary

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data was compiled from various sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

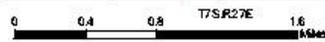
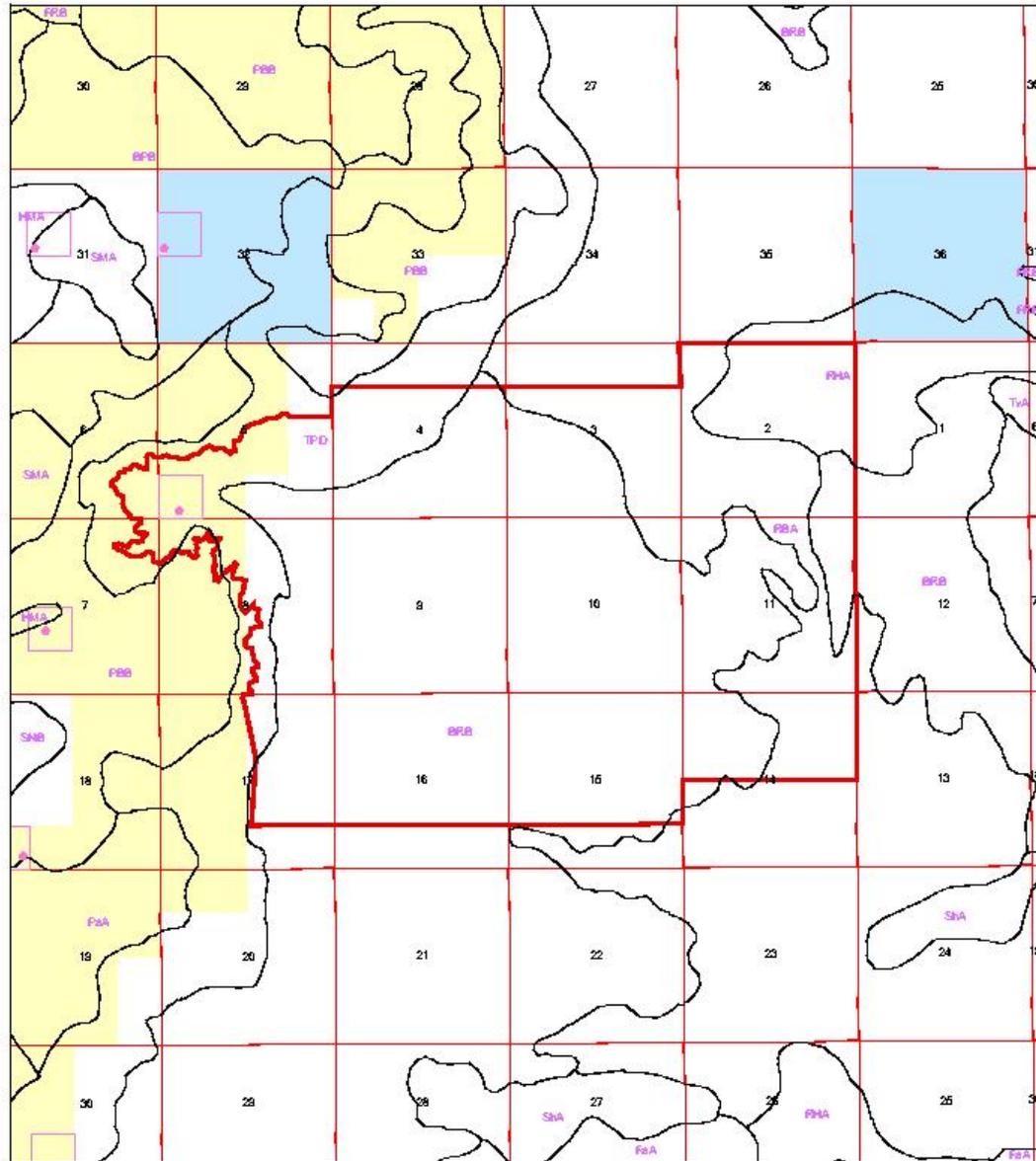
Produced by the RFO GIS Specialist on March 28, 2005.



Rangeland Health Assessment

Soil Mapping Units

Allotment - 65022



- Study Plots
40 Acres
- Study Locations
- State
- Public
- Private

- Allotment Boundary
- Soil Mapping Units

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