

Determination of Public Land (Rangeland) Health for 64081 DUH 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 Duh Ranch allotment #64081 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 was not addressed.

/s/ T. R. KREAGER
Assistant Field Manager

08/04/2004
Date

Standards of Public Land Health Evaluation of 64081 DUH RANCH Allotment [04/08/2004]

The Roswell Field Office conducted rangeland health assessments at one study site within the Duh Ranch Allotment #64081. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data 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
64081-IDSU-A168	X			X			N/A		

Twenty-two (22) indicators for Rangeland health were evaluated for the public land on the Duh Ranch, allotment #64081. Ten (10) of these assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with quantitative information gathered from previous data collected on one location were utilized to assess the rangeland health of the public land within the allotment. This allotment is in the "C" (custodial) category due to the small amount of public land present.

Several years of less than favorable precipitation resulting in dry conditions have had an impact on this allotment and the surrounding areas. This ecological site classifies as an SD-3 loamy with an Upton-Atoka soil association occurring on the uplands west of the Pecos River with slopes 0-5 percent. This site has an acreage total of 160 acres or 67 hectares, approximately. The site has not been monitored since 1991, so the long-term data was not referenced in regards to the attributes corresponding to rating the indicators. Most all the indicators rated at None to Slight to Slight to Moderate. The only indicators of concern are bareground and functional/structural groups. The ESD calls for 35% bareground and the present estimate of 50% approaches the upper end of the range expected. The number of functional/structural groups is also reduced and the grama (*Bouteloua* spp.) grass component missing. Tobosa (*Pleuraphis mutica*) and burrograss (*Scleropogon brevifolius*) remain onsite however. Filaree (*Erodium* spp.) is observed due to the late winter precipitation which may assist the site in recovery from the recent dry conditions. There are both physical and biological crusts which are holding the soil in place and protecting the pasture from sheet flow events as a result of violent thunderstorm activity.

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 as discussed above. No biotic indicators fell within the Moderate rating or higher rating. In addition to the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation. Wildlife Habitat and Population indicators rate Slight to Moderate, primarily for pronghorn antelope and a variety of non-game terrestrial species. 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. 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.

Hydrology - The bare ground indicator rated as moderate. The amount of bare ground has possibly increased due to recent dry conditions and also wind and water erosion processes. All other indicators rated as none to slight or slight to moderate. Sand and gravel deposits of Quaternary pediment deposits outcrop in the area.

It is the professional opinion of the Assessment Team that the public land within the Duh Ranch allotment #64081, 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.

Recommendations: A more rigorous monitoring schedule should be put into place in order to administer this site. The site was gps'd and located for future reference. Thirteen years between quantitative review may be too long a time frame to adequately assess this site. A qualitative evaluation coupled with quantitative information would further assist in arriving at any long-term management for the area.

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 64081-IDSU-A168

Legal Land Desc	NENE 35 0140S 0240E Meridian 23	Acreage	160
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007110 COTTONWOOD-WALNUT		
Observers	NAVARRO/BAGGAO	Observation Date	04/09/2004
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	UA	Soil Taxon Name	UPTON
Texture Class	NM666 L	Soil Phase	UPTON-ATOKA
Texture Modifier	NM666 GRAVELLY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	8.59	NOAA Growing Season Precipitation	6.47
NOAA Avg Annual Precipitation	12.65	NOAA Avg Growing Season Precipitation	10.45
Disturbances and Animal Use:			

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	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	Some past evidence of pedestaling.					

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S H	Bare Ground			X		
Comments :	Now at 50%. Approaches the upper end.					
S H	Gullies					X
Comments :	None on public; not an issue.					
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments :						
H	Litter Movement				X	
Comments :	Some by wind.					
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 :	Some lack of vegetation; some sheet flow, but remains adequate for site protection.					
S H B	Compaction Layer					X
Comments :						
B	Functional/Structural Groups			X		
Comments :	Some groups reduced; Tobosa patches, burrograss increasing and erodium are on site.					
B	Plant Mortality/Decadence				X	
Comments :	Some mortality; mostly drought influenced.					
H B	Litter Amount				X	
Comments						

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B	Annual Production				X	
Comments :	Only slightly less than long-term average.					
B	Invasive Plants				X	
Comments :	Very few invasives.					
B	Reproductive Capability of Perennial Plants					X
Comments :	Tiller and stolon formation is ok.					
S	Physical/Chemical/Biological Crusts				X	
Comments :	Physical crusts evident. There is some scattered biological crusting.					
B	Wildlife Habitat				X	
Comments :	Relatively flat grassland habitat.					
B	Wildlife Populations				X	
Comments :	No specific wildlife population data at this time. Species of concern include pronghorn antelope and a variety of terrestrial non-game species.					
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	0	0	1	5	4

H	Hydrologic	0	0	1	7	3
B	Biotic	0	0	1	8	4

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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.

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Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	1	9
Hydrologic		0	1	10
Biotic		0	1	12

Site Notes: Pronghorn (*Antilocapra americana*) habitat the allotment. Site was gps,d and located within the largest block of public land. Last monitoring on this site was 1991. Tried to remain on loamy upland as opposed to bottomland. A few horses were seen in the general vicinity of the site. Filaree (*Erodium* spp.) has grown since the late winter thunderstorm event. A bit of pebbling was observed which may suggest a small amount of A-horizon may have runoff.



