

Standards of Public Land Health Evaluation of 63085 BULL GAP RIM Allotment [11/16/2010]

The Roswell Field Office conducted rangeland health assessments at 1 study site within 63085 BULL GAP RIM. 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
63085-IDSU-A129 (*)	X			X	*		N/A		

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

- Plant Community Composition and Distribution Relative to Infiltration and Runoff
- Litter Amount
- Invasive Plants

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

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on the Bull Gap Rim allotment, #63085. Ten of these assessed soil site stability, 11 hydrologic functions and 13 assessed biotic integrity. These qualitative assessments in conjunction with quantitative information gathered from previous data collected at the trend study plot locations within the allotment were utilized to make rangeland health determinations. Quantitative evaluations are performed by the Roswell Field Office interdisciplinary teams, which include some or all of the following: ground and vegetative cover and composition, production, frequency and ecological condition. The collections which were initiated in the late 1970's/early 1980's, are scheduled and conducted approximately every 5 years. This allotment is in the "C" (Custodial) category.

This allotment contains 440 acres of public land. The study is located on one ecological site; Gyp-upland SD-2. A majority of the indicators for this location fell into the None to Slight or Slight to Moderate category. Three indicators were rated as a Moderate degree of departure from the ecological site description – Gullies, Soil Surface Resistance to Erosion, Reproductive Capability or Perennial Plants. Four indicators – Plant community composition and Distribution Relative to Infiltration and Runoff, Functional Structural Groups, Litter and Invasive Species,

were rated as a Moderate to Extreme departure from the Ecological Site description. Each were due to the level of soil being exposed in response to the level of mesquite and creosote present. The interdisciplinary team also estimated the production on this location to be approximately 80% to 100% of annual production, and noted that recent grazing here was not apparent.

There are no riparian areas on the public land within this allotment.

Recommendations: With the majority of the indicators falling in the None to Slight category or Slight to Moderate, this allotment is rated as “Meeting” the standards for Rangeland Health. Continue the rangeland monitoring studies to insure proper stocking rates are maintained and that the perennial grass cover continues to increase.

The invasive mesquite, creosote and broom snakeweed root systems are better able to take advantage of the available precipitation. Vegetation species which would serve to slow surface runoff have not been able to compete with the mesquite or creosote on the areas with higher percentages of slope. The soil aspect has areas or inclusions of desirable grass species which are serving to hold the soil in place. Grazing was not noted to be a limiting factor, nor was utilization of the forage species considered to be more than at a slight level. The team noted that an adjacent vegetation treatment had occurred recently and that the area is slow to respond. Monitoring data from 1991 also did not indicate almost any grass species present. At the time of this rangeland health review, desirable grass species were noted on site, with the potential for increasing in production and cover levels.

There is a potential to work with other agencies, such as the New Mexico State Land office or the Natural Resource Conservation Service (USDA-NRCS) to map and discuss the feasibility of implementing a vegetation treatment to reduce the amount of invasive species if warranted. This would not be economical if only applied to the 440 acres of public land. Recommend coordinating with other agencies for shrub treatments, followed by at least 2 full seasons of grazing rest if the treatments are implemented. A varied rate application, changing the amount of herbicide applied or implementing strips of application, or trying some experimental test plots on this soil area to determine the best application process before a wide area is treated would be recommended. The team noted that grazing itself does not seem to be having an adverse effect.

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 63085-IDSU-A129

Legal Land Desc	SENE 28 0090S 0090E Meridian 23	Acreage	440
Ecosite	042BY006NM GYP UPLAND SD-2	Photo Taken	Y
Watershed	13050003060 COTTONWOOD		
Observers	TRAUTNER, VINSON	Observation Date	11/16/2010
County Soil Survey	NM632 LINCOLN	Soil Var/Taxad	
Soil Map Unit	034	Soil Taxon Name	MALARGO
Texture Class	NM632	Soil Phase	MALARGO- BLUEPOINT
Texture Modifier	NM632 LOAM,LOAMY FINE SA		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation		NOAA Growing Season Precipitation	
NOAA Avg Annual Precipitation		NOAA Avg Growing Season Precipitation	
Disturbances and Animal Use:	Light animal use noted		

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:	Increasing alongside new gully formations					
S H	Water Flow Patterns				X	
Comments:	Soil is becoming unprotected.					
S H	Pedestals and/or Terracettes				X	
Comments:	Slight pedastalling, no exposed roots					
S H	Bare Ground				X	
Comments:	Ecological site description says 50%, Estimated at this location = 50%. Bare areas					

	connected					
S H	Gullies			X		
Comments:	Unstable gullies, not well vegetated					
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:	Moving downhill with the water flow					
S H B	Soil Surface Resistance to Erosion			X		
Comments:	dissolves quickly in water					
S H B	Soil Surface Loss or Degradation				X	
Comments:	loss of A horizon has brought gypic soil closer to the surface					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff		X			
Comments:	Gullies and water flow patterns, reduction in bunchgrasses					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups			X		
Comments:	dominated by shrubs, grass a minor component					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount		X			
Comments:	Esd = 16%, less than 5% litter at this location					
B	Annual Production				X	
Comments:	ESD = 588 lbs/acre - this location is within 60% of expected					
B	Invasive Plants		X			
Comments:	mesquite and creosote					
B	Reproductive Capability of Perennial Plants			X		
Comments:	Grass is getting choked out					
S	Physical/Chemical/Biological Crusts				X	
Comments:	some physical crusts					
B	Wildlife Habitat				X	

Comments:	food cover but little grass and forbs					
B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat					
Comments:	Na					
B	Special Status Species Populations					
Comments:	Na					

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	2	6	2
H	Hydrologic	0	2	2	6	1
B	Biotic	0	2	3	4	2

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	2	8
Hydrologic	The Lincoln County Soil Survey defines the soils for this location as a Malargo-Bluepoint association, hummocky. Slopes are defined as 0-8 percent. At this location, there were some water flow patterns developing, but the rocky - cobbly aspects of the soil were reducing or limiting the amount of water erosion. The location fits the Soil Survey description as well as the inclusions of Onite soils in areas between the dunes and very gravelly alluvial soils along the drainageways. The invasive shrubs found at this	2	2	7

	location were definitely influencing the amount of soil cover. While the shrubs do affect the impact of rainfall on the soil surface, the growth patterns do little to slow water flow across the soil planes. Grazing impacts were slight to minimal; the forage species which were present still had viable seedheads, late in the grazing season. The increasers or invasive shrub species were definitely influencing the amount of mineral and water availability to the desirable vegetation.			
Biotic	The invasive mesquite, creosote and broom snakeweed root systems are better able to take advantage of the available precipitation. Vegetation species which would serve to slow surface runoff have not been able to compete with the mesquite or creosote on the areas with higher percentages of slope. The soil aspect has areas or inclusions of desirable grass species which are serving to hold the soil in place. Grazing was not noted to be a limiting factor, nor was utilization of the forage species considered to be more than at a slight level. The team noted that an adjacent vegetation treatment had occurred recently and that the area is slow to respond. Monitoring data from 1991 also did not indicate almost any grass species present. At the time of this rangeland health review, desirable grass species were noted on site, with the potential for increasing in production and cover levels.	2	3	6
<p>Site Notes: 1. Very much dominated by broomweed, mesquite, saltbush, yucca and creosote. 2. Sporadic patches of areas with some sporobolus, muhly, 3-awns and burrograss. Other large areas with complete cover of shrubs, with some burrograss.</p> <p>Recommend coordinating with other agencies for shrub treatments, followed by at least 2 full seasons of grazing rest if the treatments are implemented. A varied rate application, changing the amount of herbicide applied or implementing strips of application, or trying some experimental test plots on this soil area to determine the best application process before a wide area is treated would be recommended. The team noted that grazing itself does not seem to be having an adverse effect.</p>				

Determination of Public Land (Rangeland) Health for 63085 BULL GAP RIM

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing (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 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 evaluated the local indicators were completed for this allotment. Based on these assessments, it is my determination that public land within the Bull Gap Rim allotment, #63085, meets the (1) 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/ J. Howard Parman
Assistant Field Manager

01/24/2011
Date