

Determination of Public Land (Rangeland) Health for 65030 VEST LAKE

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 these assessments, it is my determination that public land within Vest Lake, allotment #65030, 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/Karen Kelleher
Field Manager

5/25/2007
Date

Standards of Public Land Health Evaluation of 65030 VEST LAKE Allotment [11/27/2006]

The Roswell Field Office conducted Rangeland Health Assessments at one study site within allotment #65030 Vest Lake. These assessments evaluated Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of this study site. Existing monitoring data was incorporated into and in support of this field assessment. A 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
65030-WS147-C030 (*)	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Vest Lake, allotment #65030. 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 study location within this allotment were utilized to make rangeland health determinations. Quantitative evaluations are performed by the Roswell Field Office, which include some or all of the following: ground and vegetative cover and composition, production, frequency and ecological condition. These collections which were initiated in the late 1970's/early 1980's, are scheduled and conducted approximately every 5 years. This allotment is a "C" custodial category Section 15 due to small amounts of public land present.

Two previous data collections for this site were conducted. One in 1979 and 2005. The 2005 data still reflects the recent dry conditions. A total of 48 AUM's are permitted to graze yearlong on this allotment. Acreage on this CP-2 Sand Hills ecological site is 320 or 129 hectares on a Faskin (FaA) soil phase, fine sand on high terraces in eastern parts of area surveyed. Elevation is from 3,800 ft/1,151 m to 4,200 ft/1,272 m on 0 to 2 percent slopes. This soil association is deep, well-drained and formed in alluvial and eolian deposits. Jalmar and Roswell soil is also found in association soil on scattered dunes moderately deep to indurated caliche. No use of livestock was observed at present. Majority of indicators assessed rated None to Slight and Slight to Moderate. Plenty of litter was observed with a high estimate of 80 percent. This factors into reduced erosional potential because of mulching capacities of organic matter content.

Functional/structural groups rated Moderate as most of the dominant groups of bluestem species have been replaced by threeawn (*Aristida* spp.) and shinnery oak (*Quercus havardii*). Little (*Schizachyrium scoparium*) and sand bluestem (*Andropogon hallii*) still are present however but in lesser amounts. This site appears more degraded than expected but remains with a diversity of vegetation such as sideoats (*Bouteloua curtipendula*), black grama (*Bouteloua eriopoda*), hairy grama (*Bouteloua hirsuta*) and mesa dropseed (*Sporobolus flexuosus*). Mesquite (*Prosopis glandulosa*), cholla (*Opuntia imbricata*) and sand sage (*Artemisia filifolia*) are also recorded for

the major brush components. Invasives rates Moderate to Extreme due to high densities of mesquite and canopy cover on site as occurring quite common. All other indicators assessed fell within normal range of variability from expected parameters.

Wildlife - Evaluation of the integrity of biotic community considered several indicators as attribute indices for this 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.

In addition to standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation. A unique assemblage of terrestrial species and avifauna can be expected to use this ecosystem. Of significance are the sand dune lizard (*Scleropus arenicola*) and lesser prairie chicken (*Tympanuchus pallidicinctus*) known only to occur within the vicinity of this ecosystem. The vegetation community of interest is the shinnery oak-tall grass type only found in portions of this Field Office area. Key habitat components include sand bluestem, shinnery oak, sand dune lizard habitat features (dune blowouts), and lesser prairie chicken habitat features (booming grounds & nesting areas). Amount, condition and juxtaposition of these habitat features are used as habitat indicators for this assessment. This assessment begins by determining if this site is within "Core Areas" for lesser prairie chicken. Other important wildlife species and their habitats, such as desert mule deer (*Odocoileus hemionus*), pronghorn (*Antilocapra americana*) and a variety of game and non-game species are also considered in this assessment.

This area of interest (public land) does fall within the Core Area. Leks were recorded in 1988 just south and west of this allotment. This area may not appear to provide suitable habitat for sand dune lizard as this upland area may be too steep and shallow for this species. Desert mule deer inhabit this allotment and vicinity with habitat features and populations in good condition and similarly conducive to upland game birds. Too much mesquite is present for suitable pronghorn habitat therefore wildlife habitat was Moderate at best.

Special Status Species habitat rates Moderate as very little bluestem grass species are present to provide nesting cover for LPC. Additionally because of soil types, this parameter is marginal at best with very limited potential also due to the amount of invasives. Populations also rates Moderate for LPC with very little bluestem or other grasses suitable for nesting.

In the professional opinion of Assessment Team, public land within Vest Lake, allotment #65030 meets 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 evaluations on this allotment.

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: The public land for this site has some mesquite encroachment. This species is common throughout. Recommendation of chemical control to curtail mesquite in this pasture will re-establish perennial grass and other desirable species propagules. Although not a serious encroachment problem at present, careful evaluation is needed to monitor this situation.





RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 65030-WS147-C030

Legal Land Desc	SWSW 12 0080S 0310E Meridian 23	Acreage	320
Ecosite	070BY061NM SAND HILLS CP-2	Photo Taken	Y
Watershed	13060007050 WHITE LAKES		
Observers	NAVARRO/MOE	Observation Date	11/27/2006
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	FaA	Soil Taxon Name	FASKIN
Texture Class	NM644 LFS	Soil Phase	FASKIN
Texture Modifier	NM644 FINE SAND		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	17.17	NOAA Growing Season Precipitation	13.7
NOAA Avg Annual Precipitation	14.2	NOAA Avg Growing Season Precipitation	12.18
Disturbances and Animal Use:	No livestock observed at time of evaluation. This site is adjacent to a reclaimed oil/gas pad and access road. The allotment boundary fence is in need of repair but has not influenced this site as of yet.		

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:						
S H	Bare Ground				X	
Comments:	current estimate is 20%					
S H	Gullies				X	

Comments:	Some old gullying is evident on the access road that has been reclaimed leading into this area.					
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:	Threawn is abundant and found in higher amounts. Mesquite has become a problem on this upland site.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	80% is the current estimate					
B	Annual Production			X		
Comments:	600-800 lbs/ac or kg/ha is the current estimate					
B	Invasive Plants		X			
Comments:	mesquite is common throughout					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	physical crusts present					
B	Wildlife Habitat			X		
Comments:	good for deer- too much mesquite for pronghorn					
B	Wildlife Populations				X	
Comments:	good deer population					
B	Special Status Species Habitat			X		

Comments:	Because of soil type, marginal LPC at best: a little potential but invaded with mesquite and other invasives.					
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B	Special Status Species Populations			X		
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Comments:	Probably some use by LPC's from adjacent suitable habitat- very little bluestem or other grasses suitable for LPC.					
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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	0	8	2
H	Hydrologic	0	0	0	8	3
B	Biotic	0	1	5	3	4

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	0	10
Hydrologic		0	0	11
Biotic		1	5	7

Site Notes: This site is located just adjacent to a reclaimed oil and gas pad and access road. The disturbances from past activities have added to the abundance of mesquite and increaser grass species. No livestock were present however. Located between Button Mesa and lower more sandy deeper soil types, this area may not be suitable for LPC but upland birds and other ungulates like deer and pronghorn may be able to utilize this site. This site was gps'd and photographed.