

Standards of Public Land Health

Evaluation of 61009 DICKIE CANYON Allotment

[05/04/2006]

The Roswell Field Office conducted a Rangeland Health Assessment at one (1) study site within allotment #61009, Dickie Canyon. This assessment evaluated Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the study site and vicinity. Existing monitoring data was incorporated into and in support of this field assessment. A summary of this 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
61009-IDSU-A008 (*)	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Dickie Canyon, allotment #61009. Ten 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 rangeland health of public land within this allotment. This allotment is a "C" (custodial) category due to small amounts of public land present.

This CP-2 South Breaks ecological site on a southern exposure contains 212 acres/86 hectares public land in an allotment which is mostly private. Located in Quay county, approximately 4 mi/6.4 km northwest of Tucumcari, this soil phase is Rock Land consisting of 20 to 80 percent slopes and Latom stony sandy loam on 3 to 9 percent slopes. Elevation ranges from 4,500 ft/1,364 m to 5,000 ft/1,515 m. These two landforms form the High Plains Escarpment with soil that is hilly to very steep. Soil is shallow to very shallow with numerous outcrops of sandstone and caliche material overlying interbedded red-bed shale and sandstone on upland ridges weathered over time. Public land evaluated is at the western junction of Dickie Canyon and Conchas Canal. Only one previous data collection was performed in year 1991. Quantitative information is therefore lacking and will not be used as part of this assessment other than from an inventory standpoint. A limited amount of grazing is occurring here due to steepness.

Most indicators assessed fell within normal range of variability with None to Slight and Slight to Moderate ratings. Gully formation is quite common, basal of these escarpments on more steeper slopes, and display active erosion with bottomland vegetation. Gullies rates Moderate with some headcuts observed. Mesquite (*Prosopis glandulosa*) is common in the bottomland and is steadily encroaching upslope. Very limited forage is available in these areas. Invasive plants made up of snakeweed (*Gutierrezia sarothrae*) and mesquite both contribute to a Moderate rating. Soil attributes such as physical crusting is limited at best with virtually no biological crusting occurring and is only a minor interspace component. Stability of the soil is adequate however

and provides for site protection. This site has high productive potential considering its location and aspect. Numerous cottonwood (*Populus* spp.) saplings were observed along with juniper (*Juniperus* spp.) and cholla (*Opuntia imbricata*) representing the tree and shrub component respectively.

Wildlife - Evaluation of the integrity of 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 vegetative aspects of the ecological site description, such as functional/structural groups and plant mortality & decadence. A decline and static status in mule deer (*Odocoileus hemionus*) and quail (*Callipepla* spp.) populations has been documented as per conversation with the operator. Wild turkey (*Meleagris gallopavo*) was present however. Populations have not been at potential for these and other wildlife though. A predator base in the form of coyote (*Canis latrans*) is present and sustaining itself here which suggests a decent prey base. No Special Status Species Habitat or Populations concerns occur on this allotment.

It is the professional opinion of the Assessment Team, public land within allotment #61009, Dickie Canyon meets Upland and Biotic Standards. There are no Riparian issues present therefore this standard was not addressed. See site notes, comments 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: Limited opportunity for livestock grazing due to slopes is normal here and should continue. Distribution of livestock between bottomland and steeper slopes is an issue. Yearlings and possibly goats would best utilize this site. Prudent timing and duration of grazing is key in preventing this site from deteriorating. Deferred grazing systems varying the season of grazing and rest in successive years is necessary to maintain and improve the vegetative community. These continued actions will only enhance wildlife habitat and over time should lend itself to bringing populations back to sustainable levels.

A closer evaluation is necessary for public land and also surrounding private to gauge mesquite encroachment. This invasive shrub although native could be possibly spot-treated at this stage before entire landscapes are encroached upon.

Again disposal of these isolated tracts would only serve to administer those other well-blocked parcels better in the future. From a logistical standpoint, this makes better sense and could possibly serve to only enhance landscape management as a whole regardless of land status.

Taking into account no legal access and land-locked by private estate should serve as a strong foundation for disposal.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 61009-IDSU-A008			
Legal Land Desc	NWNW 5 0110N 0300E Meridian 23	Acreage	212
Ecosite	070BY060NM BREAKS SOUTH CP-2	Photo Taken	Y
Watershed	11080006080 MIDDLE PAJARITO		
Observers	ARTHUN/MCFERRAZ	Observation Date	05/24/2006
County Soil Survey	NM676 N. QUAY	Soil Var/Taxad	
Soil Map Unit	RU	Soil Taxon Name	ROCK LAND
Texture Class	NM676 ST-SL	Soil Phase	ROCK LAND
Texture Modifier	NM676		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	14.44	NOAA Growing Season Precipitation	11.42
NOAA Avg Annual Precipitation	11.64	NOAA Avg Growing Season Precipitation	9.71
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:						

S H	Bare Ground				X	
Comments:	33% is the current estimate.					
S H	Gullies			X		
Comments:	Vegetation exists in bottom-mainly find gullies on steep slopes					
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:	blue grama, mesquite, cholla, juniper, threeawn, snakeweed yucca and opuntia found-					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount				X	
Comments:	10-15% is the current estimate.					
B	Annual Production				X	
Comments:	300-350 lbs/ac or kg/ha is the current estimate.					
B	Invasive Plants		X			
Comments:	Mesquite is common in bottomland and encroaching upslope.					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts			X		
Comments:	bio crust absent from site; physical crust limited at best-					

B	Wildlife Habitat				X	
Comments:	Encroachment of mesquite in lowlands-little forage					
B	Wildlife Populations			X		
Comments:	Decline in deer, quail populations, per owner/operator- insect pops include nats, locust, horse flies, mosquitos; Herps; lizards, snakes. Predator base present; would conclude a decent rodent population-turkey present.					
B	Special Status Species Habitat					X
Comments:	No special status species habitat concerns occur.					
B	Special Status Species Populations					X
Comments:	No special status species populations concerns 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	2	5	3
H	Hydrologic	0	0	1	7	3
B	Biotic	0	1	1	6	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	2	8
Hydrologic		0	1	10
Biotic		1	1	11

Site Notes: Mesquite encroaching on site; No livestock present at evaluation. Trend plot set with rebar and t-post; site gps'd with step-point and double sampling conducted; photos taken as well.

Determination of Public Land (Rangeland) Health for 61009 DICKIE CANYON

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 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 Dickie Canyon, allotment #61009, 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/ EDDIE BATESON
Assistant Field Manager

09/12/2006
Date