

Standards of Public Land Health

Evaluation of 64001 LITTLE COWBOY DRAW Allotment [01/11/2008]

The Roswell Field Office conducted Rangeland Health Assessments at 2 study sites within allotment #64001, Little Cowboy Draw. These assessments evaluated Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data and Ecological Site Descriptions were 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
64001-#1-F156	X			X			N/A		
64001-#2-F157	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Little Cowboy Draw, allotment #64001. Of these, 10 assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with ecological site descriptions and quantitative information gathered from previous data collected on 2 trend plot study locations 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.

Allotment Little Cowboy Draw, an "I" category allotment is located approximately 10 miles west off Stargrass County Road between drainages Fifteen Mile Arroyo and Little Cowboy Draw. Current authorization is 213 AU's (Animal Units) @ 64% public land use. Cattle, horses and sheep are the class of livestock authorized. Pasture #1 is a CP-3 loamy ecological site and encompasses 2,427 acres (983 hectares). Soil phase is a Pastura-Darvey (PDB) association, moderately undulating. Found on plateaus in northwestern parts of survey area, this unit is on 0-5% slopes between 4,600 ft/1,394 m and 4,900 ft/1,485 m. Pastura soil, shallow and well-drained is on ridges and knolls and Darvey, deep and well-drained is on alluvial side slopes and in depressional areas. Pastura and Darvey formed in calcareous alluvium and derived dominantly from limestone respectively.

All indicators assessed for this pasture rated None to Slight and Slight to Moderate. Moderate use by livestock in some upland areas was observed but current rotations are allowing for more uniform utilization levels at intermediate ranges. Therefore the majority of parameters are either being met or exceeded for all soil, hydrologic and biotic attributes and fall within normal range

of variability. Tobosa (*Plueraphis mutica*) along with cholla (*Opuntia imbricata*) are populating the draws. Vine mesquite (*Panicum obtusum*) and burrograss (*Scleropogon brevifolius*) are two grasses which are adding to annual production. Current annual production estimate is 1000 lbs/ac or 455 kg/ha and is comprised of favorable perennial grass species. The road leading into this pasture is along an ecotone with shallow, loamy and draw influences. Wildlife habitat for pronghorn (*Antilocapra americana*) and mule deer (*Odocoileus hemionus*) is excellent and good respectively.

Pasture #2 is 2,428 acres/983 hectares is size on a CP-3 shallow ecological site. Soil association is (DPC) Deama-Pastura, moderately rolling. Slope is 0-15% and between 4,400 ft/1,333 m and 4,900 ft/1,485 m elevation. Deama and Pastura soil is found on back slopes, and ridges or foot slopes respectively. Both soil types are shallow and well-drained. Deama formed in residuum derived dominantly from limestone. Pastura formed in calcareous alluvium mixed with eolian material. The majority of indicators assessed fell well within normal range of variability. This site is located on an upland with very few invasive plant issues. The grama grass component is evident along with adequate forb production. New Mexico feathergrass (*Stipa neomexicana*) is also a grass species observed in an isolated population. No livestock use was observed here but sheep and cattle were utilizing the lower reaches next to a water source which is named Government Waterhole located at the mouth of Little Cowboy Draw. Wildlife habitat for pronghorn (*Antilocapra americana*) and mule deer (*Odocoileus hemionus*) is excellent and good respectively. No special status species exist for this allotment.

It is the professional opinion of the Assessment Team, public land within allotment #64001 Little Cowboy Draw, 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.

Recommendations: Current rotation of livestock to adequately utilize the forage evenly should continue. Water sources are spaced at intervals that are commensurate with resource protection.

Recommend a future burn project to restore the tobosa draw leading into Little Cowboy Pasture. Fuel loads here lend themselves to a hot burn to control the cholla infestation which has encroached through this draw. With a proper burn plan for fall or spring, this draw can be restored and brought back to a healthy state.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 64001-#1-F156			
Legal Land Desc	NWSE 21 0040S 0200E Meridian 23	Acreage	2427
Ecosite	070CY109NM LOAMY CP-3	Photo Taken	Y
Watershed	13060005040 FIFTEEN MILE		
Observers	NAVARRO/POST	Observation Date	04/15/2008

County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	PDB	Soil Taxon Name	PASTURA
Texture Class	NM644	Soil Phase	PASTURA-DARVEY
Texture Modifier	NM644 LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	9.83	NOAA Growing Season Precipitation	7.66
NOAA Avg Annual Precipitation	9.49	NOAA Avg Growing Season Precipitation	7.58
Disturbances and Animal Use:	Livestock observed at this site. Two-tracks are beginning to gully over in some places, but still in good travable shape.		

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:	10-15% is the current estimate.					
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:	good O.M. content in soil					

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:						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount				X	
Comments:	30-40% is the current estimate					
B	Annual Production					X
Comments:	1000 lbs/ac or kg/ha is the current estimate					
B	Invasive Plants			X		
Comments:	cholla scattered					
B	Reproductive Capability of Perennial Plants				X	
Comments:	Moderate use by livestock may be inhibiting some capability.					
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	
Comments:	Excellent for pronghorn; fair for deer					
B	Wildlife Populations				X	
Comments:	Pronghorn and deer were observed.					
B	Special Status Species Habitat					X
Comments:	N/A					
B	Special Status Species Populations					X
Comments:	N/A					

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	6	4
H	Hydrologic	0	0	0	8	3
B	Biotic	0	0	1	8	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		0	1	12

Site Notes: This site is located along an ecotone which is separated by the two-track ranch road. Upland and loamy draw area are both represented here with production and ground cover much higher in the tobosa draw . Livestock observed throughout this pasture.

Moderate use by livestock is quite evident on the upland area. The tobosa draws are filled with cholla and enough fuel to carry and clean out the stagnant and decadent vegetation. Pronghorn observed in this allotment and all those surrounding.

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 64001-#2-F157

Legal Land Desc	SWNE 19 0040S 0200E Meridian 23	Acreage	2428
Ecosite	070CY113NM SHALLOW CP-3	Photo Taken	Y
Watershed	13060005040 FIFTEEN MILE		
Observers	NAVARRO/POST	Observation Date	04/15/2008
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	DPC	Soil Taxon Name	DEAMA

Texture Class	NM644 L	Soil Phase	DEAMA-PASTURA
Texture Modifier	NM644 GRAVELLY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	9.83	NOAA Growing Season Precipitation	7.66
NOAA Avg Annual Precipitation	9.49	NOAA Avg Growing Season Precipitation	7.58
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:	40-50% is the current estimate					
S H	Gullies					X
Comments:	only associated with roads and two-tracks					
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:						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	20-30% is the current estimate.					
B	Annual Production			X		
Comments:	500-550 lbs/ac or kg/ha is the current estimate					
B	Invasive Plants					X
Comments:						
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	
Comments:	Excellent for pronghorn; fair for deer and upland birds.					
B	Wildlife Populations				X	
Comments:	pronghorn observed					
B	Special Status Species Habitat					X
Comments:	N/A					
B	Special Status Species Populations					X
Comments:	N/A					
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	6	4
H	Hydrologic	0	0	0	7	4
B	Biotic	0	0	1	6	6

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		0	1	12

Site Notes: This upland site is less productive but with more diversity of plant species. *Stipa* species can be found in several isolated pockets intermingled with the grama grass component.

No livestock were observed here but at the bottom portion of this pasture leading into this study area. These bottomland draw sites are good candidates for Rx burn projects to remove standing decadent/stagnant plant material and cholla as well. Like the rest of all those sites evaluated, dry winter and spring conditions lend themselves to possible range fires from lightning strikes or human causes.

Determination of Public Land (Rangeland) Health for 64001 LITTLE COWBOY DRAW

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 Little Cowboy Draw, allotment #64001, 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/ BRAD PENDLEY
Assistant Field Manager

09/19/2008
Date