

## Standards of Public Land Health

### Evaluation of 64046 COTTONWOOD Allotment

[ 11/19/2010 ]

The Roswell Field Office conducted rangeland health assessments at 3 study sites within 64046 COTTONWOOD. 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
64046-BADGER-F215	X			X			N/A		
64046-INDIAN-F217	X			X			N/A		
64046-POLLARD-F214	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on the Cottonwood allotment, 64046. 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 "M" (Maintain) category.

This allotment contains 5,611 acres of public land. The studies are located on two different ecological sites; Sandy SD-3 and Loamy SD-3.

The first study, located in Badger Pasture, is on a Sandy SD-3 ecological site. A majority of the indicators for this pasture fell in the "None to Slight" or the "Slight to Moderate" category. Only the indicator for Plant Mortality/Decadence was rated as a "Moderate" departure from the ecological site description. The team noted that mesquite was dying, but noted that a vegetation treatment had occurred recently in this pasture, the goal being to reduce the amount of mesquite. Evidently the treatment had been effective. The team also noted the salt cedar pockets were established along the draw, and that this draw eventually drained to the Pecos River. It was the teams recommendation the salt cedar populations be mapped for future consideration of a

vegetation treatment. Good seed head development was also noted as well as good vegetative species diversity.

The second study, located in Indian Pasture is also on a Sandy SD-3 ecological site. The indicator for Plant Mortality/Decadence was rated as “Slight to Moderate”, but the team rated the amount of litter as “Moderate” noted because of the amount of dying and disintegrating mesquite. The mesquite had been subjected to a vegetation treatment recently. The remaining indicators for rangeland health were rated as either “None to Slight” or “Slight to Moderate” for this pasture. The team again noted that there was good species diversity, with good levels of reproductive material present.

The Pollard Pasture is considered to be the Loamy SD-3 ecological site. Again a majority of the indicators for this location fell into the None to Slight category or the Slight to Moderate category. The indicator for Plant Mortality/Decadence was again rated as “Moderate” due to a recent vegetation treatment on mesquite.

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 and good plant composition remains. 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 salt cedar if warranted.

## RFOs Upland and Biotic Standard Assessment Summary Worksheet

### SITE 64046-BADGER-F215

Legal Land Desc	NENE 19 0060S 0260E Meridian 23	Acreage	640
Ecosite	042CY004NM SANDY SD-3	Photo Taken	Y
Watershed	13060003200 FIVE MILE		
Observers	ARNOLD, ORTEGA & COLBERT	Observation Date	11/19/2010
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	BBB	Soil Taxon Name	BASCAL
Texture Class	NM644 FSL	Soil Phase	BASCAL- SOTIM
Texture Modifier	NM644 GRAVELLY SANDY LOA		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	0	NOAA Growing Season Precipitation	0
NOAA Avg Annual Precipitation	0	NOAA Avg Growing Season Precipitation	0
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:	Short and stable water flow patterns					
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground				X	

Comments:						
S H	Gullies				X	
Comments:	As expected near the draw					
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:	Creosote pockets, salt cedar along the draw and some scattered snakeweed					
B	Plant Mortality/Decadence			X		
Comments:	Evidence of a mesquite treatment					
H B	Litter Amount					X
Comments:						
B	Annual Production					X
Comments:						
B	Invasive Plants				X	
Comments:	Salt cedar along the draw, creosote pockets					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts					X
Comments:						
B	Wildlife Habitat					X

Comments:						
B	Wildlife Populations					X
Comments:						
B	Special Status Species Habitat					
Comments:	Not applicable					
B	Special Status Species Populations					
Comments:	Not applicable					

### 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	4	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	10

Site Notes: Good cover with desirable grasses bearing alot of seed heads. Recommend mapping cresote and the salt cedar along the draw to consider for a vegetation treatment. Pasture looks good overall.

## RFOs Upland and Biotic Standard Assessment Summary Worksheet

### SITE 64046-INDIAN-F217

Legal Land Desc	SWNW 31 0060S 0260E Meridian 23	Acreage	2200
Ecosite	042CY004NM SANDY SD-3	Photo Taken	Y
Watershed	13060003200 FIVE MILE		
Observers	ARNOLD, ORTEGA & COLBERT	Observation Date	11/19/2010
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	BBB	Soil Taxon Name	BASCAL
Texture Class	NM644 FSL	Soil Phase	BASCAL- SOTIM
Texture Modifier	NM644 GRAVELLY SANDY LOA		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	0	NOAA Growing Season Precipitation	0
NOAA Avg Annual Precipitation	0	NOAA Avg Growing Season Precipitation	0
Disturbances and Animal Use:	Oil & gas activity, livestock observed in this pasture.		

### 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:	short and stable water flow patterns.					
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground				X	

Comments:						
S H	Gullies				X	
Comments:	only in drainages					
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 ground cover with grass species					
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:	Creosote and broom snakeweed present. The mesquite shows that it was treated.					
B	Plant Mortality/Decadence				X	
Comments:	Mesquite dying due to vegetation treatment					
H B	Litter Amount			X		
Comments:	Litter is a result of the dying mesquite					
B	Annual Production				X	
Comments:						
B	Invasive Plants				X	
Comments:	Consider spot treatment on creosote.					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts					X
Comments:						
B	Wildlife Habitat					X

Comments:						
B	Wildlife Populations					X
Comments:						
B	Special Status Species Habitat					
Comments:	Not applicable					
B	Special Status Species Populations					
Comments:	Not applicable					

### 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	5	5
H	Hydrologic	0	0	1	6	4
B	Biotic	0	0	1	5	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	0	10
Hydrologic		0	1	10
Biotic		0	1	10

Site Notes: Pasture looks good overall. Good ground cover of desirable grasses with a lots of seed remaining.

## RFOs Upland and Biotic Standard Assessment Summary Worksheet

### SITE 64046-POLLARD-F214

Legal Land Desc	NWNW 22 0060S 0250E Meridian 23	Acreage	2771
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060003200 FIVE MILE		
Observers	ARNOLD,ORTEGA & COLBERT	Observation Date	11/19/2010
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	HRB	Soil Taxon Name	HOLLOMEX
Texture Class	NM644 L	Soil Phase	HOLLOMEX- MILNER-REEVES
Texture Modifier	NM644 MOIST LOAMS		
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:	Livestock observed in this pasture.		

### Part 2. Attributes and Indicators

Attribute	Indicators	Departure from Ecological Site Description/Ecological Reference Areas				
		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:	Short and stable water patterns					
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground					X

Comments:						
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:						
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:	50% or more of mesquite was dead due to a past treatment which occurred in 2003.					
H B	Litter Amount					X
Comments:						
B	Annual Production					X
Comments:						
B	Invasive Plants				X	
Comments:	Mesquite					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts					X
Comments:						
B	Wildlife Habitat					X

Comments:						
B	Wildlife Populations					X
Comments:						
B	Special Status Species Habitat					
Comments:	not applicable					
B	Special Status Species Populations					
Comments:	not applicable					

**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	4	6
H	Hydrologic	0	0	0	5	6
B	Biotic	0	0	1	4	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	10

Site Notes: This pasture looks good; excellent stands of desirable grasses including grammas with a lot of seed heads.

# **Determination of Public Land (Rangeland) Health for 64046 COTTONWOOD**

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 Cottonwood allotment, #64046, meets the (1) Uplands 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