

Standards of Public Land Health Evaluation of allotment #64007 Pierce Ranch [04/22/2008]

The Roswell Field Office conducted Rangeland Health Assessments at 3 study sites within allotment #64007, Pierce Ranch. These assessments evaluated 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 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
64007-CREEK #1-E191	X			X			N/A		
64007-CREEK #2-E190	X			X			N/A		
64007-EAST-E188	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Pierce Ranch, allotment #64007. Ten of these 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 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.

Pierce Ranch is located approximately 25 miles north of Roswell in the Salt Creek 100K. Burt's Canyon, East Fork and Middle Fork all meet at a common drainage where all three converge southwest of the Ft. Sumner junction off Arroyo del Macho that divides this allotment. A major gas pipeline traverses across this allotment northwesterly. Current permitted use is 160 animal units (AU's) yearlong @ 73% public land for this Section 3 permit. Cattle and horses are the class of livestock authorized for a total of 1,402 animal unit months (AUM's). Creek #1, Creek #2 and East Pastures are CP-3 gravelly, limestone hills and loamy ecological sites respectively.

Pronghorn (*Antilocapra americana*) and mule deer (*Odocoileus hemionus*) habitat is excellent and good respectively. Lagomorphs, upland birds and rodent activity are quite high suggesting a diverse landscape and more than adequate habitat conditions. Topography here varies from flat terrain with grasses tobosa (*Pleuraphis mutica*) and burrograss (*Scleropogon brevifolius*)

dominating those bottomlands and draws to shallow and gravelly uplands with intermediate shrubby influences containing plants such as catclaw (*Acacia* spp.), sacahuista (*Nolina microcarpa*) and cholla (*Opuntia imbricata*).

Indicators assessed rated None to Slight and Slight to Moderate for all three sites. Soil, hydrologic and biotic attributes exhibited normal range of variability from all parameters both expected and for those appropriate descriptions or ecological reference areas.

It is the professional opinion of the Assessment Team, public land within allotment #64007, Pierce Ranch 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: Recommend current rotation of livestock for this allotment, continue. Although historically this allotment was authorized for sheep, no concerns exist pertaining to cholla or other brush species infestations. Oil and gas activity in regards to roads and pads is not causing any problems at present.

Current monitoring schedule should continue for this allotment. This area is very popular for hunters. Deer, pronghorn, upland birds and Barbary sheep (*Ammotragus lervia*) are some of the species that are hunted here. Perhaps additional hunting patrols could be utilized ensuring this area is not compromised by excessive hunter-made two-tracks and other illegal activities.

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 64007-CREEK #1-E191

Legal Land Desc	NENE 9 0060S 0220E Meridian 23	Acreage	1,895 ac (767 ha)
Ecosite	070CY119NM GRAVELLY CP-3	Photo Taken	Y
Watershed	13060005040 FIFTEEN MILE		
Observers	NAVARRO/POST	Observation Date	04/28/2008
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	EaC	Soil Taxon Name	ECTOR
Texture Class	NM644 VCL	Soil Phase	ECTOR
Texture Modifier	NM644 VERY COBBLY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	5.2	NOAA Growing Season Precipitation	4.08
NOAA Avg Annual Precipitation	5.46	NOAA Avg Growing Season Precipitation	4.32
Disturbances and Animal Use:	No livestock observed at evaluation. Oil and gas activity is high with pads and access roads. Archaeological sites are found throughout 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:						
S H	Pedestals and/or Terracettes				X	
Comments:						

S H	Bare Ground				X	
Comments:	current estimate is 40%					
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:						
H B	Litter Amount					X
Comments:	current estimate is 20%					
B	Annual Production				X	
Comments:	current estimate is 500-550 lbs/ac or kg/ha					
B	Invasive Plants				X	
Comments:	catclaw and cholla less than scattered					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:						

B	Wildlife Habitat				X	
Comments:	good for pronghorn and deer					
B	Wildlife Populations				X	
Comments:	adequate pops					
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	0	7	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	0	13

Site Notes: This site has been somewhat impacted by gas pad and access road activity on the fringes. Gas pads are scattered throughout and are continuing to expand. This gravelly site has some rock, gravel and cobble at the surface which aids in infiltration. Trend plot was reset and cage is missing.

Overall vegetative diversity is very good. No brush problems exist at the moment.

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 64007-CREEK #2-E190

Legal Land Desc	SESW 26 0050S 0210E Meridian 23	Acreage	1,895 ac (767 ha)
Ecosite	070CY107NM LIMESTONE HILLS CP	Photo Taken	Y
Watershed	13060005040 FIFTEEN MILE		
Observers	NAVARRO/POST	Observation Date	04/28/2008
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	DRD	Soil Taxon Name	DEAMA
Texture Class	NM644 GRV-L	Soil Phase	DEAMA-ROC- THREADGILL
Texture Modifier	NM644 VERY GRAVELLY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	5.2	NOAA Growing Season Precipitation	4.08
NOAA Avg Annual Precipitation	5.46	NOAA Avg Growing Season Precipitation	4.32
Disturbances and Animal Use:	No livestock observed but use is by deer and lagomorphs.		

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:						
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground					X

Comments:	current estimate is 10%					
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:						
H B	Litter Amount					X
Comments:	current estimate is 25%					
B	Annual Production				X	
Comments:	500 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:	weak physical/good biotic					
B	Wildlife Habitat				X	

Comments:	Very good deer habitat/fair for deer					
B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat					X
Comments:	N/A					
B	Special Status Species Populations					
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	5	5
H	Hydrologic	0	0	0	6	5
B	Biotic	0	0	0	7	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 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	0	12

Site Notes: The study plot is located in rough and rocky terrain. Excellent deer habitat and no doubt is hunted heavily. No real problems exist here. This site encompasses some loamy pockets along the rocky interface as runoff deposits sediments as a stair-step along slope.

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 64007-EAST-E188

Legal Land Desc	NWNE 1 0060S 0220E Meridian 23	Acreage	1,690 ac(684 ha)
Ecosite	070BY052NM LOAMY CP-2	Photo Taken	Y
Watershed	13060003200 FIVE MILE		
Observers	NAVARRO/POST	Observation Date	04/28/2008
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	5.2	NOAA Growing Season Precipitation	4.08
NOAA Avg Annual Precipitation	5.46	NOAA Avg Growing Season Precipitation	4.32
Disturbances and Animal Use:	Livestock are present and using this pasture at conservative levels. Trailing is quite evident along the county road as the herd moves to and from watering points.		

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:	30% 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:						
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:	current estimate is 50%					
B	Annual Production				X	
Comments:	700-800 lbs/ac or kg/ha is the current estimate					
B	Invasive Plants					X
Comments:						
B	Reproductive Capability of Perennial Plants				X	
Comments:	Conservative use by livestock is evident on blue grama (<i>Bouteloua gracilis</i>).					
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	

Comments:	prime pronghorn habitat and fair for deer					
B	Wildlife Populations				X	
Comments:						
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	0	7	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	0	13

Site Notes: Livestock are using this pasture at present. Trailing is quite evident along the county road. Grass is grazed, ie blue grama while tobosa and burrograss are more or less left alone. No brush problems exist, but oil and gas activity is occurring all over this allotment.

Determination of Public Land (Rangeland) Health for #64007 Pierce Ranch

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 Pierce Ranch, allotment #64007, 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

May 7, 2009 _____
Date