

# **Determination of Public Land (Rangeland) Health for 65091 RAT CAMP**

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 Rat Camp, allotment #65091, 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/Karen Kelleher  
Field Manager

5/25/07  
Date

## Standards of Public Land Health Evaluation of 65091 RAT CAMP Allotment [ 12/15/2005 ]

The Roswell Field Office conducted Rangeland Health Assessments at five (5) study sites within Rat Camp, allotment #65091. These assessments evaluated Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within each study location. Existing monitoring data was incorporated into and in support of these field assessments. 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
65091-BIG #1-D180	X			X			N/A		
65091-BIG #2-D181	X			X			N/A		
65091-NORTH-D179	X			X			N/A		
65091-RIVER-D175	X			X			N/A		
65091-SOUTH-D182 (*)	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for Rat Camp, allotment #65091; 10 assessed soil/site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with quantitative information from long-term monitoring studies on 5 study areas were utilized to assess rangeland health of public land within this allotment. These quantitative evaluations were performed by the Roswell Field Office staff starting in the early 1980's that included ground and vegetative cover/composition, production, frequency and ecological condition as calculated from those collections which are scheduled approximately every 5 years.

Rat Camp allotment is located five miles east of Lake Arthur. Total AUM's is 1,678 with cattle and horses as the livestock authorized on 71 percent public land use. Dry climatic conditions which have occurred in recent years have impacted this allotment and other surrounding areas. All soil associations and/or complexes found on these ecological sites occur on uplands east of the Pecos River. Big Pasture-1, found just north of ranch headquarters and Rat Camp Road is the lone Shallow SD-3 ecological site with an acreage of 2,723/1,102 hectares. Soil phase is a (TS)-Tencee-Sotim association on 0 to 9 percent slope, well-drained very shallow and shallow to indurated caliche. This soil formed in gravelly and cobbly alluvium on uplands, undulating to

gently rolling on ridges. Sotim soil is level to gently sloping and found in depressions. Elevation ranges from 3,400 ft/1,030 m to 4,200 ft/1,272 m. No livestock were present at evaluation, but an abandoned oil/gas pad was observed just east of the study site, and has yet to reclaim. Both upland (shallow) and depressional (loamy) areas found here exhibited fair to good ecological condition with an array of grass and shrub components. Rock cover has assisted in infiltration with very limited departure from ecological reference parameters. All indicators, except annual production fell well within normal range of variability. Annual production rated Moderate due to an estimate of 350 lbs/ac or kg/ha. Approximately 1/2 of long-term and ESD figures was estimated. The bulk of this production was however decreaser species-black grama (*Bouteloua eriopoda*) and increasers- burrograss (*Scleropogon brevifolius*), fluffgrass (*Dasyochloa pulchella*), threeawn (*Aristida* spp.) and pappusgrass (*Enneapogon desvauxii*). Javelinabush (*Condalia* spp.) was also observed on overlying benches with snakeweed (*Gutierrezia sarothrae*) surrounding the pad and intermediate to uplands. Quail (*Callipepla* spp.) were observed in addition to lagomorphs; jackrabbit (*Lepus californicus*) and cottontail (*Sylvilagus auduboni*).

River Pasture, one of four Loamy SD-3 ecological sites has a soil phase Holloman-Gypsum land complex (HrC) on 3 to 5 percent slopes. This well-drained soil is very shallow and shallow over gypsum, formed in alluvium over soft to hard gypsum on uplands. Elevation ranges from 3,300 ft/1,000 m to 3,600 ft/ 1,090 m. This site is found just adjacent to Rat Camp Road with an acreage of 820 or 332 hectares. No livestock were observed here but evidence of porcupine (*Erethizon dorsatum*) use on mesquite (*Prosopis glandulosa*) was obvious as these shrubs were virtually debarked and gnawing activity was heavy. Virtually all indicators fell well within normal ranges with exception annual production and invasive plants. Approximately 1/2 of the expected production was observed, but graminoids consisted mainly of decreasers; black grama, bush muhly (*Muhlenbergia porteri*) and vine mesquite (*Panicum obtusum*). Mesquite is scattered throughout, but poses no real threat to invade, since most deeper soil complexes rest in draw bottoms. Creosote (*Larrea tridentata*) is also scattered and is confined mainly to more shallower upland areas.

The following three sites are all similar in MLRA (Major Land Resource Area ) and soil phase description; South, Big-2 & North Pastures, respectively. South Pasture, a Loamy SD-3 ecological site is located on private land surrounded by state and public, just north of the Eddy county line. This ecological site however is 1,024 acres/414 hectares in size on a Sotim (So) fine sandy loam soil series, deep and well-drained. Slope is 0 to 5 percent on elevations ranging from 3,400 ft/1,030 m to 3,900 ft/1,181 m. This soil profile is moderately calcareous in the surface layer and upper part of the subsoil and strongly calcareous below and moderately alkaline throughout. No livestock were observed at evaluation as this pasture appears to be deferred presently. An active well pad is located at the two-track junction leading into this study area. Gullying is quite evident on this two-track and it appears no maintenance has been performed. Vegetation remains stabilizing the banks and headcuts are minimal. A recruitment of mesquite propagules, observed common throughout suggests influences from well pad activity and past livestock disturbance. Soil, hydrologic and biotic attributes however do exhibit minimal departure with a few exceptions.

Big Pasture-2, just adjacent to Derrick Draw is 2,724 acres/1,102 hectares in size, is located off Rat Camp Road leading southward. Evidence of past livestock use can be seen, but appears

conservative. A total of 780 acres/315 hectares on the east end of this pasture was chemically treated for mesquite in 1989. Since then, there have been numerous gas well pads built in this pasture just north of White Lake. This 17 year old treatment appears to remain effective as recent onsite in this area do not identify mesquite as a problem. Considering recent dry conditions, diversity of grass, shrub and forb components is adequate for biotic integrity. Dalea (*Dalea formosa*), yucca (*Yucca* spp.), prickly pear (*Opuntia engelmannia*) and Mormon tea (*Ephedra* spp.) are just some of the shrub species found. Other forage species found were leatherleaf croton (*Croton* spp.), burrograss, tobosa (*Pleuraphis mutica*), bush muhly, black grama and threawn in proper proportions. Only a portion of wildlife habitat appears to be in less than satisfactory condition. An onset of summer monsoons should restore those attributes conducive to wildlife food, cover and water. Mesquite and other invasives are less than scattered here and pose no immediate threat of encroachment. All indicators evaluated displayed normal range of variability.

North Pasture is located in the middle of State Section 16. Acreage is 914/370 hectares. Moderate use by livestock is evident here with 50 percent estimated utilization. Some gravel and pebbles are found on the surface of this site, which is just under a powerline. Mesquite and javelinabush are scattered and are not influencing site capability/productivity. Bare ground is currently estimated at 50 percent and falls within range. Bush muhly, a decreaser is growing in javelinabush with dropseeds (*Sporobolus* spp.) and black grama found intermittently throughout. Annual forbs also comprise some forage components, although minor. An absence of blue grama (*Bouteloua gracilis*) and four-wing saltbush (*Atriplex canescens*) rates structural/functional groups Moderate along with annual production, which is Moderately lower than expected. All other indicators fell well within normal range of variability.

Wildlife - Evaluation of 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 the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation. Habitat and Populations indicate some of this allotment is in less than satisfactory condition with Moderate departure, undoubtedly related to less than average precipitation. Pronghorn (*Antilocapra americana*) and mule deer (*Odocoileus hemionus*) inhabit this allotment and have been observed traversing in and out of those pastures evaluated. With an onset of summer precipitation and some winter moisture, the forb and browse components should rebound adequately. There are no special status concerns here.

In the professional opinion of Assessment Team, public land within Rat Camp, allotment #65091 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 the assessments 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:** Given the recent dry climate, all sites and surrounding areas were in good condition. Strategic watering points and proper livestock rotations have helped this allotment weather the dry conditions. Cyclic and/or sporadic summer thunderstorm activity only augments this allotment's healthy status. At the moment all public land sites have no current encroachment potential of shrub invasion. The 17 year old mesquite chemical treatment has proven to be very effective adjacent to Derrick Draw site. Oil and gas activity, ie, roads pads, pipelines have not appeared to compromise this pasture's productivity aside from recent dry climate. Current management should continue for this allotment along with a regular monitoring cycle.







## RFOs Upland and Biotic Standard Assessment Summary Worksheet

### SITE 65091-BIG #1-D180

Legal Land Desc	SENW 29 0150S 0270E Meridian 23	Acreage	2723
Ecosite	042CY025NM SHALLOW SD-3	Photo Taken	Y
Watershed	13060007100 WHITE LAKE		
Observers	NAVARRO	Observation Date	12/22/2005
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	TS	Soil Taxon Name	TENCEE
Texture Class	NM666 GR-FSL	Soil Phase	TENCEE- SOTIM
Texture Modifier	NM666 GRAVELLY FINE SAND		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	13.04	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.54	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:	No disturbances exist. Abandoned well pad has yet to reclaim. No livestock observed at evaluation.		

### 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:	Bare ground estimate is 50%.					
S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or					X

	Deposition Areas					
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 estimation is 10-20%.					
B	Annual Production			X		
Comments:	Current estimation for production is 350 lbs/ac or kg/ha.					
B	Invasive Plants					X
Comments:						
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Some physical crusting is evident.					
B	Wildlife Habitat				X	
Comments:	Quail were observed in drainages and next to water storage tank.					
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	8	3
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: The ecological site is in very good condition. Tobosa, vine mesquite, burrograss and panicums inhabit the bottom with burrograss and black grama. No livestock were observed. There is abandoned well pad which has yet to reclaim.

Quail observed next to water.

## RFOs Upland and Biotic Standard Assessment Summary Worksheet

### SITE 65091-BIG #2-D181

Legal Land Desc	SENE 28 0150S 0270E Meridian 23	Acreage	2724
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007100 WHITE LAKE		
Observers	NAVARRO/ARTHUN	Observation Date	12/20/2005
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	So	Soil Taxon Name	SOTIM
Texture Class	NM666 FSL	Soil Phase	SOTIM
Texture Modifier	NM666 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	13.04	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.54	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:	Hoof action of livestock suggests recent conservative 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:		Current estimate is 50%.				
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:	Some cattle trailing.					
B	Functional/Structural Groups				X	
Comments:						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount				X	
Comments:	Current estimate is 30%.					
B	Annual Production				X	
Comments:	Current estimate is 500 lbs.ac or kg/ha.					
B	Invasive Plants				X	
Comments:	Mesquite less than scattered.					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical crusting evident.					
B	Wildlife Habitat			X		
Comments:						
B	Wildlife Populations			X		
Comments:						
B	Special Status Species Habitat					X
Comments:	No special status species concerns.					
B	Special Status Species Populations					X
Comments:	No special status species concerns.					

### 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	2	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	0	10
Hydrologic		0	0	11
Biotic		0	2	11

Site Notes: This site indicates past livestock use at conservative levels. Burrograss and tobosa are abundant with black grama and muhleys. Condalia exists along the more shallow upper levels along with creosote. Evidence of livestock use is at 30-35%. Post is missing. This site is in good ecological condition.

## RFOs Upland and Biotic Standard Assessment Summary Worksheet

### SITE 65091-NORTH-D179

Legal Land Desc	SESW 16 0150S 0270E Meridian 23	Acreage	914
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007100 WHITE LAKE		
Observers	NAVARRO	Observation Date	12/22/2005
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	So	Soil Taxon Name	SOTIM
Texture Class	NM666 FSL	Soil Phase	SOTIM
Texture Modifier	NM666 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	13.04	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.54	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:	Evidence of livestock by hoof action and moderate utilization. Disturbances from the powerline are minimal.		

### 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:		Some elevated plants observed most notably javelinabush.				
S H	Bare Ground				X	
Comments:		Current estimate is 50%.				
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:	Some rocks have migrated towards the surface.					
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:	Some moderate departures.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount				X	
Comments:	Current estimate is 30%.					
B	Annual Production			X		
Comments:	Annual production is 2/3 of expected.					
B	Invasive Plants			X		
Comments:	Mesquite scattered					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical crusting evident					
B	Wildlife Habitat			X		
Comments:						
B	Wildlife Populations			X		
Comments:						
B	Special Status Species Habitat					X
Comments:	No concerns exist.					
B	Special Status Species Populations					X
Comments:	No concerns exist.					

### 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	7	4
B	Biotic	0	0	5	2	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	5	8

Site Notes: This site is located along a powerline. No livestock were observed at present, but evidence of hoof action and moderate use (50%) utilization exists. This upland area is dominated by javelinabush (*Condalia* spp.) and to a lesser extent perennial grasses.

## RFOs Upland and Biotic Standard Assessment Summary Worksheet

### SITE 65091-RIVER-D175

Legal Land Desc	NESE 25 0150S 0260E Meridian 23	Acreage	820
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007120 DOG		
Observers	NAVARRO/ARTHUN	Observation Date	12/20/2005
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	HrC	Soil Taxon Name	HOLLOMAN
Texture Class	NM666 L	Soil Phase	HOLLOMAN- GYPSUM LAND
Texture Modifier	NM666 LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	13.04	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.54	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:	Porcupine use was observed on mesquite. No livestock observed however.		

### 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 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:	Some small rocks and pebbles at the surface.					
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 30%.					
B	Annual Production			X		
Comments:	Current estimate 400 lbs/ac or kg/ha.					
B	Invasive Plants			X		
Comments:	Mesquite is scattered.					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical and biological crusts present.					
B	Wildlife Habitat				X	
Comments:						
B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat					X
Comments:	N/A					
B	Special Status Species Populations					X
Comments:	N/A					
<b>Part 3. Summary</b>						

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	7	4
B	Biotic	0	0	2	7	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	2	11

Site Notes: This site is in good ecological condition. No livestock are currently utilizing this site. Ungulates such as pronghorn and muledeer inhabit this area. Jackrabbits were observed gnawing on young mesquite cambium layers. Past evidence of porcupine use gnawing on the mesquite bark was observed. The mixture of grass/forbs/shrubs is adequate for biodiversity.

## RFOs Upland and Biotic Standard Assessment Summary Worksheet

### SITE 65091-SOUTH-D182

Legal Land Desc	SESW 31 0150S 0270E Meridian 23	Acreage	1024
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007120 DOG		
Observers	NAVARRO	Observation Date	12/22/2005
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	So	Soil Taxon Name	SOTIM
Texture Class	NM666 FSL	Soil Phase	SOTIM
Texture Modifier	NM666 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	13.04	NOAA Growing Season Precipitation	8.93
NOAA Avg Annual Precipitation	12.54	NOAA Avg Growing Season Precipitation	10.43
Disturbances and Animal Use:	Well pad and gulying on two-track are the 2 major disturbances, but not to the point of compromising the site.		

### 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 30%.				
S H	Gullies				X	
Comments:		Gullies are headcutting into the two-track.				
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:	Some gravels on surface.					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:	Only minor affects.					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups			X		
Comments:	Moderate deviations.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount				X	
Comments:	Current estimate is 30%.					
B	Annual Production			X		
Comments:	Current estimate is 400 lbs/ac or kg/ha. (Mostly made up of burrograss and tobosa).					
B	Invasive Plants		X			
Comments:	Mesquite is common but plants are young.					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical crusts with some breaks in continuity.					
B	Wildlife Habitat			X		
Comments:						
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	8	3
B	Biotic	0	1	4	2	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		1	4	8

Site Notes: This site is located SE of a drill pad. There are some influences from this activity due to gullying of the two-track leading into this study area. The upland, more shallow influence is evident here as creosote and condalia are common along with mesquite. Burrograss and tobosa are very dominant here. Annual forbs comprise the majority of litter component.

No livestock are present currently.