

## **Determination of Public Land (Rangeland) Health for 64082 JACKSON**

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 the 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 the assessments, it is my determination that the public land within the Jackson allotment #64082 meets the 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/ T. R. KREAGER  
Assistant Field Manager

09/09/2004  
Date

## Standards of Public Land Health Evaluation of 64082 JACKSON Allotment [ 04/16/2004 ]

The Roswell Field Office conducted rangeland health assessments at two (2) study sites within the Jackson Allotment #64082. 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
64082- NORTH-E107 (* )	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for the public land on the Carrol Jackson allotment #64082. Ten (10) 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 trend plot location were utilized to assess the rangeland health of the public land within the allotment. The quantitative data collected included some or all of the following: ground and vegetative cover and composition, production, frequency and ecological condition. These data collections were initiated in the late 1970's/early 1980's and are scheduled approximately every 5 years. This allotment is in the "C" (custodial) category due to the small amount of public land present.

The dry conditions occurring over the last several years have had an impact on this allotment and surrounding area. North pasture is a loamy SD-3 ecological site with an acreage of 3,396/1,415 hectares. The soil phase is the Reakor series consisting of deep, well drained soil formed in alluvium on uplands and valley fans. Effective rooting depth is 65 in/165 cm. This allotment is habitat for pronghorn (*Antilocapra americana*) and other wildlife. Most of the indicators rate at None to Slight to Slight to Moderate. The indicator of concern rating at Moderate to Extreme is bareground. A current estimate of 70 percent now exceeds the upper end of the range expected at 40-50% for the ESD. This estimate also surpasses the long-term average of 42 percent. However, the physical crusting and ground cover of burrograss (*Scleropogon brevifolius*) and the annual forb, filaree (*Erodium* spp.) hold the soil in place with exception, the trailing areas leading to and from this pasture. Some rock and gravel has been exposed due to wind erosion, which suggests an influence from the creosote (*Larrea tridentata*) dominated shallower ecotone just east and north of the site.

The pasture fence does not distinguish between the two areas, the shallower and the loamy soil types respectively. Tobosa (*Pleuraphis mutica*) and burrograss along with wolfberry (*Lycurus* spp.) and mesquite (*Prosopis glandulosa*) are the vegetation types at present. There is only a slight notable deviation from the ESD for the functional/structural groups, therefore, this indicator rates Slight to Moderate. Litter amount rates Moderate with a current estimate of approximately 10 percent. Long-term average for this site is 13% and the ESD allows 25-30 percent. Annual production is estimated currently at 400-500 lbs/ac or kg/ha. Given the small amount of ground cover, this indicator rated favorable considering the dry conditions at Slight to Moderate. The long-term average of 315 lbs/ac or kg/ha for this site has been exceeded for the moment. Mesquite and creosote are only scattered throughout and the indicator for invasive plants rates Moderate.

Wildlife - Evaluation of the integrity of the 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 the vegetative aspect of the ecological site description, such as functional/structural groups and annual production as discussed above. Specifically, two biotic indicators fell within the Moderate rating, litter amount and invasive plants. Considering present climate regimes, these two indicators can be expected to fall within the normal range of variability. In addition to the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation. Wildlife habitat and population indicators rate Slight to Moderate, primarily for pronghorn (*Antilocapra americana*) and a variety of non-game terrestrial species. The composition of vegetation reflects current climatic conditions, e.g., drought for the past several years. Range site production and cover of a variety of preferred plant species for wildlife, such as forbs and woody browse species, and the availability of seed for food and regeneration, is moderated by climate and land use. With respect to Special Status Species, none are known to occur in the area of interest at this time and the habitat and population indicators are, therefore, rated None to Slight.

Hydrology - Pasture North - The bareground indicator rated as moderate to extreme. The amount of bareground has possibly increased due to recent dry conditions and also wind and water erosion processes. The litter amount rated in the moderate category. The decrease in litter amount suggests that the dry conditions have had a negative affect on the growing conditions which decreases the amount of litter that is produced. Additionally, the decrease in litter amount can have the effect of increasing the amount of bare soil. All other indicators rated as none to slight or slight to moderate. Sand and gravel deposits of Quaternary pediment deposits outcrop in the area.

It is the professional opinion of the Assessment Team that the public land within the Jackson allotment #64082 meets the Upland and Biotic standards. There are no Riparian issues present, therefore this standard was not evaluated. See site notes 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:

- Bare Ground

These indicators by themselves are not enough to rate the site as not meeting a standard but may warrant future monitoring.

**Recommendations:** Monitoring should continue on this allotment. Although mesquite (*Prosopis glandulosa*) is beginning to encroach, it will be several years before this potential problem comes to the forefront. There has been some evidence of heavy trailing next to the road leading into the area but not on the site itself. The small amount of public land on the allotment may have identified this parcel for disposal and a further look at the RMP may be in order.

<b>RFOs Upland and Biotic Standard Assessment Summary Worksheet</b>			
<b>SITE 64082-NORTH-E107</b>			
Legal Land Desc	NESE 12 0150S 0240E Meridian 23	Acreage	3396
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007110 COTTONWOOD-WALNUT		
Observers	NAVARRO/BAGGAO	Observation Date	04/16/2004
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	RF	Soil Taxon Name	REAKOR
Texture Class	NM666 L	Soil Phase	REAKOR
Texture Modifier	NM666 LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	8.95	NOAA Growing Season Precipitation	6.47
NOAA Avg Annual Precipitation	12.75	NOAA Avg Growing Season Precipitation	10.45
Disturbances and Animal Use:			

<b>Part 2. Attributes and Indicators</b>						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extrem e	Moderat e to Extreme	Moderat e	Slight to Moderat e	None to Slight
S H	Rills					X
Comments :						
S H	Water Flow Patterns				X	
Comments :						
S H	Pedestals and/or Terracettes				X	
Comments :	Some pedestaling on tobosa especially in flow paths.					
S H	Bare Ground		X			

Comments :	70% at present is the estimate. Exceeds the upper end of the range expected.					
S H	Gullies					X
Comments :	On roads and cattle trails only.					
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments :	Some rocks and gravels exposed due to wind.					
H	Litter Movement				X	
Comments :	very small amount of litter is present, but is displaced in some areas where found.					
S H B	Soil Surface Resistance to Erosion					X
Comments :	Physical crusts and organic matter are adequate for site protection.					
S H B	Soil Surface Loss or Degradation				X	
Comments :	Some pebbles, rock and gravel can be seen coming to the surface but only closer to the creosote upland, shallower area due east closer to fence line.					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff					X
Comments :	Adequate for site protection.					
S H B	Compaction Layer					X
Comments :	Cattle trailing is the only area where this may be occurring.					
B	Functional/Structural Groups				X	
Comments :	Some reduction in F/s groups with erodium and globemallow on site.					
B	Plant Mortality/Decadence					X
Comments :	Less than 20% vegetation decadent or dead.					
H B	Litter Amount			X		
Comments :	Now less than 10%.					
B	Annual Production				X	

Comments :	Present vegetation now at 400-500 lbs/ac or kg/ha. 60-80% of potential.					
B	Invasive Plants			X		
Comments :	Mesquite and creosote are scattered throughout.					
B	Reproductive Capability of Perennial Plants				X	
Comments :	Only slight deviations exist.					
S	Physical/Chemical/Biological Crusts				X	
Comments :	Physical crusts mostly uniform.					
B	Wildlife Habitat				X	
Comments :	Relatively flat grasslands with shrub component.					
B	Wildlife Populations				X	
Comments :	No specific wildlife population data at this time. Species of concern include pronghorn antelope and a variety of non-game terrestrial wildlife species.					
B	Special Status Species Habitat					X
Comments :	None known to occur.					
B	Special Status Species Populations					X
Comments :						

### 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.

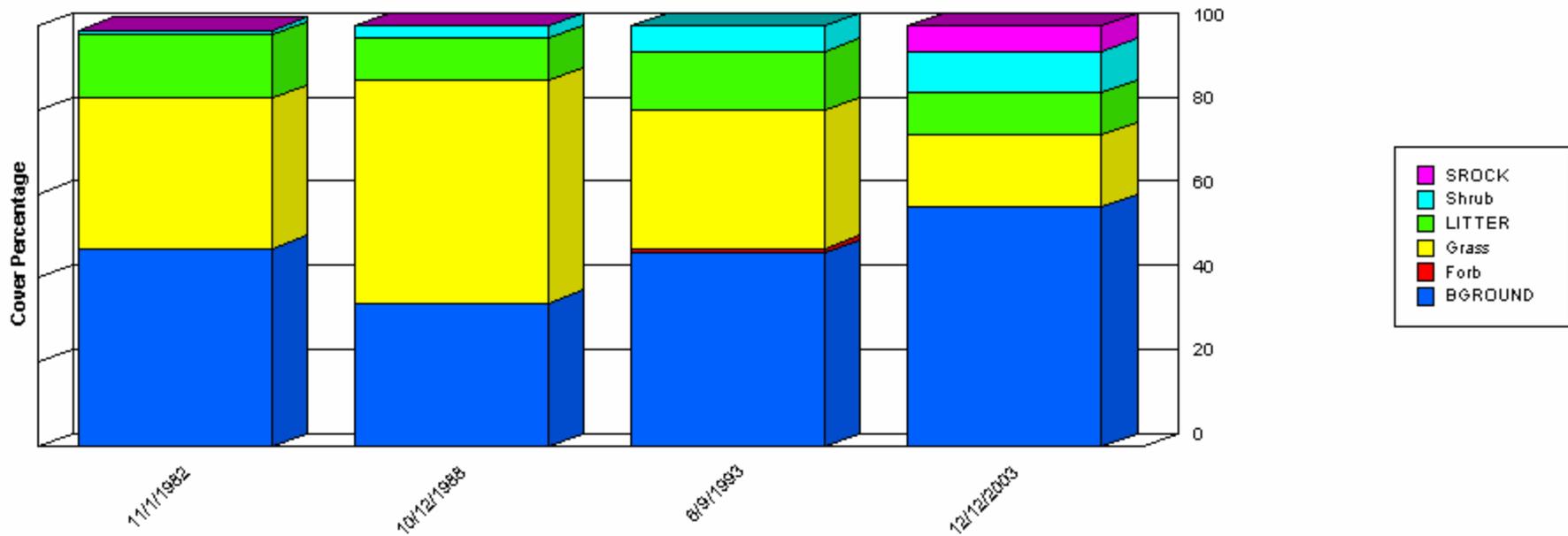
Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	1	0	4	5
H	Hydrologic	0	1	1	4	5
B	Biotic	0	0	2	6	5

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	There is a generous amount of physical crusting in place which may be leading to adequate site protection. As with most rangeland, there is some soil horizon loss but this is to be expected.	1	0	9
Hydrologic	The soil and hrdrologic attributes are working in conjunction to keep this site in check. Presipitation events are sparse but the infiltration and percolation are not being restricted.	1	1	9
Biotic	There is adequate ground cover and perennial grass to give this site some protection. A closer check may be in order if dry conditions persist though.	0	2	11

Site Notes: Creosote (*Larrea tridentata*) and mesquite (*Prosopis glandulosa*) can be observed scattered throughout. Wolfberry (*Lycurus spp.*) can also be observed. Although the site is loamy, there are some gravelly soil eastward with forbs, filaree (*Erodium spp.*) and globemallow (*Sphaeralcea spp.*) in good quantities. This site does have a data set from which to score the indicators over the long-term and against the ESD. Pronghorn (*Antilocapra americana*) do inhabit this area. There is evidence of recent livestock use due to cattle trailing to and from waterin

# Ground Cover Trends



	11/1/1982	10/12/1988	6/9/1993	12/12/2003
BGROUND	47.00	34.00	46.00	57.00
Forb	0.00	0.00	1.00	0.00
Grass	36.00	53.00	33.00	17.00
LITTER	15.00	10.00	14.00	10.00
Shrub	1.00	3.00	6.00	10.00
SROCK	0.00	0.00	0.00	6.00
Total	99.00	100.00	100.00	100.00

## Report Parameters

SITE NAME LIKE	64082-NORTH-E107
ON/AFTER	10/01/1982
ON/BEFORE	09/30/2004

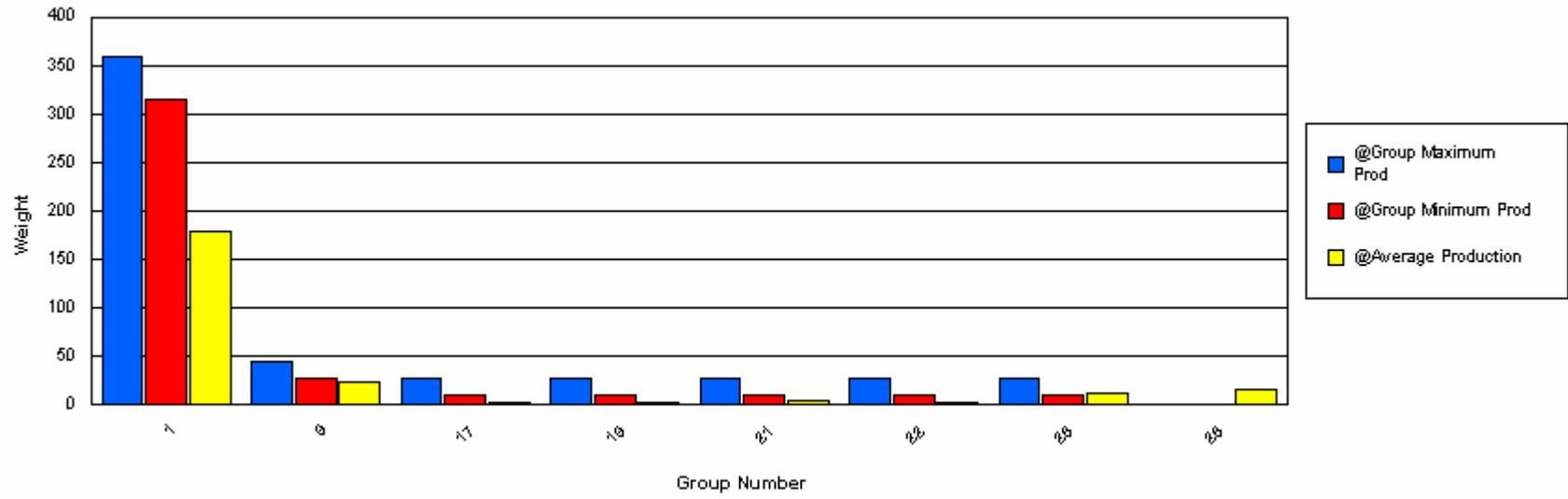
# Functional / Structural Groups

## Report Parameters

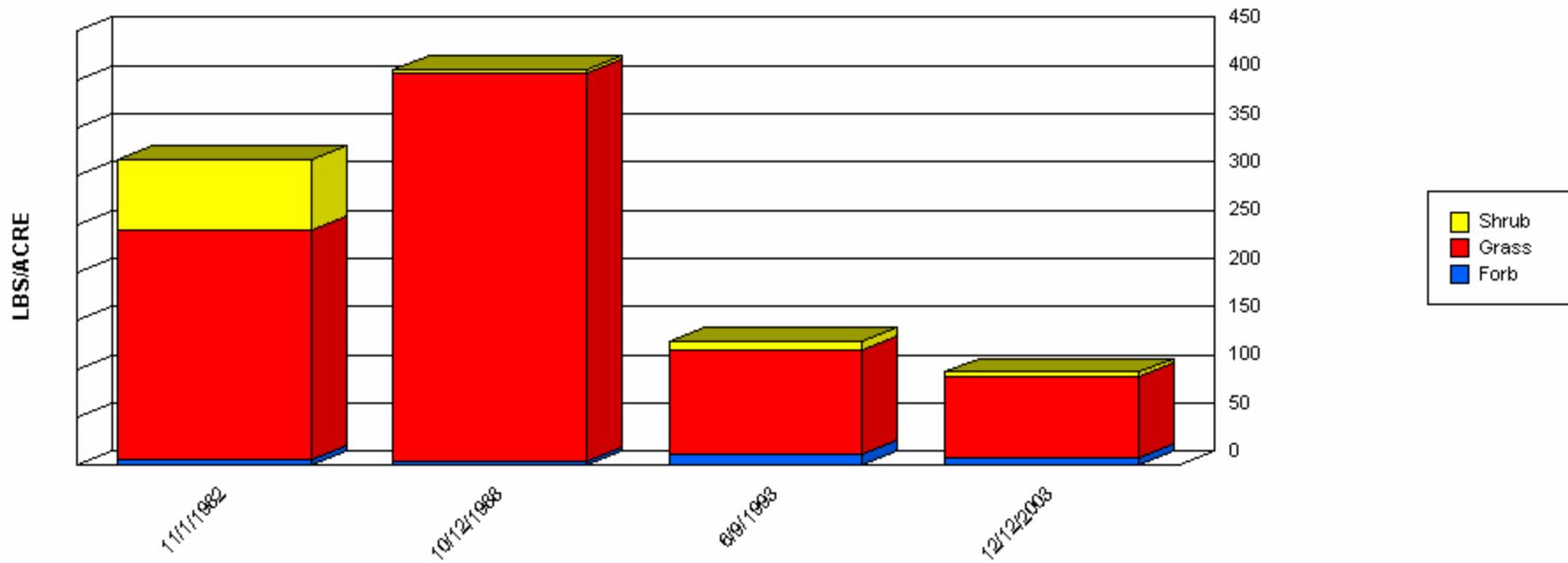
SITE NAME LIKE 64082-NORTH-E107  
 ON/AFTER 10/01/1982  
 ON/BEFORE 09/30/2004  
 MIN LBS TO GRAPH 1  
 SELECTED ECOSITE 042CY007NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	HIMU2	315	360	35.00	55.53	48.43	7.93
1	Grass	SCBR2	315	360	28.48	259.00	131.02	92.86
9	Grass	MUAR	27	45	0.00	74.00	23.86	29.37
17	Grass	ERPU8	9	27	1.00	2.00	1.50	0.50
19	Forb	CROTO	9	27	0.00	3.00	1.49	1.12
19	Forb	PENA	9	27	1.00	1.16	1.08	0.07
21	Forb	ERTE13	9	27	1.00	5.70	3.35	2.35
21	Forb	HOGL2	9	27	0.00	0.37	0.18	0.18
22	Forb	AAFF	9	27	0.00	8.00	2.34	3.29
23	Forb	AMBRO	9	27	0.00	1.47	0.73	0.73
24	Forb	SOEL	9	27	0.00	1.00	0.40	0.43
26	Shrub	GUSA2	9	27	0.00	23.46	11.73	11.73
28	Shrub	PRGL2	0	0	3.00	50.60	15.65	20.19

Group Plant Type Species Low Wt Allowed High Wt Allowed Minimum Maximum Average STDEV



# Production Lbs/Acre Trends



	11/1/1982	10/12/1988	6/9/1993	12/12/2003
Forb	5.45	5.00	11.00	7.44
Grass	238.25	402.00	109.00	84.01
Shrub	74.06	4.00	9.00	5.29
Total	317.76	411.00	129.00	96.74

## Report Parameters

SITE NAME LIKE            64082-NORTH-E107  
 ON/AFTER                    10/01/1982  
 ON/BEFORE                 09/30/2004

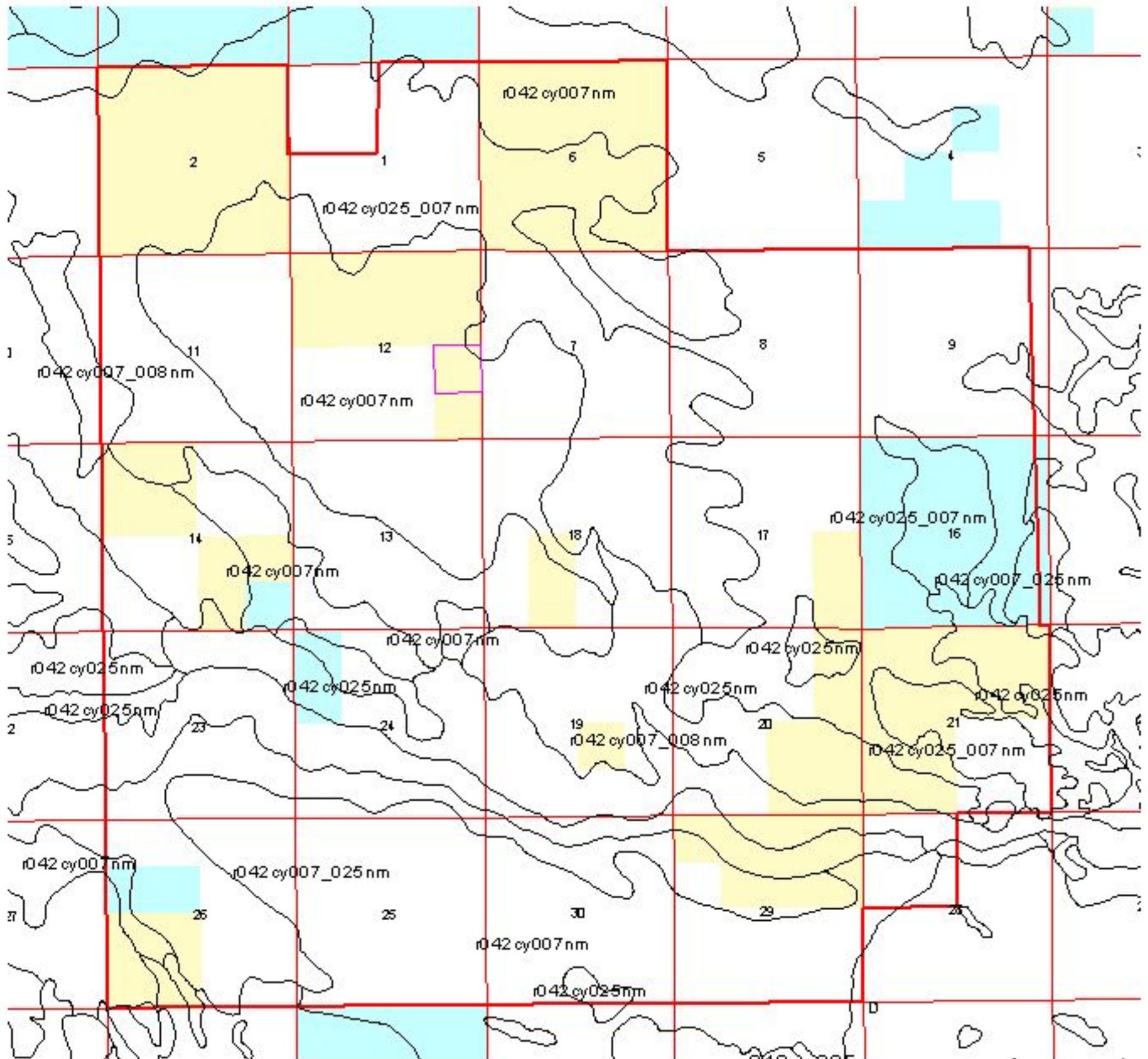


# Rangeland Health Assessment Ecological Sites



Allotment 64082

T14.R25E



T15S.R26E

0.8 0 0.8 Miles



Public



Study Plots



State



Private



Study Locations



Ecological Sites



Allotment Boundary

Produced by the Roswell Field Office  
GIS Intern on July 25, 2003.

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for any purpose other than that for which they were collected. No warranty is made by BLM, Dept. of the Interior, for any use not intended by the Bureau. This document is available electronically at [www.blm.gov](http://www.blm.gov).

