

Determination of Public Land (Rangeland) Health for 64086 CHAMPION

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 Champion allotment #64086 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 will not be addressed.

/s/ T. R. KREAGER
Assistant Field Manager

01/11/2005
Date

Standards of Public Land Health Evaluation of 64086 CHAMPION Allotment [09/24/2004]

The Roswell Field Office conducted rangeland health assessments at one study site within the Champion Allotment #64086. 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
64086-4 SECTION- F289	X			X			N/A		

Twenty-two indicators for Rangeland Health were evaluated for the public land on the Champion allotment #64086. Ten of these assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with quantitative information gathered from previous monitoring data collected on one range trend plot within the 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.

Section 4 Pasture is a SD-3 Loamy ecological site encompassing 1,323 acres/601 hectares. The soil phase is an (UA)-Upton-Atoka association which occurs on uplands west of the Pecos River with slopes 0-5 percent. Elevation is approximately 1,135 feet/344 meters. No livestock were observed at the time of assessment. The majority of indicators assessed rated in the None to Slight to Slight to Moderate category. Indicators of concern rating in the Moderate range are bareground, functional/structural groups, litter amount, annual production and invasive plants. Bareground was consistently estimated at 70%, exceeding the upper end of the range expected and can be attributed to the recent dry conditions. Vegetative cover, mainly burrograss (*Scleropogon brevifolius*) is increasing and accounts for most of the vegetative ground cover along with tobosa (*Pleuraphis mutica*). Functional/structural groups is missing the grama (*Bouteloua* spp.) component and some shrubs. Christmas cholla (*Opuntia imbricata*) and creosote (*Larrea tridentata*) are the principal shrubs presently along with lesser amounts of cholla (*Opuntia spinosa*). Due to the recent dry conditions, the opportunity for plants to proliferate and produce litter has been limited. Only recently has the grass, forb and shrub component

grown current forage for litter to be a factor. Litter should increase during the next dormant and growing season establishing an adequate mulch layer and reduce bareground even further. Annual production is approximately 1/2 of the potential with 500 lbs/ac or kg/ha. Creosote is scattered throughout but does not appear to be encroaching at any alarming rate. An adequate forb component exists which may provide forage for wildlife and add to the ground cover and protect the soil. A physical crust is holding the soil in place with some scattered pockets of biological crusts. All other indicators exhibit only slight deviations and fall within normal ranges of variability.

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 others, 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 annual production, invasive plants, and functional/structural groups as discussed above. Specifically, three biotic indicators fell within the Moderate rating, those mentioned above and litter amount. Considering present climate regimes, these indicators can be expected to fall within the normal range of variability. Rangeland conditions must be closely monitored to detect any further downward trend, exclusive of the impacts of ongoing climatic conditions (drought). The potential to improve rangeland conditions exists especially when timed with adequate precipitation and vegetation reproduction.

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 desert muledeer (*Odocoileus hemionus*), pronghorn (*Antilocapra americana*) and a variety of non-game terrestrial species, including raptor 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. Current observed wildlife populations reflect habitat condition. 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 Slight to Moderate.

Hydrology - Pasture 4 Section - The bareground indicator rated as moderate. 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 production of this attribute. Additionally, the decrease in litter amount can have the effect of increasing bare soil. All other indicators rated as none to slight or slight to moderate. Sand and gravel deposits of Quaternary pediment and Quaternary terrace gravel outcrop in the area.

It is the professional opinion of the Assessment Team that the public land within the Champion allotment meets the Upland and Biotic standards. No Riparian areas are

present, therefore this standard was not addressed. See site notes and recommendations for further information regarding this ecological site.

Recommendations:

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 64086-4 SECTION-F289

Legal Land Desc	NENE 33 0140S 0240E Meridian 23	Acreage	1323
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007110 COTTONWOOD- WALNUT		
Observers	NAVARRO/MCGEE	Observation Date	09/24/2004
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	UA	Soil Taxon Name	UPTON
Texture Class	NM666 L	Soil Phase	UPTON- ATOKA
Texture Modifier	NM666 GRAVELLY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	10.46	NOAA Growing Season Precipitation	7.71
NOAA Avg Annual Precipitation	11.96	NOAA Avg Growing Season Precipitation	9.68
Disturbances and Animal Use:	A well-vegetated swathe of vegetation exists where the pipeline lies.		

Part 2. Attributes and Indicators

		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 :						
S H	Bare Ground			X		
Comments :	Now estimated at 70%.					
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 :	Absence of grama grasses.					
B	Plant Mortality/Decadence					X
Comments :						

H B	Litter Amount			X		
Comments :	10-20% is the current estimate.					
B	Annual Production			X		
Comments :	400-500 lbs/ac or kg/ha.					
B	Invasive Plants			X		
Comments :	Creosote is scattered.					
B	Reproductive Capability of Perennial Plants					X
Comments :						
S	Physical/Chemical/Biological Crusts				X	
Comments :	A good physical crust and some biological.					
B	Wildlife Habitat				X	
Comments :						
B	Wildlife Populations				X	
Comments :						
B	Special Status Species Habitat					X
Comments :	None known to occur.					
B	Special Status Species Populations					X
Comments :	None known to occur.					
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	Moderate	Slight to Moderate	None to

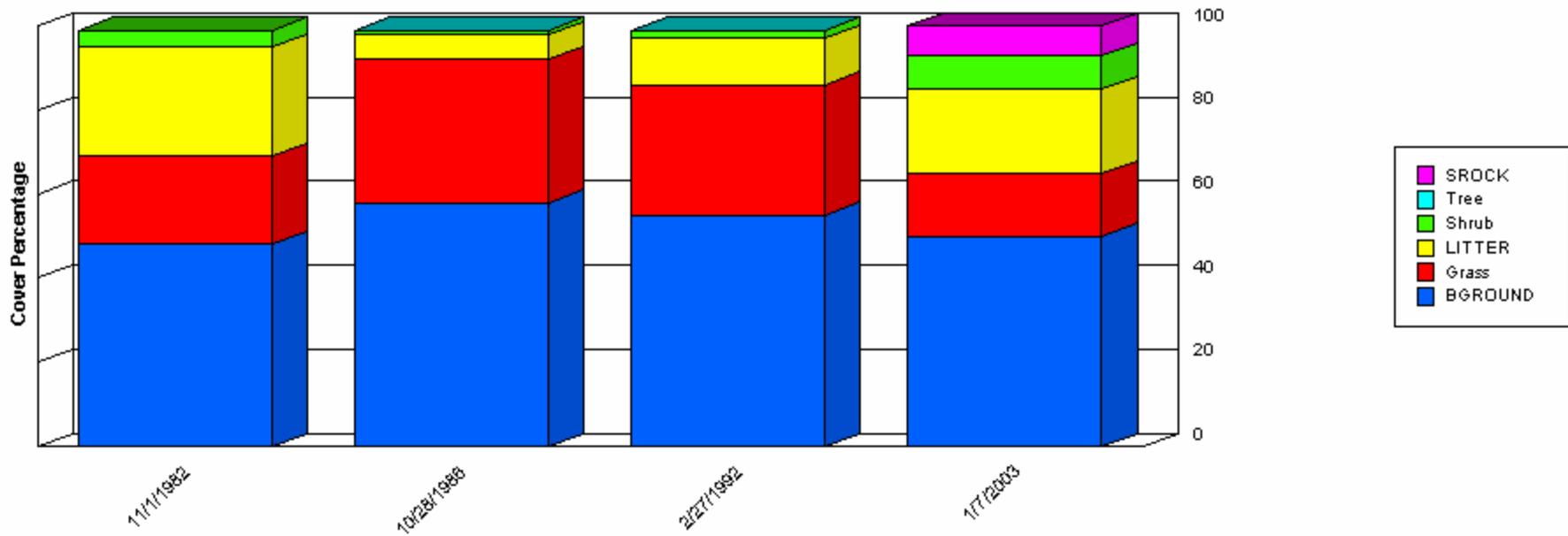
			Extreme		e	Slight
S	Soil	0	0	1	5	4
H	Hydrologic	0	0	2	6	3
B	Biotic	0	0	4	4	5

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	1	9
Hydrologic		0	2	9
Biotic		0	4	9

Site Notes: This site appears to be situated next to a water pipeline. The abundance of snakeweed and annual forbs along a swathe is evident. The site was photographed. No livestock were utilizing this pasture at the time of assessment. Burrograss is very abundant along with lesser amounts of tobosa. Creosote is scattered. A good perennial forb component now exists.

Ground Cover Trends



	11/1/1982	10/28/1986	2/27/1992	1/7/2003
BGROUND	48.00	58.00	55.00	50.00
Grass	21.00	34.00	31.00	15.00
LITTER	26.00	6.00	11.00	20.00
Shrub	4.00	1.00	2.00	8.00
SROCK	0.00	0.00	0.00	7.00
Tree	0.00	0.00	0.00	0.00
Total	99.00	99.00	99.00	100.00

Report Parameters

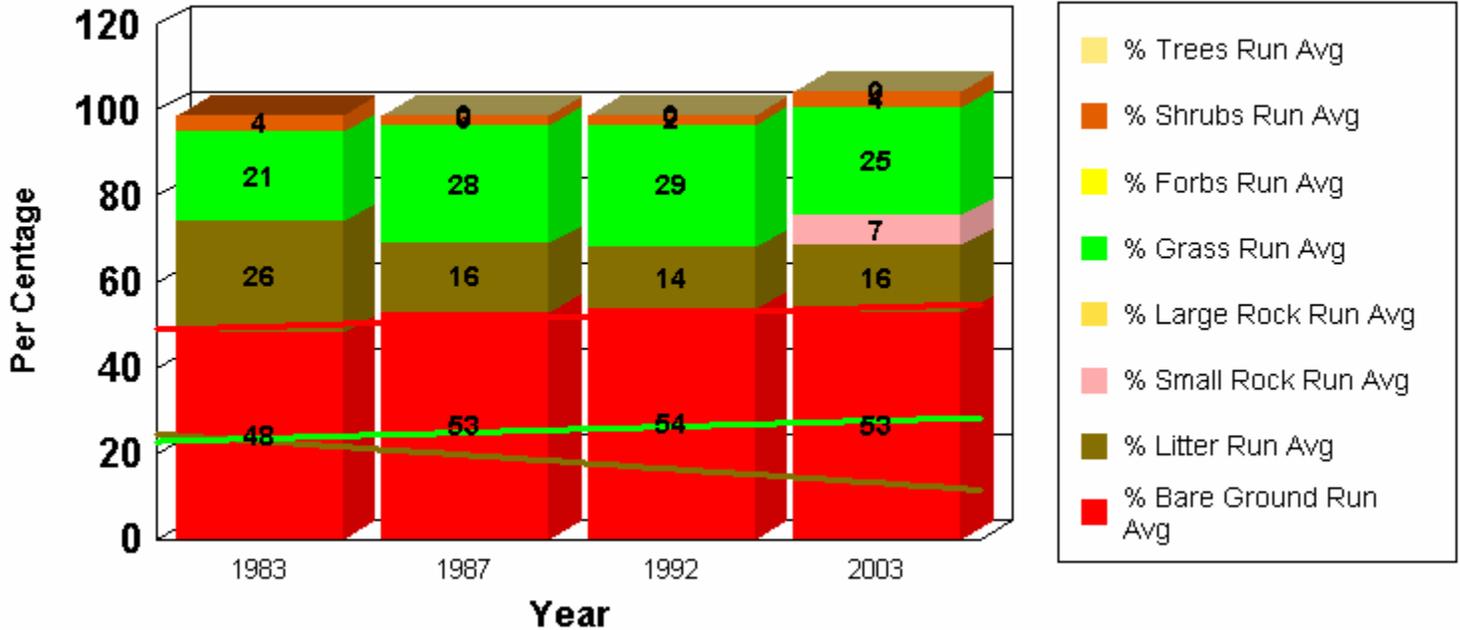
SITE NAME LIKE	64086-4 SECTION-F289
ON/AFTER	10/01/1982
ON/BEFORE	09/30/2003

Location: Township: 0140S Range 0240E Section 33 QtrQtr: NENE

Year	Bare Ground	Litter	Small Rock	Large Rock	Forbs	Grass	Shrubs	Trees	Running Average Bground	Running Average Litter	Running Average Srock	Running Average Lrock	Running Average Forb	Running Average Grass	Running Average Shrubs	Running Average Trees
1983	48.00	26.00				21.00	4.00		48.00	26.00				21.00	4.00	
1987	58.00	6.00				34.00	1.00	0.00	53.00	16.00				27.50	2.50	0.00
1992	55.00	11.00				31.00	2.00	0.00	53.67	14.33				28.67	2.33	0.00
2003	50.00	20.00	7.00			15.00	8.00		52.75	15.75	7.00			25.25	3.75	0.00

Running Average Ground Cover Trends

With Trendlines



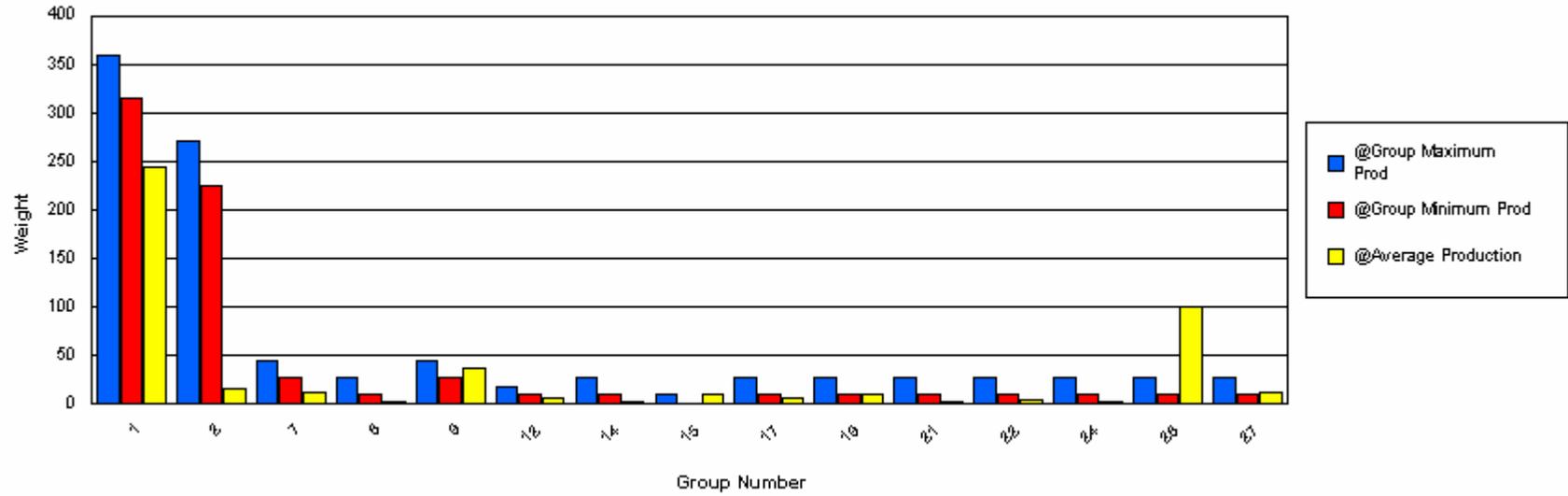
Functional / Structural Groups

Report Parameters

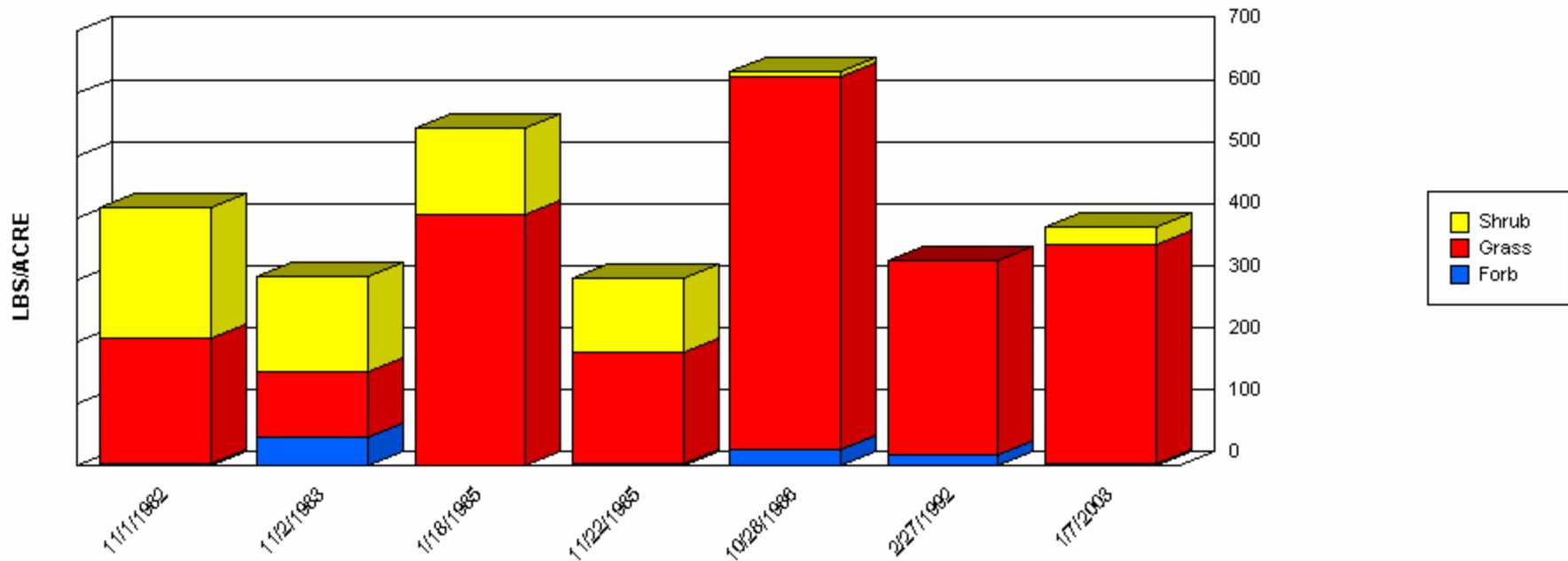
SITE NAME LIKE 64086-4 SECTION-F289
 ON/AFTER 10/01/1982
 ON/BEFORE 09/30/2003
 MIN LBS TO GRAPH 1
 SELECTED ECOSITE 042CY007NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	HIMU2	315	360	50.00	335.00	187.00	103.04
1	Grass	SCBR2	315	360	26.00	104.00	57.00	28.11
2	Grass	BOER4	225	270	0.00	17.00	4.43	6.52
2	Grass	BOGR2	225	270	0.00	28.00	10.67	12.36
7	Grass	ARIST	27	45	0.00	22.00	10.67	8.99
8	Grass	PAOB	9	27	0.00	3.00	1.50	1.50
9	Grass	MUAR	27	45	0.00	92.00	33.29	30.27
9	Grass	MUAR2	27	45	0.00	6.00	4.00	2.83
12	Grass	PAHA	9	18	0.00	8.00	5.00	3.56
14	Grass	TRMU	9	27	0.00	7.00	2.00	2.76
15	Grass	TRPI2	0	9	0.00	33.00	10.50	12.22
16	Grass	AAGG	9	27	0.00	0.00	0.00	0.00
17	Grass	ANSC2	9	27	0.00	12.00	6.00	6.00
17	Grass	ERPU8	9	27	0.00	1.00	0.17	0.37
19	Forb	CROTO	9	27	0.00	9.00	4.29	3.06
19	Forb	LESQU	9	27	0.00	1.00	0.50	0.50
19	Forb	PENA	9	27	0.00	29.00	5.00	9.86
20	Forb	CABA6	9	27	0.00	2.00	0.33	0.75
21	Forb	ERTE13	9	27	0.00	3.00	1.00	1.10
21	Forb	HOGL2	9	27	0.00	0.00	0.00	0.00
22	Forb	AAFF	9	27	0.00	12.00	3.00	4.04
23	Forb	ALLIU	9	27	0.00	0.00	0.00	0.00
24	Forb	MELE2	9	27	0.00	6.00	1.20	2.40
24	Forb	SOEL	9	27	0.00	2.00	0.57	0.73
24	Forb	SOLAN	9	27	0.00	1.00	0.20	0.40
26	Shrub	GUSA2	9	27	0.00	186.00	98.50	70.44

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
26	Shrub	OPUNT	9	27	0.00	4.00	0.80	1.60
27	Shrub	LADI2	9	27	0.00	24.00	11.00	8.79



Production Lbs/Acre Trends



	11/1/1982	11/2/1983	1/18/1985	1/22/1985	10/28/1986	2/27/1992	1/7/2003
Forb	5.00	46.00	2.00	5.00	26.00	18.00	4.00
Grass	202.00	105.00	402.00	178.00	600.00	313.00	352.00
Shrub	210.00	155.00	141.00	120.00	10.00	0.00	30.00
Total	417.00	306.00	545.00	303.00	636.00	331.00	386.00

Report Parameters

SITE NAME LIKE 64086-4 SECTION-F289
 ON/AFTER 10/01/1982
 ON/BEFORE 09/30/2003

Production (lbs/ac) Data

VEGID: 1031

64086 CHAMPION

64086-4 SECTION-F289

LOAMY SD-3

042CY007NM

Date	Range Cond.	Similarity Index	Normal Year Production	Total Production	Running Average Production	Sim Index Allowed Production	Running Average Sim Index Allowed Production
11/01/1982	50.56	28.67	900	417.00	417.00	258.00	258.00
11/02/1983	42.70	19.00	900	306.00	361.50	171.00	214.50
01/18/1985	51.57	45.89	900	545.00	422.67	413.00	280.67
11/22/1985	54.97	25.22	900	303.00	392.75	227.00	267.25
10/28/1986	63.46	58.33	900	636.00	441.40	525.00	318.80
02/27/1992	60.00	36.33	900	331.00	423.00	327.00	320.17
01/07/2003	47.34	42.89	900	386.00	417.71	386.00	329.57

Production Data For Study Site

