

Determination of Public Land (Rangeland) Health for 64069 PYETT WELL

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 allotment #64069 Pyett Well 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

07/21/2004
Date

Standards of Public Land Health Evaluation of 64069 PYETT WELL Allotment [01/06/2004]

The Roswell Field Office conducted rangeland health assessments at three (3) study sites within the Pyett Well Allotment #64069. 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
64069-#1-F205	X			X			N/A		
64069-#3-F207	X			X			N/A		
64069-#4-F208	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for the public land on the Pyett Well allotment #64069. 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 data collected on 3 trend plot locations 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.

The recurrent dry conditions have impacted this allotment over the last several years. All 3 study site locations classified as SD-3 loamy ecological sites; Pastures #1, #3 & #4 respectively. Pasture #1, encompasses 905 acres/377 hectares and consists mainly of a Reakor loam soil phase occurring on uplands west of the Pecos River with 0 to 3% slopes. No livestock are presently grazing this pasture, although a significant herd of pronghorn (*Antilocapra americana*) inhabit the allotment and immediate vicinity. The majority of indicators assessed rated None to Slight to Slight to Moderate, except bareground, functional/structural groups and annual production. All these rate at Moderate. Bareground which is currently estimated at 60% is slightly higher than the long-term average of 56% and the Ecological Site Description of 40-50%. Therefore a Moderate rating for this loamy soil is appropriate. Functional/ structural groups also rate Moderate due to the absence of the grama (*Bouteloua* spp.) and four-wing saltbush (*Atriplex canescens*) grasses and shrubs respectively as indicated by the ESD, although long-term datum indicates an absence of these species. Threeawn (*Aristida* spp.) and

Yucca (*Yucca* spp.) have replaced some of the subdominant groups not expected for the site. Tobosa (*Pleuraphis mutica*) and burrograss (*Scleropogon brevifolius*) remain as the predominant plants on the site however. Annual production also rates at Moderate. Ecological Site Description figures allow for 650 lbs/acre or kg/hectare for a below average year. The current estimate of 400 lbs/acre or kg/hectare is approximately 60% of this and 100 lbs/acre or kg/hectare less than the long-term average.

Pasture #3 rated most of the indicators None to Slight to Slight to Moderate, except for F/S groups and invasive plants which rated Moderate. This SD-3 loamy ecological site consisting of 160 acres/73 hectares of an Upton-Atoka soil association occurs on uplands west of the Pecos River with slopes 0-5%. Upton and Atoka soil is in gravelly and loamy ecological sites respectively. Some livestock were utilizing this pasture and the majority of the animals were congregated near Pyett Well. Despite the below than average precipitation recently, the amount of bareground, a soil and hydrologic attribute, falls well within the expected range for the ESD and far below the long-term average of 63%. This indicator presently rates Slight to Moderate. The F/S groups are missing the grama grass species and threeawn is replacing them along with cholla (*Opuntia spinosa*) and yucca. Therefore this indicator rates Moderate. Annual production rates Slight to Moderate with an estimation of 500 lbs/ac or kg/ha which is approximately 60% of ESD potential and above the long term average of 418 lbs/ac or kg/ha. Invasive plants rate Moderate as evidenced by cholla and yucca scattered throughout. Physical crusts are holding the soil throughout with some breaks in continuity. This indicator rates Slight to Moderate.

Pasture #4, also with an Upton-Atoka soil phase rates all indicators None to Slight to Slight to Moderate, except F/S groups rating Moderate. This pasture encompasses an approximate acreage of 640 or 290 hectares, and is in very good ecological condition considering the present climatic status. The allotment received a convectional isolated thunderstorm in late July of 2003, as per our conversation with the allottee. There was quite an amount of ponding which occurred on the draws and low-lying depressions. The growth of the forage was substantial in these areas as the runoff is greater. The obvious water mark on the embankments of these areas leading to the pasture indicates standing water. The capability of the perennial grass to reproduce by tillers, ie stolons and rhizomes or seed is only slightly limited. This indicator rated Slight to Moderate. Except for the absence of the grama grasses for the F/S groups indicator, rating at Moderate, this site displays the least degree of departure from the ESD and/or ecological reference areas, than the other 2 study areas on the allotment.

Hydrology - Pasture 1 - 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. Other indicators such as rills, water flow patterns, pedestals and or terracettes, gullies, wind-scoured blowouts and or deposition areas, soil surface resistance to erosion, soil surface loss or degradation, plant community composition and distribution relative to infiltration and runoff, compaction layer, litter amount and physical/chemical/biological crusts rated as none to slight or slight to moderate which shows a good hydrological and soil condition. Sand and gravel deposits of Quaternary

alluvial deposits outcrop in the area. Pasture 3 - The indicators such as rills, water flow patterns, pedestals and or terracettes, bareground, gullies, wind-scoured blowouts and or deposition areas, soil surface resistance to erosion, soil surface loss or degradation, plant community composition and distribution relative to infiltration and runoff, compaction layer, litter amount and physical/chemical/biological crusts rated as none to slight or slight to moderate which shows a good hydrological and soil condition. Sand and gravel deposits of Quaternary alluvial deposits outcrop in the area.

Pasture 4 - The indicators such as rills, water flow patterns, pedestals and or terracettes, bareground, gullies, wind-scoured blowouts and or deposition areas, soil surface resistance to erosion, soil surface loss or degradation, plant community composition and distribution relative to infiltration and runoff, compaction layer, litter amount and physical/chemical/biological crusts rated as none to slight or slight to moderate which shows a good hydrological and soil condition. Sand and gravel deposits of Quaternary alluvial deposits outcrop in the area.

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 plant mortality & decadence, as discussed above. In addition to the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation.

Pasture #1, #3 & #4 - The only biotic factors that fell within the Moderate rating are functional/structural groups, annual production and invasive plants. Considering present climatic regimes, these indicators can be expected to fall within the normal range of variability. As the area of interest falls within an ecotone between the Chihuahuan desert and grassland biomes, the desert shrub component can be expected in the area and would increase with declining range site conditions and the overall drying conditions over time.

Wildlife habitat and Population indicators rate Slight to Moderate, primarily for pronghorn antelope, desert mule deer, upland game birds, and a variety on non-game terrestrial species. The composition of vegetation reflects current climatic conditions, e.g., drought for the past several years and the area being within an ecotone of the Chihuahuan desert and grasslands. 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 plant regeneration, is moderated by climate and land use. These food and cover habitat components appear to be in very good condition, coupled with the presence of water in depressions and swales. Non-grazing of the land following the early spring storms has enhanced rangeland conditions.

Collectively, the current observed wildlife habitat conditions indicate an upward trend in habitat quality as evidenced by the persistence of a large pronghorn antelope population and the general lack of invasive plants that could potentially increase. 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, rate None to Slight.

It is the professional opinion of the Assessment Team, that the public land within Pyett Well meets the Upland and Biotic standards. There are no Riparian areas on the allotment, therefore this standard was not addressed. Refer to site notes and recommendations for additional information regarding the ecological sites on this allotment.

Recommendations: Continued proper grazing practices along with non-use taken by the allottee will further the favorable condition of this allotment and help it to recover even further from the drought. The available forage should be wisely utilized for the upcoming grazing period. Proper rotation and rest will augment this allotments' already high potential. This allotment has only 20% public land, the sites are in very good ecological condition from a subjective standpoint. Monitoring of those sites should continue on a regular basis, to reach more objective decisions in the future. Further evaluation of the already lowered numbers may need to be performed in the future, if dry conditions persist.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 64069-#1-F205			
Legal Land Desc	NWNW 10 0130S 0240E Meridian 23	Acreage	905
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007030 ZUBER		
Observers	NAVARRO/MCGEE	Observation Date	01/06/2004
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	8.24	NOAA Growing Season Precipitation	4.91
NOAA Avg Annual Precipitation	12.78	NOAA Avg Growing Season Precipitation	10.65
Disturbances and Animal Use:			

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 :	Bareground now at 60%.					
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 :	Physical crusts holding soil in place.					
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 :	Tobosa (<i>Pleuraphis mutica</i>), burrograss (<i>Scleropogon brevifolius</i>), yucca (<i>Yucca</i> spp.), and threeawn (<i>Aristida</i> spp.) are the plants observed. There is an absence of grama grasses (<i>Bouteloua</i> spp.).					
B	Plant Mortality/Decadence				X	
Comments :						
H B	Litter Amount				X	
Comments :	Litter amount now at 20%.					

B	Annual Production			X		
Comments :	400 lbs/acre or kg/ha is the estimation now.					
B	Invasive Plants				X	
Comments :	Some yucca (Yucca spp.) present.					
B	Reproductive Capability of Perennial Plants					X
Comments :						
S	Physical/Chemical/Biological Crusts					X
Comments :	Mostly physical crusts evident.					
B	Wildlife Habitat				X	
Comments :	Grassland habitat type on flat topography. Some vertical structure provided by yuccas.					
B	Wildlife Populations				X	
Comments :	Primary species include pronghorn antelope and a variety of non-game terrestrial species. Forb product a concern.					
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 Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	3	6
H	Hydrologic	0	0	1	6	4

B	Biotic	0	0	2	6	5
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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.

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Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil	The indicators of concern do not pose an immediate problem. Overall the site is in fair condition.	0	1	9
Hydrologic	With the exception of F/S groups and invasive plants, this site shows no evidence of major problems.	0	1	10
Biotic	This site is in the better condition than the rest of the allotment.	0	2	11

Site Notes: This study site was GPs'd at the time of assessment. The long-term averages for annual production and litter amount are slightly less than the range expected for the ESD. So any real changes in the rating would have to show significantly much more degree of departure. This pasture, #1 is habitat to a herd of pronghorn (*Antilocapra americana*).

The allottee has since taken some non-use due to resource concerns regarding the drought. The SW portion of this ecological site received a heavy rainfall event in the month of July 2003. Forb growth was also higher on this pasture.

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 64069-#3-F207

Legal Land Desc	NWNE 22 0130S 0240E Meridian 23	Acreage	160
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060009040 FELIX		
Observers	NAVARRO/MCGEE	Observation Date	01/06/2004
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	11.31	NOAA Growing Season Precipitation	7.55
NOAA Avg Annual Precipitation	13.55	NOAA Avg Growing Season Precipitation	11.18
Disturbances and Animal Use:			

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 :	Bareground is now at 40%.					
S H	Gullies				X	
Comments :						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments :						
H	Litter Movement				X	
Comments :	Some litter being displaced.					
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 :	There is an absence of grama (<i>Bouteloua</i> spp.) and yucca (<i>Yucca</i> spp.) and cholla (<i>Opuntia spinosa</i>) have slightly encroached.					
B	Plant Mortality/Decadence					X
Comments :						
H B	Litter Amount				X	
Comments	Now at 20%.					

:						
B	Annual Production				X	
Comments :	500 lbs/acre or kg/ha. is the current estimate.					
B	Invasive Plants			X		
Comments :	Cholla (<i>Opuntia spinosa</i>) and yucca (<i>Yucca spp.</i>) are beginning to encroach.					
B	Reproductive Capability of Perennial Plants				X	
Comments :	Only slightly limited.					
S	Physical/Chemical/Biological Crusts				X	
Comments :	Physical crusts evident.					
B	Wildlife Habitat				X	
Comments :	A grassland habitat type on flat topography.					
B	Wildlife Populations				X	
Comments :	Primary species of concern include pornghorn antelope and a variety of terrestrial non-game species. Forb production a concern.					
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 Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	7	3

H	Hydrologic	0	0	0	9	2
B	Biotic	0	0	1	8	4

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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.

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Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	0	10
Hydrologic		0	0	11
Biotic		0	1	12

Site Notes: Photographs were taken and the study site was gps'd. This is habitat for a herd of pronghorn (*Antilocapra americana*). There was a herd of livestock that have been using this pasture, (#3), but the allottee has since taken a substantial amount of non-use, due to the limited amount of rainfall and the absence of forage as a result.

RFOs Upland and Biotic Standard Assessment Summary Worksheet

SITE 64069-#4-F208

Legal Land Desc	SESW 21 0130S 0240E Meridian 23	Acreage	640
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060009040 FELIX		
Observers	NAVARRO/MCGEE	Observation Date	01/06/2004
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		NOAA Growing Season Precipitation	
NOAA Avg Annual Precipitation		NOAA Avg Growing Season Precipitation	
Disturbances and Animal Use:			

Part 2. Attributes and Indicators

Attribute	Indicators	Departure from Ecological Site Description/Ecological Reference Areas				
		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 :	Bareground now is estimated at 40%.					
S H	Gullies				X	
Comments :						
S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments :						
H	Litter Movement				X	
Comments :	Some litter being displaced.					
S H B	Soil Surface Resistance to Erosion				X	
Comments :	Physical crust is holding the surface in place.					
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 :	The absence of the grama (<i>Bouteloua</i> spp.) grasses in the long-term data and the ESD accounts for this rating. There was however some globemallow (<i>Sphaeralcea</i> spp.) growing.					
B	Plant Mortality/Decadence					X
Comments :						

H B	Litter Amount				X	
Comments :	30% currently is the estimation.					
B	Annual Production				X	
Comments :	Production is estimated at 500 lbs/ac or kg/ha.					
B	Invasive Plants				X	
Comments :	Yucca (Yucca spp.) is the only plant of concern.					
B	Reproductive Capability of Perennial Plants				X	
Comments :						
S	Physical/Chemical/Biological Crusts				X	
Comments :	Physical crusting evident.					
B	Wildlife Habitat				X	
Comments :	A grassland habitat type on flat topography.					
B	Wildlife Populations				X	
Comments :	Primary species of concern include pronghorn antelope and a variety of non-game terrestrial species. Forb production a concern.					
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

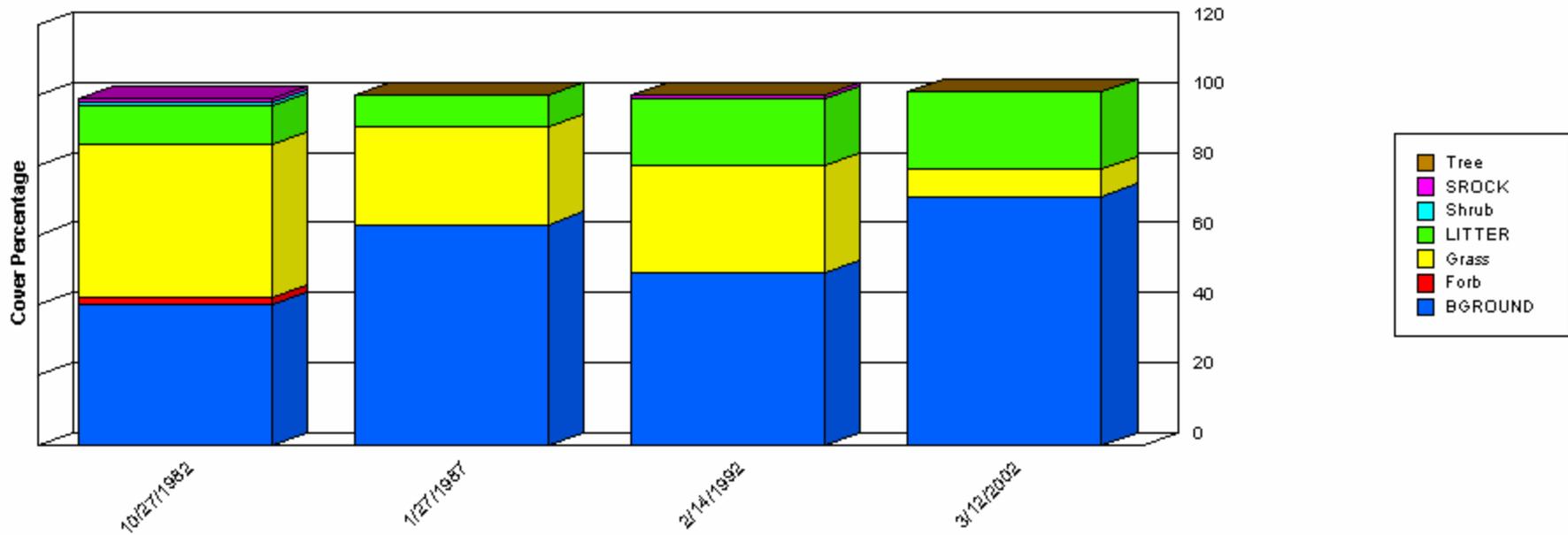
			Extreme		e	Slight
S	Soil	0	0	0	8	2
H	Hydrologic	0	0	0	9	2
B	Biotic	0	0	1	8	4

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	1	12

Site Notes: Considering the current dry conditions, this site is in the better ecological condition of the the 3 sites assessed. According to the allottee, there was a late summer storm which targeted #4 pasture. This may account for the greater amount of forage observed. There also is evidence of ponding on the lower areas as evidenced by the water line observed. Forbs such as globemallow (*Sphaeralcea* spp.) were observed on site.

Ground Cover Trends



	10/27/1982	1/27/1987	2/14/1992	3/12/2002
BGROUND	40.00	63.00	49.00	71.00
Forb	2.00	0.00	0.00	0.00
Grass	44.00	28.00	31.00	8.00
LITTER	11.00	9.00	19.00	22.00
Shrub	1.00	0.00	0.00	0.00
SROCK	1.00	0.00	1.00	0.00
Tree	0.00	0.00	0.00	0.00

	10/27/1982	1/27/1987	2/14/1992	3/12/2002
Total	99.00	100.00	100.00	101.00

Report Parameters

SITE NAME LIKE 64069-#1-F205
ON/AFTER 10/01/1982
ON/BEFORE 09/30/2002

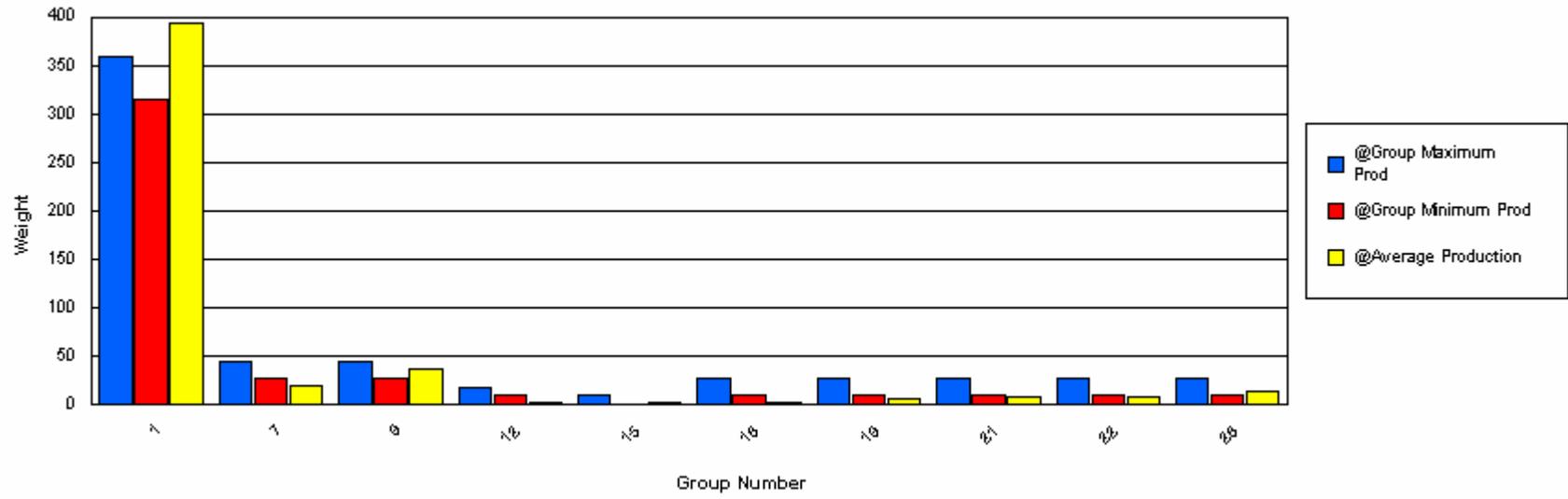
Functional / Structural Groups

Report Parameters

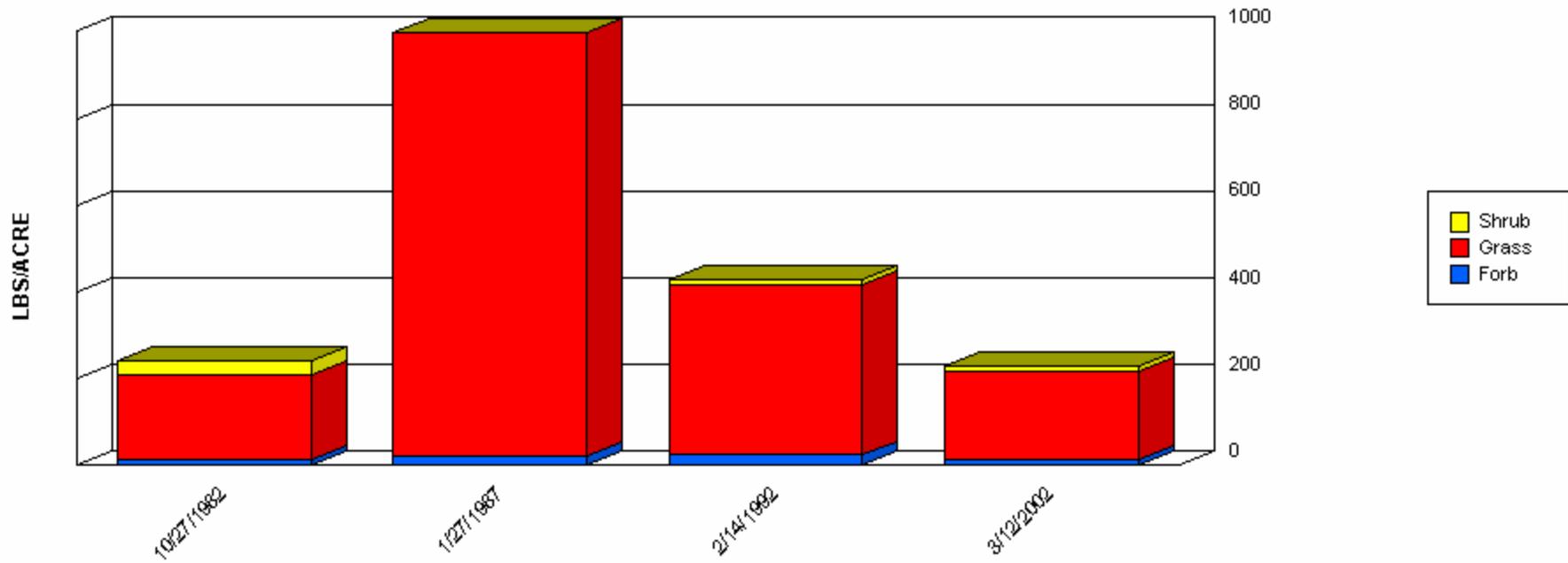
SITE NAME LIKE 64069-#1-F205
 ON/AFTER 10/01/1982
 ON/BEFORE 09/30/2002
 MIN LBS TO GRAPH 1
 SELECTED ECOSITE 042CY007NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	HIMU2	315	360	138.00	572.00	265.25	177.77
1	Grass	SCBR2	315	360	28.00	242.00	128.75	94.47
7	Grass	ARIST	27	45	1.00	37.00	19.00	18.00
8	Grass	PAOB	9	27	0.00	1.00	0.33	0.47
9	Grass	MUAR	27	45	1.00	124.00	36.50	50.73
12	Grass	PAHA	9	18	0.00	4.00	1.33	1.89
15	Grass	TRPI2	0	9	0.00	3.00	1.50	1.50
17	Grass	ERPI	9	27	0.00	1.00	0.33	0.47
18	Forb	SPHAE	9	27	0.00	4.00	1.33	1.89
19	Forb	CROTO	9	27	0.00	6.00	3.00	2.45
19	Forb	PENA	9	27	1.00	3.00	2.00	0.82
21	Forb	ERTE13	9	27	1.00	22.00	8.00	8.40
21	Forb	HOGL2	9	27	0.00	1.00	0.33	0.47
22	Forb	AAFF	9	27	4.00	12.00	8.00	4.00
22	Forb	PHLO	9	27	0.00	1.00	0.33	0.47
24	Forb	SOEL	9	27	0.00	1.00	0.67	0.47
26	Shrub	GUSA2	9	27	0.00	31.00	14.00	12.83
27	Shrub	LYBE	9	27	0.00	1.00	0.33	0.47

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



Production Lbs/Acre Trends

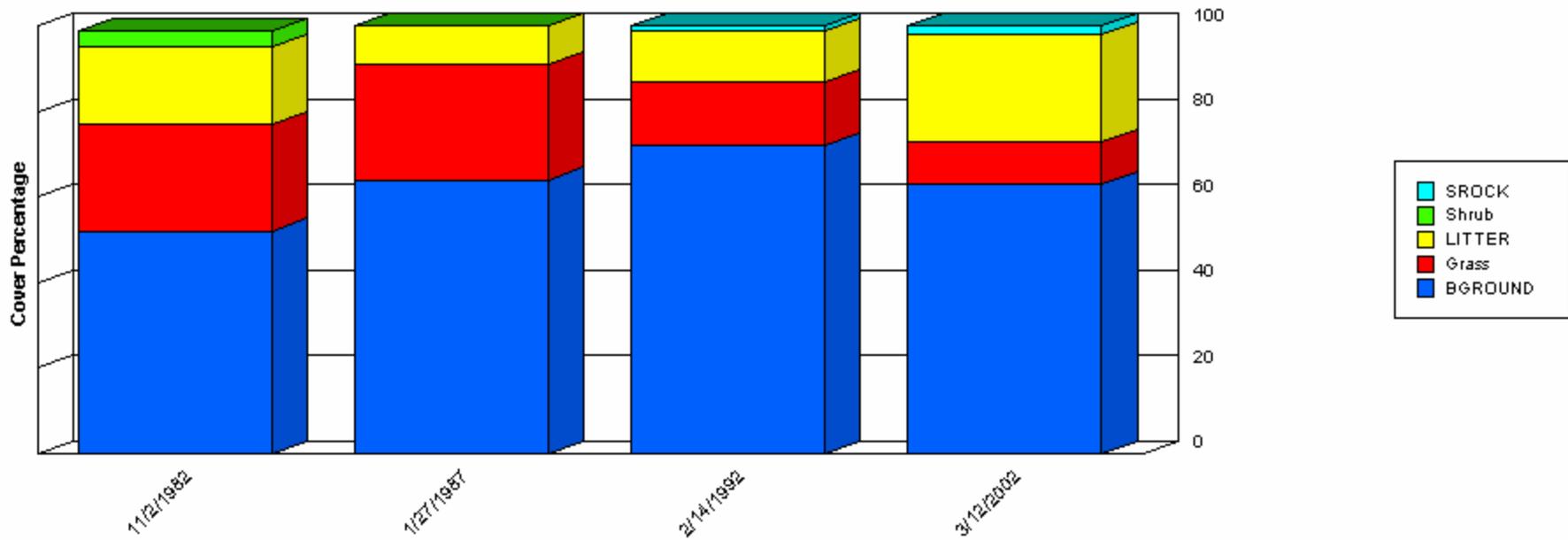


	10/27/1982	1/27/1987	2/14/1992	3/12/2002
Forb	15.00	21.00	24.00	13.00
Grass	194.00	978.00	394.00	204.00
Shrub	32.00	0.00	10.00	11.00
Total	241.00	999.00	428.00	228.00

Report Parameters

SITE NAME LIKE 64069-#1-F205
 ON/AFTER 10/01/1982
 ON/BEFORE 09/30/2002

Ground Cover Trends



	11/2/1982	1/27/1987	2/14/1992	3/12/2002
BGROUND	52.00	64.00	72.00	63.00
Grass	25.00	27.00	15.00	10.00
LITTER	18.00	9.00	12.00	25.00
Shrub	4.00	0.00	0.00	0.00
SROCK	0.00	0.00	1.00	2.00
Total	99.00	100.00	100.00	100.00

Report Parameters

SITE NAME LIKE	64069-#3-F207
ON/AFTER	10/01/1982
ON/BEFORE	09/30/2002

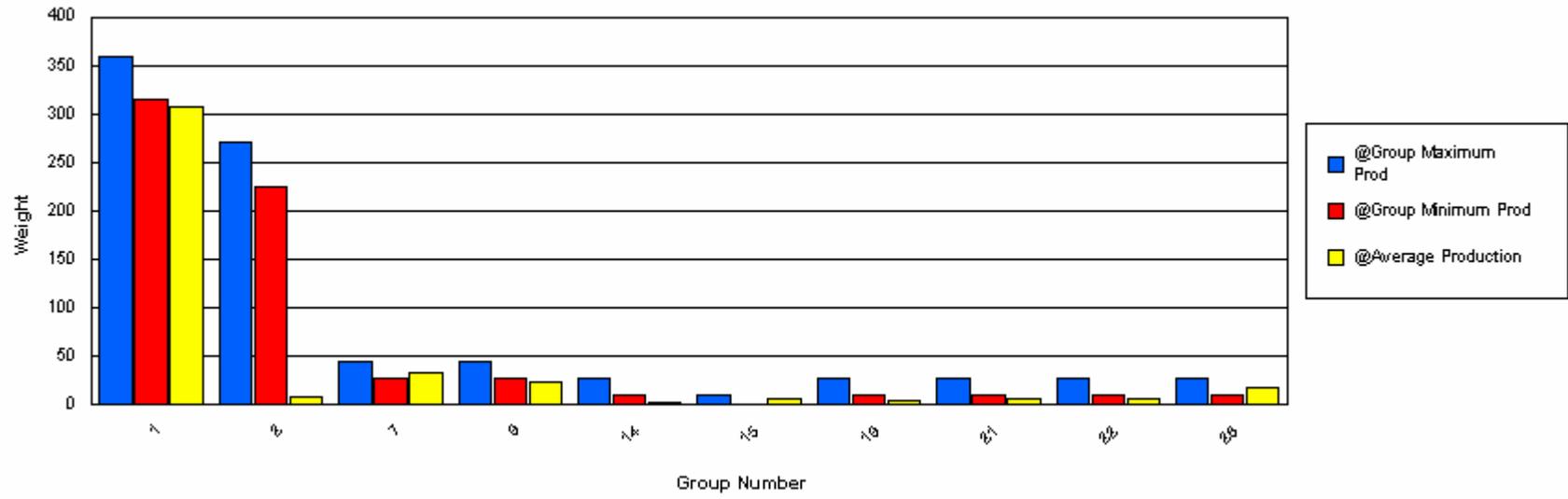
Functional / Structural Groups

Report Parameters

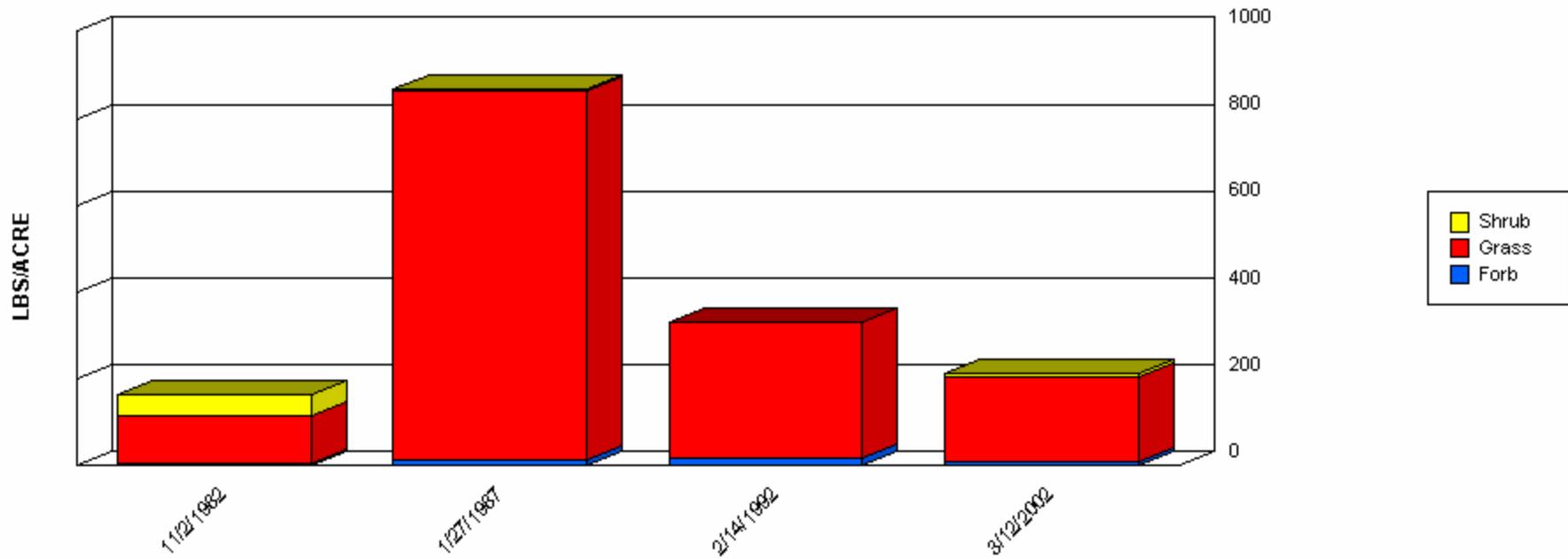
SITE NAME LIKE 64069-#3-F207
 ON/AFTER 10/01/1982
 ON/BEFORE 09/30/2002
 MIN LBS TO GRAPH 1
 SELECTED ECOSITE 042CY007NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	HIMU2	315	360	61.00	414.00	188.00	134.55
1	Grass	SCBR2	315	360	31.00	263.00	118.75	93.55
2	Grass	BOER4	225	270	0.00	29.00	7.50	12.42
7	Grass	ARIST	27	45	1.00	88.00	32.00	39.67
9	Grass	MUAR	27	45	2.00	72.00	22.25	28.83
14	Grass	TRMU	9	27	0.00	9.00	2.75	3.63
15	Grass	TRPI2	0	9	0.00	12.00	6.00	6.00
17	Grass	BUDA	9	27	0.00	0.00	0.00	0.00
18	Forb	SPHAE	9	27	0.00	1.00	0.33	0.47
19	Forb	CROTO	9	27	1.00	8.00	3.33	3.30
19	Forb	PENA	9	27	0.00	1.00	0.33	0.47
21	Forb	ERTE13	9	27	0.00	17.00	5.25	6.87
22	Forb	AAFF	9	27	1.00	10.00	5.50	4.50
22	Forb	CIRSI	9	27	0.00	1.00	0.33	0.47
24	Forb	SOEL	9	27	0.00	1.00	0.33	0.47
26	Shrub	GUSA2	9	27	0.00	47.00	17.00	21.28
26	Shrub	OPUNT	9	27	0.00	1.00	0.67	0.47

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



Production Lbs/Acre Trends

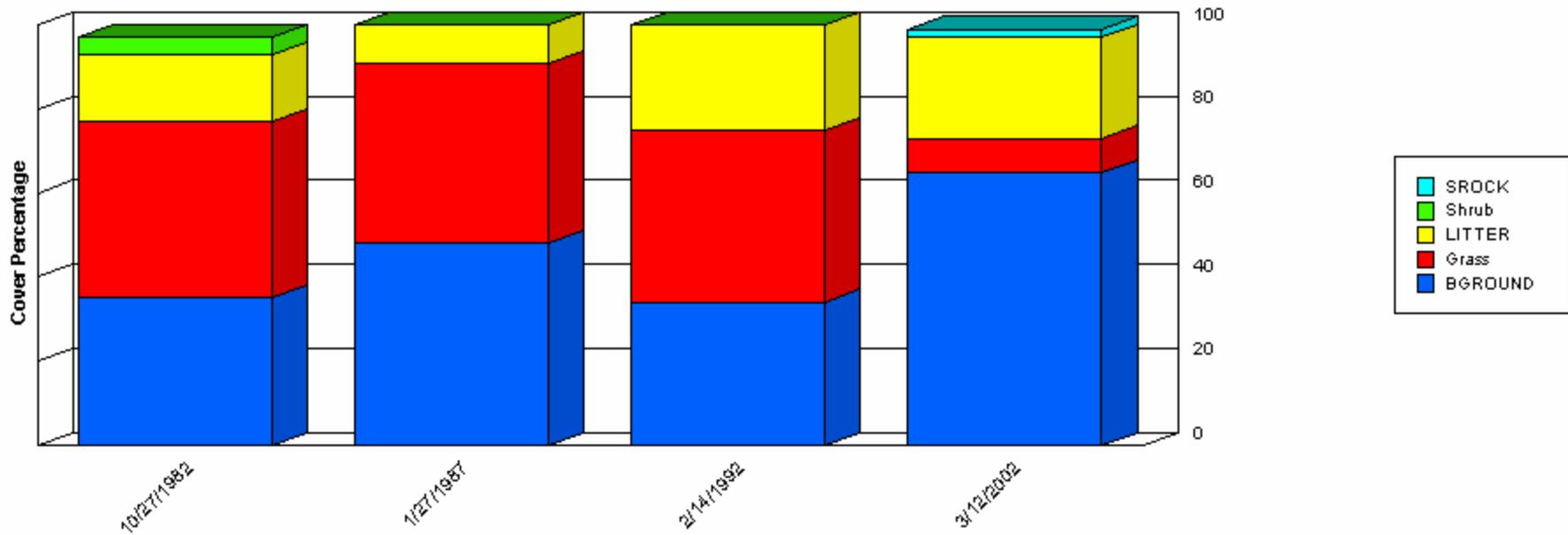


	11/2/1982	1/27/1987	2/14/1992	3/12/2002
Forb	4.00	15.00	19.00	10.00
Grass	113.00	850.00	313.00	193.00
Shrub	48.00	1.00	0.00	11.00
Total	165.00	866.00	332.00	214.00

Report Parameters

SITE NAME LIKE 64069-#3-F207
 ON/AFTER 10/01/1982
 ON/BEFORE 09/30/2002

Ground Cover Trends



	10/27/1982	1/27/1987	2/14/1992	3/12/2002
BGROUND	35.00	48.00	34.00	65.00
Grass	42.00	43.00	41.00	8.00
LITTER	16.00	9.00	25.00	24.00
Shrub	4.00	0.00	0.00	0.00
SROCK	0.00	0.00	0.00	2.00
Total	97.00	100.00	100.00	99.00

Report Parameters

SITE NAME LIKE	64069-#4-F208
ON/AFTER	10/01/1982
ON/BEFORE	09/30/2002

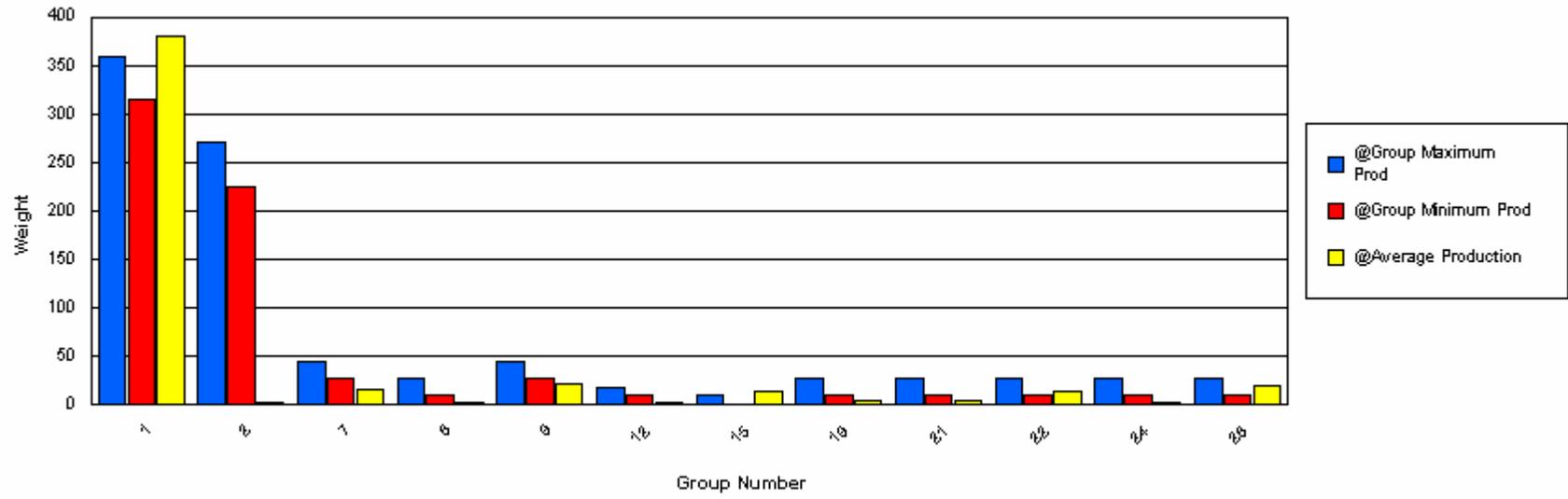
Functional / Structural Groups

Report Parameters

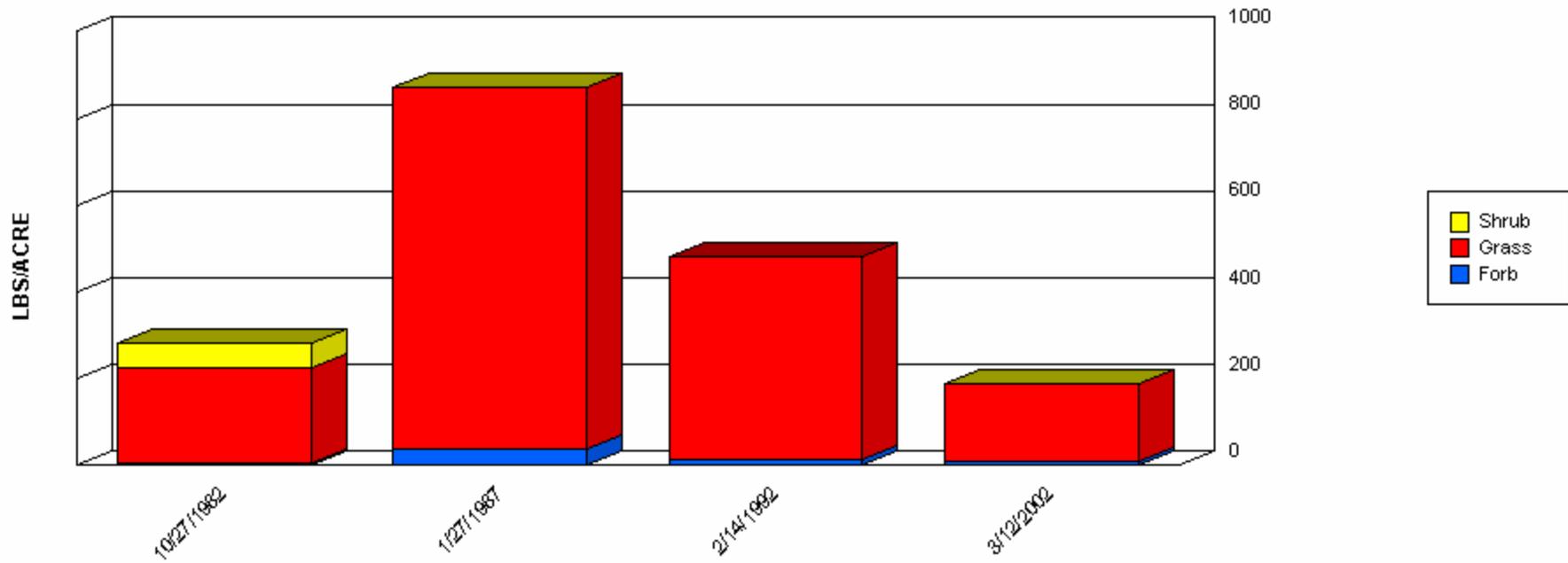
SITE NAME LIKE 64069-#4-F208
 ON/AFTER 10/01/1982
 ON/BEFORE 09/30/2002
 MIN LBS TO GRAPH 1
 SELECTED ECOSITE 042CY007NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	HIMU2	315	360	155.00	515.00	290.25	148.43
1	Grass	SCBR2	315	360	19.00	186.00	90.00	63.19
2	Grass	BOER4	225	270	1.00	4.00	2.33	1.25
7	Grass	ARIST	27	45	0.00	46.00	16.00	21.23
8	Grass	PAOB	9	27	0.00	4.00	2.00	2.00
9	Grass	MUAR	27	45	3.00	46.00	18.00	16.84
9	Grass	MUAR2	27	45	0.00	6.00	3.00	3.00
12	Grass	PAHA	9	18	0.00	4.00	2.00	1.63
15	Grass	TRPI2	0	9	0.00	26.00	13.00	13.00
17	Grass	ERPU8	9	27	0.00	1.00	0.50	0.50
18	Forb	SPHAE	9	27	0.00	1.00	0.33	0.47
19	Forb	CROTO	9	27	2.00	3.00	2.67	0.47
19	Forb	PENA	9	27	0.00	4.00	1.67	1.70
21	Forb	ERTE13	9	27	0.00	9.00	3.75	3.56
21	Forb	HOGL2	9	27	0.00	0.00	0.00	0.00
22	Forb	AAFF	9	27	1.00	25.00	13.00	12.00
24	Forb	SOEL	9	27	0.00	3.00	1.25	1.09
26	Shrub	GUSA2	9	27	0.00	58.00	19.67	27.11

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



Production Lbs/Acre Trends



	10/27/1982	1/27/1987	2/14/1992	3/12/2002
Forb	6.00	37.00	14.00	8.00
Grass	219.00	836.00	467.00	180.00
Shrub	58.00	0.00	0.00	1.00
Total	283.00	873.00	481.00	189.00

Report Parameters

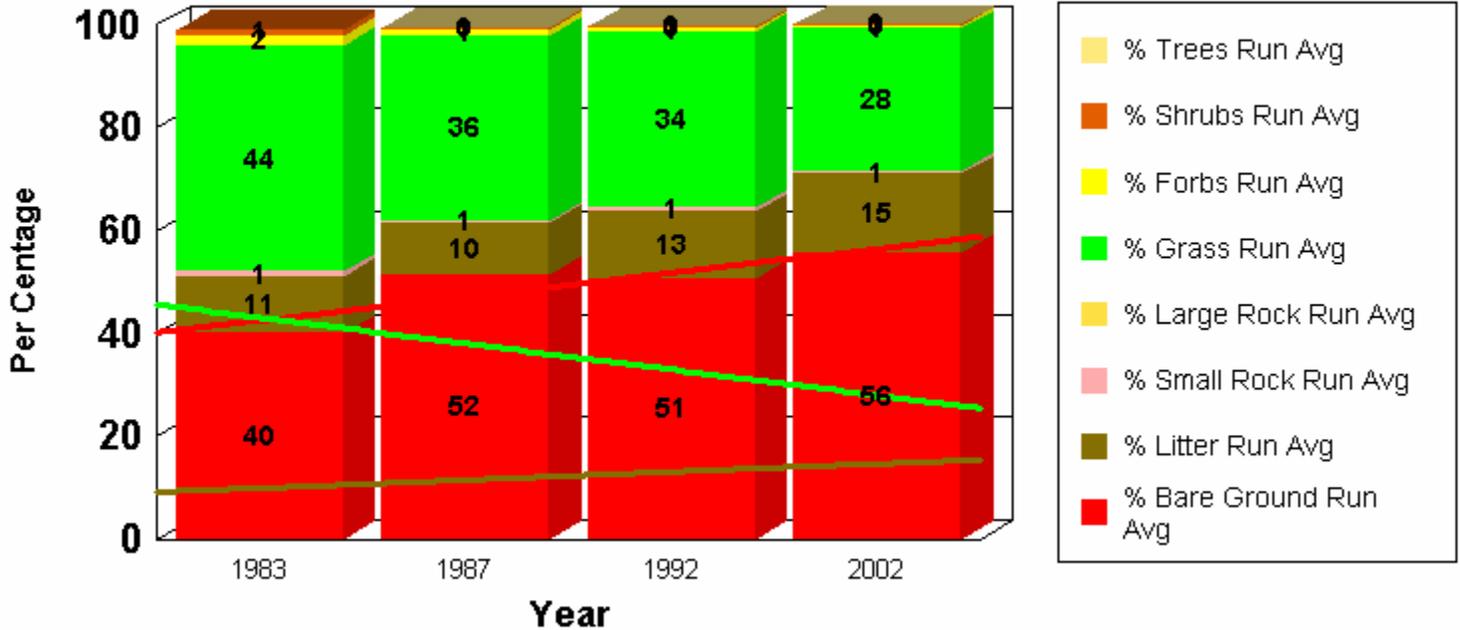
SITE NAME LIKE 64069-#4-F208
 ON/AFTER 10/01/1982
 ON/BEFORE 09/30/2002

Location: Township: 0130S Range 0240E Section 10 QtrQtr: NWNW

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	40.00	11.00	1.00		2.00	44.00	1.00		40.00	11.00	1.00		2.00	44.00	1.00	
1987	63.00	9.00	0.00		0	28.00	0.00	0.00	51.50	10.00	0.50		1.00	36.00	0.50	0.00
1992	49.00	19.00	1.00		0	31.00	0.00	0.00	50.67	13.00	0.67		0.67	34.33	0.33	0.00
2002	71.00	22.00	0.00		0	8.00	0.00	0.00	55.75	15.25	0.50		0.50	27.75	0.25	0.00

Running Average Ground Cover Trends

With Trendlines

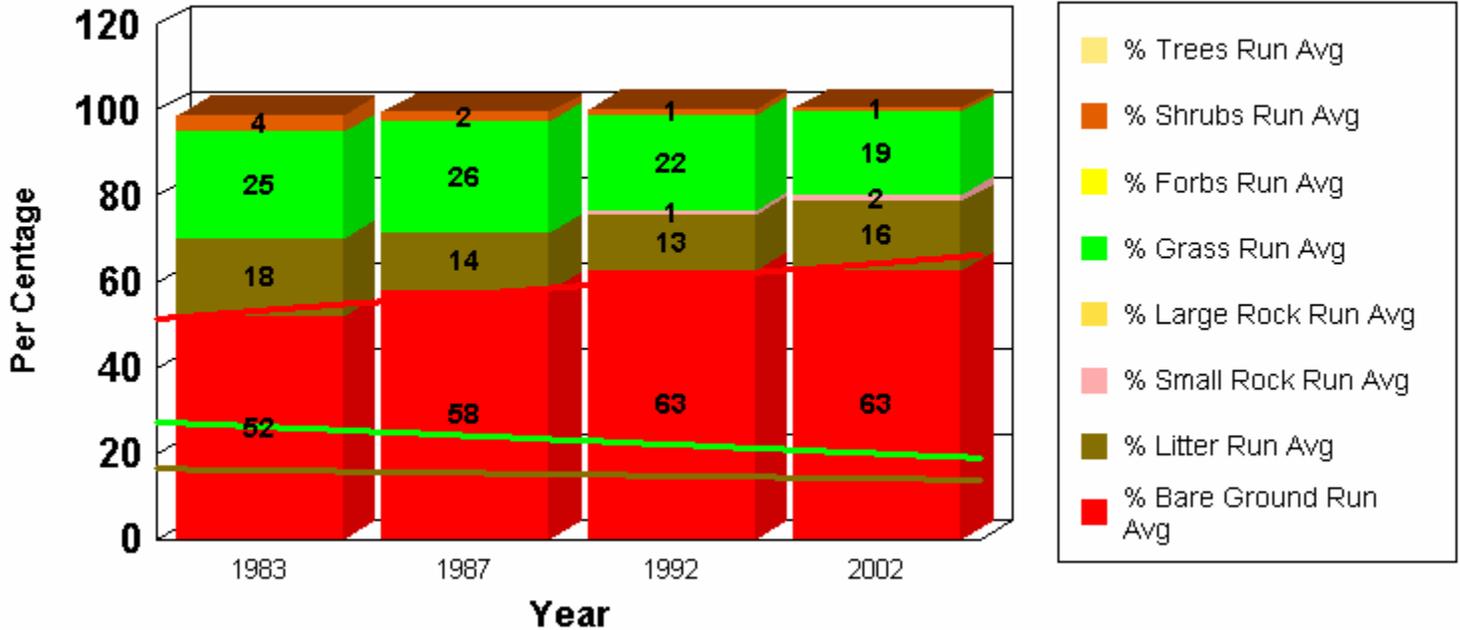


Location: Township: 0130S Range 0240E Section 22 QtrQtr: NWNE

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	52.00	18.00				25.00	4.00		52.00	18.00				25.00	4.00	
1987	64.00	9.00				27.00	0.00		58.00	13.50				26.00	2.00	
1992	72.00	12.00	1.00			15.00	0.00		62.67	13.00	1.00			22.33	1.33	
2002	63.00	25.00	2.00			10.00	0.00		62.75	16.00	1.50			19.25	1.00	

Running Average Ground Cover Trends

With Trendlines

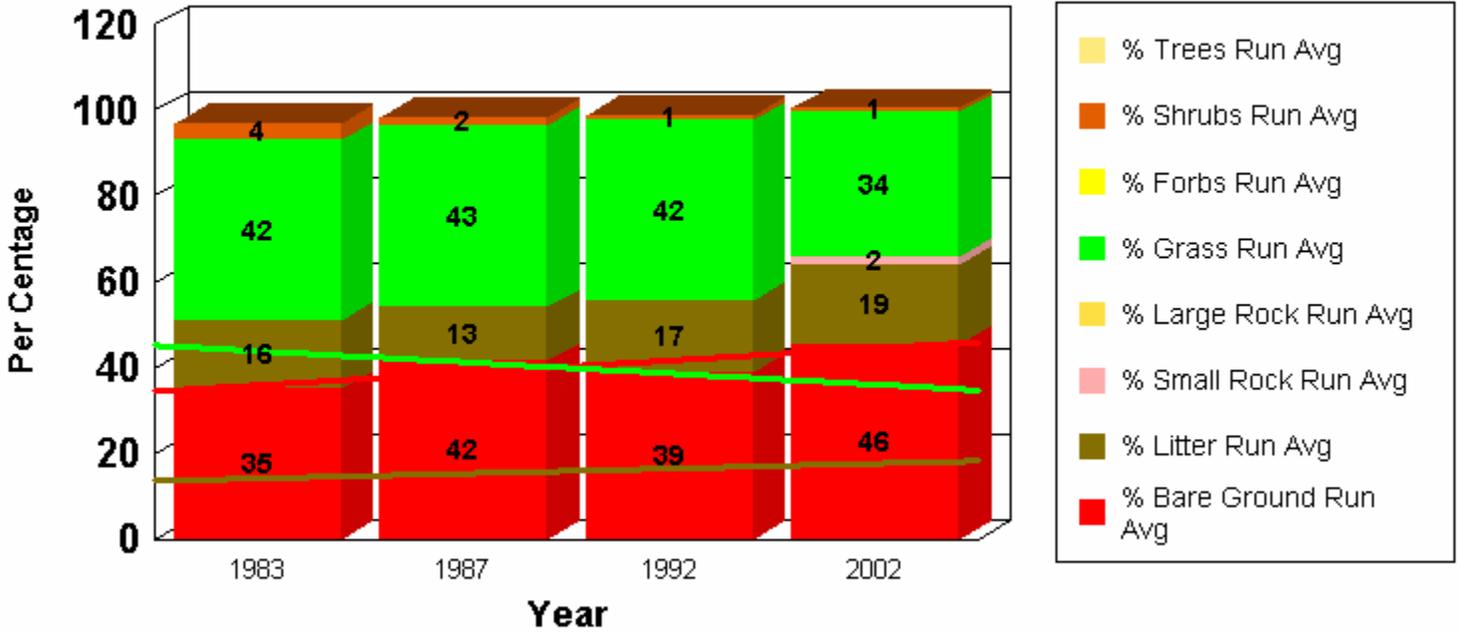


Location: Township: 0130S Range 0240E Section 21 QtrQtr: SESW

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	35.00	16.00				42.00	4.00		35.00	16.00				42.00	4.00	
1987	48.00	9.00				43.00	0.00		41.50	12.50				42.50	2.00	
1992	34.00	25.00				41.00	0.00		39.00	16.67				42.00	1.33	
2002	65.00	24.00	2.00			8.00	0.00		45.50	18.50	2.00			33.50	1.00	

Running Average Ground Cover Trends

With Trendlines



Production (lbs/ac) Data

VEGID: 947

64069 PYETT WELL

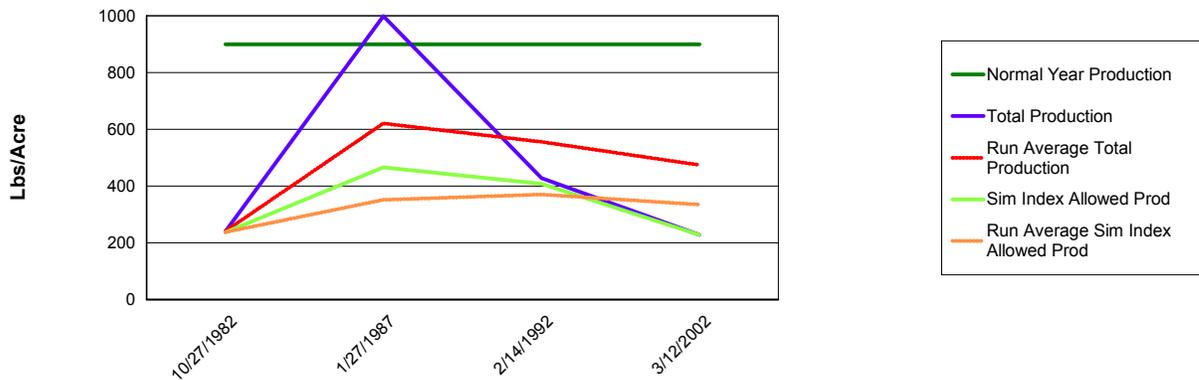
64069-#1-F205

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
10/27/1982	54.99	26.33	900	241.00	241.00	237.00	237.00
01/27/1987	51.10	51.78	900	999.00	620.00	466.00	351.50
02/14/1992	48.00	45.33	900	428.00	556.00	408.00	370.33
03/12/2002	49.95	25.33	900	228.00	474.00	228.00	334.75

Production Data For Study Site



Production (lbs/ac) Data

VEGID: 949

64069 PYETT WELL

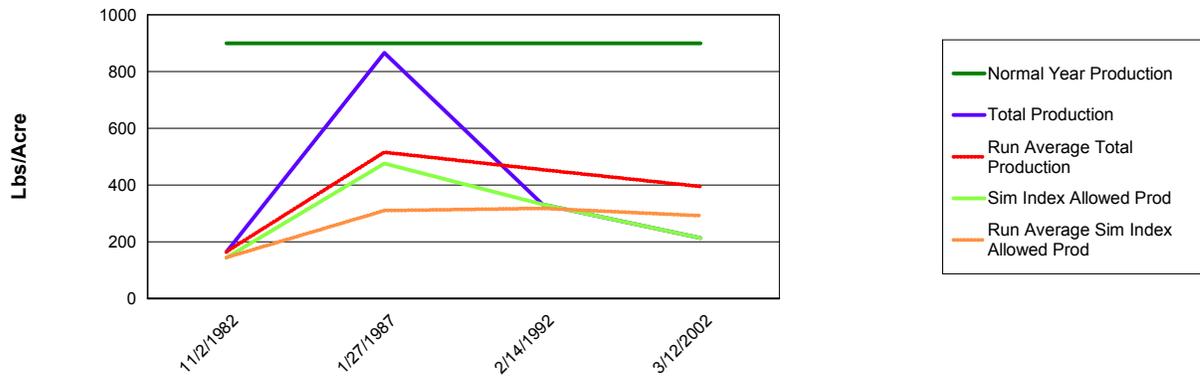
64069-#3-F207

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
11/02/1982	52.11	16.00	900	165.00	165.00	144.00	144.00
01/27/1987	52.98	52.89	900	866.00	515.50	476.00	310.00
02/14/1992	59.00	36.89	900	332.00	454.33	332.00	317.33
03/12/2002	53.95	23.78	900	214.00	394.25	214.00	291.50

Production Data For Study Site



Production (lbs/ac) Data

VEGID: 950

64069 PYETT WELL

64069-#4-F208

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
10/27/1982	48.64	28.00	900	283.00	283.00	252.00	252.00
01/27/1987	56.49	56.33	900	873.00	578.00	507.00	379.50
02/14/1992	49.00	44.89	900	481.00	545.67	404.00	387.67
03/12/2002	47.95	21.00	900	189.00	456.50	189.00	338.00

Production Data For Study Site

