

## **Determination of Public Land (Rangeland) Health for 65012 EDMON MITCHELL**

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. While habitat parameters may meet the Biotic standard, the habitat requirements for Special Status Species (lesser prairie chicken and sanddune lizard) habitat are a concern. Factors such as oil and gas activities and the associated infra-structure, the mesquite encroachment in some areas and the low composition of the tall grass species required for nesting success must continue to be addressed to improve the existing habitat and prevent lost of habitat from fragmentation.

Based on the assessments, it is my determination that the public land within Edmon Mitchell allotment #65012, meets 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

09/28/2005

Date

## Standards of Public Land Health

### Evaluation of 65012 EDMON MITCHELL Allotment

[ 04/25/2005 ]

The Roswell Field Office conducted rangeland health assessments at five (5) study sites within the Edmon Mitchell allotment 65012. 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
65012-BIG SAVAGE- D038	X			X	*		N/A		
65012- FEEDING #4- D036	X			X			N/A		
65012-LITTLE SAVAGE- D037	X			X	*		N/A		
65012-N. KELLY #2- D035	X			X	*		N/A		
65012- OWNBY #1- D034	X			X	*		N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Edmon Mitchell allotment #65012. Ten (10) of these assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with previous data collected on five study locations within this allotment were utilized to make rangeland health determinations. This allotment is a "C" (custodial) category due to the small amount of public land present.

All assessments performed are in the vicinity of a study area. Three sites are CP-2 Sandy Plains, one is Sand Hills and one Deep Sand. Feeding Pasture with an acreage of 730 or 296 hectares is a Pyote-Faskin association, moderately undulating on 0-5 percent slopes. Elevation is between 3,900 ft/1,182 m and 4,200/1,272 m on high terraces in the eastern

part of the survey area. All indicators assessed rated None to Slight to Slight to Moderate with the exception of invasive plants. Mesquite (*Prosopis glandulosa*) is scattered throughout. Soil and hydrologic attributes for those indicators all fell within the normal range of variability. Only slight deviations were observed in regards to plant vigor and reproduction, erosional processes occurring in their natural state and other parameters. In some cases the values expected for the ESD and long-term average, and what was actually observed deviated only slightly.

The other CP-2 Sandy Plains ecological site with a Pyote-Faskin soil association is North Kelly Pasture. The acreage here is 768 or 311 hectares. The majority of indicators assessed rated None to Slight to Slight to Moderate. Bareground, estimated currently at 40 percent exceeded what is expected for the ESD by 10% but is slightly less than the long-term average of 53 percent. This soil and hydrologic indicator rates Moderate. Invasive plants also rates Moderate as mesquite is scattered throughout. The grass species composition remains intact with only minor deviations. Threeawn (*Aristida* spp.), spike dropseed (*Sporobolus contractus*) and little bluestem (*Schizachyrium scoparium*) are the three principle grasses on site with shinnery oak (*Quercus havardii*) and annual forbs making up the rest of the species observed. All other indicators fall within the normal range of variability.

The remaining Sandy Plains ecological site with 576 acres/ 233 hectares is Big Savage Pasture. The soil phase is Faskin fine sand on 0-2 percent slope with similar characteristics as the two previous soil associations. Indicators assessed are comparable to the previous sites with ratings in the None to Slight to Slight to Moderate range. Again the invasive plants indicator is Moderate as mesquite is observed scattered throughout.

Little Savage Pasture with an acreage of 1,460 or 591 hectares also rates the majority of indicators None to Slight to Slight to Moderate with most all falling within the normal range of variability. This CP-2 Sand Hills ecological site is comprised of Roswell-Jalmar fine sand on high terraces in the eastern part of the survey area. Slopes are 0-5 percent or more in some areas. Elevation is comparable to previous areas. Litter amount far exceeds what is expected. Annual forb growth along with shinnery oak leaves are the major components of the litter here. Functional/structural groups rates Moderate however. Some of bluestem and other perennial grass components are reduced and have been replaced by shrub species like sand sage (*Artemisia filifolia*) and shinnery oak which has leafed out and formed (masts), acorns.

Ownby Pasture, the remaining site is a CP-2 Deep Sand and the same soil phase as Little Savage Pasture. The site encompasses 307 acres/124 hectares. All indicators ranged in ratings from None to Slight to Slight to Moderate with only slight deviations and fall within normal ranges of variability. In most cases the parameters expected were not only met but exceeded.

Hydrology -

Big Savage pasture - The bareground indicator rated moderate. The amount of bareground has possibly increased due to recent dry conditions and wind/water erosion processes. All other indicators rated none to slight or slight to moderate indicating a healthy ecological condition.

Feeding Pasture - The rills, water flow patterns, pedestals and/or terracettes, bareground, gullies, wind-scoured blowouts, and/or deposition areas, litter movement, 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 indicators rated as none to slight or slight to moderate, which indicates a healthy ecological condition.

Little Savage pasture - The rills, water flow patterns, pedestals and/or terracettes, bareground, gullies, wind-scoured blowouts, and/or deposition areas, litter movement, 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 indicators rated none to slight and slight to moderate, which indicates a healthy ecological condition.

N. Kelly pasture - The bareground indicator rated moderate. The amount of bareground has possibly increased due to recent dry conditions with wind/water erosion processes. All other indicators rated none to slight or slight to moderate which indicates a healthy ecological condition.

Ownby pasture - The rills, water flow patterns, pedestals and/or terracettes, bareground, gullies, wind-scoured blowouts, and/or deposition areas, litter movement, 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 indicators rated as none to slight or slight to moderate, indicating a healthy ecological condition.

Wildlife -

Evaluation of the integrity of 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.

In addition to the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation. A unique assemblage of terrestrial species and avifauna can be expected to use the Mescalero Sands ecosystem. Of significance are the lesser prairie chicken and sand dune lizard known only to occur within this ecosystem. The vegetation community of interest is the shinnery oak-tall grass type only found in this portion of the Field Office area.

Key habitat components include sand bluestem, shinnery oak, sand dune lizard habitat features (dune blowouts), and lesser prairie chicken habitat features (booming grounds & nesting areas). The amount, condition and juxtaposition of these habitat features are used as habitat indicators for this assessment.

Key attributes/indicators related to LPC habitat are Functional/Structural Groups, Annual Production, and Invasive Plants. Key attribute/indicators related to SDL habitat are Bare Ground, Wind-Scoured, Blowouts, Deposition Areas and Annual Production. SDL are generally associated with blowouts that are unstabilized, i.e., microhabitats affected by the physical attributes of dunes and vegetation.

Other important wildlife species and their habitats, such as desert mule deer, pronghorn antelope, a variety of game and non-game species, are considered in the assessment but not the focus of the evaluation. The assessment begins by determining if the site is within "Core Areas" for lesser prairie chicken, or contains potential/occupied habitat for the sand dune lizard.

This allotment is located in the most northern extent of the Mescalero Sands ecosystem along the western edge. Influences from both shinnery oak/tall grass and mixed shrub grasslands can be found. There is a small amount of public land within the allotment and access is limited.

Feeding & Big Savage - Both are transitional habitat types between the shinnery oak/tall grass and mixed shrub grasslands. A general shift in the wildlife community based on habitat changes is expected. Wildlife species tolerant to shrubs in the grassland community becoming more common than those grassland species less tolerant to shrubs. Wildlife Habitat and Populations were rated Slight to Moderate due to increase in mesquite and broom snakeweed.

North Kelly, Ownby & Little Savage - Shinnery oak, tall and mid grasses, and sand dunes on the rangesite are all indicators for the Special Status Species of concern. Nesting habitat for LPC can be improved and Special Status Species Habitat and Populations are rated Moderate. Wildlife Habitat & Populations rated Slight to Moderate due to the decrease in tall grasses and slight increase in the shrub component. It does appear that the habitat condition trend is upward for these pastures.

In the professional opinion of the Assessment Team, public land within Edmon Mitchell allotment #65012 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 these ecological sites.

**Recommendations:** This allotment with scattered tracts of public land is in fair to good condition. The present grazing scheme employed by the allottee is more than helping the pastures to remain in productive condition as the area and recover from the prevailing drought conditions and should remain as so. The late winter moisture has undoubtedly assisted in this allotment's recovery.

<b>RFOs Upland and Biotic Standard Assessment Summary Worksheet</b>			
<b>SITE 65012-BIG SAVAGE-D038</b>			
Legal Land Desc	SWNE 31 0060S 0290E Meridian 23	Acreage	576
Ecosite	070BY055NM SANDY PLAINS CP-2	Photo Taken	Y
Watershed	13060003210 RAILROAD MOUNTAIN		
Observers	ARTHUN/MCGEE	Observation Date	05/27/2005
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	FaA	Soil Taxon Name	FASKIN
Texture Class	NM644 LFS	Soil Phase	FASKIN
Texture Modifier	NM644 FINE SAND		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	16.17	NOAA Growing Season Precipitation	14.34
NOAA Avg Annual Precipitation	14.64	NOAA Avg Growing Season Precipitation	12.95
Disturbances and Animal Use:			

<b>Part 2. Attributes and Indicators</b>						
		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:		Forty percent is the current estimate.				
S H	Gullies				X	

Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:	Stco(was heading out), grama spp., Croton spp., Quha3(shinnery oak),Prgl(mesquite),Gusa(snakeweed).					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	Forty-five percent is the current estimate.					
B	Annual Production					X
Comments:	750 lbs./acre or kg/ha is the current estimate.					
B	Invasive Plants			X		
Comments:	Mesquite is scattered.					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical crust evident.					
B	Wildlife Habitat				X	

Comments:	An undulating mixed shrub grassland, transitional area between shinnery oak/tall grass habitat to the east and the shortgrass prairie type.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population data at this time. The primary species of concern are pronghorn antelope, desert mule deer, upland game species and a variety of non-game wildlife species.					
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	7	2
H	Hydrologic	0	0	1	7	3
B	Biotic	0	0	1	5	7

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	1	10

Biotic		0	1	12
Site Notes: Stipa species is headed out with shinnery in abundance. The site appears to be in good condition with croton and grama species evident. Mesquite is scattered along with snakeweed.				

**RFOs Upland and Biotic Standard Assessment Summary Worksheet**

**SITE 65012-FEEDING #4-D036**

Legal Land Desc	SENW 17 0060S 0290E Meridian 23	Acreage	730
Ecosite	070BY055NM SANDY PLAINS CP-2	Photo Taken	Y
Watershed	13060003180 HERNANDEZ		
Observers	ARTHUN/MCGEE	Observation Date	06/09/2005
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	PYB	Soil Taxon Name	PYOTE
Texture Class	NM644 LFS	Soil Phase	PYOTE- FASKIN
Texture Modifier	NM644 LOAMY FINE SAND		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	16.17	NOAA Growing Season Precipitation	14.34
NOAA Avg Annual Precipitation	14.64	NOAA Avg Growing Season Precipitation	12.95
Disturbances and Animal 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:	20% is the current estimate.					
S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff					X
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:	Slight deviations only.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	Litter is estimated at 45%.					
B	Annual Production				X	
Comments:	900 lbs/ac or kg/ha is the current estimate.					
B	Invasive Plants			X		
Comments:	Mesquite scattered.					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical crust is evident with some breaks in continuity.					

B	Wildlife Habitat				X	
Comments:	An undulating mesquite grassland habitat type. Transitional area between the shinners oak/tall grass type to the west and the shortgrass/mixed shrub community.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population data at this time. The primary species of concern are pronghorn antelope, desert mule deer, upland game species and a variety of non-game wildlife species.					
B	Special Status Species Habitat					X
Comments:	None known to occur.					
B	Special Status Species Populations					X
Comments:	None known to occur.					
<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	3	7
H	Hydrologic	0	0	0	3	8
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 <i>Does not Meet</i> column, Moderate becomes <i>May Need More Info</i> , and Slight to Moderate and None to Slight merge to form the <i>Meets</i> 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: This site is in very good condition although there is an unusually large amount of threeawn species observed. Also of note are dropseed, rabbitfoot grass and indian blanketflower. Mesquite is scattered along with yucca.

**RFOs Upland and Biotic Standard Assessment Summary Worksheet**

**SITE 65012-LITTLE SAVAGE-D037**

Legal Land Desc	NWNW 29 0060S 0290E Meridian 23	Acreage	1460
Ecosite	070BY061NM SAND HILLS CP-2	Photo Taken	Y
Watershed	13060003180 HERNANDEZ		
Observers	ARTHUN/MCGEE	Observation Date	06/09/2005
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	RPD	Soil Taxon Name	ROSWELL
Texture Class	NM644 FS	Soil Phase	ROSWELL- JALMAR
Texture Modifier	NM644 FINE SANDS,HILLY		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	16.17	NOAA Growing Season Precipitation	14.34
NOAA Avg Annual Precipitation	14.64	NOAA Avg Growing Season Precipitation	12.95
Disturbances and Animal 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:	Now estimated at 35%.					
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:	Shinnery oak is predominant.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	Litter is estimated at least 50% in some places.					
B	Annual Production				X	
Comments:	Annual production is currently estimated at 850 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:	Physical crusts observed.					
B	Wildlife Habitat				X	
Comments:	This is a shinnery oak/dune habitat type exhibiting diverse vegetation with shrubs and mid to tall grasses in a mosaic over the landscape.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population data at this time. The primary species of concern, other than those identified below, are pronghorn antelope, desert mule deer, upland game species and a variety of non-game wildlife species.					
B	Special Status Species Habitat			X		
Comments:	Adjacent to the LPC core area. The shinnery oak/tall grass vegetation community supports species unique to the Mescalero Sands ecosystem. Lek sites are available within the pasture. Nesting habitat appears to be a factor that can be improved, specifically tall grass species such as sand bluestem.  Habitat for SDL is present but spotty. Dune stability is a factor in SDL populations.					
B	Special Status Species Populations			X		
Comments:	LPC are known to occur in the area. Several lek sites have been documented over the years. Access limited along with the amount of public land, intensive surveys have not been regularly conducted.  No specific SDL populations have been documented to date. Populations may occur in unstabilized dune habitat (microhabitats).					
<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	6	4
H	Hydrologic	0	0	0	4	7
B	Biotic	0	0	3	7	3
B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the <i>Does not Meet</i> column, Moderate becomes <i>May Need</i>						

*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	3	10

Site Notes: This site was assessed during the summer when all perennial growth is commencing to leaf out and bud. Big bluestem, little bluestem, dropseed, threeawn and shinnery oak are headed out. Some snakeweed is evident.

**RFOs Upland and Biotic Standard Assessment Summary Worksheet**

**SITE 65012-N. KELLY #2-D035**

Legal Land Desc	NESE 35 0050S 0280E Meridian 23	Acreage	768
Ecosite	070BY055NM SANDY PLAINS CP-2	Photo Taken	Y
Watershed	13060003180 HERNANDEZ		
Observers	ARTHUN/MCGEE	Observation Date	05/27/2005
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	PYB	Soil Taxon Name	PYOTE
Texture Class	NM644 LFS	Soil Phase	PYOTE- FASKIN
Texture Modifier	NM644 LOAMY FINE SAND		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	16.17	NOAA Growing Season Precipitation	14.34
NOAA Avg Annual Precipitation	14.64	NOAA Avg Growing Season Precipitation	12.95
Disturbances and Animal 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:	This is a shinnery oak/dune habitat type exhibiting diverse vegetation with shrubs and mid to tall grasses in a mosaic over the landscape.					
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:						

S H	Bare Ground			X		
Comments:	40 percent is the current estimate.					
S H	Gullies				X	
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion					X
Comments:						
S H B	Soil Surface Loss or Degradation					X
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer				X	
Comments:						
B	Functional/Structural Groups					X
Comments:	Scsc (little bluestem), (Sporobolus spp.), (Aristida spp.), shinnery oak, mesquite, misc. forbs observed.					
B	Plant Mortality/Decadence				X	
Comments:						
H B	Litter Amount					X
Comments:	40 is the current estimate.					
B	Annual Production				X	
Comments:	950lbs./acre or kg/ha is the current estimate.					
B	Invasive Plants			X		
Comments:	Mesquite, is scattered.					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological				X	

	Crusts					
Comments:	Physical crust observed.					
B	Wildlife Habitat				X	
Comments:	This is a shinnery oak/dune habitat type exhibiting diverse vegetation with shrubs and mid to tall grasses in a mosaic over the landscape. Habitat conditions appear to be in an upward trend.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population data at this time. The primary species of concern, other than those identified below, are pronghorn antelope, desert mule deer, upland game species and a variety of non-game wildlife species.					
B	Special Status Species Habitat			X		
Comments:	Adjacent to the LPC core area. The shinnery oak/tall grass vegetation community supports species unique to the Mescalero Sands ecosystem. Lek sites are available within the pasture. Nesting habitat appears to be a factor that can be improved, specifically tall grass species such as sand bluestem.  Habitat for SDL is present but spotty. Dune stability is a factor in SDL populations.					
B	Special Status Species Populations			X		
Comments:	LPC are known to occur in the area. Several lek sites have been documented over the years in adjacent pastures. Access limited along with the amount of public land, intensive surveys have not been regularly conducted.  No specific SDL populations have been documented to date. Populations may occur in unstabilized dune habitat (microhabitats).					

**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	6	3
H	Hydrologic	0	0	1	6	4
B	Biotic	0	0	3	6	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	1	9
Hydrologic		0	1	10
Biotic		0	3	10

Site Notes: Threeawn and spike dropseed are the grasses on site. Little bluestem is also observed with annual forbs and the shinnery oak component.

**RFOs Upland and Biotic Standard Assessment Summary Worksheet**

**SITE 65012-OWNBY #1-D034**

Legal Land Desc	SWSW 13 0060S 0290E Meridian 23	Acreage	307
Ecosite	070BY063NM DEEP SAND CP-2	Photo Taken	Y
Watershed	13060003210 RAILROAD MOUNTAIN		
Observers	ARTHUN/MCGEE	Observation Date	06/09/2005
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	RPD	Soil Taxon Name	ROSWELL
Texture Class	NM644 FS	Soil Phase	ROSWELL- JALMAR
Texture Modifier	NM644 FINE SANDS,HILLY		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	16.17	NOAA Growing Season Precipitation	14.34
NOAA Avg Annual Precipitation	14.64	NOAA Avg Growing Season Precipitation	12.95
Disturbances and Animal 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 20%.					
S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff					X
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	Estimate is currently at 40%.					
B	Annual Production				X	
Comments:	Annual production is now estimated at 650 lbs/ac or kg/ha.					
B	Invasive Plants				X	
Comments:						
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological				X	

	Crusts					
Comments:	Physical crusting evident.					
B	Wildlife Habitat				X	
Comments:	This is a shinnery oak/dune habitat type exhibiting diverse vegetation with shrubs and mid to tall grasses in a mosaic over the landscape. Habitat appears to me in an upward trend.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population data at this time. The primary species of concern, other than those identified below, are pronghorn antelope, desert mule deer, upland game species and a variety of non-game wildlife species.					
B	Special Status Species Habitat			X		
Comments:	<p>Within the LPC core area. The shinnery oak/tall grass vegetation community supports species unique to the Mescalero Sands ecosystem. Lek sites are available within the pasture. Nesting habitat appears to be a factor that can be improved, specifically tall grass species such as sand bluestem.</p> <p>Habitat for SDL is present but spotty. Dune stability is a factor in SDL populations.</p>					
B	Special Status Species Populations			X		
Comments:	<p>LPC are known to occur in the area. Several lek sites have been documented over the years in adjacent pastures. Access limited along with the amount of public land, intensive surveys have not been regularly conducted.</p> <p>No specific SDL populations have been documented to date. Populations may occur in unstabilized dune habitat (microhabitats).</p>					
<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	4	6
H	Hydrologic	0	0	0	4	7
B	Biotic	0	0	2	8	3

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: Most of all the perennial vegetation is headed out and producing reproductive tillers; stolons or rhizomes. The bluestem, dropseed and grama grass components are thriving.

# Functional / Structural Groups

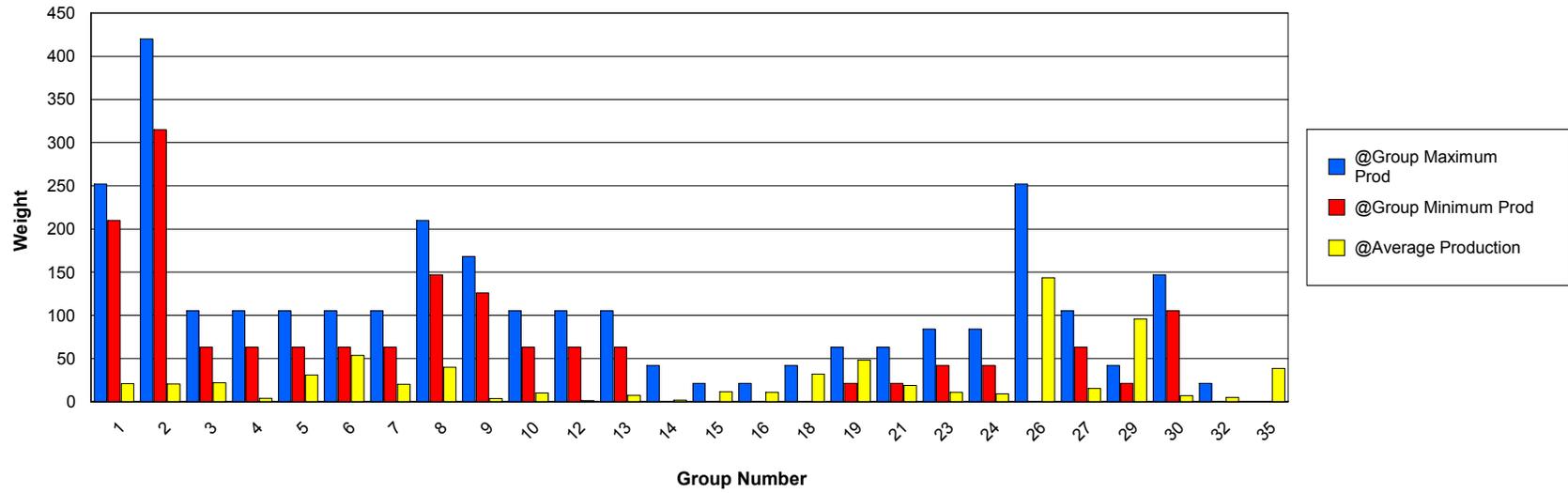
## Report Parameters

SITE NAME LIKE 65012-BIG SAVAGE-D038  
 ON/AFTER 10/01/1980  
 ON/BEFORE 09/30/2005  
 MIN LBS TO GRAPH 1  
 SELECTED ECOSITE 070BY055NM

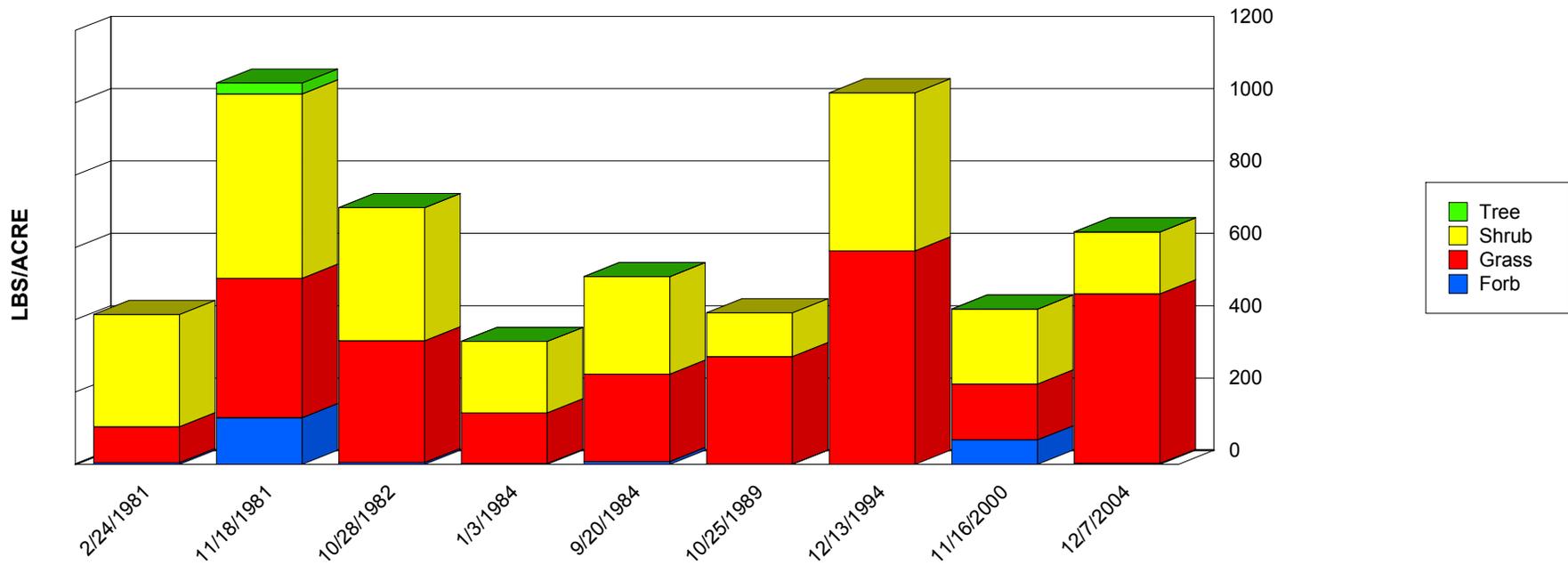
Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	ANHA	210	252	0.00	41.58	20.79	20.79
2	Grass	ANSC2	315	420	0.00	35.97	15.87	12.95
2	Grass	BOSA	315	420	0.00	22.08	4.64	8.22
3	Grass	EROX	63	105	0.00	42.78	13.08	13.77
3	Grass	PAST6	63	105	0.00	17.71	8.85	8.85
4	Grass	SEMA5	63	105	0.00	22.50	3.79	7.76
5	Grass	BOHI2	63	105	1.33	81.12	30.82	28.72
6	Grass	ARIST	63	105	0.00	138.60	53.54	39.99
7	Grass	LECO	63	105	2.00	59.00	20.15	20.26
8	Grass	SPCR	147	210	0.00	164.00	39.92	46.54
9	Grass	STCO4	126	168	0.00	14.40	3.63	5.52
10	Grass	BOER4	63	105	0.00	42.50	10.08	14.40
12	Grass	SPCO4	63	105	0.00	7.30	1.23	2.52
13	Grass	BOCU	63	105	0.00	19.00	7.19	6.34
14	Grass	MUSQ	0	42	0.00	5.52	1.81	2.56
15	Grass	CEPA7	0	21	0.00	56.00	11.36	19.00
16	Grass	CAREX	0	21	0.00	34.08	5.88	12.62
16	Grass	CYPER	0	21	0.00	24.32	4.86	9.73
17	Grass	MUAR2	0	42	0.00	1.88	0.45	0.65
18	Grass	MUPO2	0	42	0.00	246.48	31.79	81.19
19	Grass	BOGR2	21	63	0.00	12.18	3.49	4.07
19	Grass	CHCU2	21	63	0.00	32.50	9.38	12.20
19	Grass	ERSE2	21	63	0.00	2.84	0.95	1.34
19	Grass	PAOB	21	63	0.00	80.64	13.13	27.61
19	Grass	SCPA	21	63	0.00	14.88	2.98	5.95
19	Grass	SPFL2	21	63	0.00	50.45	11.08	18.55

<b>Group</b>	<b>Plant Type</b>	<b>Species</b>	<b>Low Wt Allowed</b>	<b>High Wt Allowed</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Average</b>	<b>STDEV</b>
19	Grass	SPGI	21	63	5.28	9.10	7.19	1.91
21	Forb	ERAN3	21	63	0.00	103.32	17.22	38.51
21	Forb	ERIOG	21	63	0.00	5.20	1.04	2.08
21	Forb	SPCO	21	63	0.00	1.77	0.59	0.83
23	Forb	AAFF	42	84	0.00	55.53	10.76	18.30
24	Forb	ARLU	42	84	0.00	12.27	6.13	6.13
24	Forb	CROTO	42	84	0.00	1.49	0.37	0.60
24	Forb	LEER	42	84	0.00	0.28	0.09	0.13
24	Forb	PPFF	42	84	0.00	1.40	0.47	0.66
24	Forb	SOEL	42	84	0.00	3.36	0.58	1.16
24	Forb	ZIGR	42	84	0.00	2.89	1.34	1.19
26	Shrub	QUHA3	0	252	0.00	422.40	143.55	129.68
27	Shrub	YUCCA	63	105	0.00	40.00	10.30	17.15
27	Tree	YUEL	63	105	0.00	30.00	5.00	11.18
29	Shrub	GUSA2	21	42	0.00	294.36	95.79	94.72
30	Shrub	ARFI2	105	147	0.00	32.53	7.17	10.82
31	Shrub	CHRY9	21	63	0.00	1.36	0.19	0.48
32	Shrub	OPUNT	0	21	0.00	35.00	5.00	12.25
35	Shrub	PRGL2	0	0	0.00	216.67	38.58	71.00

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



# Production Lbs/Acre Trends



	2/24/1981	11/18/1981	10/28/1982	1/3/1984	9/20/1984	10/25/1989	12/13/1994	11/16/2000	12/7/2004
Forb	4.65	129.08	5.20	2.68	7.67	1.00	0.00	67.80	2.89
Grass	99.52	385.64	336.44	139.90	241.84	297.00	590.62	154.20	468.84
Shrub	310.53	509.92	368.64	197.20	269.71	121.00	436.80	207.31	171.39
Tree	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	414.71	1,054.64	710.28	339.78	519.21	419.00	1,027.42	429.31	643.12

## Report Parameters

SITE NAME LIKE 65012-BIG SAVAGE-D038  
 ON/AFTER 10/01/1980  
 ON/BEFORE 09/30/2005

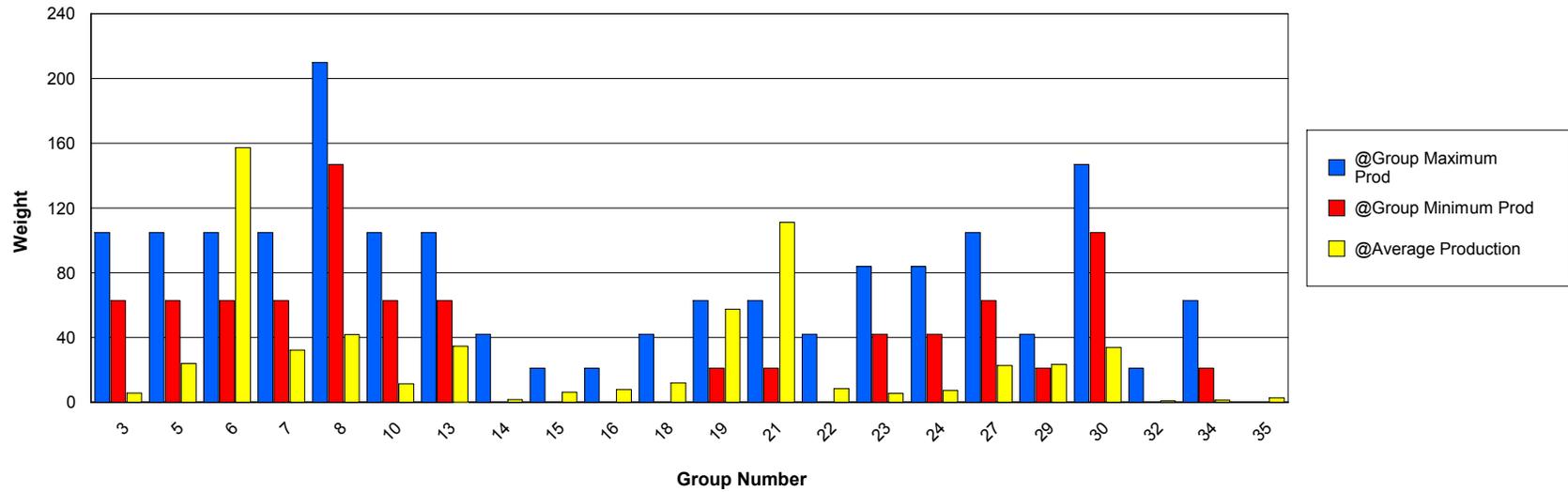
# Functional / Structural Groups

## Report Parameters

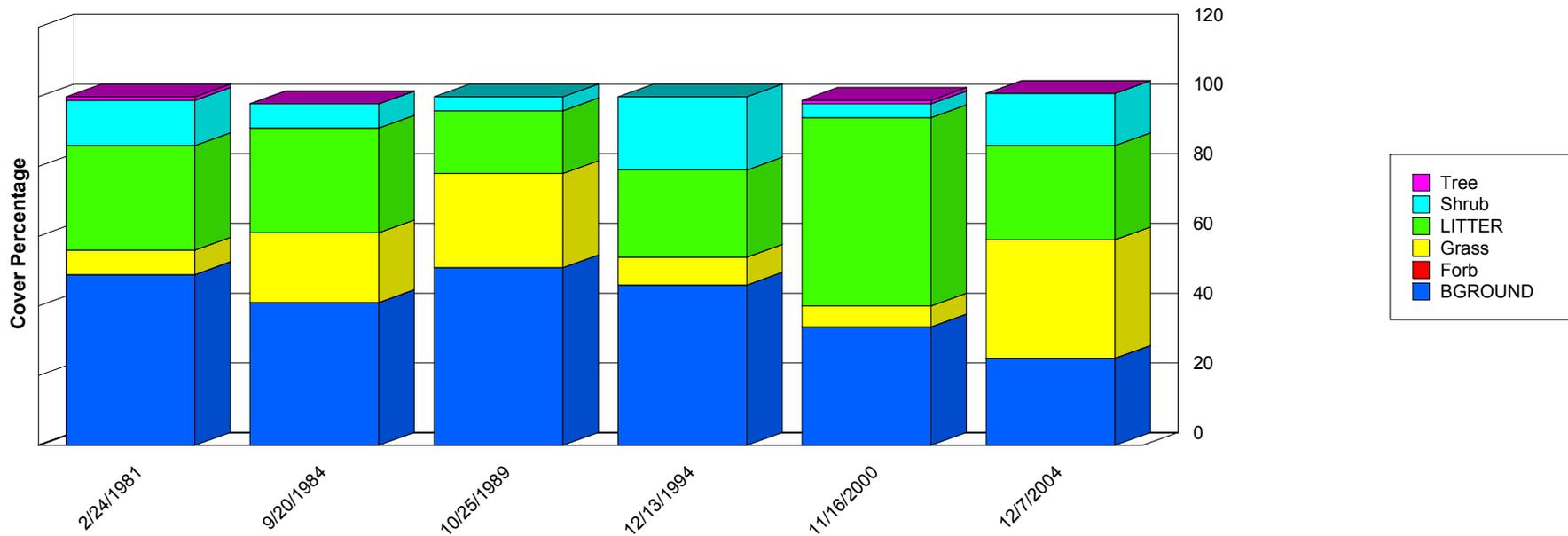
SITE NAME LIKE 65012-FEEDING #4-D036  
 ON/AFTER 10/01/1980  
 ON/BEFORE 09/30/2005  
 MIN LBS TO GRAPH 1  
 SELECTED ECOSITE 070BY055NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
3	Grass	EROX	63	105	0.00	10.78	2.16	4.31
3	Grass	PAST6	63	105	0.00	7.19	3.60	3.60
5	Grass	BOHI2	63	105	0.00	87.48	23.99	29.38
6	Grass	ARIST	63	105	0.00	490.50	157.29	130.05
7	Grass	LECO	63	105	10.67	99.40	32.34	29.86
8	Grass	SPCR	147	210	0.00	127.50	41.83	35.07
10	Grass	BOER4	63	105	0.00	31.73	11.47	11.20
13	Grass	BOCU	63	105	4.00	109.80	34.67	31.13
14	Grass	AAGG	0	42	0.00	10.00	1.67	3.33
15	Grass	CEPA7	0	21	0.97	11.79	6.38	5.41
16	Grass	CAREX	0	21	0.00	34.08	8.02	10.39
18	Grass	MUPO2	0	42	11.15	13.00	12.07	0.93
19	Grass	BOGR2	21	63	0.00	72.38	14.48	28.95
19	Grass	CHCI	21	63	0.00	3.48	0.87	1.51
19	Grass	CHCU2	21	63	0.00	45.50	9.36	16.02
19	Grass	ERCU	21	63	0.00	4.00	1.00	1.73
19	Grass	ERSE2	21	63	0.00	58.22	19.41	27.45
19	Grass	SPFL2	21	63	0.00	84.85	12.50	29.55
21	Forb	ERAN3	21	63	0.00	638.00	106.33	237.77
21	Forb	ERIOG	21	63	0.00	22.10	4.79	8.68
22	Forb	AMBRO	0	42	0.00	3.12	0.62	1.25
22	Forb	AMPS	0	42	0.00	23.80	7.93	11.22
23	Forb	AAFF	42	84	0.00	13.68	4.64	4.22
23	Unknown	HEDYO	42	84	0.00	2.88	0.96	1.36
24	Forb	CAHA	42	84	0.00	0.45	0.09	0.18
24	Forb	HYFL	42	84	0.00	11.44	3.81	5.39

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
24	Forb	PPFF	42	84	0.00	12.30	3.50	5.05
27	Shrub	YUCCA	63	105	0.00	40.00	20.00	20.00
27	Tree	YUEL	63	105	0.00	5.40	2.81	2.34
29	Shrub	GUSA2	21	42	0.00	146.40	23.55	46.01
30	Shrub	ARFI2	105	147	0.00	81.94	34.02	32.71
32	Shrub	OPUNT	0	21	0.00	6.00	1.00	2.24
34	Shrub	DALE2	21	63	0.00	1.41	0.47	0.67
34	Shrub	SENEC2	21	63	0.00	2.67	0.89	1.26
35	Shrub	PRGL2	0	0	0.00	8.28	2.86	3.57



# Ground Cover Trends

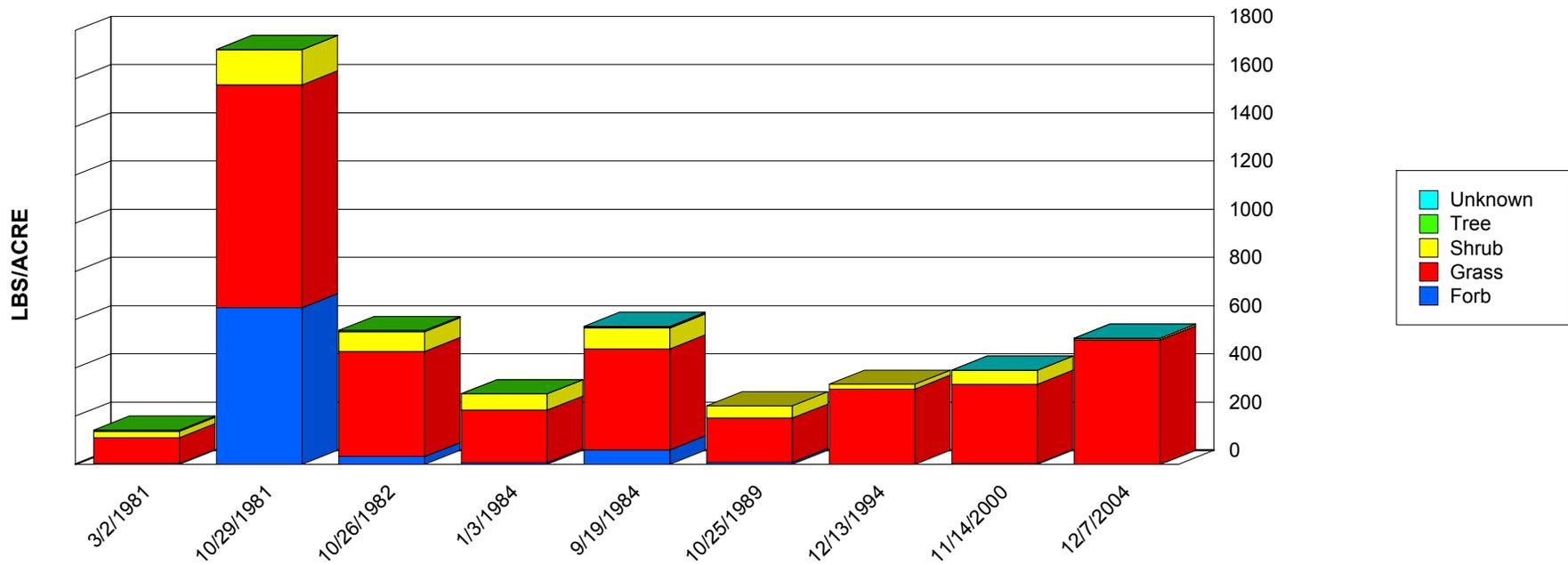


	2/24/1981	9/20/1984	10/25/1989	12/13/1994	11/16/2000	12/7/2004
BGROUND	49.00	41.00	51.00	46.00	34.00	25.00
Forb	0.00	0.00	0.00	0.00	0.00	0.00
Grass	7.00	20.00	27.00	8.00	6.00	34.00
LITTER	30.00	30.00	18.00	25.00	54.00	27.00
Shrub	13.00	7.00	4.00	21.00	4.00	15.00
Tree	1.00	0.00	0.00	0.00	1.00	0.00
Total	100.00	98.00	100.00	100.00	99.00	101.00

## Report Parameters

SITE NAME LIKE	65012-BIG SAVAGE-D038
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005

# Production Lbs/Acre Trends

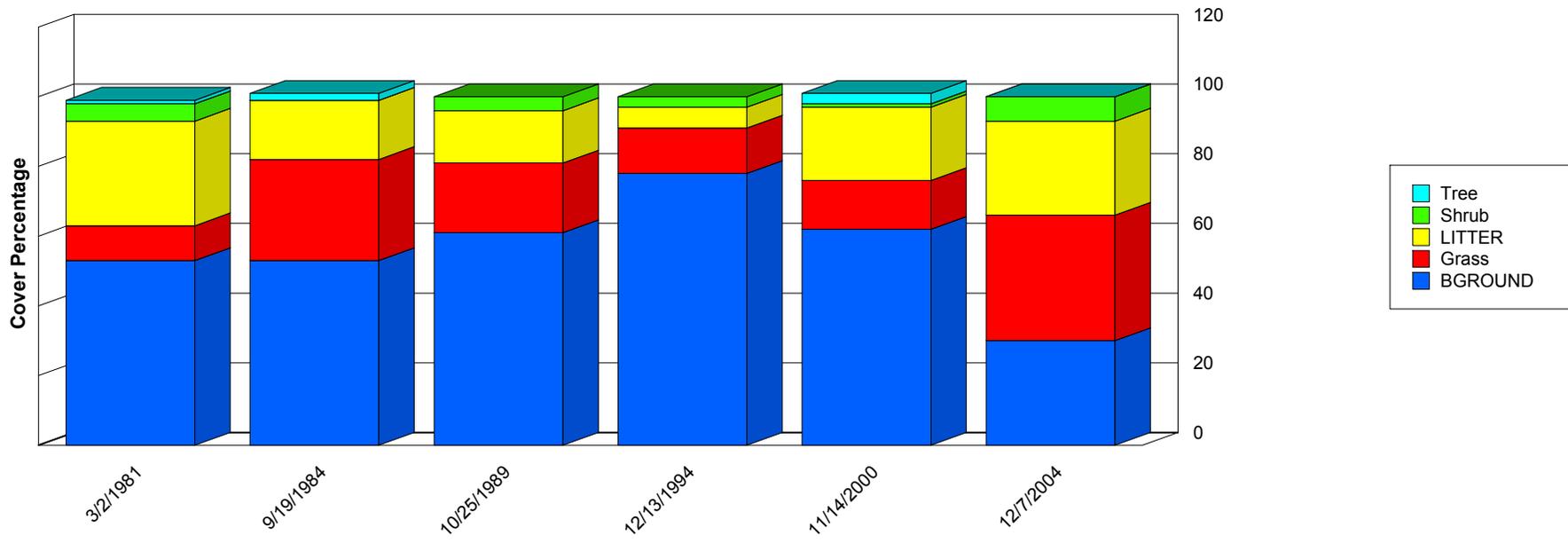


	3/2/1981	10/29/1981	10/26/1982	1/3/1984	9/19/1984	10/25/1989	12/13/1994	11/14/2000	12/7/2004
Forb	3.40	650.30	32.42	6.70	60.31	8.00	0.00	3.59	0.00
Grass	107.40	924.28	435.68	218.10	418.33	184.00	312.22	328.72	515.72
Shrub	26.93	146.40	82.20	68.00	86.90	51.00	20.40	58.71	7.92
Tree	4.67	0.00	5.40	0.00	4.00	0.00	0.00	0.00	0.00
Unknown	0.00	0.00	0.00	0.00	2.88	0.00	0.00	0.00	0.00
<b>Total</b>	<b>142.40</b>	<b>1,720.98</b>	<b>555.70</b>	<b>292.80</b>	<b>572.42</b>	<b>243.00</b>	<b>332.62</b>	<b>391.02</b>	<b>523.64</b>

**Report Parameters**

SITE NAME LIKE 65012-FEEDING #4-D036  
ON/AFTER 10/01/1980  
ON/BEFORE 09/30/2005

# Ground Cover Trends



	3/2/1981	9/19/1984	10/25/1989	12/13/1994	11/14/2000	12/7/2004
BGROUND	53.00	53.00	61.00	78.00	62.00	30.00
Grass	10.00	29.00	20.00	13.00	14.00	36.00
LITTER	30.00	17.00	15.00	6.00	21.00	27.00
Shrub	5.00	0.00	4.00	3.00	1.00	7.00
Tree	1.00	2.00	0.00	0.00	3.00	0.00
Total	99.00	101.00	100.00	100.00	101.00	100.00

## Report Parameters

SITE NAME LIKE	65012-FEEDING #4-D036
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005

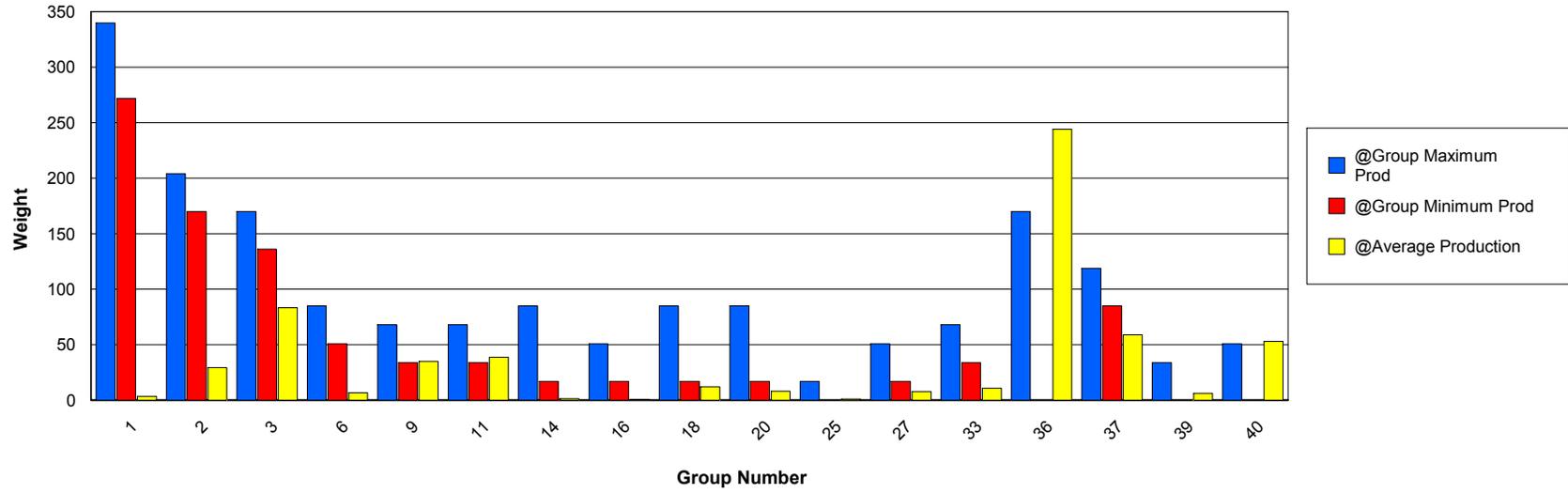
# Functional / Structural Groups

## Report Parameters

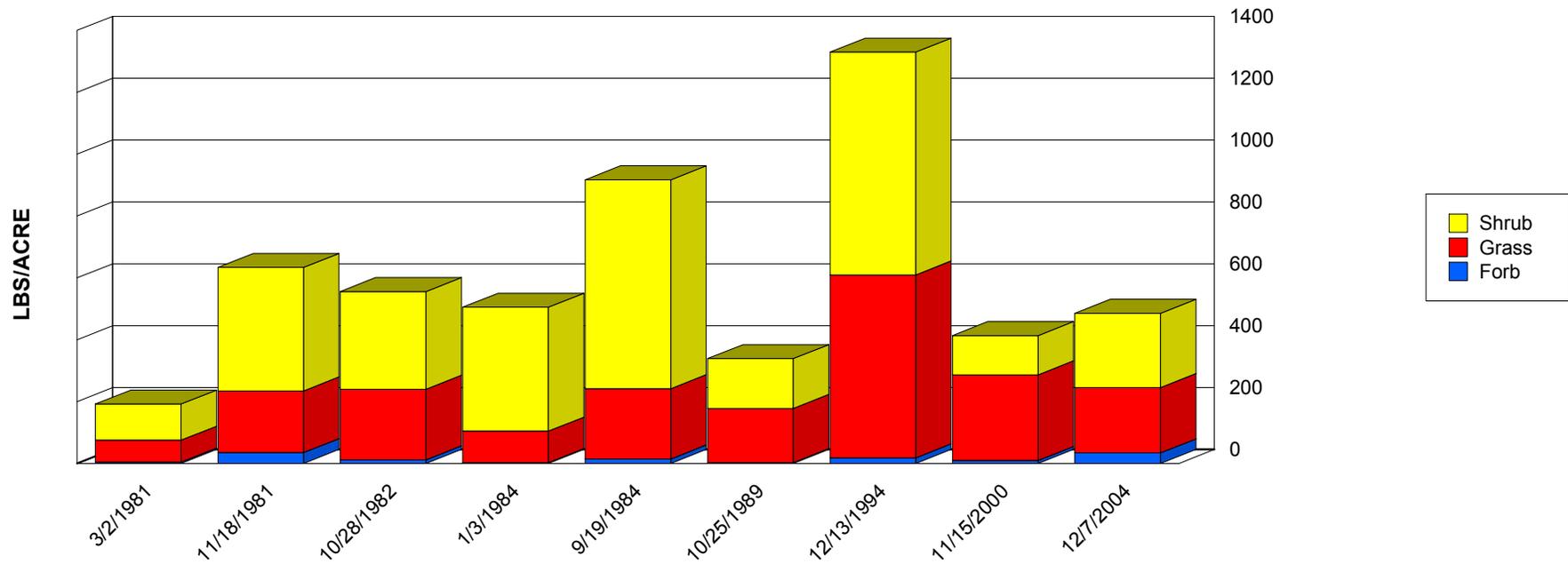
SITE NAME LIKE 65012-LITTLE SAVAGE-D037  
 ON/AFTER 10/01/1980  
 ON/BEFORE 09/30/2005  
 MIN LBS TO GRAPH 1  
 SELECTED ECOSITE 070BY061NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	ANHA	272	340	0.00	21.60	3.58	7.40
2	Grass	SPCO4	170	204	0.00	19.20	5.36	7.25
2	Grass	SPCR	170	204	2.00	94.90	23.25	28.38
2	Grass	SPFL2	170	204	0.00	3.33	0.80	1.30
3	Grass	ANSC2	136	170	3.33	426.80	83.37	127.52
6	Grass	PASPA2	51	85	0.00	6.00	1.50	2.60
6	Grass	PAST6	51	85	0.00	25.00	5.25	8.40
8	Grass	BOHI2	51	85	0.00	6.00	0.83	1.96
9	Grass	ARIST	34	68	0.00	76.44	34.92	19.19
10	Grass	CEPA7	0	34	0.00	1.96	0.74	0.81
11	Grass	LECO	34	68	13.33	88.16	38.85	25.77
12	Grass	MUSQ	0	34	0.00	1.36	0.80	0.66
14	Grass	EROX	17	85	0.00	7.20	1.45	2.41
16	Grass	CHCI	17	51	0.00	4.00	1.00	1.73
18	Grass	BOCU	17	85	0.00	47.50	12.24	17.27
20	Grass	BOGR2	17	85	0.00	19.22	8.25	8.40
25	Grass	CAREX	0	17	0.00	5.68	1.21	2.08
27	Grass	SPGI	17	51	0.00	21.23	7.93	7.04
33	Forb	AAFF	34	68	0.00	33.60	10.83	9.88
34	Forb	CHAMA8	34	68	0.00	0.67	0.10	0.23
34	Forb	SOEL	34	68	0.00	1.68	0.28	0.63
36	Shrub	QUHA3	0	170	74.00	572.00	244.14	163.18
37	Shrub	ARFI2	85	119	0.00	215.04	58.83	72.56
39	Shrub	YUCCA	0	34	0.00	36.00	6.17	12.09
40	Shrub	GUSA2	0	51	0.00	160.16	53.01	52.03

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



# Production Lbs/Acre Trends

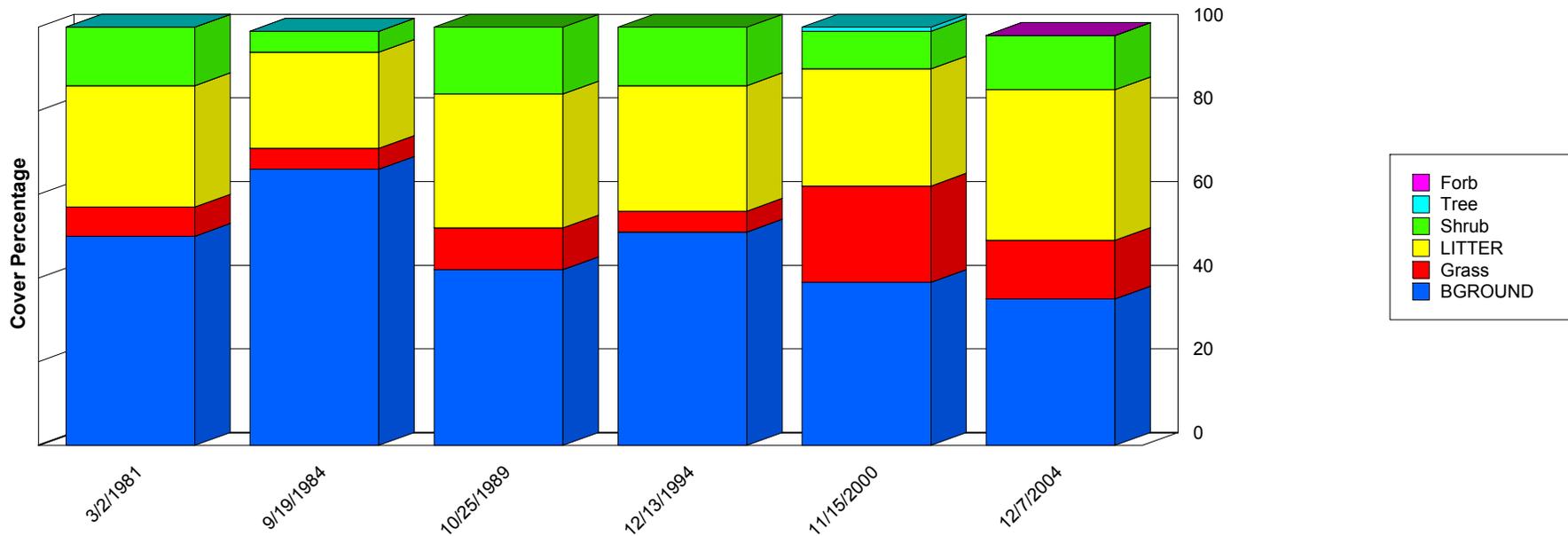


	3/2/1981	11/18/1981	10/28/1982	1/3/1984	9/19/1984	10/25/1989	12/13/1994	11/15/2000	12/7/2004
Forb	4.75	35.28	11.70	2.68	14.40	3.00	18.24	9.80	34.43
Grass	70.54	199.30	228.66	102.00	227.43	175.00	591.26	276.95	210.86
Shrub	116.91	399.12	315.48	400.28	675.45	161.00	720.32	126.83	240.11
Total	192.19	633.70	555.84	504.96	917.29	339.00	1,329.82	413.58	485.40

## Report Parameters

SITE NAME LIKE 65012-LITTLE SAVAGE-D037  
 ON/AFTER 10/01/1980  
 ON/BEFORE 09/30/2005

# Ground Cover Trends



	3/2/1981	9/19/1984	10/25/1989	12/13/1994	11/15/2000	12/7/2004
BGROUND	50.00	66.00	42.00	51.00	39.00	35.00
Forb	0.00	0.00	0.00	0.00	0.00	0.00
Grass	7.00	5.00	10.00	5.00	23.00	14.00
LITTER	29.00	23.00	32.00	30.00	28.00	36.00
Shrub	14.00	5.00	16.00	14.00	9.00	13.00
Tree	0.00	0.00	0.00	0.00	1.00	0.00
Total	100.00	99.00	100.00	100.00	100.00	98.00

## Report Parameters

SITE NAME LIKE	65012-LITTLE SAVAGE-D037
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005

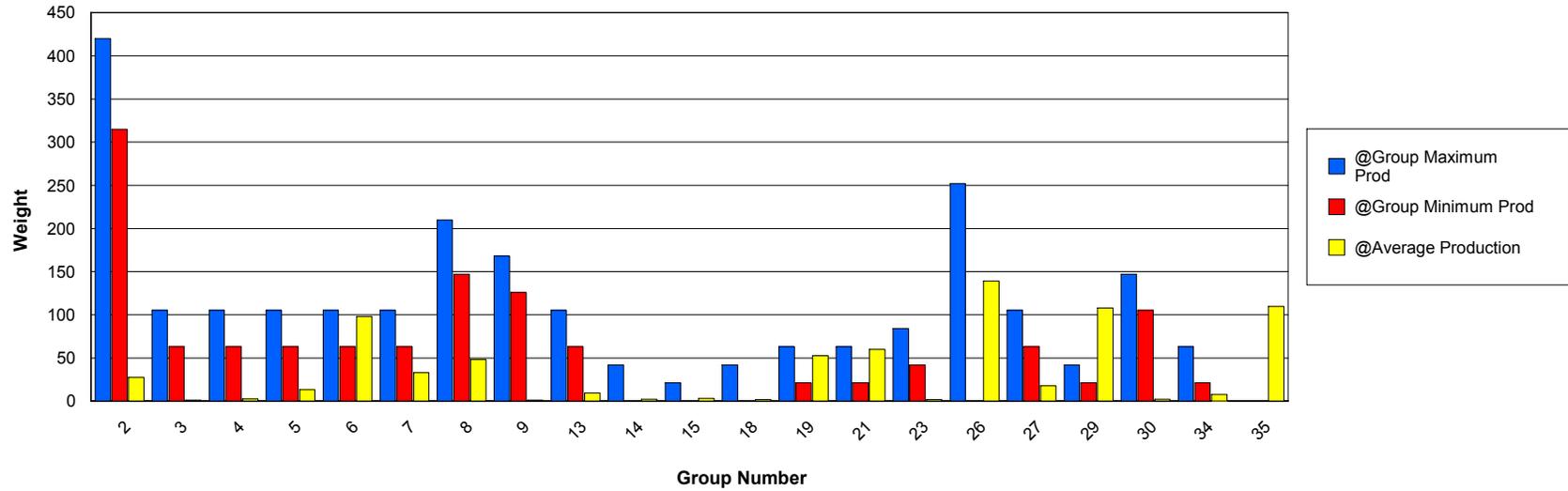
# Functional / Structural Groups

## Report Parameters

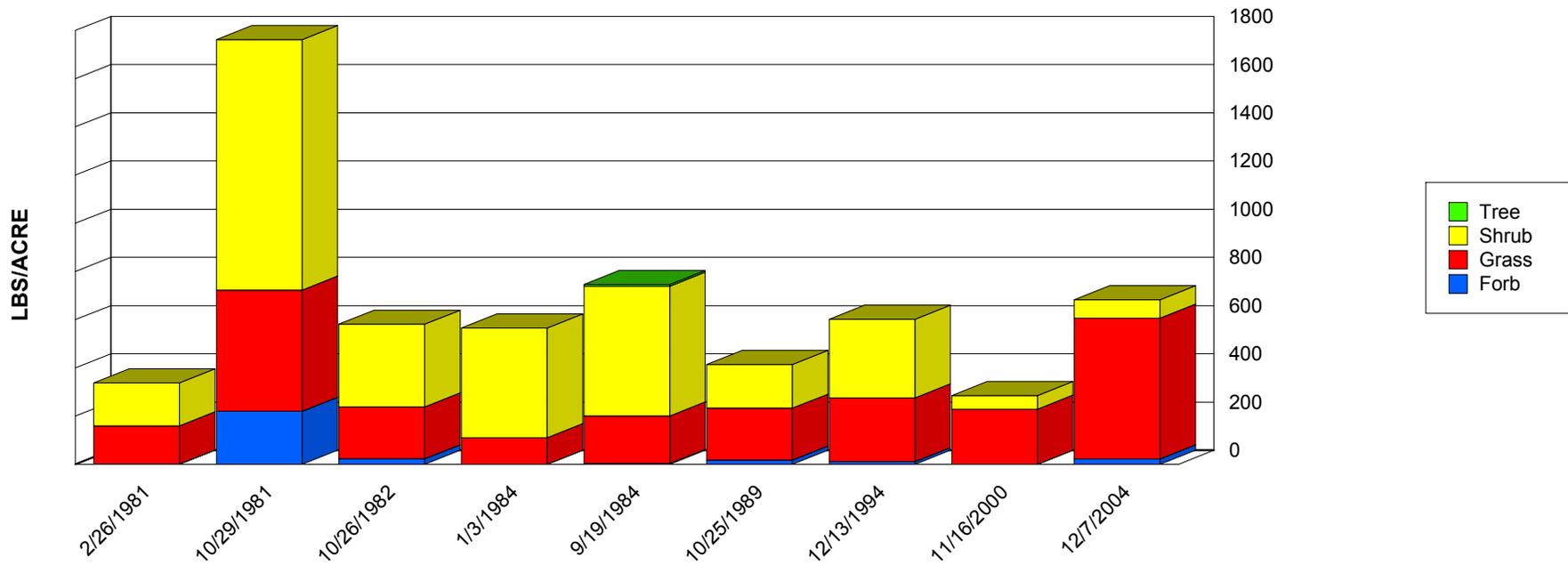
SITE NAME LIKE 65012-N. KELLY #2-D035  
 ON/AFTER 10/01/1980  
 ON/BEFORE 09/30/2005  
 MIN LBS TO GRAPH 1  
 SELECTED ECOSITE 070BY055NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
2	Grass	ANSC2	315	420	23.28	31.63	27.46	4.18
3	Grass	PAST6	63	105	0.00	7.68	1.24	2.54
4	Grass	SEMA5	63	105	0.00	19.20	2.64	6.29
5	Grass	BOHI2	63	105	0.00	42.12	13.19	12.66
6	Grass	ARIST	63	105	0.00	264.00	98.00	71.86
7	Grass	LECO	63	105	2.67	94.62	33.09	26.19
8	Grass	SPCR	147	210	0.00	180.00	48.23	53.04
9	Grass	STCO4	126	168	0.00	3.47	1.16	1.63
12	Grass	SPCO4	63	105	0.00	2.67	0.48	0.92
13	Grass	BOCU	63	105	0.00	21.06	9.60	7.85
14	Grass	AAGG	0	42	0.00	10.00	1.67	3.73
14	Grass	MUSQ	0	42	0.00	1.33	0.67	0.54
15	Grass	CEPA7	0	21	0.00	6.35	3.17	3.17
18	Grass	MUPO2	0	42	0.00	5.20	1.89	2.25
19	Grass	BOGR2	21	63	0.00	12.03	4.01	5.67
19	Grass	PAOB	21	63	0.00	23.28	3.42	7.62
19	Grass	SPFL2	21	63	0.00	233.35	43.65	79.45
19	Grass	SPGI	21	63	0.00	10.00	1.43	3.50
21	Forb	ERAN3	21	63	0.00	220.00	55.00	95.26
21	Forb	ERIOG	21	63	0.00	22.10	4.85	8.67
23	Forb	AAFF	42	84	0.00	11.40	1.91	3.64
26	Shrub	QUHA3	0	252	7.00	306.80	138.98	103.33
27	Shrub	YUCCA	63	105	0.00	50.00	17.78	22.83
29	Shrub	GUSA2	21	42	0.00	610.00	107.81	182.13
30	Shrub	ARFI2	105	147	0.00	8.50	2.18	3.22
34	Shrub	ATCA2	21	63	0.00	11.31	3.77	5.33

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
34	Shrub	HAPLO2	21	63	0.00	2.80	0.50	0.97
34	Shrub	MACHA	21	63	0.00	7.00	2.33	3.30
34	Shrub	SENEC2	21	63	0.00	3.17	1.06	1.49
35	Shrub	PRGL2	0	0	0.00	229.67	109.52	91.01



# Production Lbs/Acre Trends

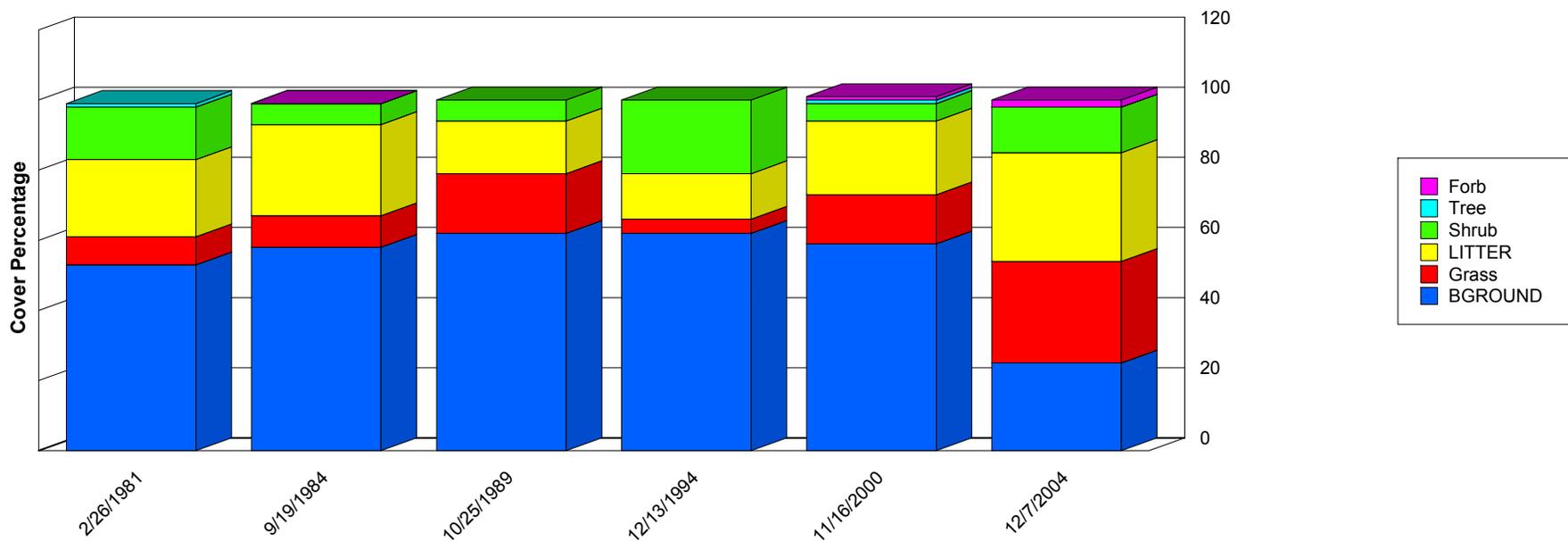


	2/26/1981	10/29/1981	10/26/1982	1/3/1984	9/19/1984	10/25/1989	12/13/1994	11/16/2000	12/7/2004
Forb	1.36	220.00	23.00	0.00	3.75	18.00	11.40	0.00	22.46
Grass	158.25	502.70	215.02	110.00	196.99	215.00	264.06	228.63	583.86
Shrub	178.73	1,039.20	343.32	455.36	538.38	181.00	326.40	56.15	76.90
Tree	0.00	0.00	0.00	0.00	6.67	0.00	0.00	0.00	0.00
Total	338.35	1,761.90	581.34	565.36	745.79	414.00	601.86	284.78	683.22

## Report Parameters

SITE NAME LIKE            65012-N. KELLY #2-D035  
 ON/AFTER                    10/01/1980  
 ON/BEFORE                 09/30/2005

# Ground Cover Trends



	2/26/1981	9/19/1984	10/25/1989	12/13/1994	11/16/2000	12/7/2004
BGROUND	53.00	58.00	62.00	62.00	59.00	25.00
Forb	0.00	0.00	0.00	0.00	1.00	2.00
Grass	8.00	9.00	17.00	4.00	14.00	29.00
LITTER	22.00	26.00	15.00	13.00	21.00	31.00
Shrub	15.00	6.00	6.00	21.00	5.00	13.00
Tree	1.00	0.00	0.00	0.00	1.00	0.00
Total	99.00	99.00	100.00	100.00	101.00	100.00

## Report Parameters

SITE NAME LIKE	65012-N. KELLY #2-D035
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005

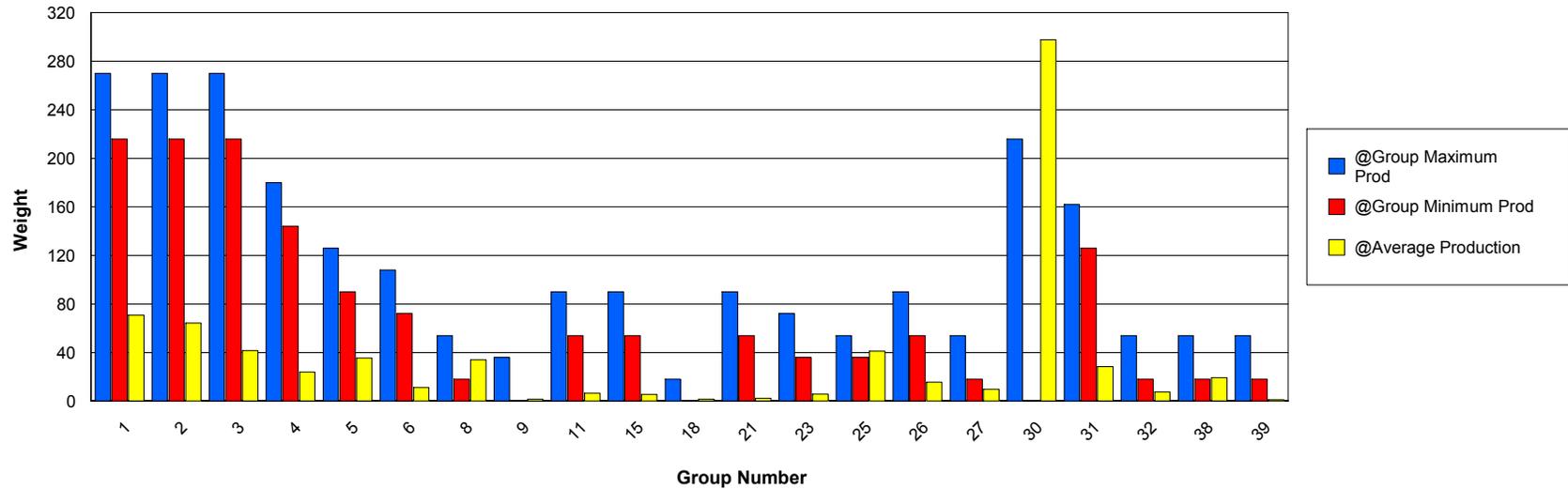
# Functional / Structural Groups

## Report Parameters

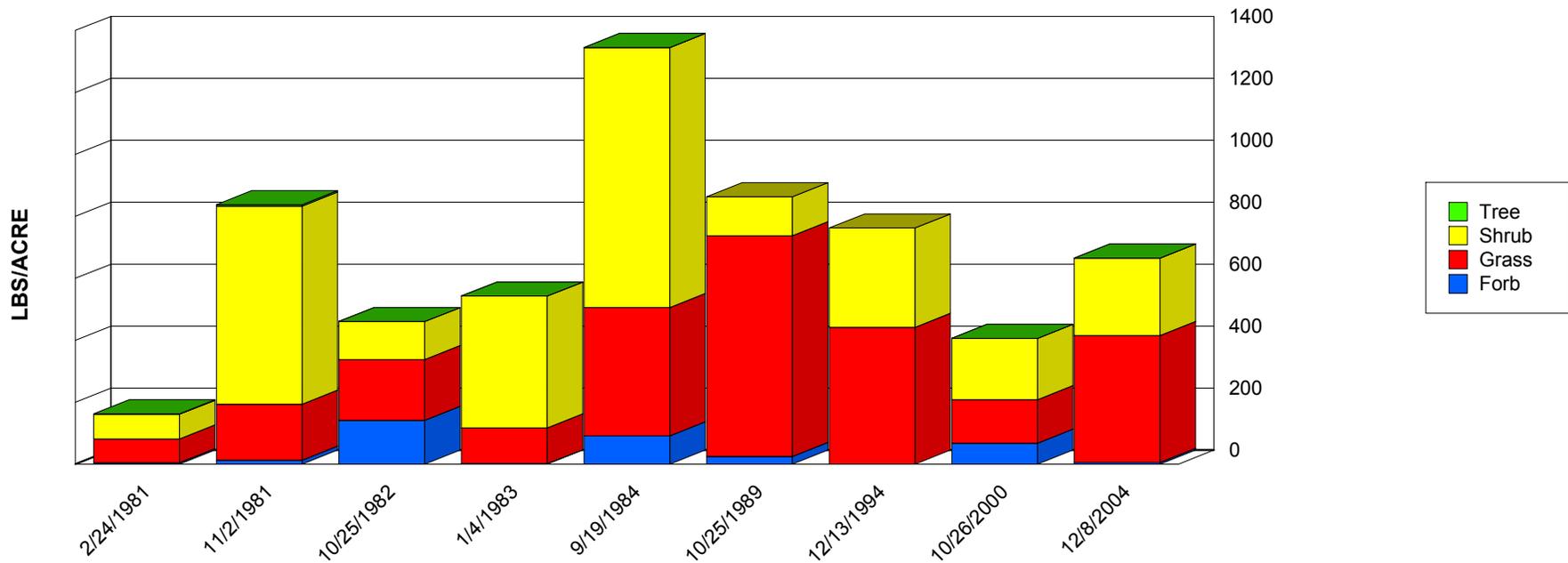
SITE NAME LIKE 65012-OWNBY #1-D034  
 ON/AFTER 10/01/1980  
 ON/BEFORE 09/30/2005  
 MIN LBS TO GRAPH 1  
 SELECTED ECOSITE 070BY063NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	ANHA	216	270	0.00	271.00	70.85	102.97
2	Grass	ANSC2	216	270	13.33	221.00	64.19	65.53
3	Grass	SPCO4	216	270	0.00	24.00	9.88	10.24
3	Grass	SPCR	216	270	0.00	41.34	10.52	13.92
3	Grass	SPFL2	216	270	0.00	104.92	21.19	34.37
4	Grass	BOHI2	144	180	1.74	59.00	23.98	17.74
5	Grass	ARIST	90	126	0.00	116.92	35.45	30.95
6	Grass	PASPA2	72	108	0.00	0.00	0.00	0.00
6	Grass	PAST6	72	108	0.00	49.00	11.00	14.80
8	Grass	LECO	18	54	8.30	101.64	33.97	27.70
9	Grass	AAGG	0	36	0.00	2.00	0.25	0.66
9	Grass	MUSQ	0	36	0.00	3.33	1.33	1.44
11	Grass	BOCU	54	90	0.00	16.20	6.44	6.50
15	Grass	EROX	54	90	0.00	20.46	5.48	6.90
18	Grass	CAREX	0	18	0.00	4.00	0.50	1.32
18	Grass	CYPER	0	18	0.00	5.12	1.02	2.05
19	Grass	SPGI	18	54	0.00	3.60	0.99	1.57
21	Forb	ERAN3	54	90	0.00	6.96	1.16	2.59
21	Forb	ERIOG	54	90	0.00	3.47	1.16	1.63
23	Forb	HEAN3	36	72	0.00	20.00	5.75	8.32
25	Forb	AMBRO	36	54	0.00	134.16	27.77	53.23
25	Forb	AMPS	36	54	0.00	52.36	13.43	22.49
26	Forb	AAFF	54	90	0.00	49.31	12.68	16.45
26	Forb	DIWI	54	90	0.00	0.28	0.09	0.13
26	Forb	EUPHO	54	90	0.00	0.90	0.30	0.42
26	Forb	HYMEN7	54	90	0.00	5.88	1.96	2.77

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
26	Forb	PHYLL	54	90	0.00	1.80	0.60	0.85
27	Forb	ARLU	18	54	0.00	18.09	9.05	9.05
27	Forb	HYFL	18	54	0.00	0.87	0.29	0.41
27	Forb	MELE2	18	54	0.00	0.98	0.33	0.46
30	Shrub	QUHA3	0	216	76.67	734.28	297.69	223.72
31	Shrub	ARFI2	126	162	3.28	81.26	28.37	23.67
32	Shrub	GUSA2	18	54	0.00	1.17	0.39	0.55
32	Shrub	SENEC2	18	54	0.00	22.17	7.04	9.07
38	Shrub	YUCCA	18	54	0.00	36.67	18.33	18.33
38	Tree	YUEL	18	54	0.00	5.00	0.90	1.73
39	Shrub	DALE2	18	54	0.00	0.18	0.06	0.08
39	Shrub	ERWR	18	54	0.00	4.00	1.00	1.73



# Production Lbs/Acre Trends

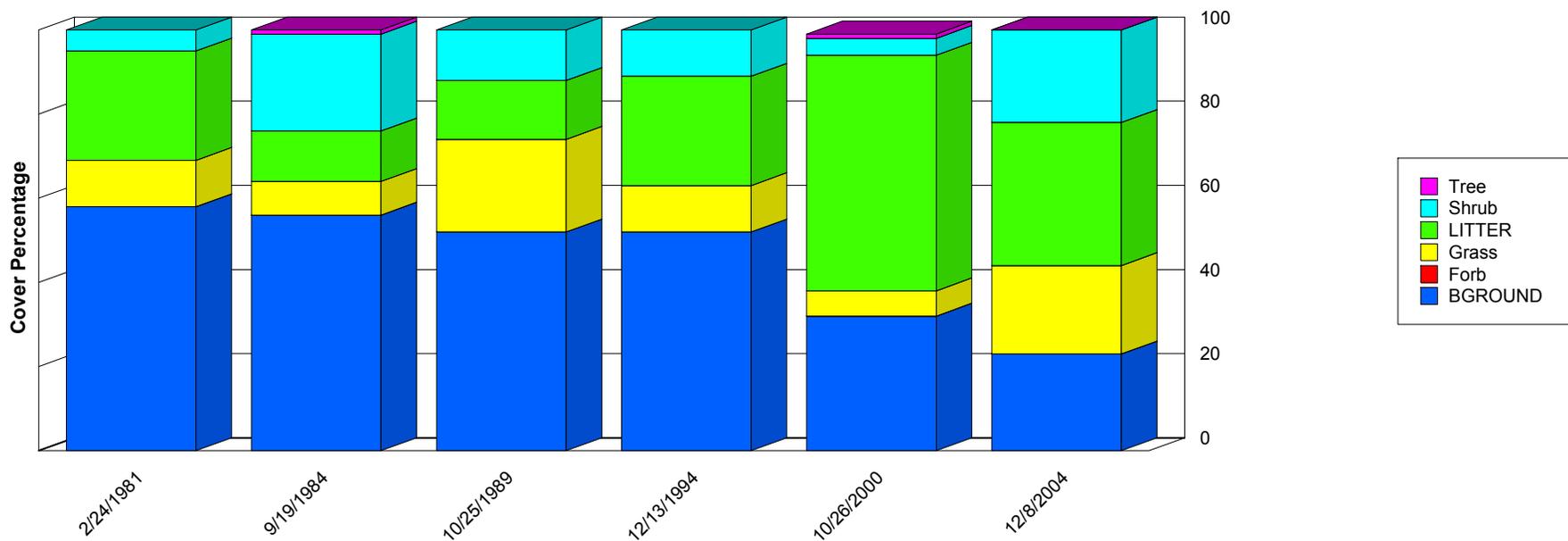


	2/24/1981	11/2/1981	10/25/1982	1/4/1983	9/19/1984	10/25/1989	12/13/1994	10/26/2000	12/8/2004
Forb	4.67	12.70	141.36	1.34	91.03	25.00	0.00	67.40	5.55
Grass	76.61	181.00	196.24	115.66	414.76	712.00	441.42	140.59	409.74
Shrub	79.95	639.24	122.76	425.60	839.06	126.00	320.96	198.09	249.71
Tree	1.27	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	162.49	837.94	460.36	542.60	1,344.85	863.00	762.38	406.08	665.00

## Report Parameters

SITE NAME LIKE 65012-OWNBY #1-D034  
 ON/AFTER 10/01/1980  
 ON/BEFORE 09/30/2005

# Ground Cover Trends



	2/24/1981	9/19/1984	10/25/1989	12/13/1994	10/26/2000	12/8/2004
BGROUND	58.00	56.00	52.00	52.00	32.00	23.00
Forb	0.00	0.00	0.00	0.00	0.00	0.00
Grass	11.00	8.00	22.00	11.00	6.00	21.00
LITTER	26.00	12.00	14.00	26.00	56.00	34.00
Shrub	5.00	23.00	12.00	11.00	4.00	22.00
Tree	0.00	1.00	0.00	0.00	1.00	0.00
Total	100.00	100.00	100.00	100.00	99.00	100.00

## Report Parameters

SITE NAME LIKE	65012-OWNBY #1-D034
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005