Determination of Public Land (Rangeland) Health for 65018 BUD BILBERRY

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 these assessments, it is my determination that public land within Bud Bilberry, allotment #65018 meets (1) Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard will not be addressed.

/s/ Eddie Bateson	8/8/2006
Field Manager	Date

Standards of Public Land Health
Evaluation of 65018 BUD BILBERRY Allotment
[10/15/2005]

The Roswell Field Office conducted rangeland health assessments at six (6) study sites within the Bud Bilberry allotment #65018. These assessments evaluated Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within each study site location. Existing monitoring data was incorporated into and in support of these field assessments. A summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
65018-DRAW #1-D039	X			X	*		N/A		
65018-NORTH SAND-D040	X			X	*		N/A		
65018-OVERLY #4-D043	X			X	*		N/A		
65018-PVT LD COOPER-D044	X			X			N/A		
65018-SOUTH SAND #3-D041	X			X	*		N/A		
65018-WEST SAND #6-D042	X			X	*		N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Bud Bilberry, allotment #65018. 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 six study locations within this 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.

This entire allotment lies within the LPC (Lesser Prairie Chicken) Core area with State, public and private land intermingled. Four of six sites on this allotment evaluated are CP-2 Deep Sand ecological sites on Roswell-Jalmar fine sand, hilly on high terraces in eastern parts of area surveyed; North Sand, Draw, South Sand and West Sand Pastures. Slopes are 0 to 25 percent or more in some areas with elevations between 4,000 ft/1,212 m and 4,200 ft/1,272 m. This soil formed in eolian and alluvial deposits. Roswell soil is found in hummocky sand dunes with Jalmar in depressional and interdunal areas. Both are deep and well-drained with effective rooting depths of 60 in/152 cm or more. North Sand Pasture, with an acreage of 1,510 or 611 hectares rated most indicators Slight to Moderate. Pedestals and/or terracettes, wind-scoured blowouts and/or depositional areas and annual production rated Moderate. Pedestaling was occurring on exposed slopes and some flow paths with sand bluestem (Andropogon hallii) and little bluestem (Schizachyrium scoparium) elevated on these aspects. Blowouts are occasionally present with some deposition. Annual production is currently estimated at 1/2 of long-term average. Some adequate clumps of sand bluestem on dunes to south are prevalent. Some grazing has occurred on bluestem grass. Shinnery oak (Quercus havardii) and bluestem production is on an increase here which may potentially provide adequate nesting cover for lesser prairie chicken (Tympanuchus pallidicinctus) although no data for lek or nesting activity have been recorded in this pasture. All other indicators assessed fell within normal range of variability.

Draw Pasture, encompassing 591 acres/239 hectares for this site had some cattle utilizing it at observation. All indicators fell within normal range of variability with Slight to Moderate departure. Hydrologic, soil and biotic attributes support good overall ecological condition with bluestem species providing suitable cover for prairie chicken nesting. Proportion of grass to shinnery oak is near optimum levels. One dozen prairie chicken were observed at present indicating there is adequate cover for this bird. In addition to those plants previously encountered are buckwheat (Eriogonum spp.), dropseed (Sporobolus spp.), threeawn (Aristida spp.), sand sage (Artemesia filifolia), yucca (Yucca spp.), sideoats grama (Bouteloua curtipendula), muhly (Muhlenbergia spp.) and blue grama (Bouteloua gracilis). Diversity of vegetation for this pasture indicates wildlife and livestock conservatively use this pasture with no specific forage type targeted for overuse as well as strategic watering points to evenly distribute resource use.

South Sand and West Sand Pasture (almost totally private and NM State land), 849 acres/343 hectares and 39 acres/16 hectares in size respectively both rated all indicators either None to Slight or Slight to Moderate, with normal range of variability from established criteria, both quantitatively and qualitatively. Soil site stability indicates adequate ground cover and organic matter mainly in the form of shinnery oak leaves. LPC tracks were observed; overall these pastures are in good to excellent ecological condition and are comparable to Draw Pasture in most categories pertaining to site protection and wildlife habitat. Proportion of grass to oak is also adequate for potential LPC nesting.

Cooper Pasture, (all private land) is a CP-2 Sandy Loam ecological site with a (FaA) Faskin fine sand, 0 to 2 percent slopes. This soil is deep to indurated caliche and well-

drained on high terraces in eastern parts of area surveyed and formed in eolian and alluvial deposits. Elevation is 3,800 ft/1,151 m to 4,200 ft/1,272 m. This pasture is a solid blue grama flat with some mesquite (Prosopis glandulosa) with yucca and cholla (Opuntia spinosa). Vine mesquite (Panicum obtusum), hairy grama (Bouteloua hirsuta) and locoweed (Astragalus spp.) are some of the other plant species found on site. Forbs are plentiful and provide excellent forage for pronghorn (Antilocapra americana). This site may also be used potentially by LPC for booming due to high visibility. There have been some past recordings of lek activity dating back to 1986 and as recently as 1999. Livestock have used this site in the past, but utilization levels are down to light and conservative use. Overall all indicators fell well within normal range of variability from established parameters.

Overly Pasture, also is a CP-2 Deep Sand ecological site on 903 acres/365 hectares on (RoD) Roswell fine sand, 10 to 30 percent slopes, deep and excessively drained on high terraces in eastern parts of area surveyed. This soil formed in eolian and alluvial deposits on level and depressional areas. Elevation is 4,000 ft/1,212 m to 4,200 ft/1,272 m. All indicators rated None to Slight and Slight to Moderate indicated normal range of variability. Sand dropseed (Sporobolus cryptandrus) is plentiful but could improve for potential LPC habitat. Special status species habitat is in satisfactory condition with slight departure from ecological reference areas. Lek activity is high here with "booming" recordings at four different locations adjacent to this site. No livestock were observed in this pasture at observation.

In the professional opinion of Assessment Team, public land within Bud Bilberry, allotment #65018 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 assessments on this allotment.

Recommendations: This allotment lies within the boundaries of LPC Core Area. Overall the current management employed by the allottee, ie, rotations, watering points, other range improvements, prudent road usage and sustainable use levels has augmented an already good to excellent condition of all pastures.

Strategic watering placement and conservative utilization levels should continue and would only enhance livestock and wildlife conditions. No brush problems exist at present.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65018-DRAW #1-D039			
Legal Land Desc	SWNE 32 0060S 0310E Meridian 23	Acreage	591
Ecosite	070BY063NM DEEP SAND CP-2	Photo Taken	Y
Watershed	13060003210 RAILROAD MOUNTAIN		
Observers	ARTHUN/MOE	Observation Date	01/10/2006
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	19.55	NOAA Growing Season Precipitation	15.86
NOAA Avg Annual Precipitation	15.73	NOAA Avg Growing Season Precipitation	13.34
Disturbances and Animal Use:	Some livestock observed in this pasture.		

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:	40% 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:	Only minor departures exist.					
B	Plant Mortality/Decadence				X	
Comments:						
H B	Litter Amount					X
Comments:	50% is the current estimate.					
B	Annual Production				X	
Comments:	450-500 lbs/ac or kg/ha is the current estimate.					
B	Invasive Plants				X	
Comments:						
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	

Comments:						
B	Wildlife Habitat				X	
Comments:	More sand bluestem would improve-good overall					
B	Wildlife Populations					X
Comments:	Saw dozen L.P.C.					
B	Special Status Species Habitat				X	
Comments:	good overall nesting, but more sand bluestem would improve it					
B	Special Status Species Populations					X
Comments:						

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	7	3
H	Hydrologic	0	0	0	7	4
B	Biotic	0	0	0	9	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	0	13
Site Notes: A higher oak to grass ratio exists for this site. Little bluestem is on site but in reduced amounts. Prairie chickens were observed however at the time of assessment. Allotee accompanied the team on this assessment.				

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65018-NORTH SAND-D040			
Legal Land Desc	NESE 36 0060S 0300E Meridian 23	Acreage	1510
Ecosite	070BY063NM DEEP SAND CP-2	Photo Taken	Y
Watershed	13060003210 RAILROAD MOUNTAIN		
Observers	ARTHUN/MOE	Observation Date	01/10/2006
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	19.55	NOAA Growing Season Precipitation	15.86
NOAA Avg Annual Precipitation	15.73	NOAA Avg Growing Season Precipitation	13.34
Disturbances and Animal Use:	Some cattle were observed utilizing this pasture.		

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:	On grass clumps.					

S H	Bare Ground				X	
Comments:	40% is the current estimate.					
S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas			X		
Comments:	Occasionally present					
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:	Increase in yucca; decrease in mesquite					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	Current estimate is 60% with shinnery oak as the primary source.					
B	Annual Production			X		
Comments:	450-500 lbs/ac or kg/ha is the current estimate.					
B	Invasive Plants				X	
Comments:						
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	

Comments:	Physical/biological crusts observed.					
B	Wildlife Habitat					X
Comments:	Some good clumps-sand bluestem on dunes to south.					
B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat					X
Comments:	nice clumps sand bluestem to south					
B	Special Status Species Populations					X
Comments:	good LPC pops.					

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	2	5	3
H	Hydrologic	0	0	1	6	4
B	Biotic	0	0	1	6	6

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	2	8
Hydrologic		0	1	10

Biotic		0	1	12
Site Notes: Some livestock observed at time of assessment. Allotee accompanied the team on the evaluation. The usual recruitment of grasses and shrubs was observed.				

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65018-OVERLY #4-D043			
Legal Land Desc	SWSE 7 0070S 0310E Meridian 23	Acreage	903
Ecosite	070BY063NM DEEP SAND CP-2	Photo Taken	Y
Watershed	13060003210 RAILROAD MOUNTAIN		
Observers	ARTHUN/MOE	Observation Date	01/10/2006
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	RoD	Soil Taxon Name	ROSWELL
Texture Class	NM644 FS	Soil Phase	ROSWELL
Texture Modifier	NM644 FINE SAND		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	19.55	NOAA Growing Season Precipitation	15.86
NOAA Avg Annual Precipitation	15.73	NOAA Avg Growing Season Precipitation	13.34
Disturbances and Animal Use:	No animal disturbances observed.		

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:	35% 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:						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	60% is the current estimate.					
B	Annual Production				X	
Comments:	600 lbs/ac or kg/ha is the current estimate.					
B	Invasive Plants					X
Comments:						
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical and bio crust-interspace dissolved- good o.m.-canopy held together.					

B	Wildlife Habitat				X	
Comments:	More sand dropseed would improve for LPC.					
B	Wildlife Populations					X
Comments:						
B	Special Status Species Habitat				X	
Comments:	more large grass clumps would improve nesting for LPC					
B	Special Status Species Populations					X
Comments:						

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	6	4
H	Hydrologic	0	0	0	7	4
B	Biotic	0	0	0	6	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	0	10
Hydrologic		0	0	11
Biotic		0	0	13

Site Notes: This site possesses a mixture of grass/shrub with the grama component and some little bluestem and shinnery. Allotee accompanied the team on evaluation.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65018-PVT LD COOPER-D044			
Legal Land Desc	SESW 14 0070S 0300E Meridian 23	Acreage	0
Ecosite	070BY054NM SANDY LOAM CP-2	Photo Taken	Y
Watershed	13060003210 RAILROAD MOUNTAIN		
Observers	ARTHUN/MOE	Observation Date	01/10/2006
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	19.55	NOAA Growing Season Precipitation	15.86
NOAA Avg Annual Precipitation	15.73	NOAA Avg Growing Season Precipitation	13.34
Disturbances and Animal Use:	Some past use by livestock is evident.		

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:	40% is the current estimate.					
S H	Gullies					X
Comments:						
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:	none					
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:	Mostly blue grama with intermittant shrubs.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	55% is the current estimate.					
B	Annual Production			X		
Comments:	450-500 lbs/ac or kg/ha is the current estimate.					
B	Invasive Plants					X
Comments:						
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical/biological					

B	Wildlife Habitat					X
Comments:	Excellent pronghorn habitat-may be used by LPC for booming.					
B	Wildlife Populations					X
Comments:						
B	Special Status Species Habitat					X
Comments:	not LPC nesting habitat but good site for lek					
B	Special Status Species Populations					X
Comments:						

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	5	5
H	Hydrologic	0	0	0	6	5
B	Biotic	0	0	1	2	10

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: This site is mostly a solid stand of blue grama w/some mesquite-yucca/cholla/astragalus/snakeweed, buckwheat and dropseed. (Livestock-past use is down in utilization however). Allotee accompanied the team on evaluation.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65018-SOUTH SAND #3-D041			
Legal Land Desc	SWNW 1 0070S 0300E Meridian 23	Acreage	849
Ecosite	070BY063NM DEEP SAND CP-2	Photo Taken	Y
Watershed	13060003210 RAILROAD MOUNTAIN		
Observers	ARTHUN/MOE	Observation Date	01/10/2006
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	19.55	NOAA Growing Season Precipitation	15.86
NOAA Avg Annual Precipitation	15.73	NOAA Avg Growing Season Precipitation	13.34
Disturbances and Animal Use:	No disturbances exist except for LPC tracks.		

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:	30% 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:	Interspace sample held together well and canopy-very good!					
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:	Litter amount is now estimated at 70%.					
B	Annual Production				X	
Comments:	Current estimate is 500 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:	weak physical crust					
B	Wildlife Habitat				X	
Comments:	Overall good-more sand bluestem would improve					
B	Wildlife Populations					X
Comments:	LPC tracks					
B	Special Status Species Habitat				X	
Comments:	More sand bluestem would improve LPC habitat					
B	Special Status Species Populations					X
Comments:						

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	7	3
H	Hydrologic	0	0	0	7	4
B	Biotic	0	0	0	6	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	0	10
Hydrologic		0	0	11

Biotic		0	0	13
Site Notes: The litter component is mostly shinnery oak leaves. Allotee accompanhied the team on evaluation.				

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65018-WEST SAND #6-D042			
Legal Land Desc	NWNE 11 0070S 0300E Meridian 23	Acreage	39
Ecosite	070BY063NM DEEP SAND CP-2	Photo Taken	Y
Watershed	13060003210 RAILROAD MOUNTAIN		
Observers	ARTHUN/MOE	Observation Date	01/10/2006
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	19.55	NOAA Growing Season Precipitation	15.86
NOAA Avg Annual Precipitation	15.73	NOAA Avg Growing Season Precipitation	13.34
Disturbances and Animal Use:	Some livestock observed in this pasture.		

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:	30% 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:	Only minor departures exist.					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	60% is the current estimate.					
B	Annual Production				X	
Comments:	500-600 lbs/ac or kg/ha is the current estimate.					
B	Invasive Plants				X	
Comments:	Only yucca is less than scattered.					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	

Comments:	Physical					
B	Wildlife Habitat				X	
Comments:	Overall good-more sand bluestem would improve					
B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat				X	
Comments:	More sand bluestem would improve LPC habitat.					
B	Special Status Species Populations					X
Comments:						

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	7	3
H	Hydrologic	0	0	0	7	4
B	Biotic	0	0	0	8	5

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

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

Biotic		0	0	13
Site Notes: Interspace soil - increased o.m. held together very well! Edge of dunes indicated increase in little bluestem, but a reduction in sand bluestem. Some livestock observed in this pasture. Allotee accompanied the team on this assessment.				

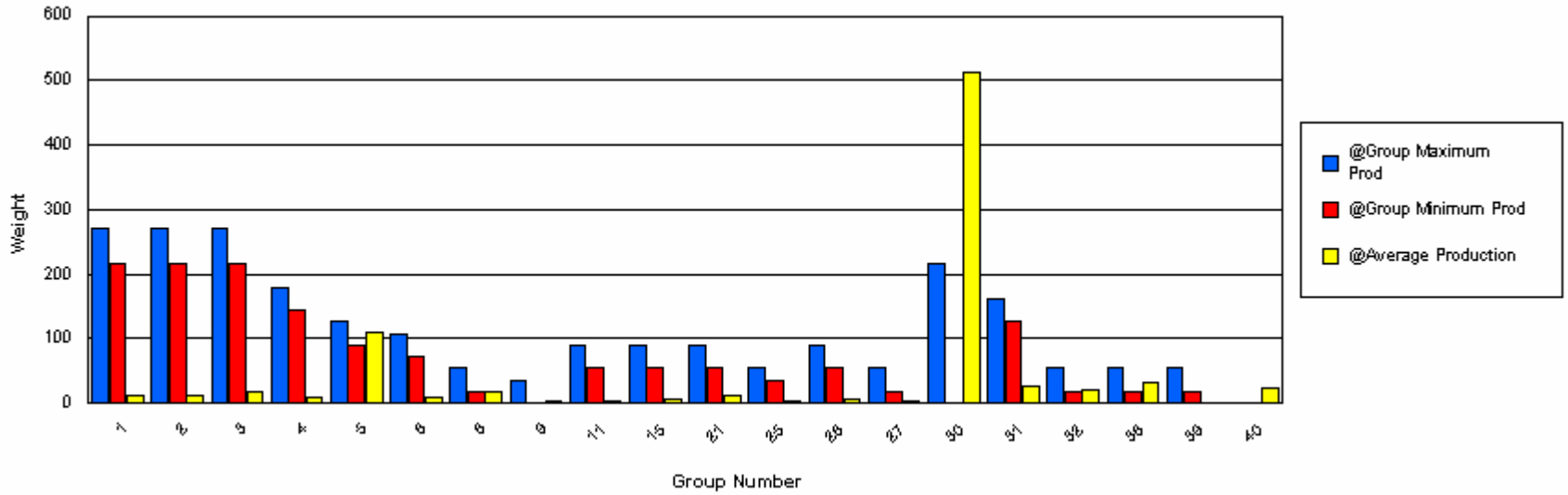
Functional / Structural Groups

Report Parameters

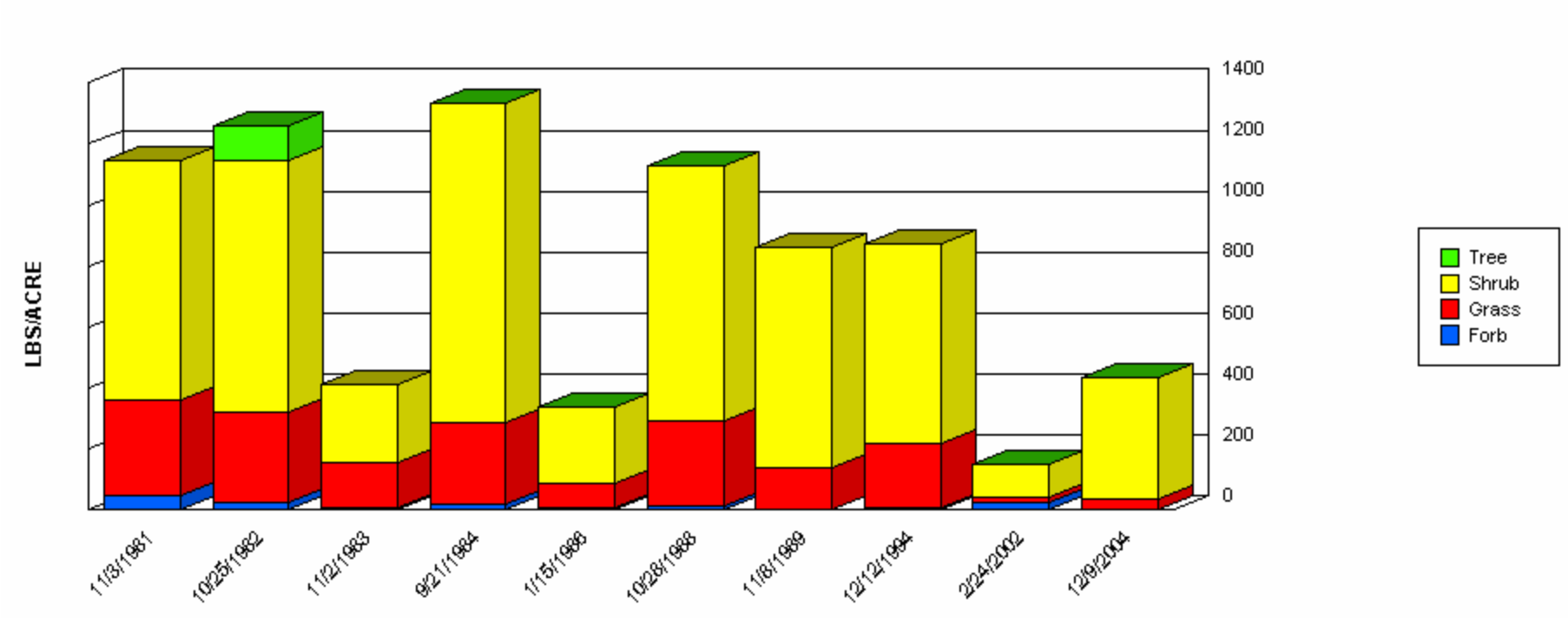
SITE NAME LIKE	65018-DRAW #1-D039
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005
MIN LBS TO GRAPH	1
SELECTED ECOSITE	070BY063NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	ANHA	216	270	1.21	35.00	10.98	11.91
2	Grass	ANSC2	216	270	0.00	29.00	11.07	11.52
3	Grass	SPCR	216	270	0.00	49.50	18.60	14.85
4	Grass	BOHI2	144	180	0.00	26.28	7.49	8.77
5	Grass	ARIST	90	126	0.00	221.52	99.11	72.12
5	Grass	ARPU9	90	126	9.75	12.74	11.24	1.50
6	Grass	PASPA2	72	108	0.00	16.60	5.53	7.83
6	Grass	PAST6	72	108	0.00	12.00	2.79	4.31
8	Grass	LECO	18	54	0.00	66.88	17.96	18.98
9	Grass	CEPA7	0	36	0.00	4.00	1.00	1.73
9	Grass	MUSQ	0	36	0.00	7.36	2.12	2.66
11	Grass	BOCU	54	90	0.00	10.50	4.20	2.96
15	Grass	EROX	54	90	0.00	16.00	5.91	5.96
18	Grass	CAREX	0	18	0.00	5.12	0.92	1.88
21	Forb	ERIOG	54	90	0.00	23.22	11.61	11.61
25	Forb	AMBRO	36	54	1.00	6.24	3.62	2.62
25	Forb	AMPS	36	54	0.00	2.00	0.51	0.77
26	Forb	AAFF	54	90	0.00	12.00	4.95	3.88
26	Forb	CALYL	54	90	0.00	7.84	1.57	3.14
26	Forb	EUPHO	54	90	0.00	1.62	0.32	0.65
26	Forb	PEPA2	54	90	0.00	0.84	0.17	0.34
27	Forb	HYFL	18	54	0.00	0.36	0.07	0.14
27	Forb	MELE2	18	54	0.00	1.96	0.39	0.78
27	Forb	PPFF	18	54	1.00	3.00	2.00	1.00
30	Shrub	QUHA3	0	216	66.50	947.72	513.78	283.45
31	Shrub	ARFI2	126	162	1.44	67.32	26.31	21.54

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
32	Shrub	GUSA2	18	54	4.00	11.52	8.50	2.76
32	Shrub	SENEC2	18	54	0.00	31.02	10.48	12.42
38	Shrub	YUCCA	18	54	0.00	26.67	15.22	11.21
38	Tree	YUEL	18	54	0.00	114.48	17.02	39.81
39	Shrub	DALE2	18	54	0.00	5.22	1.04	2.09
40	Shrub	PRGL2	0	0	4.00	41.40	22.70	18.70



Production Lbs/Acre Trends

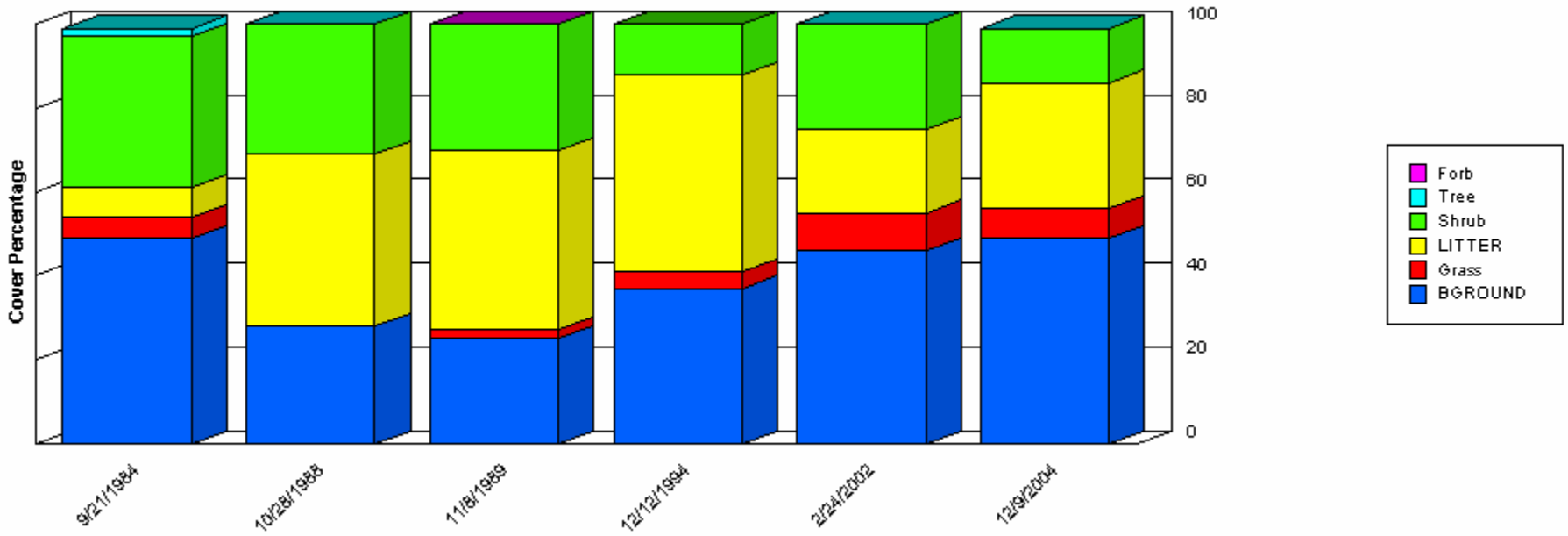


	11/3/1981	10/25/1982	11/2/1983	9/21/1984	1/15/1986	10/28/1988	11/8/1989	12/12/1994	2/24/2002	12/9/2004
Forb	**45.24**	**23.44**	**9.68**	**18.58**	**6.00**	**12.00**	**4.00**	**8.00**	**23.22**	**0.00**
Grass	**315.82**	**296.52**	**143.74**	**265.81**	**84.00**	**282.52**	**133.00**	**213.00**	**20.09**	**35.50**
Shrub	**783.72**	**823.50**	**256.36**	**1,046.59**	**249.60**	**835.28**	**722.00**	**651.00**	**105.37**	**399.74**
Tree	**0.00**	**114.48**	**0.00**	**0.67**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**1,144.78**	**1,257.94**	**409.78**	**1,331.65**	**339.60**	**1,129.80**	**859.00**	**872.00**	**148.68**	**435.24**

Report Parameters

SITE NAME LIKE	65018-DRAW #1-D039
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

Ground Cover Trends



	9/21/1984	10/28/1988	11/8/1989	12/12/1994	2/24/2002	12/9/2004
BGROUND	49.00	28.00	25.00	37.00	46.00	49.00
Forb	0.00	0.00	0.00	0.00	0.00	0.00
Grass	5.00	0.00	2.00	4.00	9.00	7.00
LITTER	7.00	41.00	43.00	47.00	20.00	30.00
Shrub	36.00	31.00	30.00	12.00	25.00	13.00
Tree	2.00	0.00	0.00	0.00	0.00	0.00
Total	99.00	100.00	100.00	100.00	100.00	99.00

Report Parameters

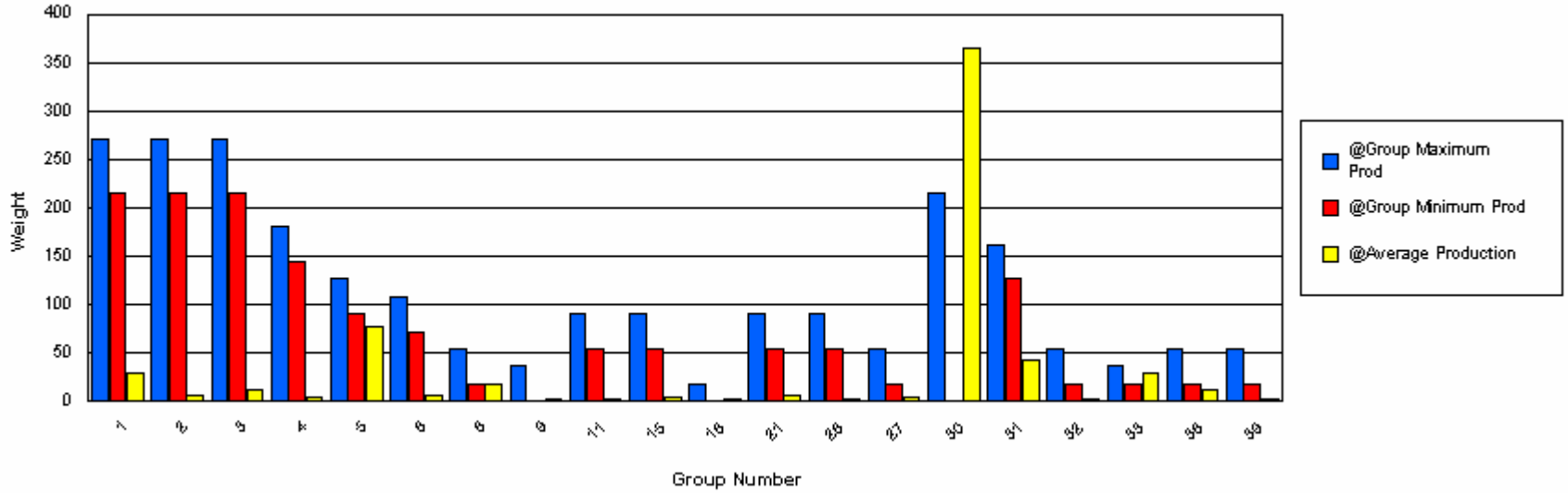
SITE NAME LIKE	65018-DRAW #1-D039
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

Functional / Structural Groups

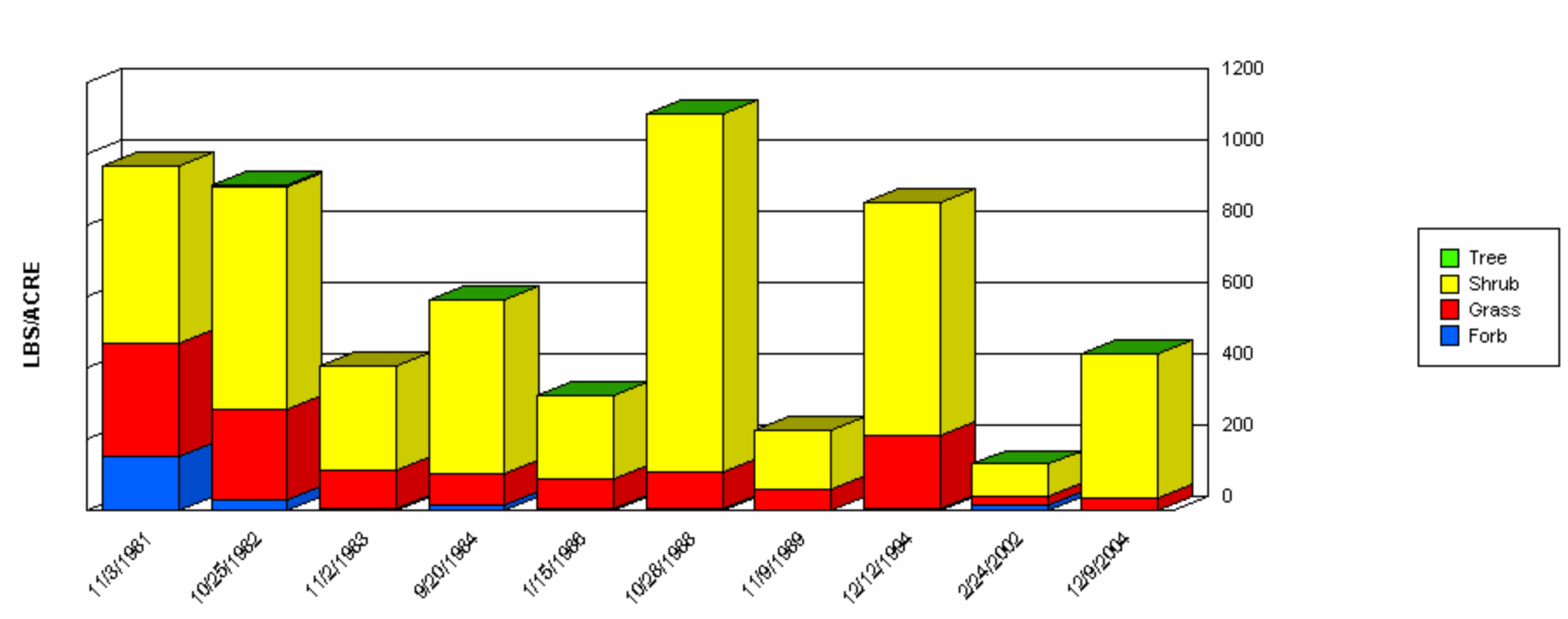
Report Parameters	
SITE NAME LIKE	65018-NORTH SAND-D040
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005
MIN LBS TO GRAPH	1
SELECTED ECOSITE	070BY063NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	ANHA	216	270	0.00	124.80	27.96	48.71
2	Grass	ANSC2	216	270	0.00	18.71	6.10	5.43
3	Grass	SPCO4	216	270	0.00	5.30	1.28	2.00
3	Grass	SPCR	216	270	0.00	22.50	7.43	6.58
3	Grass	SPFL2	216	270	0.00	6.00	2.07	2.45
4	Grass	BOHI2	144	180	0.00	18.98	3.44	6.01
5	Grass	ARIST	90	126	0.00	164.00	55.00	54.33
5	Grass	ARPU9	90	126	17.77	24.27	21.02	3.25
6	Grass	PAST6	72	108	0.00	16.00	5.68	4.71
8	Grass	LECO	18	54	2.53	61.60	17.11	21.18
9	Grass	CEPA7	0	36	0.00	2.00	0.61	0.86
9	Grass	MUSQ	0	36	0.00	1.84	0.64	0.72
11	Grass	BOCU	54	90	0.00	4.50	1.27	1.76
12	Grass	BOER4	54	90	0.00	0.91	0.18	0.36
15	Grass	EROX	54	90	0.00	9.94	2.94	3.60
18	Grass	CAREX	0	18	0.00	2.96	1.16	1.42
19	Grass	BOGR2	18	54	0.00	0.65	0.32	0.32
21	Forb	ERIOG	54	90	0.00	16.72	6.28	6.97
24	Forb	GAURA	18	36	0.00	3.96	0.79	1.58
26	Forb	AAFF	54	90	0.00	7.00	2.56	2.62
26	Forb	EUPHO	54	90	0.00	0.88	0.24	0.35
27	Forb	HYFL	18	54	0.00	0.54	0.11	0.22
27	Forb	MELE2	18	54	0.00	4.00	0.87	1.57
27	Forb	PHACE	18	54	0.00	1.80	0.36	0.72
27	Forb	PPFF	18	54	0.00	16.40	2.65	5.28
30	Shrub	QUHA3	0	216	56.10	844.80	365.55	230.65

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
31	Shrub	ARFI2	126	162	2.40	160.80	41.91	43.06
32	Shrub	GUSA2	18	54	1.00	1.00	1.00	0.00
32	Shrub	SENEC2	18	54	0.00	1.32	0.39	0.55
33	Shrub	YUGL	18	36	7.33	52.00	29.67	22.34
38	Shrub	YUCCA	18	54	0.00	16.67	8.33	8.33
38	Tree	YUEL	18	54	0.00	12.00	3.02	4.30
39	Shrub	OPUNT	18	54	0.00	3.00	1.00	1.41



Production Lbs/Acre Trends

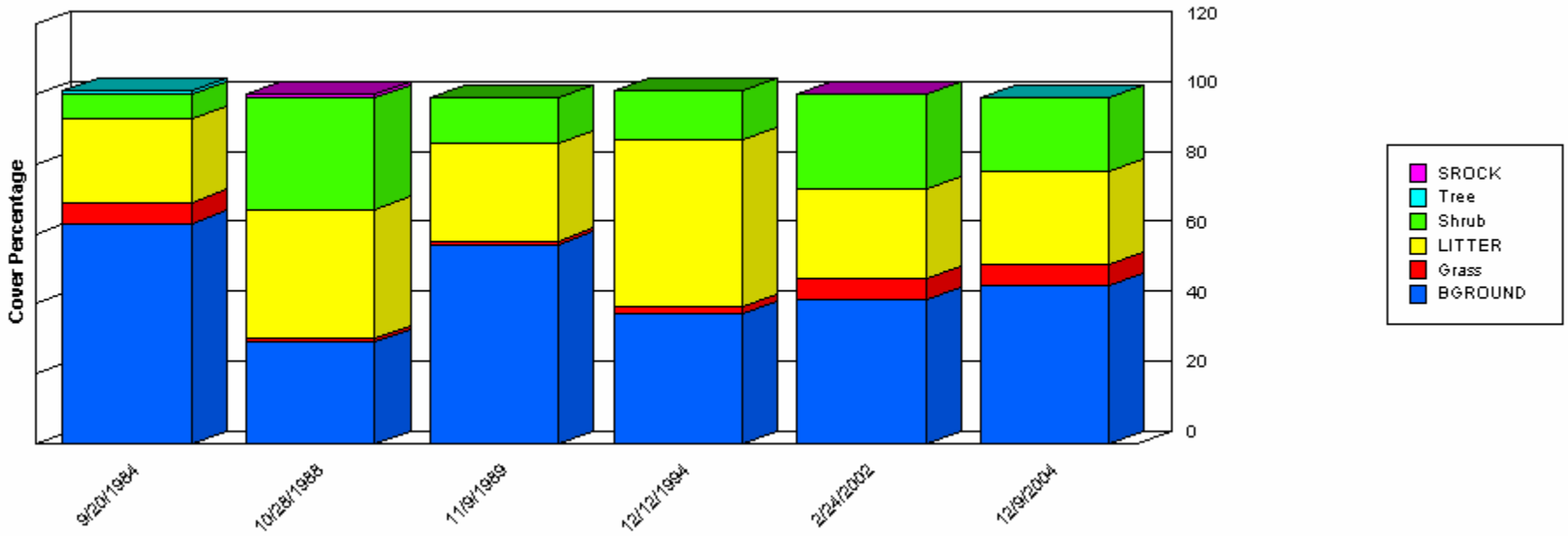


	11/3/1981	10/25/1982	11/2/1983	9/20/1984	1/15/1986	10/28/1988	11/9/1989	12/12/1994	2/24/2002	12/9/2004
Forb	**152.12**	**30.28**	**6.16**	**15.73**	**6.00**	**6.00**	**1.00**	**8.00**	**15.19**	**1.52**
Grass	**317.10**	**252.40**	**107.88**	**89.86**	**82.96**	**101.42**	**58.00**	**204.00**	**26.77**	**33.05**
Shrub	**496.80**	**627.00**	**294.64**	**485.82**	**235.84**	**1,008.60**	**166.00**	**652.00**	**89.17**	**407.49**
Tree	**0.00**	**6.48**	**0.00**	**2.67**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**966.02**	**916.16**	**408.68**	**594.07**	**324.80**	**1,116.02**	**225.00**	**864.00**	**131.13**	**442.06**

Report Parameters

SITE NAME LIKE	65018-NORTH SAND-D040
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

Ground Cover Trends



	9/20/1984	10/28/1988	11/9/1989	12/12/1994	2/24/2002	12/9/2004
BGROUND	63.00	29.00	57.00	37.00	41.00	45.00
Grass	6.00	1.00	1.00	2.00	6.00	6.00
LITTER	24.00	37.00	28.00	48.00	26.00	27.00
Shrub	7.00	32.00	13.00	14.00	27.00	21.00
SROCK	0.00	1.00	0.00	0.00	0.00	0.00
Tree	1.00	0.00	0.00	0.00	0.00	0.00
Total	101.00	100.00	99.00	101.00	100.00	99.00

Report Parameters

SITE NAME LIKE	65018-NORTH SAND-D040
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

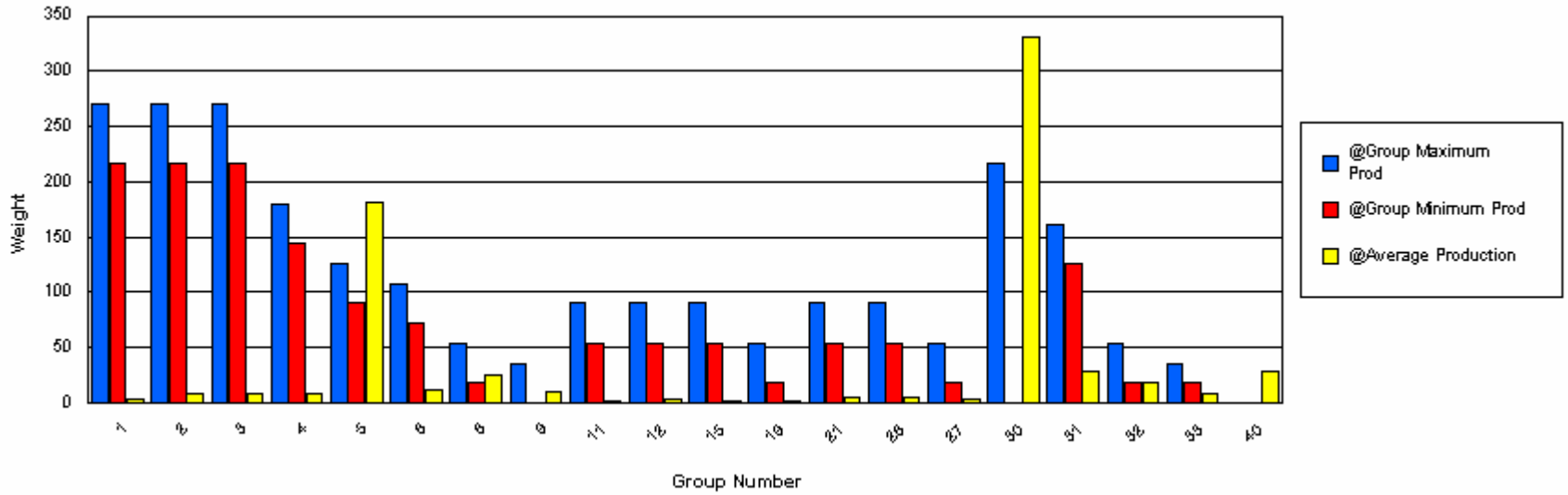
Functional / Structural Groups

Report Parameters

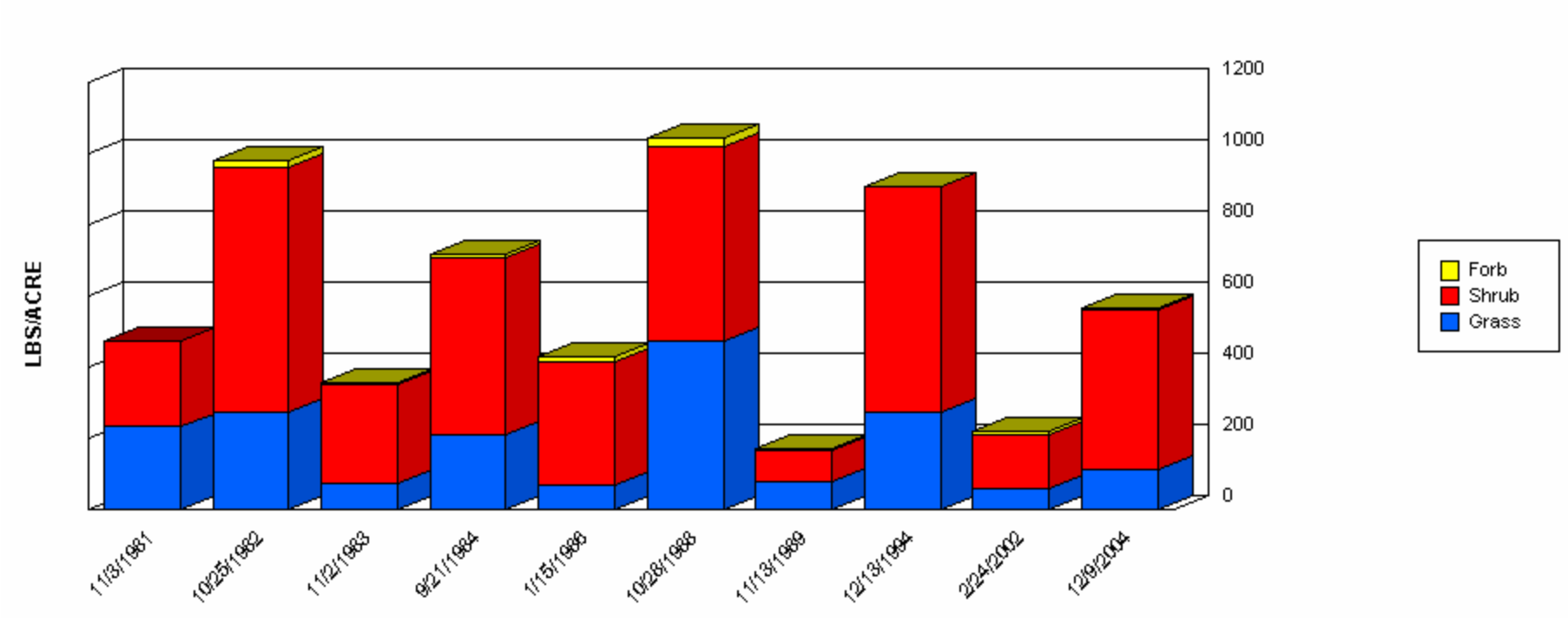
SITE NAME LIKE	65018-OVERLY #4-D043
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005
MIN LBS TO GRAPH	1
SELECTED ECOSITE	070BY063NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	ANHA	216	270	0.00	7.00	3.00	3.29
2	Grass	ANSC2	216	270	0.00	29.00	8.19	9.53
3	Grass	SPCR	216	270	0.00	34.50	8.73	10.18
4	Grass	BOHI2	144	180	0.00	13.14	7.61	4.89
5	Grass	ARDI5	90	126	0.00	2.29	1.15	1.15
5	Grass	ARIST	90	126	0.00	340.00	106.75	94.17
5	Grass	ARPU9	90	126	49.31	98.28	73.79	24.49
6	Grass	PASPA2	72	108	0.00	26.56	8.85	12.52
6	Grass	PAST6	72	108	0.00	15.00	3.33	4.48
8	Grass	LECO	18	54	3.17	80.56	25.48	22.22
9	Grass	CEPA7	0	36	0.00	2.00	0.56	0.74
9	Grass	MUSQ	0	36	0.00	49.68	10.17	17.98
11	Grass	BOCU	54	90	0.00	6.10	1.74	2.40
12	Grass	BOER4	54	90	0.00	16.72	3.32	5.12
15	Grass	EROX	54	90	0.00	11.00	2.52	3.48
18	Grass	CAREX	0	18	0.00	1.28	0.35	0.51
19	Grass	BOGR2	18	54	0.00	6.00	1.52	2.28
21	Forb	ERIOG	54	90	0.00	8.00	4.22	3.24
25	Forb	AMPS	36	54	0.00	0.56	0.11	0.22
26	Forb	AAFF	54	90	0.00	18.00	2.92	5.49
26	Forb	EUPHO	54	90	0.00	0.90	0.18	0.36
26	Forb	PEPA2	54	90	0.00	7.40	1.85	3.20
27	Forb	HYFL	18	54	0.00	0.72	0.14	0.29
27	Forb	PENST	18	54	0.00	2.64	0.44	0.98
27	Forb	SENEC	18	54	0.00	6.40	2.13	3.02
30	Shrub	QUHA3	0	216	58.00	557.04	331.15	157.36

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
31	Shrub	ARFI2	126	162	1.44	69.68	28.13	20.48
32	Shrub	GUSA2	18	54	0.00	14.52	5.06	6.39
32	Shrub	SENEC2	18	54	0.00	65.34	12.92	22.76
33	Shrub	YUGL	18	36	6.00	11.00	8.50	2.50
39	Shrub	DALE2	18	54	0.00	0.36	0.07	0.14
40	Shrub	PRGL2	0	0	0.00	75.00	27.87	27.82



Production Lbs/Acre Trends

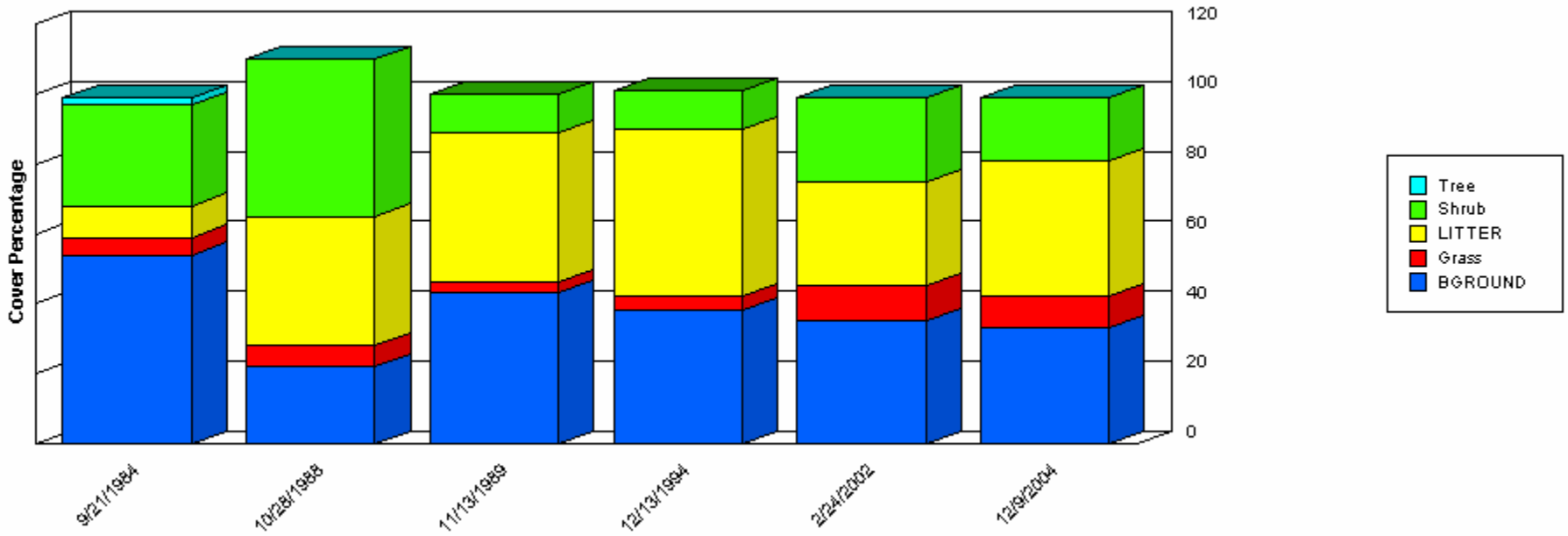


	11/3/1981	10/25/1982	11/2/1983	9/21/1984	1/15/1986	10/28/1988	11/13/1989	12/13/1994	2/24/2002	12/9/2004
Forb	**0.00**	**18.40**	**3.52**	**10.95**	**15.40**	**24.40**	**4.00**	**2.00**	**5.45**	**7.95**
Grass	**233.70**	**276.28**	**76.52**	**210.43**	**68.00**	**472.90**	**80.00**	**275.00**	**59.97**	**115.13**
Shrub	**240.12**	**688.38**	**277.12**	**498.39**	**348.64**	**548.08**	**87.00**	**634.00**	**153.79**	**446.85**
Total	**473.82**	**983.06**	**357.16**	**719.77**	**432.04**	**1,045.38**	**171.00**	**911.00**	**219.20**	**569.93**

Report Parameters

SITE NAME LIKE	65018-OVERLY #4-D043
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

Ground Cover Trends



	9/21/1984	10/28/1988	11/13/1989	12/13/1994	2/24/2002	12/9/2004
BGROUND	54.00	22.00	43.00	38.00	35.00	33.00
Grass	5.00	6.00	3.00	4.00	10.00	9.00
LITTER	9.00	37.00	43.00	48.00	30.00	39.00
Shrub	29.00	45.00	11.00	11.00	24.00	18.00
Tree	2.00	0.00	0.00	0.00	0.00	0.00
Total	99.00	110.00	100.00	101.00	99.00	99.00

Report Parameters

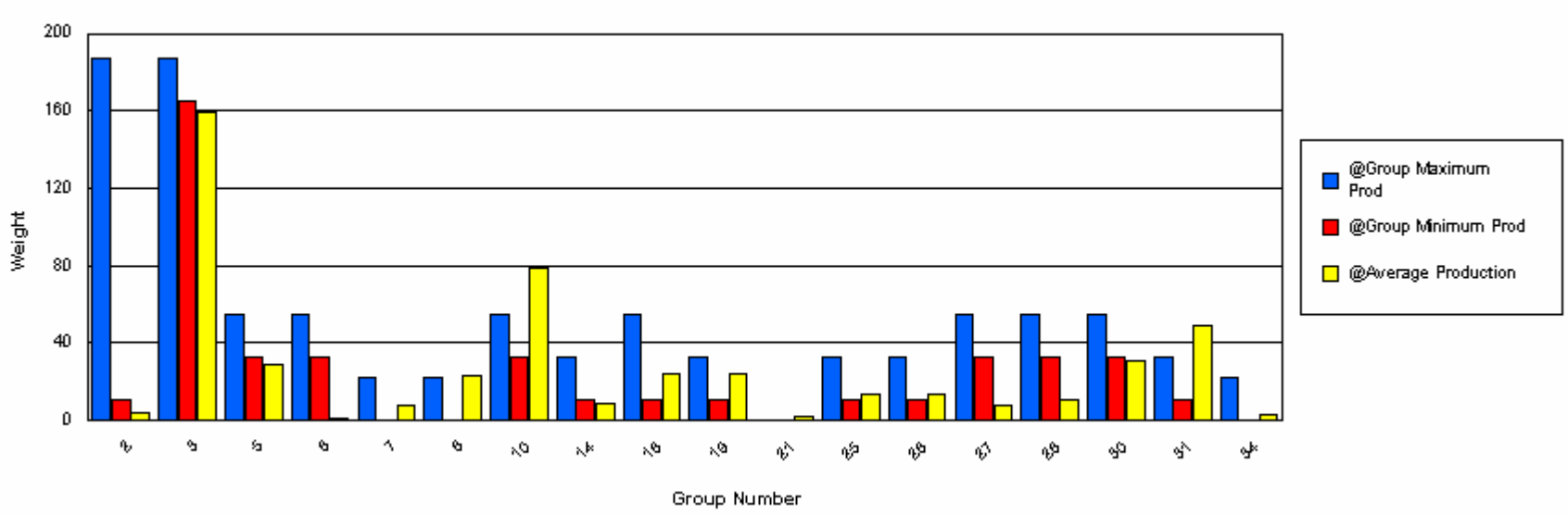
SITE NAME LIKE	65018-OVERLY #4-D043
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

Functional / Structural Groups

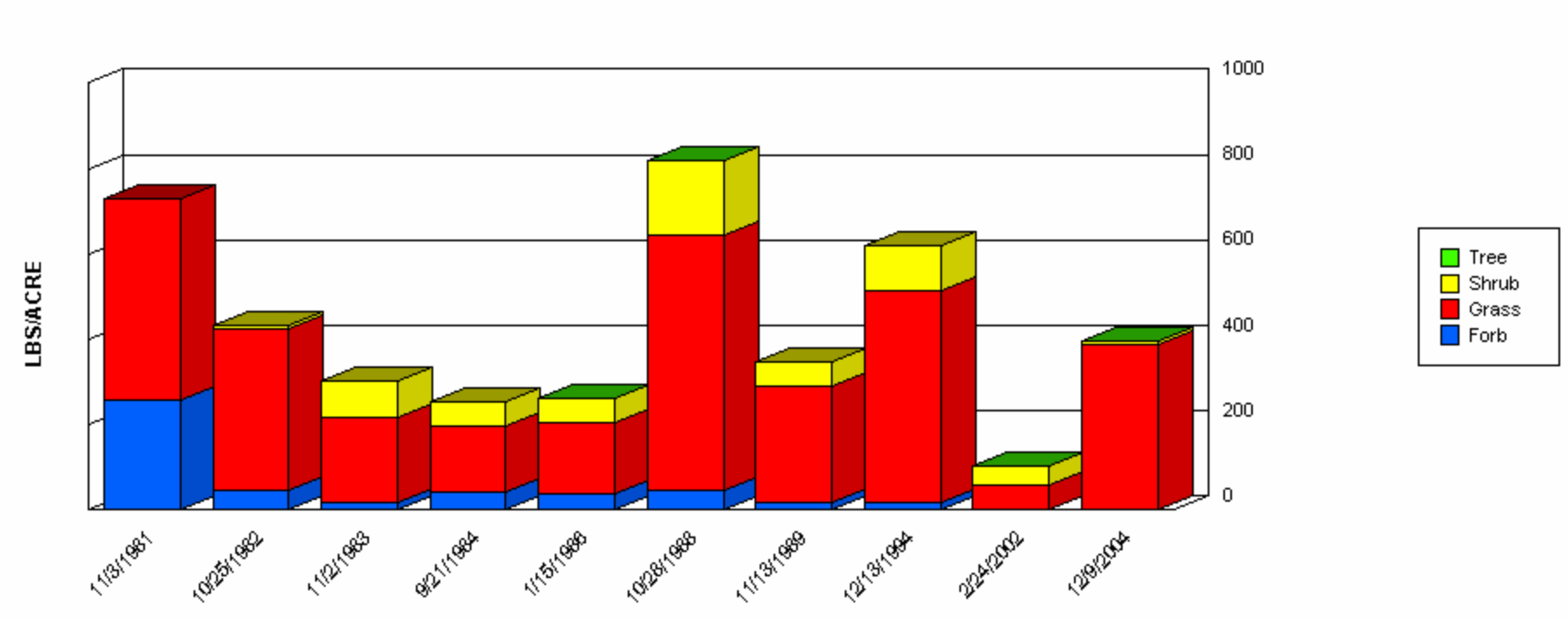
Report Parameters	
SITE NAME LIKE	65018-PVT LD COOPER-D044
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005
MIN LBS TO GRAPH	1
SELECTED ECOSITE	070BY054NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
2	Grass	BOCU	11	187	0.00	17.82	4.29	5.89
3	Grass	BOER4	165	187	12.00	142.00	71.09	43.38
3	Grass	BOGR2	165	187	15.52	176.08	78.03	50.88
3	Grass	BOHI2	165	187	0.00	56.00	10.02	19.14
5	Grass	SPCR	33	55	5.82	60.00	28.35	15.59
6	Grass	EROX	33	55	0.00	3.12	1.04	1.47
7	Grass	LECO	0	22	0.00	22.00	7.30	8.11
8	Grass	MUAR2	0	22	0.00	85.12	23.30	29.34
10	Grass	ARIST	33	55	0.00	242.00	52.14	72.62
10	Grass	ARPU9	33	55	16.63	36.40	26.51	9.89
14	Grass	CHCU2	11	33	0.00	32.12	8.47	11.52
16	Grass	PAHA	11	55	0.00	16.00	4.75	5.79
16	Grass	PAOB	11	55	0.00	34.00	14.23	10.22
16	Grass	PARA2	11	55	3.84	7.10	5.47	1.63
17	Grass	PASPA2	11	22	0.00	4.26	0.71	1.59
19	Grass	ERAGR	11	33	0.00	11.04	3.29	4.09
19	Grass	MUAR	11	33	0.00	69.72	18.02	29.86
19	Grass	SCPA	11	33	0.00	16.60	2.77	6.19
21	Grass	ERPU8	0	0	1.00	3.33	2.17	1.17
23	Forb	SPHAE	0	22	0.00	1.00	0.36	0.47
25	Forb	CROTO	11	33	0.00	18.24	6.80	6.52
25	Forb	CRPO5	11	33	0.00	28.37	7.09	10.83
26	Forb	ERIOG	11	33	0.00	66.12	13.10	22.88
27	Forb	ERIGE2	33	55	0.00	3.64	0.73	1.46
27	Forb	GRSQ	33	55	0.00	2.80	0.56	1.12
27	Forb	LOCO	33	55	0.00	14.00	3.50	6.06

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
27	Forb	SENEC	33	55	0.00	8.96	2.99	4.22
28	Forb	AAFF	33	55	0.00	21.60	6.51	7.43
28	Forb	FROEL	33	55	0.00	0.18	0.04	0.07
28	Forb	XADR	33	55	0.00	24.12	4.38	8.86
30	Shrub	YUCCA	33	55	0.00	95.00	29.13	35.30
30	Tree	YUEL	33	55	0.00	5.00	1.54	2.02
31	Shrub	GUSA2	11	33	1.92	168.36	48.79	50.20
34	Shrub	OPPO	0	22	0.00	6.00	3.00	3.00
34	Shrub	SENEC2	0	22	0.00	1.33	0.27	0.53



Production Lbs/Acre Trends

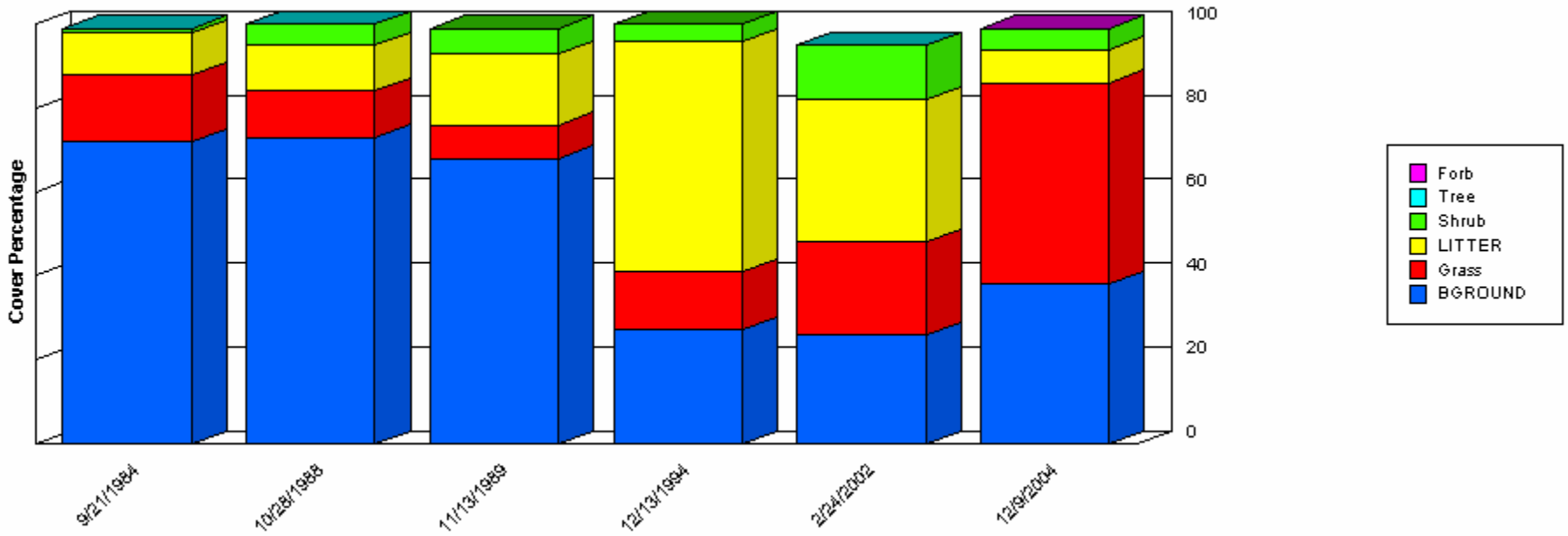


	11/3/1981	10/25/1982	11/2/1983	9/21/1984	1/15/1986	10/28/1988	11/13/1989	12/13/1994	2/24/2002	12/9/2004
Forb	**258.94**	**45.68**	**16.80**	**40.81**	**40.00**	**45.68**	**17.00**	**16.00**	**1.65**	**0.33**
Grass	**471.56**	**377.32**	**201.50**	**156.34**	**164.00**	**597.36**	**274.00**	**498.00**	**55.59**	**388.05**
Shrub	**0.00**	**9.24**	**83.72**	**55.01**	**56.00**	**177.36**	**55.00**	**107.00**	**47.87**	**7.25**
Tree	**0.00**	**0.00**	**0.00**	**0.00**	**2.72**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**730.50**	**432.24**	**302.02**	**252.17**	**262.72**	**820.40**	**346.00**	**621.00**	**105.11**	**395.63**

Report Parameters

SITE NAME LIKE	65018-PVT LD COOPER-D044
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

Ground Cover Trends



	9/21/1984	10/28/1988	11/13/1989	12/13/1994	2/24/2002	12/9/2004
BGROUND	72.00	73.00	68.00	27.00	26.00	38.00
Forb	0.00	0.00	0.00	0.00	0.00	0.00
Grass	16.00	11.00	8.00	14.00	22.00	48.00
LITTER	10.00	11.00	17.00	55.00	34.00	8.00
Shrub	1.00	5.00	6.00	4.00	13.00	5.00
Tree	0.00	0.00	0.00	0.00	0.00	0.00
Total	99.00	100.00	99.00	100.00	95.00	99.00

Report Parameters

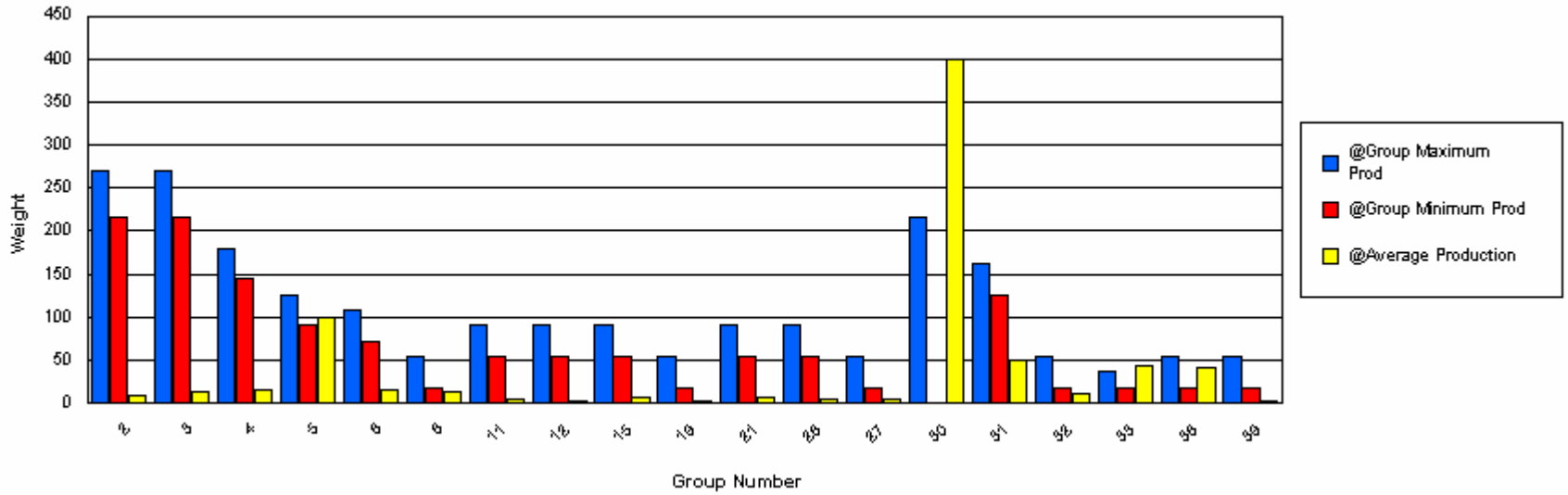
SITE NAME LIKE	65018-PVT LD COOPER-D044
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

Functional / Structural Groups

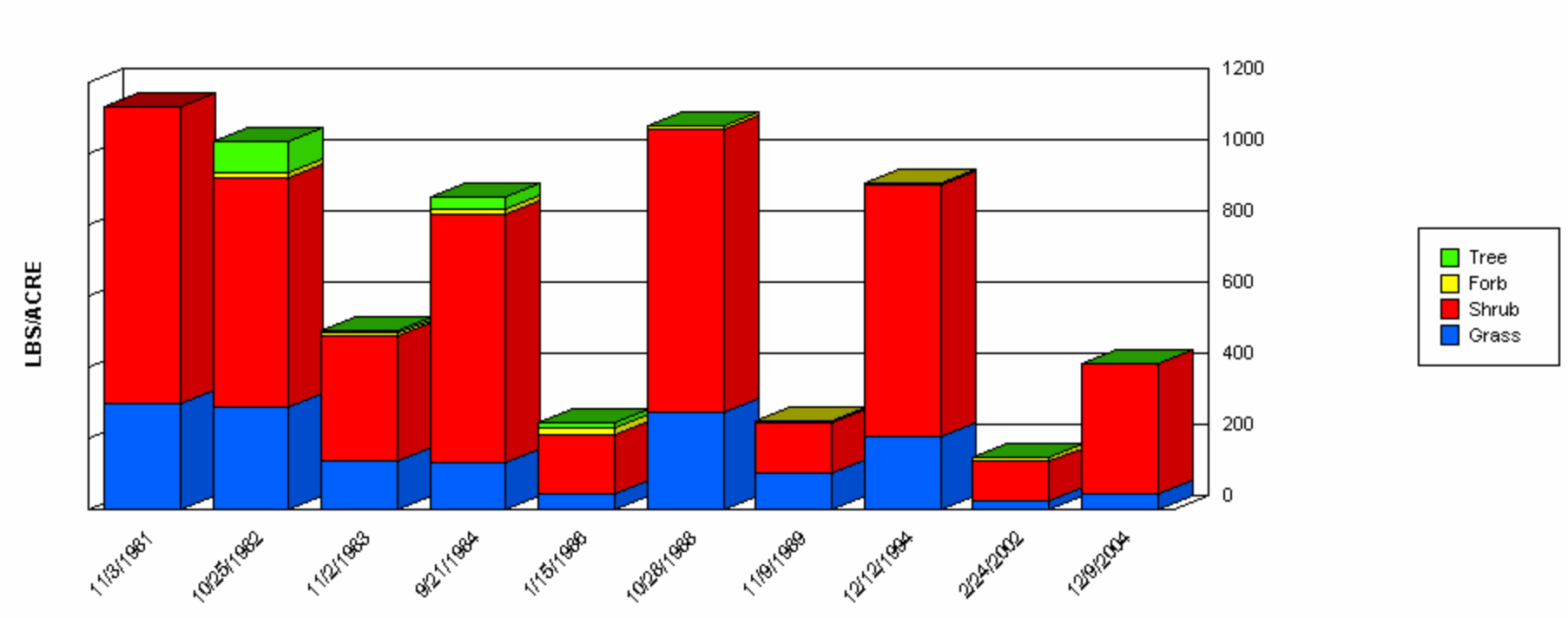
Report Parameters	
SITE NAME LIKE	65018-SOUTH SAND #3-D041
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005
MIN LBS TO GRAPH	1
SELECTED ECOSITE	070BY063NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
2	Grass	ANSC2	216	270	0.00	17.20	8.41	6.78
3	Grass	SPCR	216	270	0.00	52.50	12.32	15.91
4	Grass	BOHI2	144	180	0.00	31.00	15.91	10.27
5	Grass	ARIST	90	126	0.00	191.52	80.21	61.08
5	Grass	ARPU9	90	126	14.91	24.27	19.59	4.68
6	Grass	PASPA2	72	108	0.00	43.16	10.61	17.61
6	Grass	PAST6	72	108	0.00	13.00	4.95	4.94
8	Grass	LECO	18	54	2.53	39.52	13.05	9.91
9	Grass	MUSQ	0	36	0.00	2.00	0.67	0.84
11	Grass	BOCU	54	90	0.00	22.68	5.14	6.88
12	Grass	BOER4	54	90	0.00	4.00	1.39	1.34
15	Grass	EROX	54	90	0.00	20.28	6.51	7.29
18	Grass	CAREX	0	18	0.00	3.84	0.86	1.31
19	Grass	BOGR2	18	54	0.00	5.47	1.48	2.13
21	Forb	ERIOG	54	90	0.00	13.47	5.66	5.01
26	Forb	AAFF	54	90	0.00	12.00	2.68	3.82
26	Forb	PEPA2	54	90	0.00	7.40	1.85	3.20
27	Forb	CROTO	18	54	0.00	3.57	0.71	1.43
27	Forb	MELE2	18	54	0.00	10.00	2.50	4.33
27	Forb	PPFF	18	54	1.00	3.00	2.00	1.00
30	Shrub	QUHA3	0	216	50.16	766.72	400.01	238.81
31	Shrub	ARFI2	126	162	4.92	266.22	49.54	75.59
32	Shrub	GUSA2	18	54	0.00	58.24	10.22	20.01
33	Shrub	YUGL	18	36	1.33	85.00	43.17	41.84
38	Shrub	YUCCA	18	54	0.00	56.67	22.56	24.53
38	Tree	YUEL	18	54	0.00	86.40	19.21	27.64

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
39	Shrub	OPUNT	18	54	0.00	8.00	2.50	3.55



Production Lbs/Acre Trends

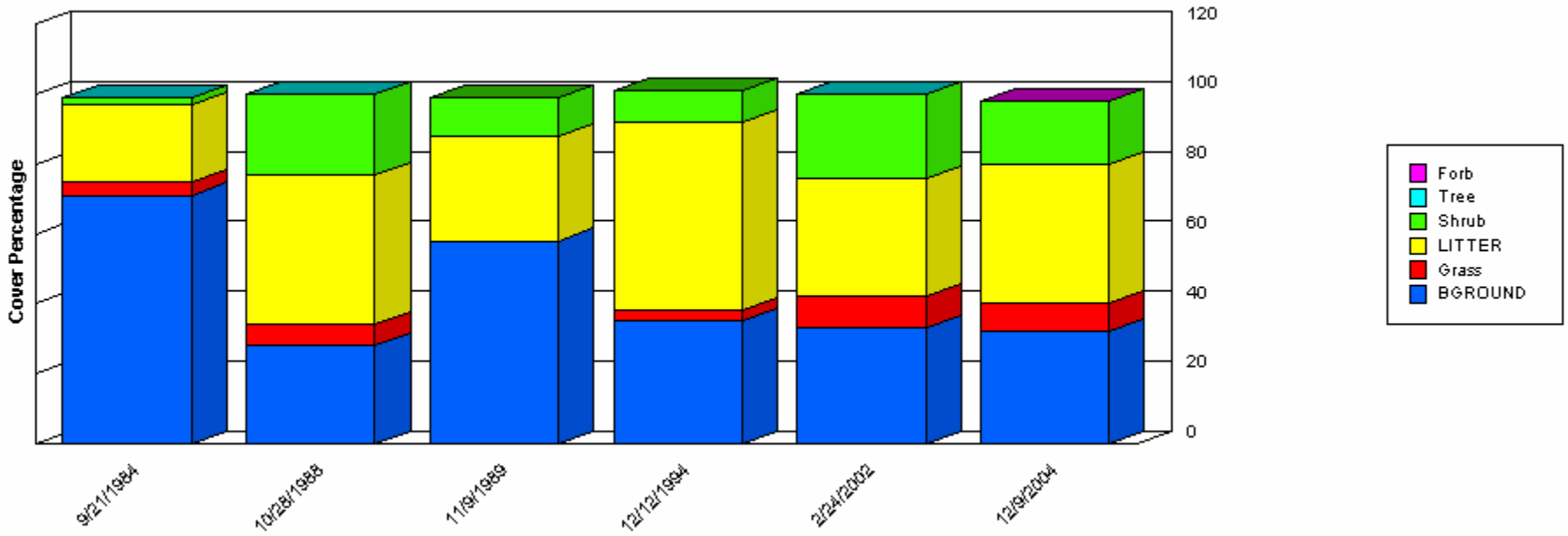


	11/3/1981	10/25/1982	11/2/1983	9/21/1984	1/15/1986	10/28/1988	11/9/1989	12/12/1994	2/24/2002	12/9/2004
Forb	**0.00**	**17.08**	**7.92**	**15.95**	**21.40**	**12.00**	**5.00**	**3.00**	**13.47**	**0.00**
Grass	**300.84**	**291.14**	**140.40**	**132.83**	**48.00**	**274.20**	**105.00**	**207.00**	**24.21**	**46.67**
Shrub	**830.88**	**641.52**	**348.56**	**696.85**	**161.44**	**793.52**	**142.00**	**708.00**	**111.75**	**366.50**
Tree	**0.00**	**86.40**	**9.60**	**34.67**	**16.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**1,131.72**	**1,036.14**	**506.48**	**880.29**	**246.84**	**1,079.72**	**252.00**	**918.00**	**149.43**	**413.17**

Report Parameters

SITE NAME LIKE	65018-SOUTH SAND #3-D041
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

Ground Cover Trends



	9/21/1984	10/28/1988	11/9/1989	12/12/1994	2/24/2002	12/9/2004
BGROUND	71.00	28.00	58.00	35.00	33.00	32.00
Forb	0.00	0.00	0.00	0.00	0.00	0.00
Grass	4.00	6.00	0.00	3.00	9.00	8.00
LITTER	22.00	43.00	30.00	54.00	34.00	40.00
Shrub	2.00	23.00	11.00	9.00	24.00	18.00
Tree	0.00	0.00	0.00	0.00	0.00	0.00
Total	99.00	100.00	99.00	101.00	100.00	98.00

Report Parameters

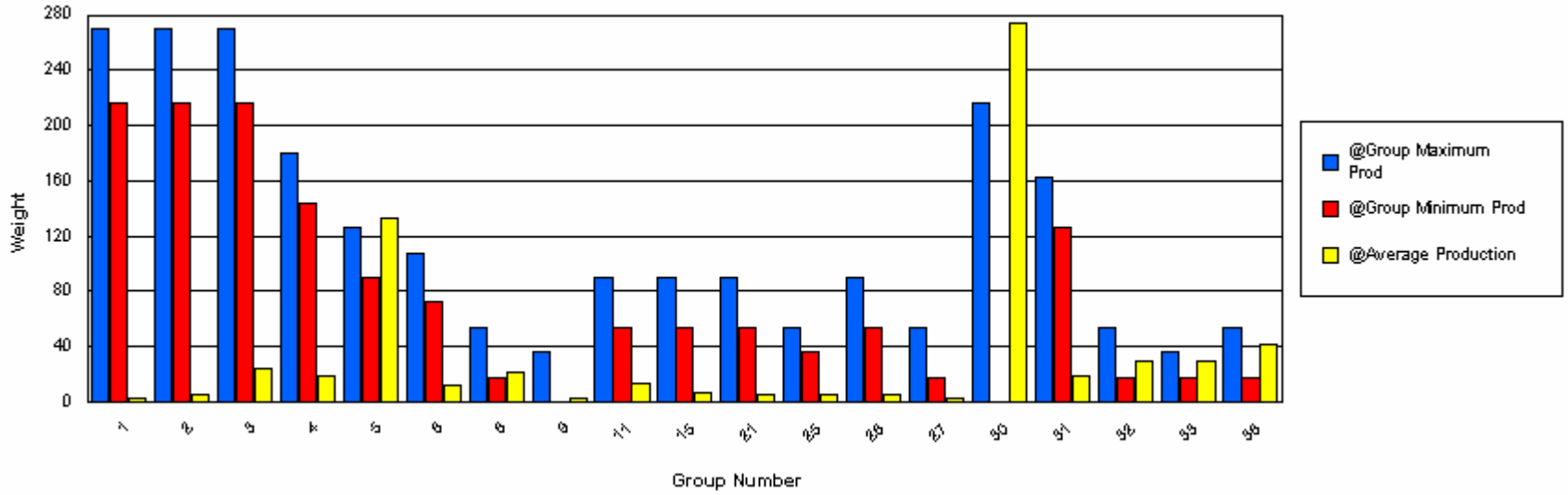
SITE NAME LIKE	65018-SOUTH SAND #3-D041
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

Functional / Structural Groups

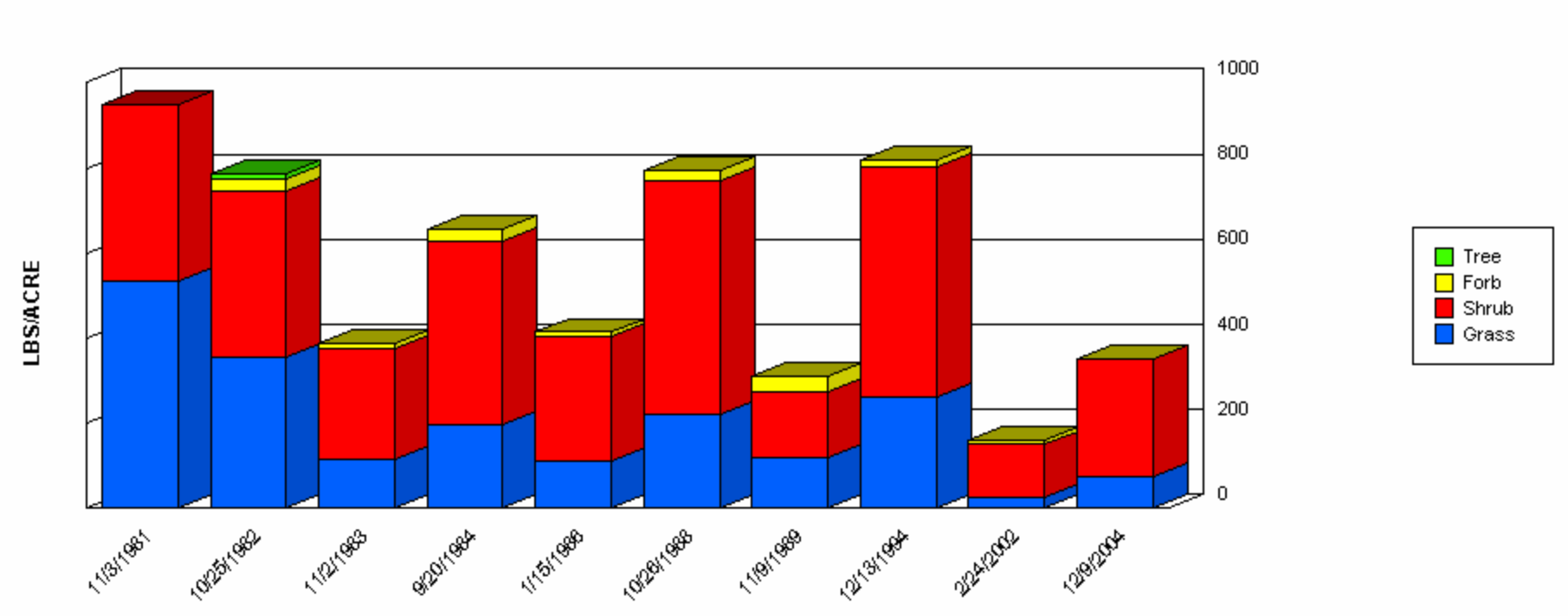
Report Parameters	
SITE NAME LIKE	65018-WEST SAND #6-D042
ON/AFTER	10/01/1980
ON/BEFORE	09/30/2005
MIN LBS TO GRAPH	1
SELECTED ECOSITE	070BY063NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	ANHA	216	270	0.00	7.00	2.76	2.68
2	Grass	ANSC2	216	270	0.00	10.00	4.72	3.41
3	Grass	SPCO4	216	270	8.00	8.26	8.13	0.13
3	Grass	SPCR	216	270	0.00	60.00	14.17	16.26
3	Grass	SPFL2	216	270	0.00	6.00	2.36	2.53
4	Grass	BOHI2	144	180	1.27	52.56	18.56	16.49
5	Grass	ARIST	90	126	0.00	307.32	107.32	85.49
5	Grass	ARPU9	90	126	14.33	38.22	26.28	11.94
6	Grass	PASPA2	72	108	0.00	19.44	7.35	8.08
6	Grass	PAST6	72	108	0.00	14.00	5.27	5.48
8	Grass	LECO	18	54	4.43	91.20	22.15	24.19
9	Grass	CEPA7	0	36	0.00	10.00	2.21	3.33
11	Grass	BOCU	54	90	1.29	40.26	13.59	13.15
15	Grass	EROX	54	90	0.00	21.00	6.24	5.89
18	Grass	CAREX	0	18	0.00	2.00	0.60	0.80
21	Forb	ERIOG	54	90	0.00	10.89	5.45	5.45
24	Forb	GAURA	18	36	0.00	1.44	0.29	0.58
25	Forb	AMPS	36	54	0.00	20.16	5.63	7.90
26	Forb	AAFF	54	90	0.00	24.00	5.00	7.47
26	Forb	PSORA	54	90	0.00	1.08	0.22	0.43
27	Forb	ARLU	18	54	0.00	7.20	1.20	2.68
27	Forb	BAMU	18	54	0.00	0.88	0.15	0.33
27	Forb	HYFL	18	54	0.00	0.36	0.07	0.14
27	Forb	PPFF	18	54	0.00	6.00	1.45	2.13
30	Shrub	QUHA3	0	216	115.50	515.84	274.86	122.44
31	Shrub	ARFI2	126	162	2.68	52.80	19.17	15.79

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
32	Shrub	GUSA2	18	54	3.31	74.00	23.18	22.55
32	Shrub	SENEC2	18	54	0.00	25.00	6.58	9.68
33	Shrub	YUGL	18	36	4.00	54.00	29.00	25.00
38	Shrub	YUCCA	18	54	0.00	40.00	13.39	15.01
38	Tree	YUEL	18	54	12.96	44.00	28.48	15.52



Production Lbs/Acre Trends

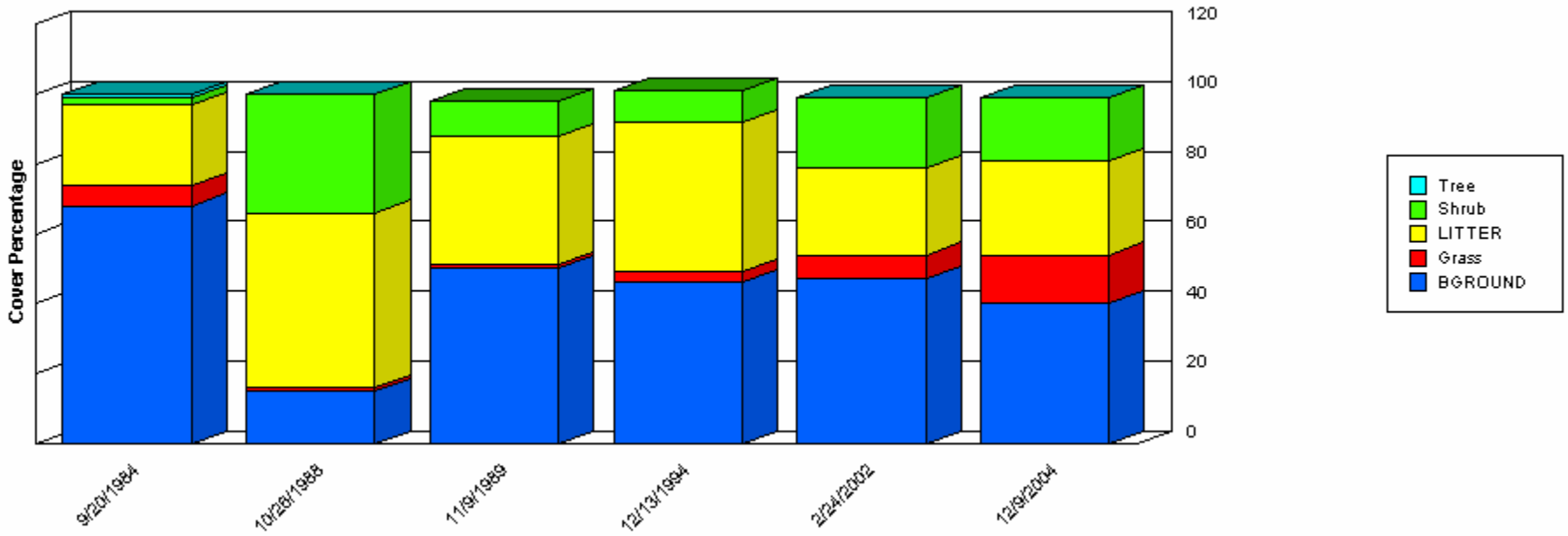


	11/3/1981	10/25/1982	11/2/1983	9/20/1984	1/15/1986	10/26/1988	11/9/1989	12/13/1994	2/24/2002	12/9/2004
Forb	**0.00**	**28.80**	**10.72**	**25.78**	**10.00**	**24.00**	**37.00**	**17.00**	**10.89**	**0.00**
Grass	**532.44**	**354.30**	**113.74**	**197.94**	**112.00**	**221.52**	**119.00**	**261.00**	**26.53**	**74.48**
Shrub	**417.04**	**389.40**	**262.32**	**430.27**	**292.16**	**547.24**	**155.00**	**540.00**	**123.43**	**274.99**
Tree	**0.00**	**12.96**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**949.48**	**785.46**	**386.78**	**653.99**	**414.16**	**792.76**	**311.00**	**818.00**	**160.85**	**349.47**

Report Parameters

SITE NAME LIKE	65018-WEST SAND #6-D042
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005

Ground Cover Trends



	9/20/1984	10/26/1988	11/9/1989	12/13/1994	2/24/2002	12/9/2004
BGROUND	68.00	15.00	50.00	46.00	47.00	40.00
Grass	6.00	1.00	1.00	3.00	7.00	14.00
LITTER	23.00	50.00	37.00	43.00	25.00	27.00
Shrub	2.00	34.00	10.00	9.00	20.00	18.00
Tree	1.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	98.00	101.00	99.00	99.00

Report Parameters

SITE NAME LIKE	65018-WEST SAND #6-D042
ON/AFTER	01/01/1981
ON/BEFORE	12/31/2005