Determination of Rangeland Health for the Comanche Hill Allotment #65037

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 which evaluate the local indicators, were completed for this allotment. Based on the assessments, it is my determination that the Public Lands within the Comanche Hill Allotment #65037 meet the Upland Sites Standard and (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard. There are no Public Land riparian areas on this allotment, therefore this Standard will not addressed.

/s/ T. R. KREAGER	09/08/2003
Assistant Field Manager	Date

Standards of Public Land Health
Evaluation of 65037 COMANCHE HILL Allotment
[11/12/2002]

The Roswell Field Office conducted rangeland health assessments at six study sites within COMANCHE HILL ALLOTMENT 65037. 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
65037-#1 SOUTH-D237	X			X	*		N/A		
65037-#2 HEIFER-D238	X			X			N/A		
65037-#3 WEST CENTER-D239	X			X	*		N/A		
65037-#4 E CENTER-D240 (*)	X			X	*		N/A		
65037-#5 NE-D241 (*)	X	*		X	*		N/A		
65037-#6 NW-D242 (*)	X	*		X	*		N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for the Comanche Hill allotment; 10 of these assessed soil/site stability, 11 assessed hydrologic functions and 13 assessed biotic integrity. These qualitative assessments along with quantitative information from long-term monitoring studies on six study areas on the allotment were utilized to assess the rangeland health of the public land within the allotment. These quantitative evaluations were performed by the Roswell Field office staff starting in the early 1980's. These included ground and vegetative cover and composition, production, frequency, and ecological condition as calculated from these collections which have been scheduled approximately every 5 years.

Monitoring will continue on the allotment and the attributes which were rated as Moderate or Moderate/Extreme will continue to be reviewed to detect changes that may occur.

While drought over the past three years has had an impact on these sites, the assessments of the indicators range from Moderate down to Slight to None. The exception being the presence of invasive plants (mesquite, opuntia and creosote) rated as Moderate to Extreme on four sites. Portions of these sites (#3 West Center, #5 Northeast, and #6 Northwest) are hummocky sands that are shrub dominated. These areas exhibit excessive patterns of bare ground, extensive water flow patterns and soil movement due to both water and wind.

A small population of noxious plants (African Rue) was noted along a county road; these areas have been treated and will continue to be monitored.

Oil and Gas activities in this area have been increasing in the last few years but do not appear at this time to be having adverse effects.

The West Center and NW pastures have small springs/seeps; the spring in the West Center pasture is on state land. The spring in the NW pasture supports habitat for the Pecos sunflower. The documented location is in the drainage located in the south half of Section 24. Livestock grazing is deferred during the critical growth period. the area also receives grazing pressure from mule deer as they do frequent the area. Saltcedar has invaded the drainage.

In the professional opinion of the Assessment Team, these sites meet the Standards of Rangeland Health.

The (*) indicates that the assessment had one or more indicator(s) rated moderate/extreme or extreme. These indicators are:

- Plant Community Composition and Distribution Relative to Infiltration and Runoff
- Litter Amount
- Invasive Plants

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

Recommendations: There are areas within the allotment that should be considered for possible mesquite control. These sites are the hummocky sand sites on public land in the West Center and Northwest pastures. The East Center and Northeast pastures are similar in nature but are primarily made up of private land. Mesquite treatment could improve the hydrology functions of the area.

Wildlife and TE Species - All drainages supporting riparian habitat should be considered potential habitat for the Pecos sunflower. A population does exist in a drainage in Northwest Pasture. All riparian areas should be monitored for use to prevent overgrazing these areas. Consider saltcedar eradication in all drainages. Seasonal use of Northwest Pasture should be maintained with non-use during the growing season and flowering period of the sunflower (until seed set).

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65037-#1 SOUTH-D237			
Legal Land Desc	NENE 13 0100S 0250E Meridian 23	Acreage	2877
Ecosite		Photo Taken	N
Watershed	13060007010 GOPHER		
Observers	RF0 ASSESSMENT TEAM & WORK GROUP	Observation Date	07/23/2002
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	HMA	Soil Taxon Name	HOLLOMEX
Texture Class	NM644 L	Soil Phase	HOLLOMEX-REEVES-MILNER
Texture Modifier	NM644 LOAM,DRY		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.41	NOAA Growing Season Precipitation	8.4
NOAA Avg Annual Precipitation	13.17	NOAA Avg Growing Season Precipitation	10.83
Disturbances and Animal Use:	Rencent Grazing		

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:						
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:	More towar slight					
B	Functional/Structural Groups				X	
Comments:						
B	Plant Mortality/Decadence				X	
Comments:						
H B	Litter Amount				X	
Comments:						
B	Annual Production				X	
Comments:						
B	Invasive Plants			X		
Comments:	Opuntia and maybe a slight increase in mesquite					
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	

Comments:						
B	Wildlife Habitat					X
Comments:	This is a grassland habitat type on top of the Pecos Valley escarpment. Many topographic features such as large drainages and sinkholes define this pasture as a unique wildlife habitat area. Developments in the area include a major county road and oil and gas wells with associated roads.					
B	Wildlife Populations					X
Comments:	No specific population studies for the area. Species of concern include pronghorn antelope, mule deer, upland game birds and a variety of terrestrial nongame wildlife species, especially those associated with the drainages and sinkhole special habitat features.					
B	Special Status Species Habitat					X
Comments:	There is potential habitat for the Pecos sunflower in the drainages that support springs (SENE Section 13). No populations have been found to date. The steep sides of the drainages and sinkholes may provide nesting habitat for birds of prey.					
B	Special Status Species Populations					X
Comments:	None know to occur at this time. Pecos sunflower may appear in drainages in the future.					

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	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 *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 sued 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:

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65037-#2 HEIFER-D238			
Legal Land Desc	SWSE 6 0100S 0260E Meridian 23	Acreage	759
Ecosite		Photo Taken	N
Watershed	13060007010 GOPHER		
Observers	RFO ASSESSMENT TEAM	Observation Date	10/29/2002
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	HMA	Soil Taxon Name	HOLLOMEX
Texture Class	NM644 L	Soil Phase	HOLLOMEX-REEVES-MILNER
Texture Modifier	NM644 LOAM,DRY		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.41	NOAA Growing Season Precipitation	8.4
NOAA Avg Annual Precipitation	13.17	NOAA Avg Growing Season Precipitation	10.83
Disturbances and Animal Use:	Recent grazing in the 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:	Generally not applicable					
S H	Water Flow Patterns				X	
Comments:	Stable and Short					
S H	Pedestals and/or Terracettes			X		
Comments:	Borderline with slight/moderate					

S H	Bare Ground				X	
Comments:						
S H	Gullies					X
Comments:	Generally not applicable					
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:						
B	Annual Production			X		
Comments:	Review study data					
B	Invasive Plants			X		
Comments:						
B	Reproductive Capability of Perennial Plants			X		
Comments:	Due to recent grazing after seedhead development, more toward slight/moderate					
S	Physical/Chemical/Biological					X

	Crusts					
Comments:						
B	Wildlife Habitat			X		
Comments:	A grassland habitat type with invasion by mesquite. There was once an active prairie dog colony in the NWNW of Section 6. The area has grown over since then.					
B	Wildlife Populations					X
Comments:	No specific population information. Species of concern include pronghorn antelope, upland game birds and terrestrial nongame wildlife species.					
B	Special Status Species Habitat					X
Comments:	There was once an active prairie dog colony in the NWNW of Section 6. This area may be open to re-colonization naturally or by re-introduction.					
B	Special Status Species Populations					X
Comments:	None known to occur at this time.					

Part 3. Summary

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

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	1	3	6
H	Hydrologic	0	0	2	5	4
B	Biotic	0	0	5	2	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 sued 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	May	Meets

		Meet	Need More Info	
Soil		0	1	9
Hydrologic		0	2	9
Biotic		0	5	8
Site Notes:				

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65037-#3 WEST CENTER-D239			
Legal Land Desc	NENE 35 0090S 0250E Meridian 23	Acreage	836
Ecosite		Photo Taken	N
Watershed	13060007010 GOPHER		
Observers	RFO ASSESSMENT TEAM & WORK GROUP	Observation Date	07/23/2002
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	SMA	Soil Taxon Name	SOTIM
Texture Class	NM644 FSL	Soil Phase	SOTIM-BERINO
Texture Modifier	NM644 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.41	NOAA Growing Season Precipitation	8.4
NOAA Avg Annual Precipitation	13.17	NOAA Avg Growing Season Precipitation	10.83
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:						
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:						
B	Annual Production			X		
Comments:						
B	Invasive Plants			X		
Comments:	Primarily mesquite					
B	Reproductive Capability of Perennial Plants			X		
Comments:						
S	Physical/Chemical/Biological Crusts					X
Comments:						

B	Wildlife Habitat					X
Comments:	A grassland habitat type which includes a major drainage supporting riparian habitat (ephemeral open water pools) on State Land in Section 36. The draw is in good condition except for saltcedar invasion. A major pipeline crosses through the pasture and the draw.					
B	Wildlife Populations					X
Comments:	No specific population information. Species of concern include aquatic species, mule deer and a variety of nongame bird species.					
B	Special Status Species Habitat					X
Comments:	The drainage bottom may be potential habitat for the Pecos sunflower. The drainage is in good condition except for saltcedar invasion.					
B	Special Status Species Populations					X
Comments:	None known to occur at this time.					

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

			Info	
Soil		0	5	5
Hydrologic		0	5	6
Biotic		0	6	7
Site Notes:				

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65037-#4 E CENTER-D240			
Legal Land Desc	NENW 31 0090S 0260E Meridian 23	Acreage	643
Ecosite		Photo Taken	N
Watershed	13060007010 GOPHER		
Observers	RFO ASSESSMENT TEAM	Observation Date	10/29/2002
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	HMA	Soil Taxon Name	HOLLOMEX
Texture Class	NM644 L	Soil Phase	HOLLOMEX-REEVES-MILNER
Texture Modifier	NM644 LOAM,DRY		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.41	NOAA Growing Season Precipitation	8.4
NOAA Avg Annual Precipitation	13.17	NOAA Avg Growing Season Precipitation	10.83
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:	Toward moderate					
S H	Pedestals and/or Terracettes				X	
Comments:	Toward moderate					

S H	Bare Ground				X	
Comments:						
S H	Gullies				X	
Comments:	Gullies are present on the upper slope edges of the site					
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:	Toward moderate					
S H B	Compaction Layer					X
Comments:	Toward slight					
B	Functional/Structural Groups			X		
Comments:						
B	Plant Mortality/Decadence				X	
Comments:						
H B	Litter Amount					X
Comments:	Toward slight					
B	Annual Production			X		
Comments:						
B	Invasive Plants		X			
Comments:	Mesquite, prickly pear and salt cedar in lower areas and appears to be increasing in density					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological					X

	Crusts					
Comments:						
B	Wildlife Habitat				X	
Comments:	A grassland habitat type which forms the subwatershed of a drainage system. Some invasion by mesquite and saltcedar. Greater densities of mesquite in the northern portion of the pasture.					
B	Wildlife Populations			X		
Comments:	No specific population information. Species of concern include pronghorn antelope, mule deer and grassland bird 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	0	7	3
H	Hydrologic	0	0	0	8	3
B	Biotic	0	1	3	5	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 sued 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	Meets

			More Info	
Soil		0	0	10
Hydrologic		0	0	11
Biotic		1	3	9
Site Notes:				

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65037-#5 NE-D241			
Legal Land Desc	SENW 20 0090S 0260E Meridian 23	Acreage	0
Ecosite		Photo Taken	N
Watershed	13060007010 GOPHER		
Observers	RFO ASSESSMENT TEAM	Observation Date	10/29/2002
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	SNB	Soil Taxon Name	SOTIM
Texture Class	NM644 FSL	Soil Phase	SOTIM-SIMONA
Texture Modifier	NM644 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.41	NOAA Growing Season Precipitation	8.4
NOAA Avg Annual Precipitation	13.17	NOAA Avg Growing Season Precipitation	10.83
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:	Grassland invaded by mesquite.					
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground			X		

Comments:	Site reclassified from Sandy SD-2 to Shallow Sand SD-2					
S H	Gullies					X
Comments:	Gullies present on the upper slope edges of the site					
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:	Leans toward moderate					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff			X		
Comments:	More pronounced in Hummocky areas					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups			X		
Comments:	Mesquite dominates portions of this site					
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount		X			
Comments:	Lack of overall litter; lots of young plants with fresh material; on the up side					
B	Annual Production			X		
Comments:						
B	Invasive Plants		X			
Comments:	Mesquite primarily					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:						

B	Wildlife Habitat				X	
Comments:	A grassland habitat type invaded by mesquite.					
B	Wildlife Populations			X		
Comments:	No specific population information. Species of concern include mule deer, upland game birds and a variety of terrestrial nongame wildlife species. Because of the high density of mesquite, wildlife habitat has degraded with a shift in species that prefer a more shrubby habitat.					
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	6	3
H	Hydrologic	0	1	2	5	3
B	Biotic	0	2	3	4	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 sued 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	Current management is improving conditions.	0	1	9

	This pasture is all private.			
Hydrologic	Current management is improving conditions. This pasture is all private.	1	2	8
Biotic	Current management is improving conditions. This pasture is all private.	2	3	8

Site Notes: This pasture is all private land.

The primary ecological site for this soil map unit SNB is a Sandy SD-3, however, there are inclusions of Shallow Sandy SD-3 sites like this one within the soil map unit. The lower portions of this unit is hummocky sands that are dominated by mesquite.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65037-#6 NW-D242			
Legal Land Desc	NENE 24 0090S 0250E Meridian 23	Acreage	1253
Ecosite		Photo Taken	N
Watershed	13060007010 GOPHER		
Observers	RFO ASSESSMENT TEAM	Observation Date	10/20/2002
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	10/20/02
Soil Map Unit	SNB	Soil Taxon Name	SOTIM
Texture Class	NM644 FSL	Soil Phase	SOTIM-SIMONA
Texture Modifier	NM644 FINE SANDY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	12.41	NOAA Growing Season Precipitation	8.4
NOAA Avg Annual Precipitation	13.17	NOAA Avg Growing Season Precipitation	10.83
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:						
S H	Gullies			X		
Comments:	Gullies present on the upper slopes of the area					
S	Wind-scoured, Blowouts, and/or Deposition Areas			X		
Comments:	Toward moderate/extreme influenced from the hummocky areas of the site					
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:	More prounced in the hummocky areas					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups			X		
Comments:	Toward moderate/extreme shrubs dominate the hummocky areas					
B	Plant Mortality/Decadence				X	
Comments:						
H B	Litter Amount			X		
Comments:						
B	Annual Production			X		
Comments:						
B	Invasive Plants		X			
Comments:	Mesquite primarily					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:						

B	Wildlife Habitat					X
Comments:	A mixture of grasslands, rolling hills and drainages.					
B	Wildlife Populations				X	
Comments:	No specific population information. The abundance of drainages on this habitat ecotone between uplands and bottomlands makes the area unique in wildlife diversity. Species of concern are mule deer, upland game birds and a variety of terrestrial nongame species, and aquatic species when water is present in the drainage located in the south half of Section 24.					
B	Special Status Species Habitat				X	
Comments:	This pasture contains habitat for the Pecos sunflower. The documented location is in the drainage located in the south half of Section 24. The area is subject to livestock grazing but also receives grazing pressure from mule deer as they do frequent the area. Saltcedar has invaded the drainage.					
B	Special Status Species Populations				X	
Comments:	A small population of Pecos sunflower is found in the drainage and was first documented in the year 2000. About 30 to 40 plants may occur in the 300-yard reach.					

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

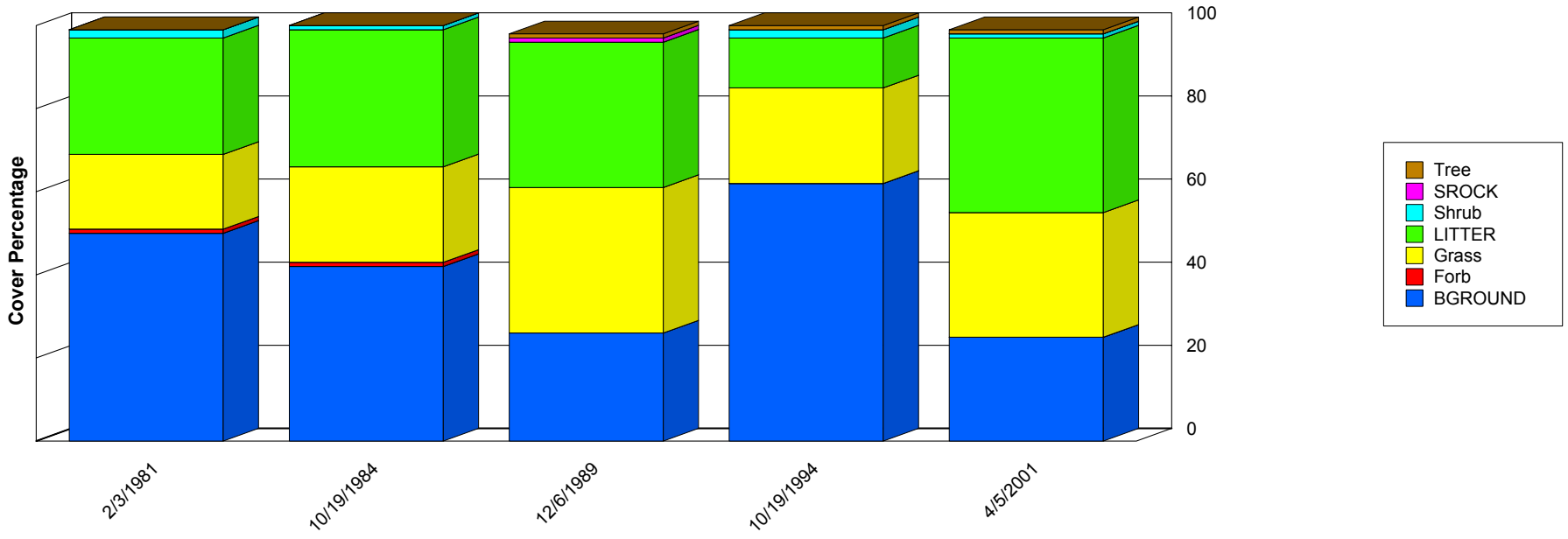
B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be sued 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	4	6
Hydrologic		1	5	5
Biotic		1	5	7

Site Notes: The study area is on the edge of the mapping unit. To the west and north of the area deeper sands are dominant (Deep Sand sites) and to the east and south the area is dominated by hummocky sands (Sandy SD-3 sites). It is questionable whether the soils of the deep sand sites are trully a Roswell fine sand map unit as mapped. It could possiblely be a Berino complex.

Wildlife and TE Species - The drainage in the south half of Section 24 needs to be closely monitored. Management actions have been implemented to prevent overgrazing and to defer the area from grazing during the critical growth period of the pecos puzzle sunflower. Saltcedar eradication would help improve the riparian area.

Ground Cover Trends



	2/3/1981	10/19/1984	12/6/1989	10/19/1994	4/5/2001
BGROUND	50.00	42.00	26.00	62.00	25.00
Forb	1.00	1.00	0.00	0.00	0.00
Grass	18.00	23.00	35.00	23.00	30.00
LITTER	28.00	33.00	35.00	12.00	42.00
Shrub	2.00	1.00	0.00	2.00	1.00
SROCK	0.00	0.00	1.00	0.00	0.00
Tree	0.00	0.00	1.00	1.00	1.00
Total	99.00	100.00	98.00	100.00	99.00

Report Parameters

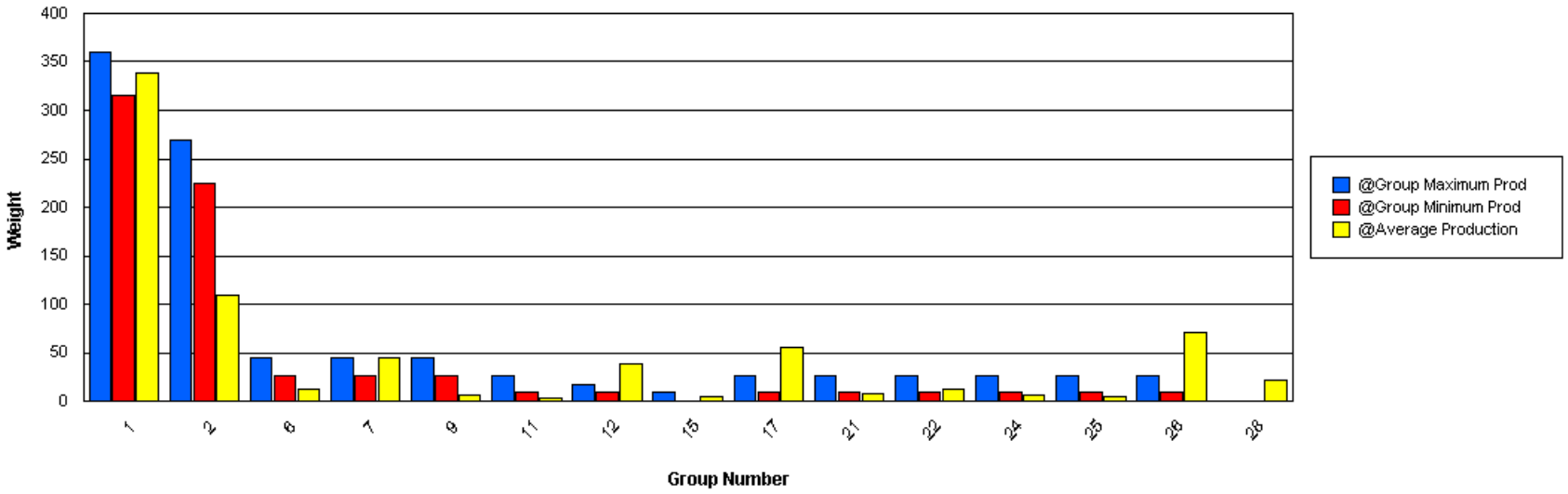
SITE NAME LIKE	65037-#1 SOUTH-D237
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Functional / Structural Groups

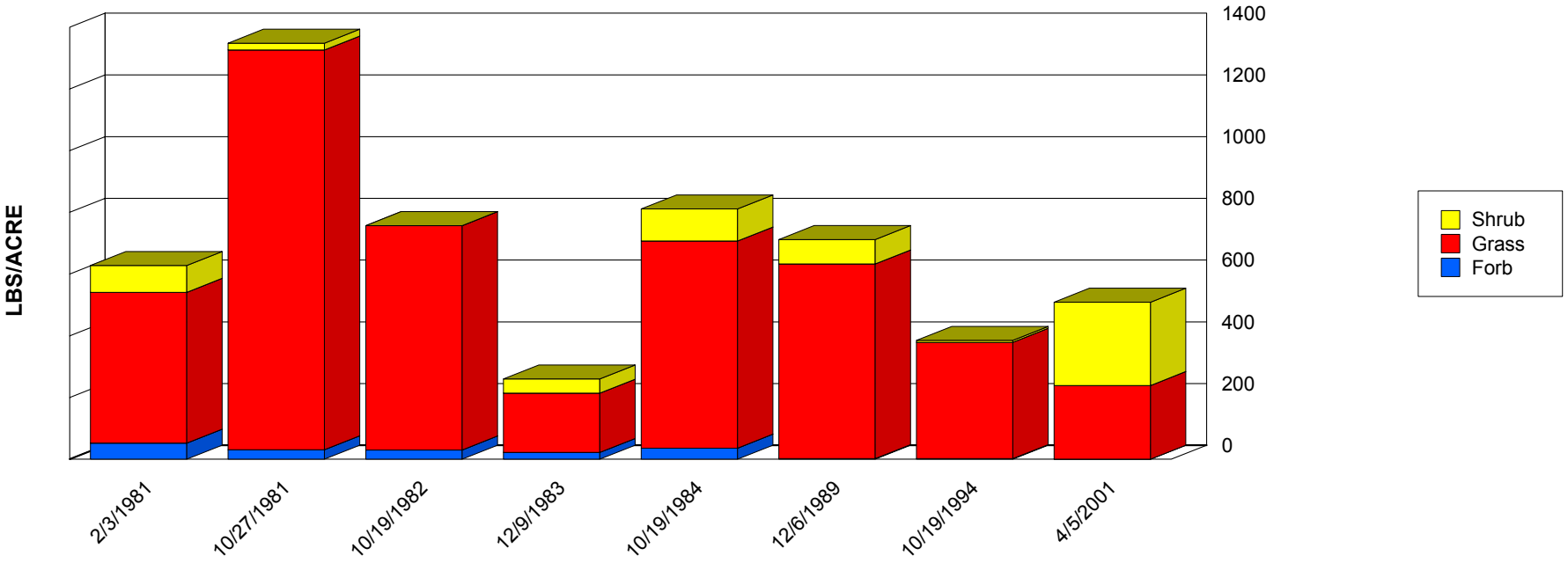
Report Parameters	
SITE NAME LIKE	65037-#1 SOUTH-D237
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001
MIN LBS TO GRAPH	3
SELECTED ECOSITE	042CY007NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	HIMU2	315	360	104.00	498.00	303.25	131.19
1	Grass	SCBR2	315	360	10.00	83.00	34.86	23.80
2	Grass	BOER4	225	270	20.00	301.00	98.50	83.42
2	Grass	BOGR2	225	270	0.00	40.00	10.57	13.98
6	Grass	SPAI	27	45	0.00	75.00	12.29	25.88
7	Grass	ARIST	27	45	0.00	80.00	14.17	29.50
7	Grass	SPCR	27	45	0.00	96.00	31.29	33.92
9	Grass	MUAR	27	45	0.00	14.00	6.29	5.92
11	Grass	ENDE	9	27	0.00	16.00	3.57	5.23
12	Grass	PAHA	9	18	0.00	234.00	38.86	80.44
15	Grass	TRPI2	0	9	0.00	15.00	5.13	4.14
16	Grass	AAGG	9	27	0.00	7.00	1.40	2.80
17	Grass	ERPU8	9	27	0.00	39.00	7.57	13.01
17	Grass	PARA2	9	27	0.00	41.00	13.67	19.33
17	Grass	SPCO4	9	27	0.00	1.00	0.20	0.40
17	Grass	SPFL2	9	27	0.00	9.00	3.00	4.24
17	Grass	SPNE	9	27	0.00	141.00	31.17	49.74
18	Forb	SPHAE	9	27	0.00	2.00	0.50	0.76
19	Forb	LESQU	9	27	0.00	3.00	0.60	1.20
19	Forb	PENA	9	27	0.00	2.00	0.50	0.76
19	Forb	SENEC	9	27	0.00	5.00	0.83	1.86
21	Forb	ERTE13	9	27	0.00	11.00	3.80	4.45
21	Forb	HOGL2	9	27	0.00	5.00	1.67	2.36
21	Forb	LEMO2	9	27	0.00	16.00	3.00	5.86
22	Forb	AAFF	9	27	0.00	21.00	8.43	8.78
22	Forb	OENOT	9	27	0.00	4.00	0.67	1.49

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
22	Forb	PECTI	9	27	0.00	17.00	3.17	6.23
23	Forb	ALLIU	9	27	0.00	1.00	0.33	0.47
24	Forb	PPFF	9	27	0.00	31.00	5.67	11.35
24	Forb	SOEL	9	27	0.00	1.00	0.33	0.47
25	Shrub	EPHED	9	27	0.00	15.00	4.57	5.60
26	Shrub	GUSA2	9	27	0.00	102.00	24.00	35.38
26	Shrub	OPUNT	9	27	0.00	253.00	46.67	92.71
27	Shrub	HAPLO2	9	27	0.00	7.00	1.75	3.03
28	Shrub	PRGL2	0	0	0.00	63.00	21.17	27.93



Production Lbs/Acre Trends

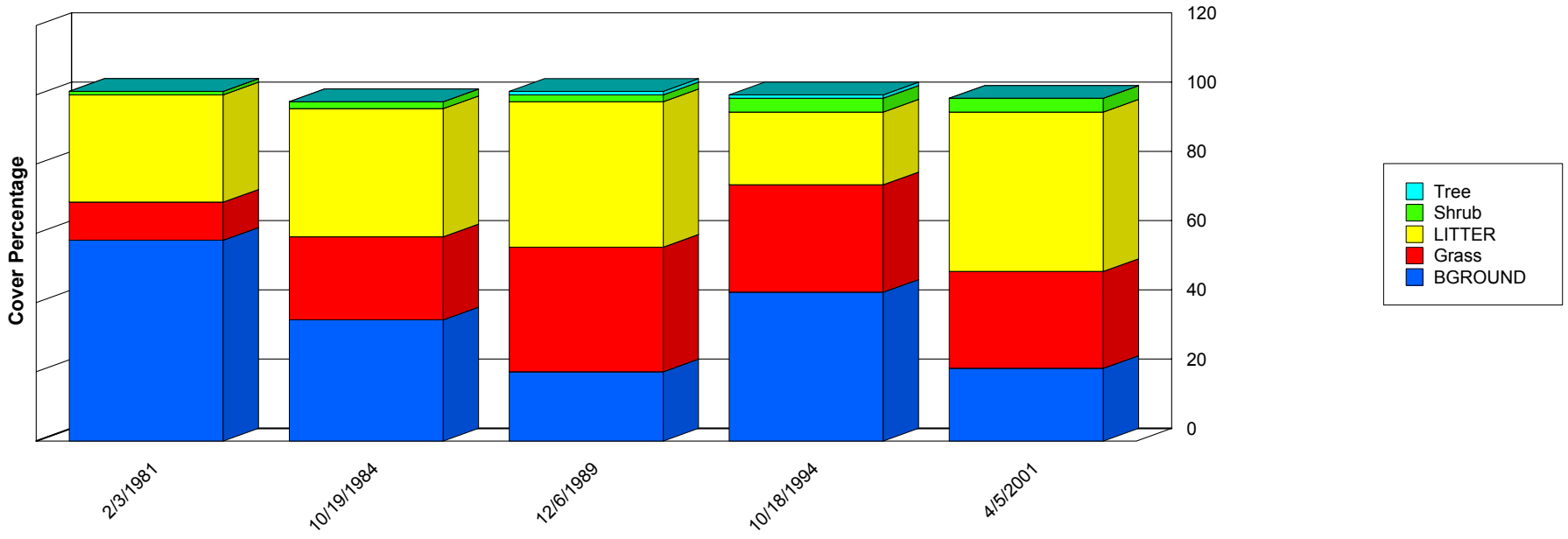


	2/3/1981	10/27/1981	10/19/1982	12/9/1983	10/19/1984	12/6/1989	10/19/1994	4/5/2001
Forb	**52.00**	**31.00**	**30.00**	**22.00**	**36.00**	**2.00**	**2.00**	**0.00**
Grass	**489.00**	**1,295.00**	**727.00**	**192.00**	**671.00**	**631.00**	**377.00**	**239.00**
Shrub	**87.00**	**22.00**	**0.00**	**46.00**	**104.00**	**79.00**	**6.00**	**270.00**
Total	**628.00**	**1,348.00**	**757.00**	**260.00**	**811.00**	**712.00**	**385.00**	**509.00**

Report Parameters

SITE NAME LIKE	65037-#1 SOUTH-D237
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Ground Cover Trends



	2/3/1981	10/19/1984	12/6/1989	10/18/1994	4/5/2001
BGROUND	58.00	35.00	20.00	43.00	21.00
Grass	11.00	24.00	36.00	31.00	28.00
LITTER	31.00	37.00	42.00	21.00	46.00
Shrub	1.00	2.00	2.00	4.00	4.00
Tree	0.00	0.00	1.00	1.00	0.00
Total	101.00	98.00	101.00	100.00	99.00

Report Parameters

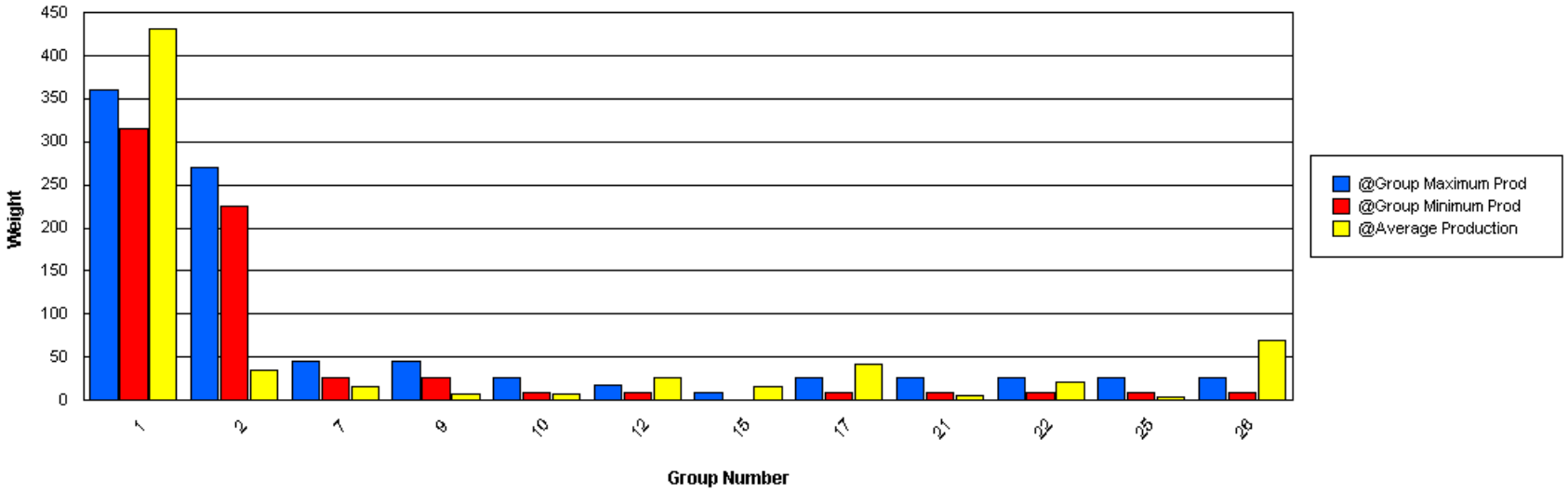
SITE NAME LIKE	65037-#2 HEIFER-D238
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Functional / Structural Groups

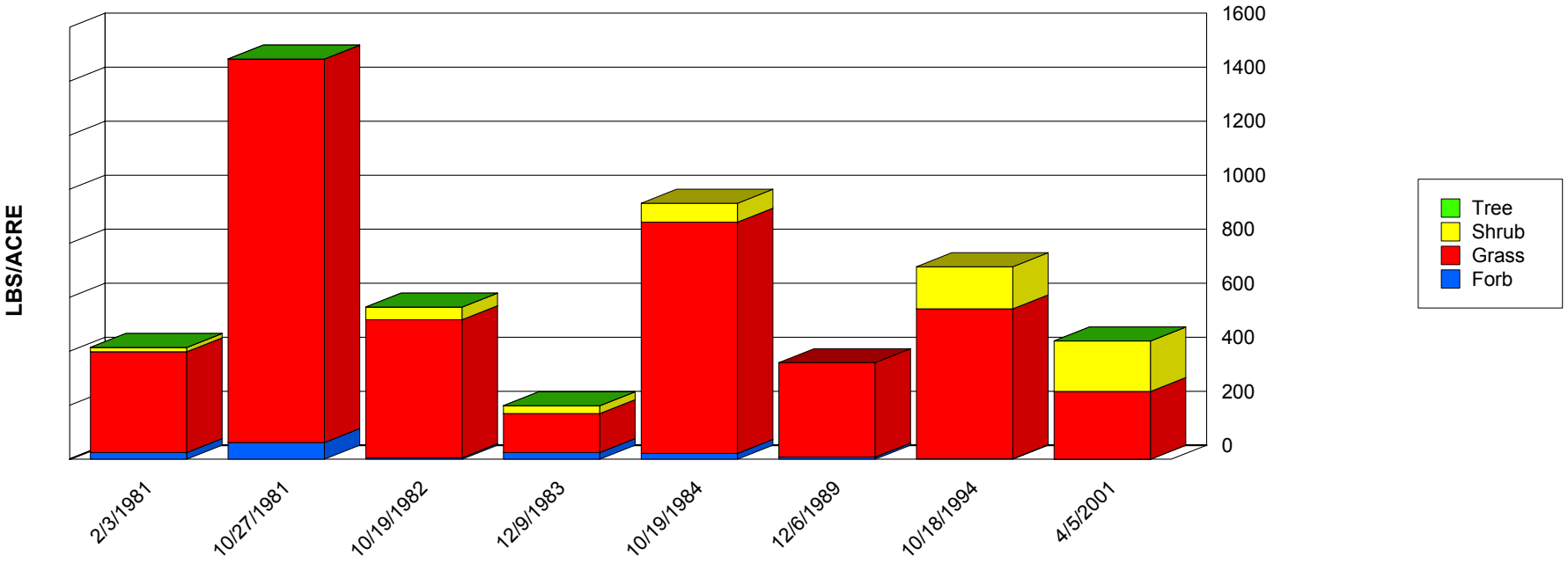
Report Parameters	
SITE NAME LIKE	65037-#2 HEIFER-D238
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001
MIN LBS TO GRAPH	3
SELECTED ECOSITE	042CY007NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	HIMU2	315	360	30.00	730.00	377.13	226.64
1	Grass	SCBR2	315	360	3.00	277.00	54.14	91.64
2	Grass	BOER4	225	270	0.00	44.00	19.00	14.47
2	Grass	BOGR2	225	270	0.00	39.00	16.63	11.49
7	Grass	ARIST	27	45	0.00	44.00	7.57	14.95
7	Grass	SPCR	27	45	0.00	27.00	8.63	9.90
8	Grass	PAOB	9	27	0.00	3.00	0.50	1.12
9	Grass	MUAR	27	45	0.00	19.00	4.38	5.91
9	Grass	MUAR2	27	45	0.00	12.00	2.50	4.39
10	Grass	BOBR	9	27	0.00	14.00	7.00	7.00
11	Grass	ENDE	9	27	0.00	5.00	1.00	2.00
12	Grass	PAHA	9	18	0.00	159.00	26.00	50.96
14	Grass	TRMU	9	27	0.00	12.00	2.00	4.47
15	Grass	TRPI2	0	9	0.00	94.00	16.38	30.12
16	Grass	AAGG	9	27	0.00	3.00	1.00	1.26
17	Grass	ERPU8	9	27	0.00	49.00	7.86	16.83
17	Grass	PARA2	9	27	0.00	9.00	3.00	4.24
17	Grass	SPFL2	9	27	0.00	33.00	11.00	15.56
17	Grass	SPNE	9	27	0.00	38.00	19.00	15.51
17	Grass	SPORO	9	27	0.00	7.00	1.40	2.80
18	Forb	SPHAE	9	27	0.00	3.00	1.25	1.30
19	Forb	LESQU	9	27	0.00	0.00	0.00	0.00
19	Forb	PENA	9	27	0.00	1.00	0.20	0.40
21	Forb	ERTE13	9	27	0.00	7.00	1.40	2.80
21	Forb	HOGL2	9	27	0.00	2.00	0.67	0.94
21	Forb	LEMO2	9	27	0.00	0.00	0.00	0.00

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
21	Forb	LEPID	9	27	0.00	16.00	4.00	6.93
22	Forb	AAFF	9	27	0.00	25.00	8.71	9.25
22	Forb	OENOT	9	27	0.00	6.00	1.00	2.24
22	Forb	PEPA2	9	27	0.00	14.00	3.50	6.06
22	Forb	XADR	9	27	0.00	32.00	8.00	13.86
23	Forb	ALLIU	9	27	0.00	1.00	0.33	0.47
24	Forb	PPFF	9	27	0.00	2.00	0.67	0.94
24	Forb	SOEL	9	27	0.00	1.00	0.33	0.47
25	Shrub	EPHED	9	27	0.00	13.00	4.71	4.20
26	Shrub	GUSA2	9	27	0.00	59.00	18.83	23.10
26	Shrub	OPUNT	9	27	0.00	183.00	50.43	73.97
26	Tree	YUEL	9	27	0.00	0.00	0.00	0.00
28	Shrub	PRGL2	0	0	0.00	6.00	1.20	2.40



Production Lbs/Acre Trends

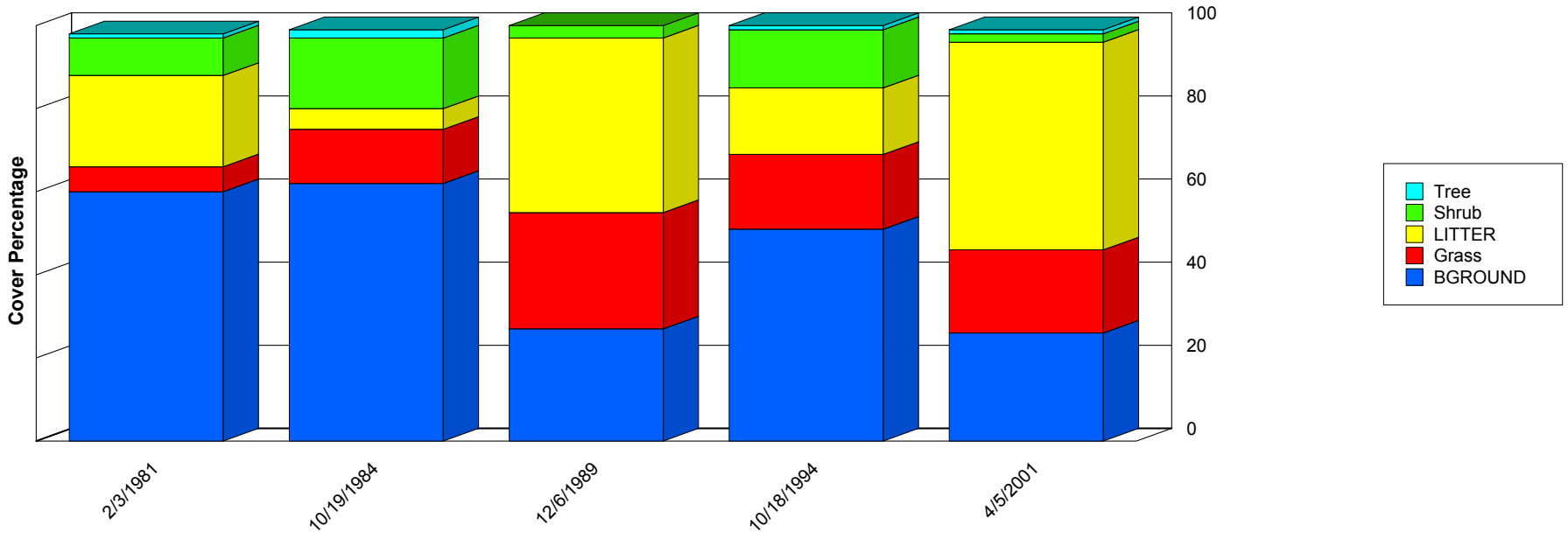


	2/3/1981	10/27/1981	10/19/1982	12/9/1983	10/19/1984	12/6/1989	10/18/1994	4/5/2001
Forb	**25.00**	**62.00**	**6.00**	**25.00**	**22.00**	**8.00**	**2.00**	**0.00**
Grass	**373.00**	**1,420.00**	**511.00**	**144.00**	**856.00**	**350.00**	**555.00**	**251.00**
Shrub	**16.00**	**0.00**	**47.00**	**29.00**	**70.00**	**0.00**	**156.00**	**187.00**
Tree	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**414.00**	**1,482.00**	**564.00**	**198.00**	**948.00**	**358.00**	**713.00**	**438.00**

Report Parameters

SITE NAME LIKE	65037-#2 HEIFER-D238
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Ground Cover Trends



	2/3/1981	10/19/1984	12/6/1989	10/18/1994	4/5/2001
BGROUND	60.00	62.00	27.00	51.00	26.00
Grass	6.00	13.00	28.00	18.00	20.00
LITTER	22.00	5.00	42.00	16.00	50.00
Shrub	9.00	17.00	3.00	14.00	2.00
Tree	1.00	2.00	0.00	1.00	1.00
Total	98.00	99.00	100.00	100.00	99.00

Report Parameters

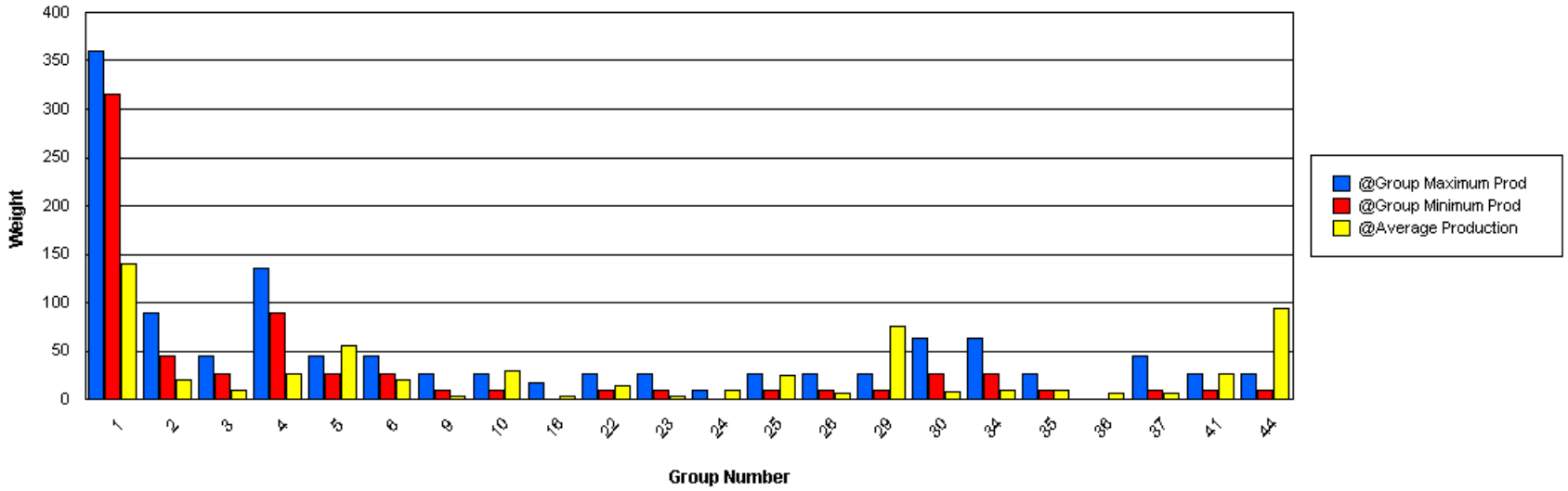
SITE NAME LIKE	65037-#3 WEST CENTER-D239
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Functional / Structural Groups

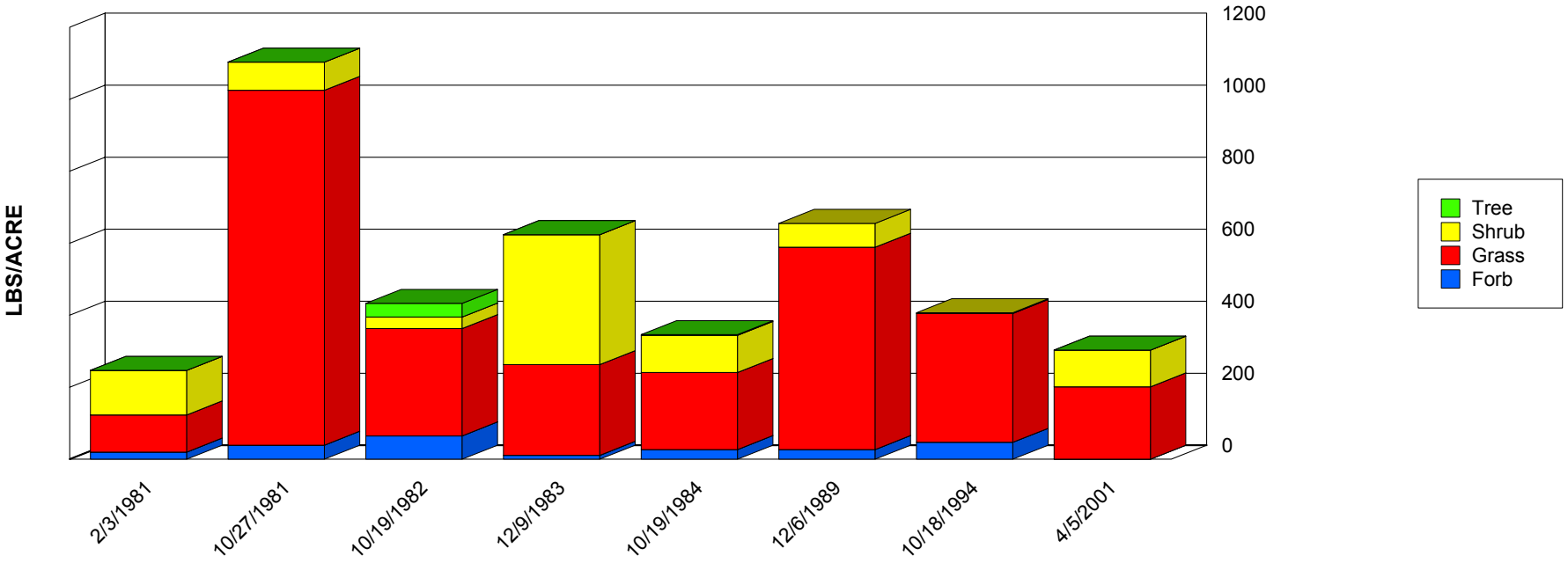
Report Parameters	
SITE NAME LIKE	65037-#3 WEST CENTER-D239
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001
MIN LBS TO GRAPH	3
SELECTED ECOSITE	042CY004NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	BOER4	315	360	2.00	564.00	140.13	179.24
2	Grass	BOGR2	45	90	0.00	69.00	19.63	22.57
3	Grass	MUPO2	27	45	0.00	21.00	9.83	8.43
4	Grass	SPCR	90	135	0.00	55.00	20.75	18.18
4	Grass	SPFL2	90	135	0.00	24.00	5.00	8.62
5	Grass	ARIST	27	45	23.00	113.00	55.00	30.72
6	Grass	SEMA5	27	45	1.00	60.00	20.86	20.10
9	Grass	PAOB	9	27	0.00	20.00	4.20	7.91
10	Grass	HIMU2	9	27	0.00	75.00	29.33	32.72
15	Grass	AAGG	9	45	0.00	9.00	1.80	3.60
15	Grass	CEPA7	9	45	0.00	4.00	0.71	1.39
16	Grass	BOBR	0	18	0.00	15.00	3.80	5.81
17	Grass	CHCU2	9	27	0.00	9.00	1.71	3.15
22	Grass	MUAR	9	27	0.00	70.00	14.20	27.90
23	Grass	MUAR2	9	27	0.00	8.00	4.00	3.16
24	Grass	PAHA	0	9	0.00	50.00	9.57	17.52
25	Grass	PARA2	9	27	0.00	100.00	25.29	37.26
26	Grass	SCBR2	9	27	0.00	30.00	5.83	10.96
29	Grass	BOBA3	9	27	0.00	1.00	0.33	0.47
29	Grass	BOCU	9	27	0.00	5.00	0.83	1.86
29	Grass	ERPU8	9	27	0.00	25.00	6.00	8.11
29	Grass	PANIC	9	27	0.00	48.00	16.00	22.63
29	Grass	PAVI2	9	27	0.00	191.00	47.75	82.71
29	Grass	TRPI2	9	27	0.00	17.00	5.25	6.98
30	Forb	CROTO	27	63	0.00	3.00	1.67	1.25
30	Forb	MELE2	27	63	0.00	28.00	5.83	10.24

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
32	Forb	LEFE	27	63	0.00	5.00	1.25	2.17
32	Forb	LESQU	27	63	0.00	3.00	1.00	1.41
34	Forb	AAFF	27	63	0.00	17.00	8.50	5.41
34	Forb	CALLI	27	63	0.00	1.00	0.17	0.37
34	Forb	EUPHO	27	63	0.00	3.00	1.00	1.41
35	Forb	CABA6	9	27	0.00	1.00	0.17	0.37
35	Forb	CHCO	9	27	0.00	3.00	0.75	1.30
35	Forb	HOGL2	9	27	0.00	4.00	1.33	1.89
35	Forb	HYFL	9	27	0.00	1.00	0.17	0.37
35	Forb	LEER	9	27	0.00	1.00	0.17	0.37
35	Forb	LEMO2	9	27	0.00	6.00	1.67	2.43
35	Forb	MACHA4	9	27	0.00	2.00	0.33	0.75
35	Forb	PENA	9	27	0.00	11.00	2.40	4.32
35	Forb	SOEL	9	27	0.00	10.00	2.33	3.73
36	Forb	CIRSI			0.00	20.00	6.67	9.43
37	Tree	YUEL	9	45	0.00	38.00	6.67	14.03
41	Shrub	GUSA2	9	27	0.00	78.00	25.75	28.04
44	Shrub	PRGL2	9	27	0.00	313.00	93.71	96.56



Production Lbs/Acre Trends

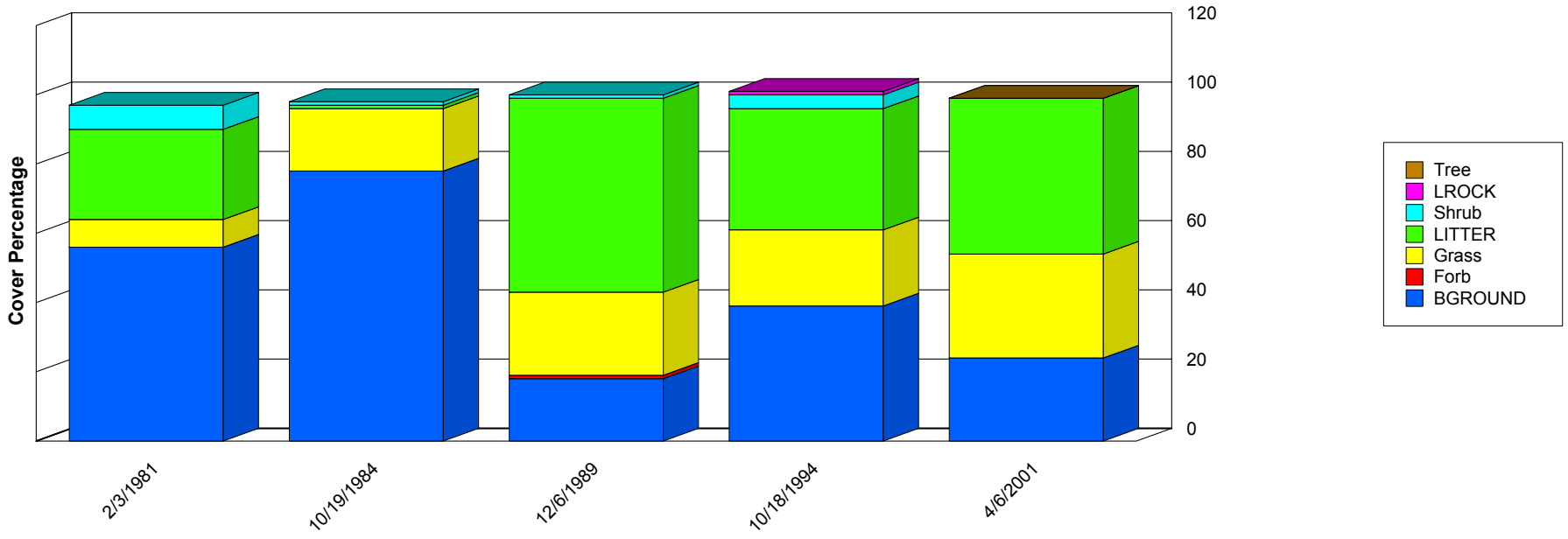


	2/3/1981	10/27/1981	10/19/1982	12/9/1983	10/19/1984	12/6/1989	10/18/1994	4/5/2001
Forb	**20.00**	**39.00**	**65.00**	**11.00**	**27.00**	**27.00**	**47.00**	**0.00**
Grass	**103.00**	**986.00**	**298.00**	**252.00**	**214.00**	**562.00**	**358.00**	**201.00**
Shrub	**124.00**	**78.00**	**32.00**	**361.00**	**103.00**	**66.00**	**2.00**	**102.00**
Tree	**0.00**	**0.00**	**38.00**	**0.00**	**2.00**	**0.00**	**0.00**	**0.00**
Total	**247.00**	**1,103.00**	**433.00**	**624.00**	**346.00**	**655.00**	**407.00**	**303.00**

Report Parameters

SITE NAME LIKE	65037-#3 WEST CENTER-D239
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Ground Cover Trends



	2/3/1981	10/19/1984	12/6/1989	10/18/1994	4/6/2001
BGROUND	56.00	78.00	18.00	39.00	24.00
Forb	0.00	0.00	1.00	0.00	0.00
Grass	8.00	18.00	24.00	22.00	30.00
LITTER	26.00	1.00	56.00	35.00	45.00
LROCK	0.00	0.00	0.00	1.00	0.00
Shrub	7.00	1.00	1.00	4.00	0.00
Tree	0.00	0.00	0.00	0.00	0.00
Total	97.00	98.00	100.00	101.00	99.00

Report Parameters

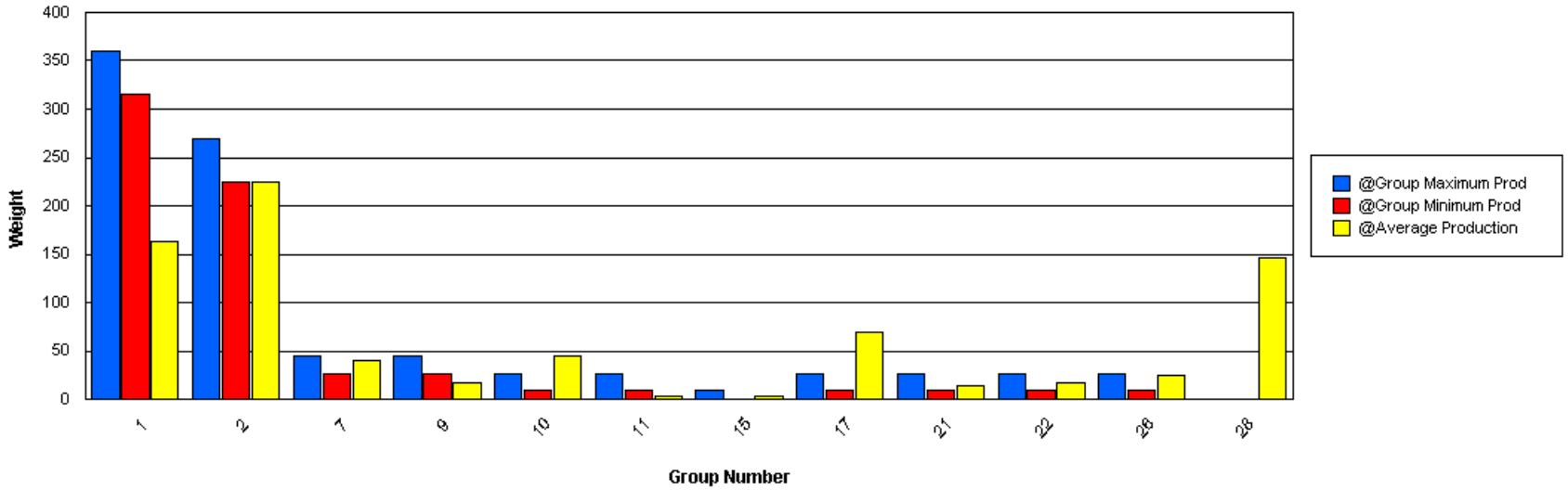
SITE NAME LIKE	65037-#4 E CENTER-D240
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Functional / Structural Groups

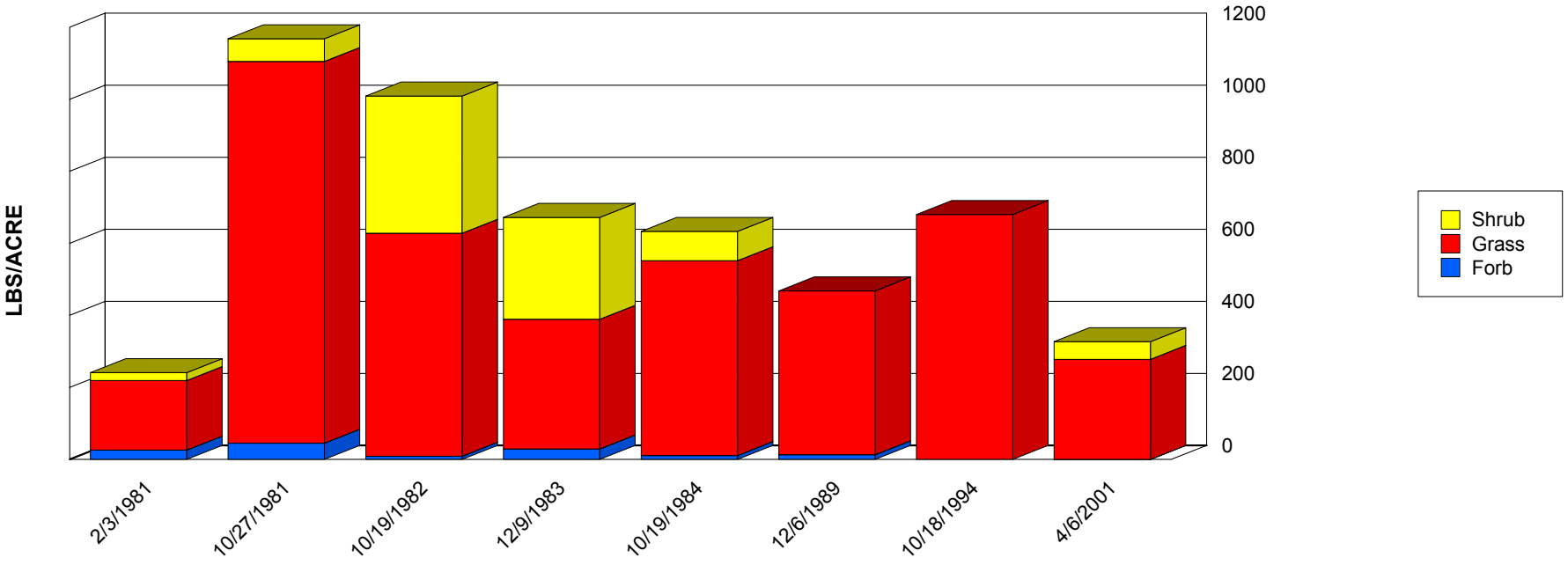
Report Parameters	
SITE NAME LIKE	65037-#4 E CENTER-D240
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001
MIN LBS TO GRAPH	3
SELECTED ECOSITE	042CY007NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	HIMU2	315	360	0.00	350.00	133.50	120.28
1	Grass	SCBR2	315	360	0.00	112.00	30.00	41.93
2	Grass	BOER4	225	270	65.00	435.00	202.50	120.67
2	Grass	BOGR2	225	270	5.00	51.00	21.71	14.45
7	Grass	ARIST	27	45	0.00	16.00	7.00	5.83
7	Grass	SPCR	27	45	0.00	140.00	32.57	46.36
8	Grass	PAOB	9	27	0.00	3.00	0.60	1.20
9	Grass	MUAR	27	45	0.00	32.00	10.57	13.37
9	Grass	MUAR2	27	45	0.00	15.00	6.00	6.68
10	Grass	BOBR	9	27	0.00	114.00	44.57	39.84
11	Grass	ENDE	9	27	0.00	6.00	3.00	2.31
12	Grass	PAHA	9	18	0.00	4.00	1.00	1.53
15	Grass	TRPI2	0	9	0.00	10.00	3.17	3.76
16	Grass	AAGG	9	27	0.00	3.00	0.60	1.20
16	Grass	TRBE	9	27	0.00	1.00	0.33	0.47
17	Grass	ERPU8	9	27	0.00	171.00	33.33	61.98
17	Grass	MUTO2	9	27	0.00	38.00	12.67	17.91
17	Grass	PARA2	9	27	0.00	11.00	3.67	5.19
17	Grass	SPFL2	9	27	0.00	22.00	4.80	8.63
17	Grass	SPNE	9	27	0.00	38.00	15.00	14.17
17	Grass	SPORO	9	27	0.00	1.00	0.33	0.47
19	Forb	SENEC	9	27	0.00	2.00	0.67	0.94
21	Forb	ERTE13	9	27	0.00	3.00	0.60	1.20
21	Forb	LEMO2	9	27	0.00	28.00	14.00	14.00
21	Forb	LEPID	9	27	0.00	1.00	0.17	0.37
22	Forb	AAFF	9	27	0.00	19.00	5.71	7.09

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
22	Forb	PECTI	9	27	0.00	7.00	2.33	3.30
22	Forb	PEPA2	9	27	0.00	35.00	8.75	15.16
24	Forb	DYPE2	9	27	0.00	4.00	0.80	1.60
24	Forb	PPFF	9	27	0.00	10.00	2.17	3.67
24	Forb	SOEL	9	27	0.00	0.00	0.00	0.00
26	Shrub	GUSA2	9	27	0.00	81.00	25.00	33.68
27	Shrub	HAPLO2	9	27	0.00	1.00	0.33	0.47
28	Shrub	PRGL2	0	0	0.00	380.00	145.60	153.97



Production Lbs/Acre Trends

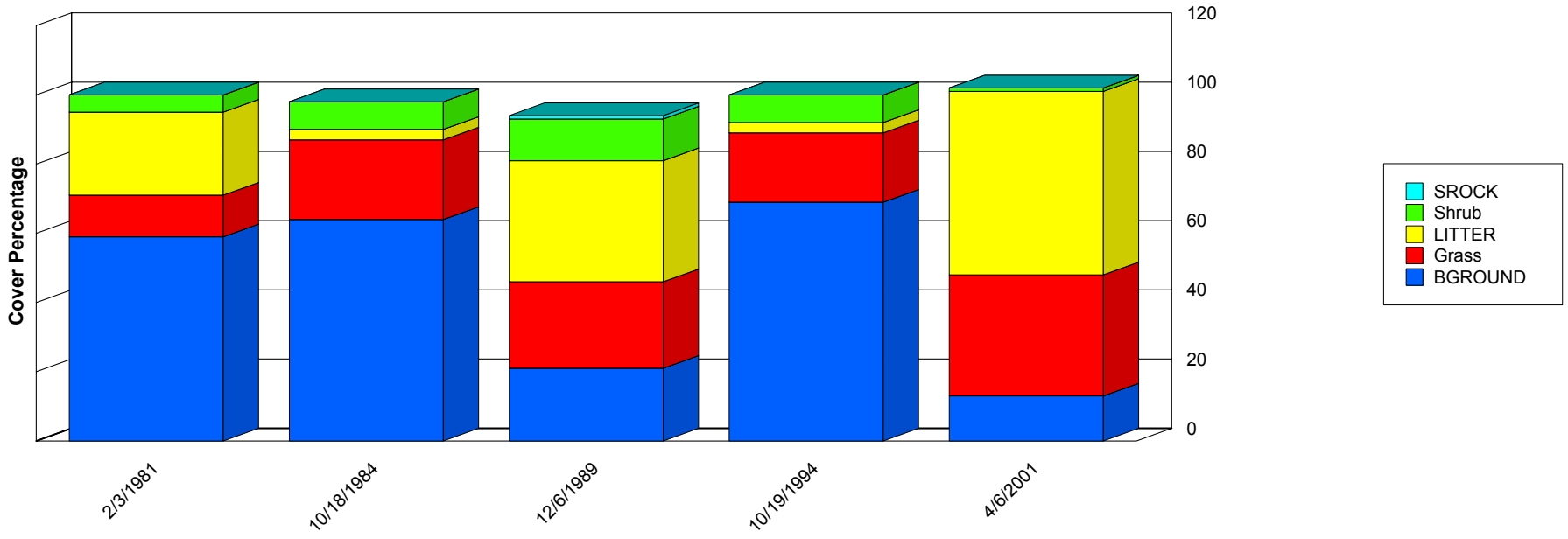


	2/3/1981	10/27/1981	10/19/1982	12/9/1983	10/19/1984	12/6/1989	10/18/1994	4/6/2001
Forb	**26.00**	**45.00**	**9.00**	**29.00**	**11.00**	**13.00**	**0.00**	**0.00**
Grass	**193.00**	**1,060.00**	**619.00**	**360.00**	**541.00**	**455.00**	**680.00**	**278.00**
Shrub	**22.00**	**63.00**	**381.00**	**283.00**	**81.00**	**0.00**	**0.00**	**49.00**
Total	**241.00**	**1,168.00**	**1,009.00**	**672.00**	**633.00**	**468.00**	**680.00**	**327.00**

Report Parameters

SITE NAME LIKE	65037-#4 E CENTER-D240
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Ground Cover Trends



	2/3/1981	10/18/1984	12/6/1989	10/19/1994	4/6/2001
BGROUND	59.00	64.00	21.00	69.00	13.00
Grass	12.00	23.00	25.00	20.00	35.00
LITTER	24.00	3.00	35.00	3.00	53.00
Shrub	5.00	8.00	12.00	8.00	1.00
SROCK	0.00	0.00	1.00	0.00	0.00
Total	100.00	98.00	94.00	100.00	102.00

Report Parameters

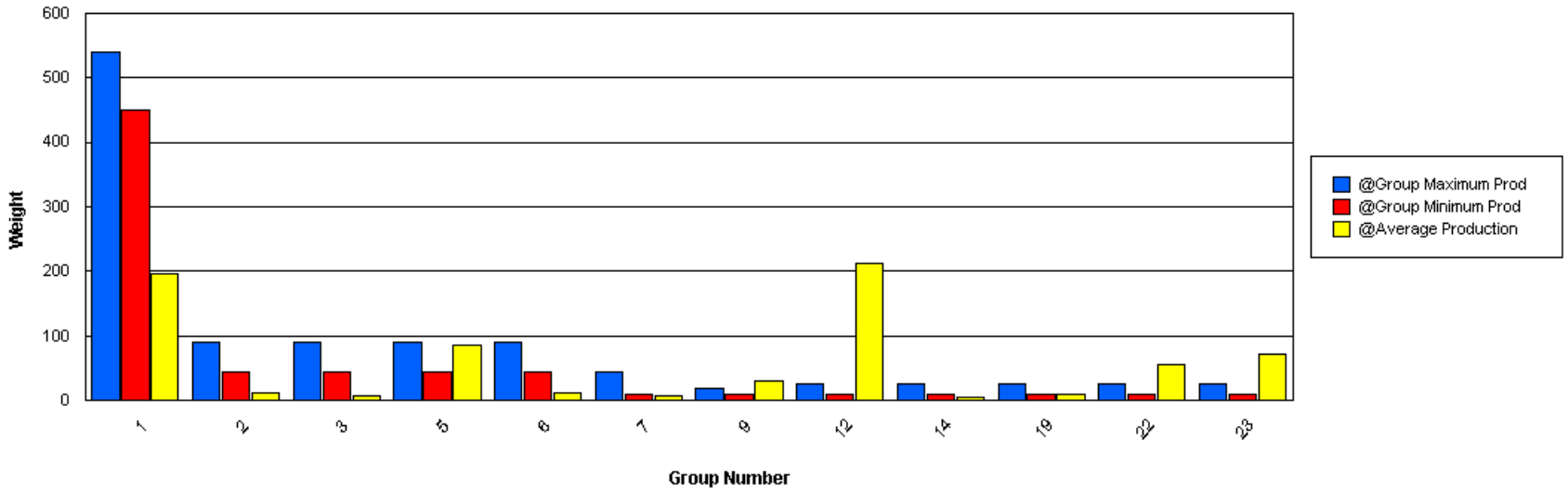
SITE NAME LIKE	65037-#5 NE-D241
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Functional / Structural Groups

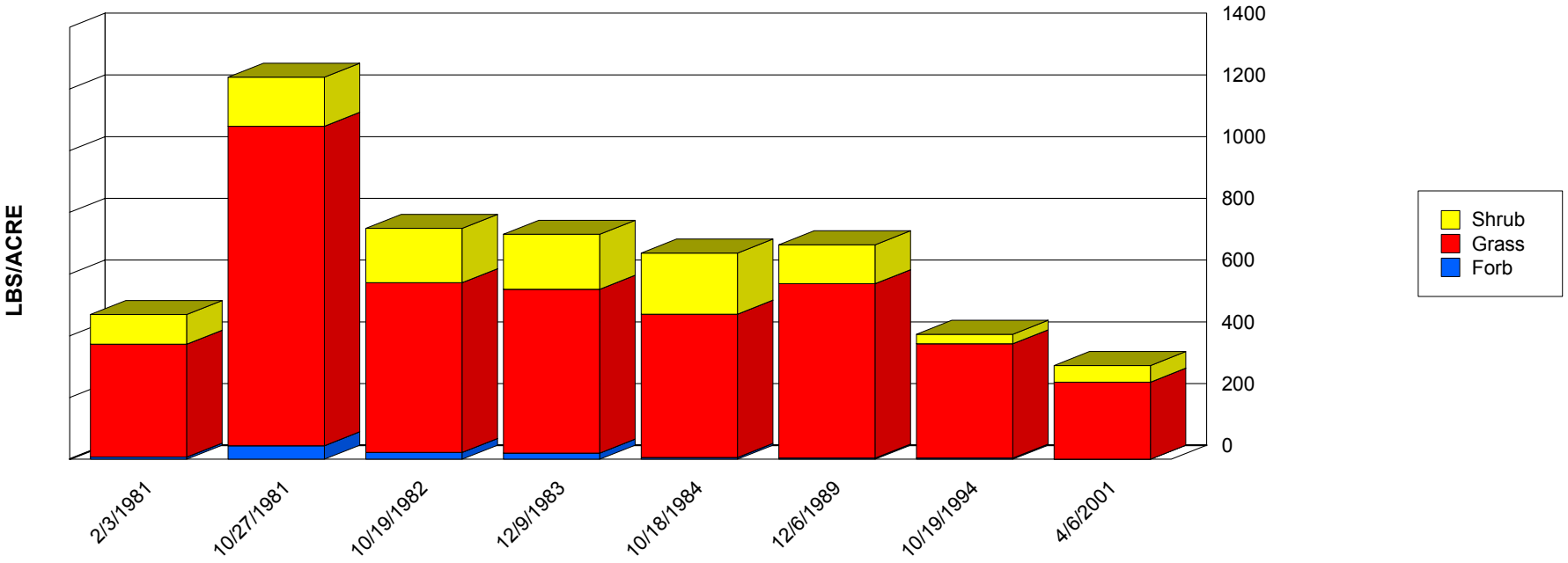
Report Parameters	
SITE NAME LIKE	65037-#5 NE-D241
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001
MIN LBS TO GRAPH	3
SELECTED ECOSITE	042CY002NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	BOER4	450	540	29.00	691.00	196.38	196.79
2	Grass	MUPO2	45	90	0.00	32.00	13.00	11.60
3	Grass	BOGR2	45	90	0.00	19.00	8.00	6.48
5	Grass	ARIST	45	90	0.00	65.00	24.88	27.80
5	Grass	SPCR	45	90	0.00	189.00	57.63	75.76
5	Grass	SPFL2	45	90	0.00	14.00	3.20	5.46
6	Grass	PARA2	45	90	0.00	16.00	5.33	7.54
6	Grass	SEMA5	45	90	0.00	19.00	7.00	7.84
7	Grass	ERPU8	9	45	0.00	30.00	8.57	11.26
9	Grass	MUAR2	9	18	0.00	82.00	30.63	25.03
12	Grass	HIMU2	9	27	0.00	154.00	81.50	63.68
12	Grass	MUAR	9	27	0.00	38.00	16.00	14.38
12	Grass	MUTO2	9	27	0.00	102.00	30.50	42.08
12	Grass	PAHA	9	27	0.00	30.00	5.38	9.73
12	Grass	SCBR2	9	27	14.00	179.00	80.17	60.42
13	Forb	CROTO	27	63	0.00	4.00	1.86	1.88
14	Forb	PENA	9	27	0.00	12.00	4.60	4.96
18	Forb	AAFF	9	27	0.00	4.00	2.00	2.00
19	Forb	LEFE	9	27	0.00	39.00	6.50	14.53
19	Forb	LEPID	9	27	0.00	5.00	1.25	2.17
19	Forb	SOEL	9	27	0.00	13.00	2.50	4.75
22	Shrub	GUSA2	9	27	0.00	195.00	55.25	72.36
23	Shrub	PRGL2	9	27	0.00	157.00	72.00	56.59

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



Production Lbs/Acre Trends

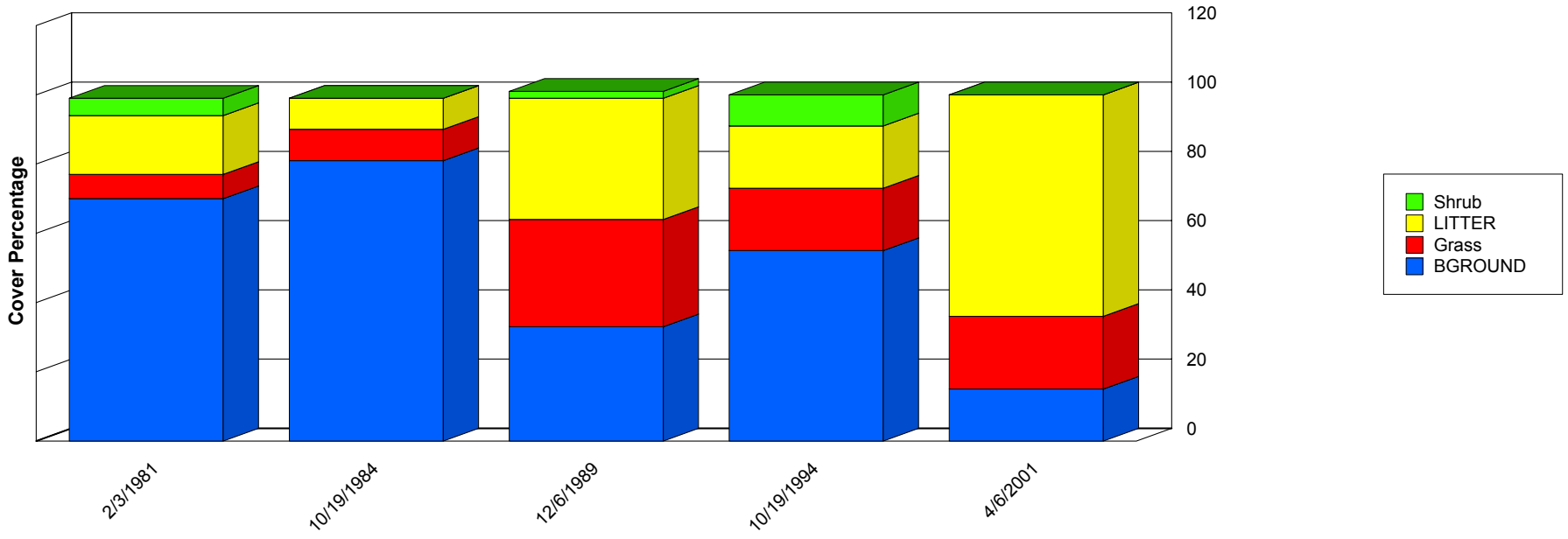


	2/3/1981	10/27/1981	10/19/1982	12/9/1983	10/18/1984	12/6/1989	10/19/1994	4/6/2001
Forb	**7.00**	**44.00**	**22.00**	**20.00**	**6.00**	**4.00**	**4.00**	**0.00**
Grass	**366.00**	**1,035.00**	**550.00**	**531.00**	**464.00**	**565.00**	**370.00**	**250.00**
Shrub	**96.00**	**159.00**	**176.00**	**178.00**	**198.00**	**126.00**	**31.00**	**54.00**
Total	**469.00**	**1,238.00**	**748.00**	**729.00**	**668.00**	**695.00**	**405.00**	**304.00**

Report Parameters

SITE NAME LIKE	65037-#5 NE-D241
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Ground Cover Trends



	2/3/1981	10/19/1984	12/6/1989	10/19/1994	4/6/2001
BGROUND	70.00	81.00	33.00	55.00	15.00
Grass	7.00	9.00	31.00	18.00	21.00
LITTER	17.00	9.00	35.00	18.00	64.00
Shrub	5.00	0.00	2.00	9.00	0.00
Total	99.00	99.00	101.00	100.00	100.00

Report Parameters

SITE NAME LIKE	65037-#6 NW-D242
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

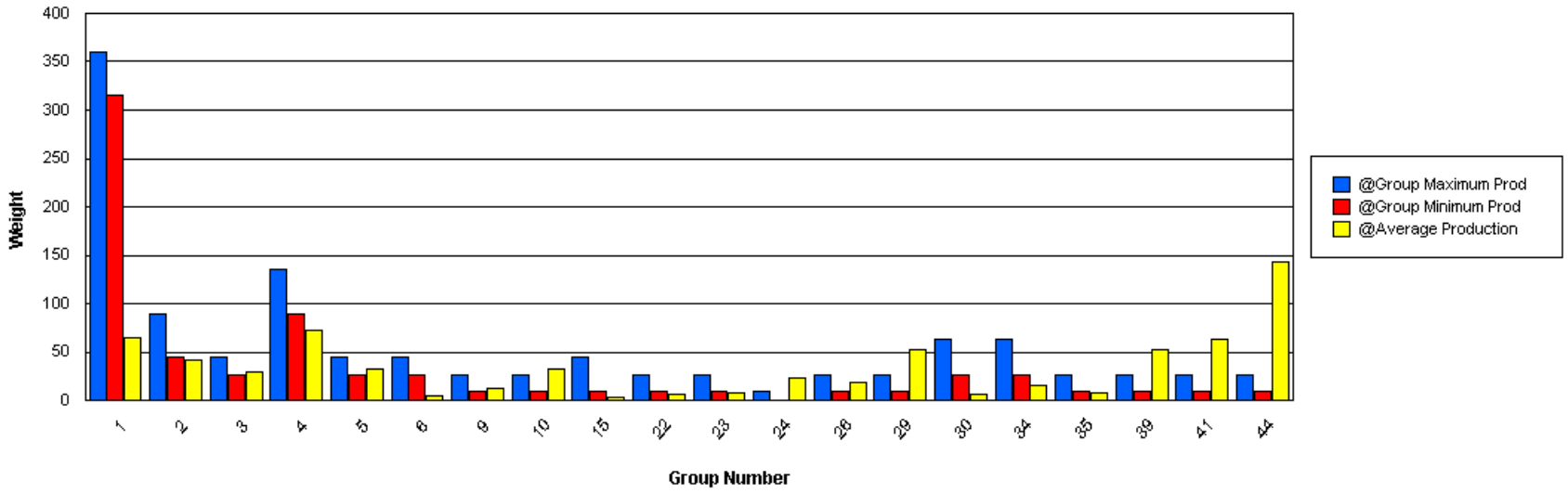
Functional / Structural Groups

Report Parameters

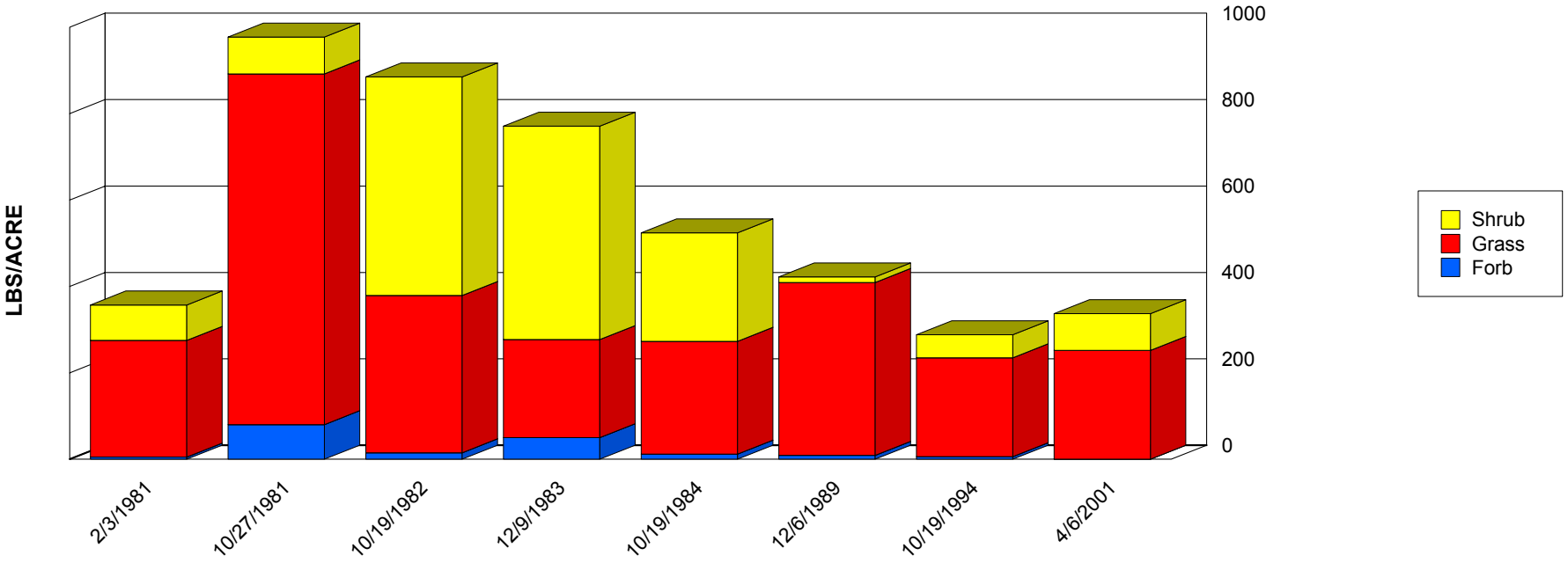
SITE NAME LIKE	65037-#6 NW-D242
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001
MIN LBS TO GRAPH	3
SELECTED ECOSITE	042CY004NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	BOER4	315	360	12.00	115.00	64.75	29.72
2	Grass	BOGR2	45	90	0.00	93.00	42.25	28.59
3	Grass	MUPO2	27	45	0.00	71.00	28.83	25.67
4	Grass	SPCO4	90	135	0.00	8.00	2.67	3.77
4	Grass	SPCR	90	135	0.00	246.00	61.13	73.54
4	Grass	SPFL2	90	135	0.00	26.00	8.40	10.76
5	Grass	ARIST	27	45	5.00	50.00	33.00	16.63
6	Grass	SEMA5	27	45	0.00	14.00	5.25	5.36
9	Grass	PAOB	9	27	0.00	49.00	12.50	15.39
10	Grass	HIMU2	9	27	0.00	61.00	32.00	26.70
15	Grass	AAGG	9	45	0.00	14.00	2.80	5.60
15	Grass	CEPA7	9	45	0.00	2.00	0.33	0.75
18	Grass	ENDE	0	9	0.00	5.00	1.29	1.75
22	Grass	MUAR	9	27	0.00	25.00	6.43	8.33
23	Grass	MUAR2	9	27	0.00	17.00	8.29	6.34
24	Grass	PAHA	0	9	0.00	175.00	22.88	57.51
26	Grass	SCBR2	9	27	0.00	83.00	18.20	32.46
29	Grass	BOCU	9	27	0.00	3.00	0.60	1.20
29	Grass	ERPU8	9	27	4.00	75.00	22.50	27.42
29	Grass	MUTO2	9	27	0.00	80.00	20.00	34.64
29	Grass	TRPI2	9	27	0.00	57.00	9.83	21.11
30	Forb	CROTO	27	63	0.00	34.00	5.67	12.67
30	Forb	MELE2	27	63	0.00	5.00	1.17	1.86
32	Forb	LEFE	27	63	0.00	2.00	0.50	0.87
32	Forb	LESQU	27	63	0.00	3.00	0.83	1.21
34	Forb	AAFF	27	63	0.00	9.00	4.13	3.33

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
34	Forb	PEPA2	27	63	0.00	66.00	11.17	24.52
35	Forb	CASSI	9	27	0.00	7.00	2.00	2.92
35	Forb	CHCO	9	27	0.00	2.00	0.50	0.87
35	Forb	COHI	9	27	0.00	4.00	0.67	1.49
35	Forb	DYPE2	9	27	0.00	11.00	5.50	5.50
35	Forb	OENOT	9	27	0.00	0.00	0.00	0.00
35	Forb	SENEC	9	27	0.00	0.00	0.00	0.00
35	Forb	SOEL	9	27	0.00	0.00	0.00	0.00
39	Shrub	ATCA2	9	27	0.00	104.00	52.00	52.00
41	Shrub	GUSA2	9	27	3.00	250.00	64.00	80.49
44	Shrub	PRGL2	9	27	0.00	458.00	143.43	169.20



Production Lbs/Acre Trends

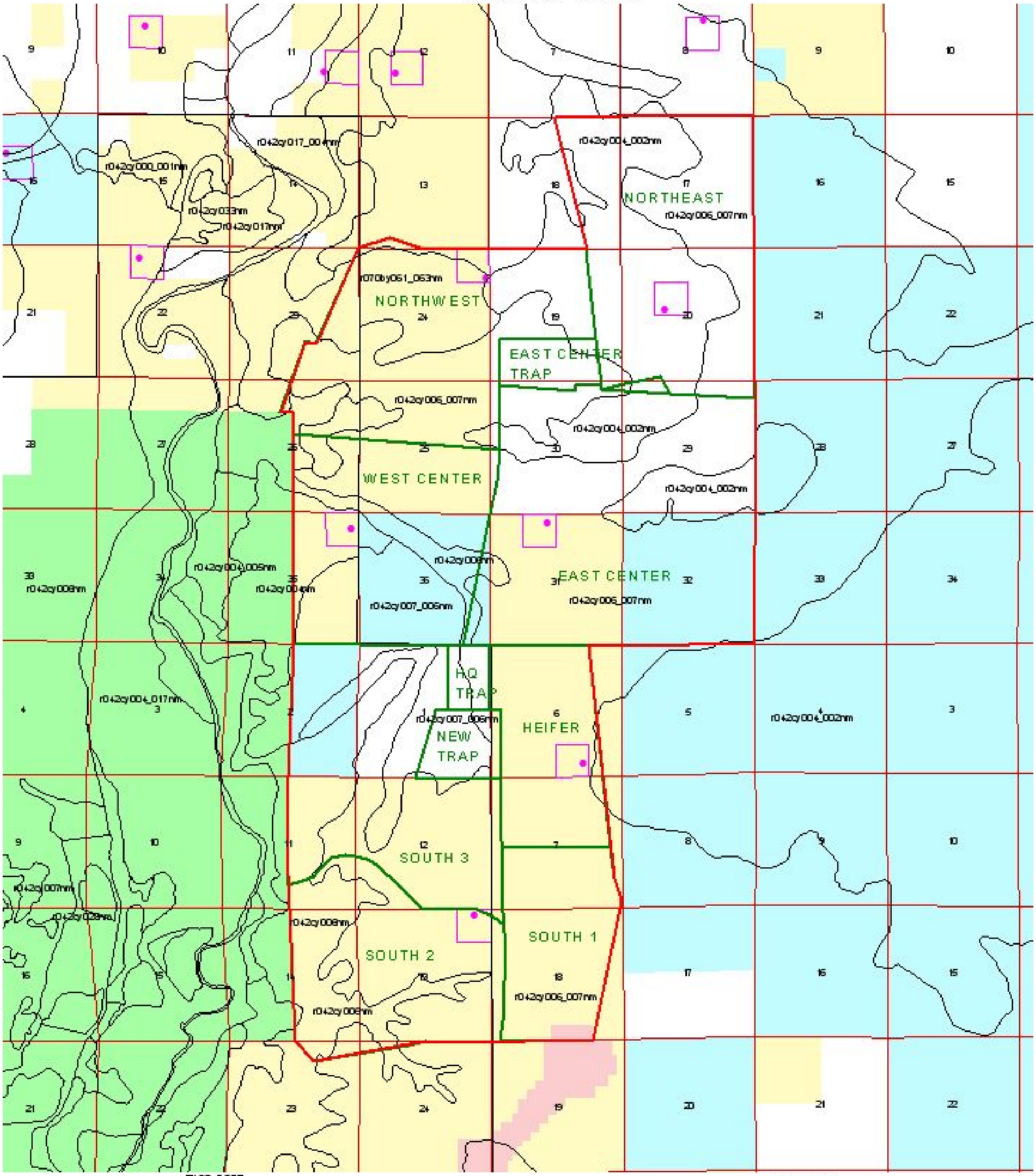


	2/3/1981	10/27/1981	10/19/1982	12/9/1983	10/19/1984	12/6/1989	10/19/1994	4/6/2001
Forb	**5.00**	**80.00**	**15.00**	**50.00**	**12.00**	**9.00**	**6.00**	**0.00**
Grass	**270.00**	**812.00**	**364.00**	**227.00**	**261.00**	**400.00**	**229.00**	**252.00**
Shrub	**82.00**	**85.00**	**506.00**	**494.00**	**251.00**	**13.00**	**53.00**	**85.00**
Total	**357.00**	**977.00**	**885.00**	**771.00**	**524.00**	**422.00**	**288.00**	**337.00**

Report Parameters

SITE NAME LIKE	65037-#6 NW-D242
ON/AFTER	10/01/1979
ON/BEFORE	09/30/2001

Rangeland Health Assessment
Ecological Sites
Allotment - 65037



Study Plots 40 Acres

Study Locations

State

Private

Public

FWS

DOD

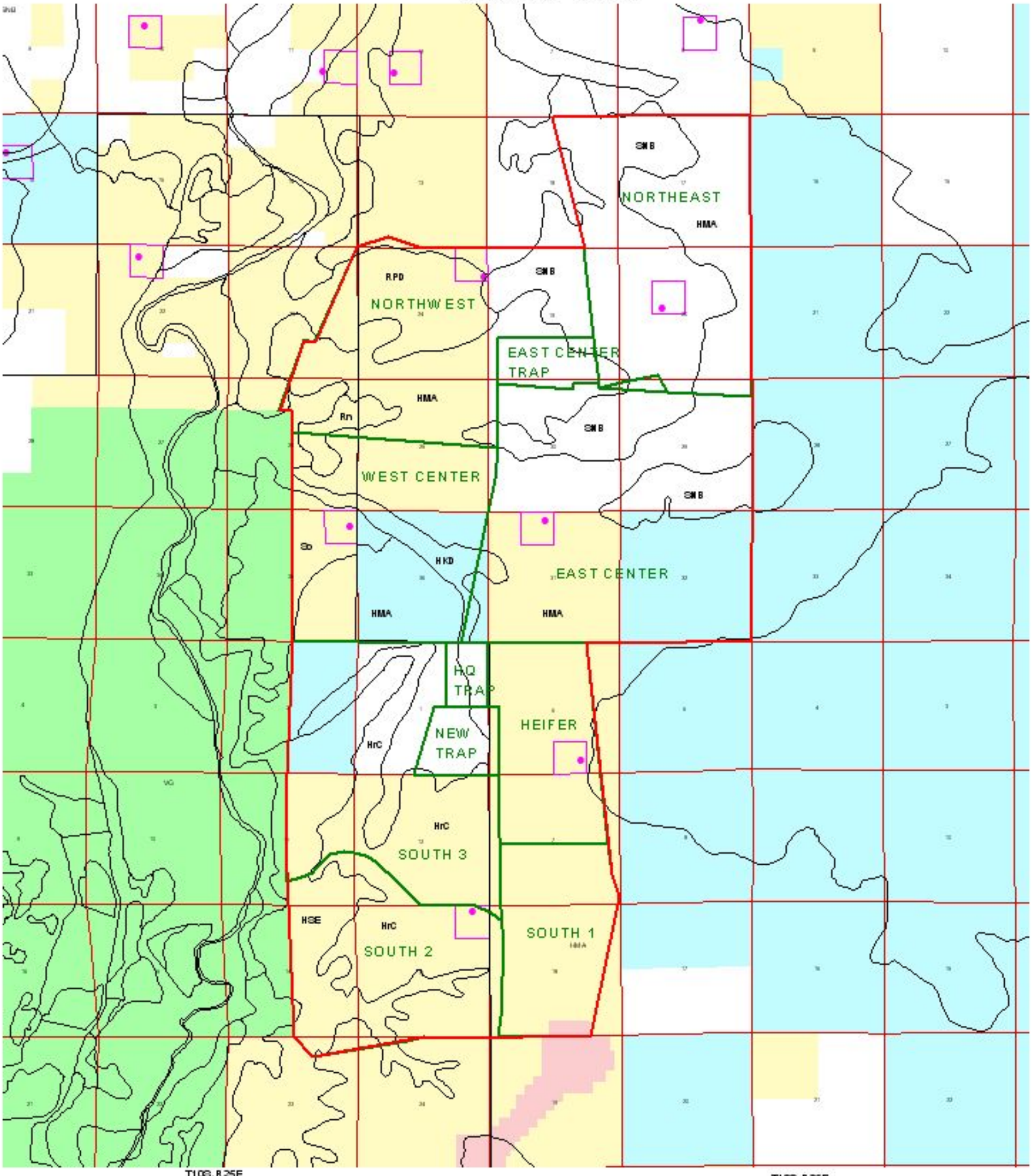
Allotment Boundary

Pasture Boundary

Ecological Site Boundary

Produced by the Roswell Field Office
GIS Specialist on May 14, 2003.

Rangeland Health Assessment
Soil Mapping Units
Allotment - 65037



Study Plots
40 Acres

Study Locations

State

Private

Public

FWS

Allotment Boundary

Pasture Boundary

Soil Mapping Unit Boundary

Produced by the Roswell Field Office
GIS Specialist on May 14, 2003.