

**UNITED STATES DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE**

**ECOLOGICAL SITE DESCRIPTION**

**ECOLOGICAL SITE CHARACTERISTICS**

Site Type: Rangeland

Site ID: R042XA061NM

Site Name: Clayey

Precipitation or Climate Zone: 8-10 inches

Phase: \_\_\_\_\_

**PHYSIOGRAPHIC FEATURES**

**Narrative:**

This site occurs on piedmont slopes and moderately sloping broad valleys and benches. Often, it is found below interbedded shale and sandstone breaks. Run-on from adjacent sites increases effective soil moisture, which results in high production during favorable years. Slopes range from 3 to 15 percent, but average less than 8 percent. Elevations range from 4,200 to 5,500 feet above sea level.

**Land Form:**

- 1. Fan piedmont

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- 2. Valley

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- 3.

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**Aspect:**

- 1. Not significant.

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- 2.

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- 3.

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	Minimum	Maximum
Elevation (feet)	4,200	5,500
Slope (percent)	3	15
Water Table Depth (inches)	N/A	N/A

	Minimum	Maximum
Flooding:		
Frequency	N/A	N/A
Duration	N/A	N/A

	Minimum	Maximum
Ponding:		
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

**Runoff Class:**

N/A

## CLIMATIC FEATURES

### Narrative:

This site has an arid climate with distinct seasonal temperature variations and large annual and diurnal temperature changes characteristic of a continental climate.

Precipitation averages 8 to 10 inches annually. Deviations of 4 inches or more from the average are quite common. Fifty percent of the moisture is received from July to November, which is the dominant growing season of native plants. Summer moisture is characterized by high intensity, short duration rainstorms. Winter precipitation averages less than one half per month, usually in the form of rain. There are occasional snow storms of short duration.

Temperatures vary from a mean monthly average of 77F in July to 34F in January, with the maximum being 104F and the minimum 10F below zero. The average last killing frost in the spring is April 15, and the average first killing frost in the fall is October 28. Frost free season is an average of 185 days. Temperatures are conducive for native grass and forb growth from March through November.

Spring winds of 15 to 40 miles per hour are common from February to June. These winds increase transpiration rates of native plants and rapidly dry the surface soil. Small soil particles are often displaced by the wind near the soil surface often resulting in structural damage to native plants, especially young seedlings.

	Minimum	Maximum
Frost-free period (days):	140	165
Freeze-free period (days):	190	213
Mean annual precipitation (inches):	8.00	10.00

### Monthly moisture (inches) and temperature (<sup>0</sup>F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	0.31	0.44	34.1	36.2
February	0.31	0.46	39.3	42.0
March	0.25	0.54	46.3	48.8
April	0.33	0.52	53.3	56.5
May	0.34	0.50	62.5	64.5
June	0.46	0.70	70.6	74.3
July	1.18	2.35	75.3	78.5
August	1.64	2.47	73.0	75.9
September	1.00	1.56	66.5	68.6
October	0.89	1.25	55.5	57.4
November	0.36	0.54	43.7	45.4
December	0.44	0.57	35.1	37.2

Climate Stations:							
Station ID	NM0915	Location	Bernardo	From:	1962	Period To	1990
	_____		_____			:	_____
Station ID	NM0983	Location	Bingham	From:	1961	Period To	1990
	_____		_____			:	_____
Station ID	NM0234	Location	Albuquerque	From:	1961	Period To	1990
	_____		_____			:	_____
Station ID	NM5150	Location	Los Lunas	From:	1961	Period To	1990
	_____		_____			:	_____
						Period	

**INFLUENCING WATER FEATURES**

Narrative:

This site is not influenced by water from wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

**REPRESENTATIVE SOIL FEATURES**

Narrative:

The soils are moderately deep to deep and moderately to well drained. Surface textures range from very fine sandy loams to clay loams to clays. Subsoils are loams to clays. Permeability is medium to slow with water holding capacity generally moderate to high. A desert pavement and coarse fragments throughout the soil profile is not uncommon.

Parent Material Kind: Alluvium

Parent Material Origin: Mixed

Surface Texture:

1. VFSL, CL, C,

2. C, L, SCL

Surface Texture Modifier:

1.

2.

Subsurface Texture Group: C, SIC, CL, SICL, L

Surface Fragments <=3" (% Cover): N/A

Surface Fragments >3" (% Cover): N/A

Subsurface Fragments <=3" (%Volume): 16-20

Subsurface Fragments >=3" (%Volume): 8

	Minimum Well	Maximum Well
Drainage Class:	Impermeable	Moderately Slow
Permeability Class:	>72	>72
Depth (inches):	0	16.00
Electrical Conductivity (mmhos/cm):	N/A	N/A
Sodium Absorption Ratio:	7.4	9.6
Soil Reaction (1:1 Water):	N/A	N/A
Soil Reaction (0.1M CaCl2):	3	7
Available Water Capacity (inches):	N/A	N/A
Calcium Carbonate Equivalent (percent):		

## **PLANT COMMUNITIES**

Ecological Dynamics of the Site:

Future development.

Plant Communities and Transitional Pathways (diagram)

Future development.

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 Narrative Label: HCPC

Plant Community Narrative:

This grassland site is strongly dominated by alkali sacaton. Shrubs are scattered about the site and a few oneseed juniper and pinyon trees are not uncommon. Forbs are a minor component on this site.

Canopy Cover

Trees	6
Shrubs and half shrubs	6

Ground Cover (Average Percent of Surface Area).

Grasses & Forbs	46
Bare ground	40
Surface gravel	15
Surface cobble and stone	6
Litter (percent)	16
Litter (average depth in cm.)	4

Plant Community Annual Production (by plant type):

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	425	723	1,020
Forb	25	43	60
Tree/Shrub/Vine	50	85	120
Lichen			
Moss			
Microbiotic Crusts			
Totals	500	850	1,200

**Plant Community Composition and Group Annual Production:**

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	SPAI	Alkali sacaton	383 – 468	383 – 468
2	PLJA	Galleta	85 – 128	85 – 128
	PLMU3	Tobosa		
3	BOGR2	Blue grama	43- 85	43- 85
4	ELEL5	Bottlebrush squirreltail	43 – 68	43 – 68
5	BOER4	Black grama	43 – 68	43 – 68
	MUPO2	Bush muhly		
6	ACHY	Indian ricegrass	26 – 43	26 – 43
	SPORO	Dropseeds spp.		
7	PAOB	Vine mesquite	9 - 43	9 - 43
8	BOCU	Sideoats grama	0 - 43	0 - 43
	2GRM	Other Grasses		

Plant Type - Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
9	ATCA2	Fourwing saltbush	43 – 85	43 – 85
	ATCO	Shadscale		
10	KRLA2	Winterfat	9 - 26	9 - 26
11	ERNAN5	Rubber rabbitbrush	0 - 26	0 - 26
	RHTR	Skunkbush sumac		
	JUMO	Oneseed Juniper		
	PIED	Pinyon pine		
	2SHRUBS	Other Shrubs		

Plant Type – Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
12	ERIOG	Wildbuckwheat	26 - 43	26 - 43
	SPHAE	Globemallow		
	PLPA2	Wooly Indian wheat		
	CRPOP	Leatherweed croton		
	SAKA	Russian thistle		
	2FORBS	Other Forbs		

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other grasses that could appear on this site would include: Cane bluestem, Giant dropseed, Ring muhly, Burrograss

Other woody plants include: Broom snakeweed, Yucca spp., Cactus spp.

Other forbs include: Milkweed, Silverleaf nightshade

Plant Growth Curves

Growth Curve ID NM-2301

Growth Curve Name: HCPC

Growth Curve Description: SD-1 Clayey HCPC Warm Season Plant Community

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
		3	5	10	10	25	30	12	5		

Plant Growth Curves

Growth Curve ID NM-2302

Growth Curve Name: HCPC

Growth Curve Description: SD-1 HCPC Clayey Cool Season Plant Community

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
		15	20	20	2	5	10	15	13		

## ECOLOGICAL SITE INTERPRETATIONS

### Animal Community:

This site provides habitats which support a resident animal community that is characterized by pronghorn antelope, black-tailed jackrabbit, silky pocket mouse, horned lark, black-throated sparrow, little striped whiptail, and western diamond back rattlesnake.

### Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydraulic cover conditions and hydrologic soil groups.

### Hydrologic Interpretations

Soil Series	Hydrologic Group
La Fonda	B

### Recreational Uses:

This site is not normally considered for its recreational value other than for nature observation, hunting, and horseback riding. The beauty of this site may be enhanced by its proximity to a colorful mesa setting.

### Wood Products:

This site has no significant wood products in its potential plant community.

### Other Products:

Approximately 90 percent of the vegetative production on this site is suitable as forage for domestic livestock and wildlife. Grazing distribution is generally not a problem on this site if water facilities are adequately located.

Inadequate management of the site leads to repetitive grazing of the most desirable plant species, reducing the vigor and productivity of these plants. The result is a deterioration in the potential plant community. Deterioration is indicated by a decrease in blue grama, black grama, and sideoats grama, bush muhly, bottlebrush squirreltail, Indian ricegrass, saltbush, and winterfat.

A planned grazing system with periodic deferment is best to maintain the desirable balance between plant species and to maintain the natural productivity and plant vigor.

In addition to domestic livestock, deer, pronghorn, small mammals, and birds also use this site.

Other Information:	
Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month	
Similarity Index	Ac/AUM
100 - 76	2.4 – 3.2
75 – 51	3.1 – 4.8
50 – 26	4.6 – 9.5
25 – 0	9.5 +

Plant Preference by Animal Kind:

	Code	Species Preference	Code
Stems	S	None Selected	N/S
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruit/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Animal Kind: Livestock

Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Blue grama	<i>Bouteloua gracilis</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Sideoats grama	<i>Bouteloua curtipendula</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Bottlebrush squirreltail	<i>Elymus elymoides</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Black grama	<i>Bouteloua eriopoda</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Bush muhly	<i>Muhlenbergia porteri</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Indian ricegrass	<i>Achnatherum hymenoides</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Fourwing saltbush	<i>Atriplex canescens</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Shadscale	<i>Atriplex confertifolia</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Winterfat	<i>Krascheninnikovia lanata</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Some Forbs		EP	P	P	P	P	P	P	P	P	P	P	P	P
Alkali sacaton	<i>Sporobolus airoides</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Galleta	<i>Pleuraphis jamesii</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Dropseeds	SPORO spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Burrograss	<i>Scleropogon brevifolius</i>	EP	U	U	U	U	U	U	U	U	U	U	U	U
Ring muhly	<i>Muhlenbergia torreyi</i>	EP	U	U	U	U	U	U	U	U	U	U	U	U
Broom snakeweed	<i>Gutierrezia sarothae</i>	EP	U	U	U	U	U	U	U	U	U	U	U	U

**SUPPORTING INFORMATION**

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

Inventory Data References (narrative):

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Inventory Data References:

Data Source	# of Records	Sample Period	State	County

State Correlation:

This site has been correlated with the following sites: \_\_\_\_\_

Type Locality:

State:	Latitude:	Longitude:
County:	Section:	Township: Range:

Narrative Location Description:

Is the type locality sensitive?      Yes       No

General Legal Description: \_\_\_\_\_

Relationship to Other Established Classifications:

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Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Desertic Basins, Plains and Mountains, Major Land Resource Areas of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Valencia, and Bernalillo.

Characteristic Soils Are:

La Fonda loams	Barana	Bucklebar
Hagerman	Armijo	

Other Soils included are:

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Site Description Approval:

{PRIVATE}Author	Date	Approval	Date
Don Sylvester	07/12/1979	Don Sylvester	7/12/1979

Site Description Revision:

{PRIVATE}Author	Date	Approval	Date
Santiago Misquez	03/03/03	George Chavez	03/05/03