

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

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R042XA052NM

Site Name: Loamy

Precipitation or Climate Zone: 8-10 inches

Phase: _____

PHYSIOGRAPHIC FEATURES

Narrative:

This upland site is relatively level to gently rolling with an occasional drainageway. Slopes are from 3 to 10 percent. Elevations are from 4,500 feet above sea level to 6,000 feet.

Land Form:

1. Plain

2. Drainageway

3.

Aspect:

1. Not significant.

2.

3.

Elevation (feet)	Minimum 4,500	Maximum 6,000
Slope (percent)	3	10
Water Table Depth (inches)	42	>72
Flooding:	Minimum	Maximum
Frequency	Very Rare	Rare
Duration	Extremely Brief	Very Brief
Ponding:	Minimum	Maximum
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Very low to Medium

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 inch per month, usually in the form of rain. There are occasional snowstorms 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 forbs 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. This results in structural damage to native plants, especially young seedlings.

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

Monthly moisture (inches) and temperature (⁰F) 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		Location		Period	
				From:	To
NM0915		Bernardo		1962	1990
					:
NM0983		Bingham		1961	1990
					:
NM0234		Albuquerque		1961	1990
					:
NM5150		Los Lunas		1961	1990
					:
					:
					:
					:

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:

These soils are deep, well drained soils with fine sandy loam, very fine sandy loam or loam surface layers occurring mainly on the uplands. Subsoils are calcareous loam, sandy loam, and light sandy clay loams except for Tres Hermanos, which is a thin light clay loam subsoil. Substratums are calcareous loam, sandy clay loam, sandy loam, fine sandy loam, very fine sandy loam, and a few areas with gravelly and very gravelly sandy loam or loam. Permeability is moderate (0.63 to 2.0 inches per hour) to moderately rapid (20 to 6.3 inches per hour). Moisture holding capacity is 0.08 to 0.4 inches per inches. Reaction is moderately alkaline (pH 7.9 to 8.4) to strongly alkaline (pH 8.5 to 9.0).

Parent Material Kind: Alluvium

Parent Material Origin: Mixed

Surface Texture:

1. Loamy sand
2. Loamy fine sand
3. Fine sand

Surface Texture Modifier:

1. LS,
2. LFS
3. FS

Subsurface Texture Group: N/A

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

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

Subsurface Fragments <=3" (% Volume): 0 %

Subsurface Fragments >=3" (% Volume): 0 %

	<u>Minimum</u> Poorly	<u>Maximum</u> Somewhat excessively
Drainage Class:	<u>Impermeable</u>	<u>Rapid</u>
Permeability Class:	<u>20</u>	<u>>72</u>
Depth (inches):	<u>0</u>	<u>16</u>
Electrical Conductivity (mmhos/cm):	<u>0</u>	<u>5.0</u>
Sodium Absorption Ratio:	<u>6.6</u>	<u>9.6</u>
Soil Reaction (1:1 Water):	<u>N/A</u>	<u>N/A</u>
Soil Reaction (0.1M CaCl2):	<u>0</u>	<u>6</u>
Available Water Capacity (inches):	<u>N/A</u>	<u>N/A</u>
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:

The aspect and biomass of vegetation on this site is dominately grassland characterized by short grasses. Perennial shrubs, half shrubs, and forbs are a minor component of the plant community. Annual forbs are present in relatively large amounts during spring and summer in years of above average plant growing conditions. When the plant community deteriorates there is a marked increase in amounts of half shrubs, forbs, and cacti.

Ground Cover (Aveage Percent of Surface Area).

Grasses & Forbs	20
Trees & Shrubs (canopy)	3
Bare ground	70
Surface cobble and stone	0
Surface gravel	0
Litter (percent)	10
Litter (average depth in cm.)	1

Plant Community Annual Production (by plant type):

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	320	480	640
Forb	60	90	120
Tree/Shrub/Vine	20	30	40
Lichen			
Moss			
Microbiotic Crusts			
Totals	400	600	800

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	BOER4	Black grama	180-240	180-240
2	MUPO2	Bush Muhly	60-120	60-120
3	PLJA	Galleta	60-120	60-120
4	ELEL5	Bottlebrush squirreltail	12-60	12-60
5	ARIST	Three Awn spp.	12-60	12-60
6	ACHY	Indian Ricegrass	30-60	30-60
7	BOGR2	Blue grama	30-60	30-60
8	SPCR	Sand dropseed	6-30	6-30
	SPCO4	Spike dropseed		
	SPFL2	Mesa dropseed		
9	BOSA	Silver bluestem	6-30	6-30
	2GRM	OTHER Grasses	6-30	6-30

Plant Type - Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	ATCA2	Fourwing saltbush	0- 30	0- 30
11	KRLA2	Winterfat	12-30	12-30
12	EPVI	Mormon tea	6-18	6-18
13	GUSA4	Broom snakeweed	12-30	12-30
14	OPPO	Plains pricklypear	12-18	12-18
	OPIM	Cholla		
	2SHRUB	Other Shrubs	12-18	12-18

Plant Type – Forb

15	ERIOG	Buckwheat spp.	6-30	6-30
16	SAKA	Russian thistle	6-18	6-18
17	AMPS	Western ragweed	6-18	6-18
18	KOSC	Kochia	6-30	6-30
19	DESO2	Tansymustard	6-18	6-18
	2FORB	OTHER Forbs	6-18	6-18

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: fluff grass, ring muhly, and six weeks grama.

Other woody plants include: wolfberry, broom baccharis.

Other forbs include: fiddleneck, verbena, fleabane, desertsenna, woolly groundsel, locoweed, mentzelia, globemallow, pricklypoppy, hoffmanseggia, yerba-de-pasmo.

Plant Growth Curves

Growth Curve ID NM - 2211

Growth Curve Name: HCPC

Growth Curve Description: SD-1 Loamy 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		

Growth Curve ID NM - 2212

Growth Curve Name: HCPC

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

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

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

This ecological site provides habitats which support a resident animal community that is characterized by coyote, black tailed jackrabbit, desert cottontail, white tailed antelope squirrel, Botta’s pocket gopher, banner-tailed kangaroo rat, southern plains woodrat, burrowing owl, scaled quail, meadowlark, brown towhee.

These sites may be utilized by wintering flocks of chipping, rufous-crowned, and black chinned sparrows.

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

Recreational Uses:

This site has limited potential for recreational use.

Wood Products:

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

Other Products:

This site is well suited for year-long grazing use by cattle, sheep, horses, antelope, deer, and burros

Other Information:	
Guide to Suggested Initial Stocking Rate Acres per Animal Unit Year	
Similarity Index	Ac/AUY
100 - 76	58 – 70
75 – 51	70 – 100
50 – 26	90 – 110
25 – 0	110 - 180

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	
Black grama	<i>Bouteloua eriopoda</i>	EP	D	D	D	D	D	D	D	P	P	P	P	D	D
Bush muhly	<i>Muhlenbergia porteri</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P	P
Blue grama	<i>Bouteloua gracilis</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P	P
Indian ricegrass	<i>Achnatherum hymenoides</i>	EP	D	P	P	P	D	D	D	D	D	D	P	P	D
Buckwheat	<i>Eriogonum</i> spp.	EP	P	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	P
Galleta	<i>Pleuraphis jamesii</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D	D
Bottlebrush squirreltail	<i>Elymus elymoides</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D	D
Sand dropseed	<i>Sporobolus cryptandrus</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D	D
Spike dropseed	<i>Sporobolus contractus</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D	D
Silver bluestem	<i>Bothriochloa saccharoides</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D	D
Fourwing saltbush	<i>Atriplex canescens</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D	D
Threeawns spp.	<i>Aristida</i> spp.	EP	U	U	U	U	U	U	U	U	U	U	U	U	U
Fluffgrass	<i>Dasyochloa pulchella</i>	EP	U	U	U	U	U	U	U	U	U	U	U	U	U
Sixweeks grama	<i>Bouteloua barbata</i>	EP	U	U	U	U	U	U	U	U	U	U	U	U	U
Plains pricklypear	<i>Opuntia polycantha</i>	EP	U	U	U	U	U	U	U	U	U	U	U	U	U
Russian thistle	<i>Salsola kali</i>	EP	U	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	U
Globemallow	<i>Sphaeralcea</i> spp.	EP	U	U	U	U	U	U	U	U	U	U	U	U	U

