

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

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R036XA006NM

Site Name: Loamy

Precipitation or Climate Zone: 9 to 14 inches

Phase: _____

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on mesas, plateaus, low rolling hills and broad upland valleys. It usually is level to nearly level but slopes range to 15 percent. Elevation ranges from 6,400 to 7,800 feet above sea level.

Land Form:

1. Valley side

2. Mesa

- 3.

Aspect:

1. N/A

- 2.

- 3.

	Minimum	Maximum
Elevation (feet)	6,400	7,800
Slope (percent)	1	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:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

Mean annual precipitation varies from 9 to 14 inches. Deviations of 4 inches or more are quite common. Approximately 60 percent of the precipitation is received during the native plant growth period, April through September. June is the driest month. During July, August and September 4 to 5 inches of precipitation influence the presence and production of warm-season plants. Fall and spring moisture is conducive to the growth of cool-season herbaceous plants. Maximum shrub growth also occurs during this time. Summer precipitation is characterized by brief, localized thunderstorms. Winter moisture usually occurs as snow or light rain.

Mean annual temperature varies from 64 degrees F in July to 21 degrees F in January. The maximum is near 100 degrees F. The minimum is near 40 degrees F. The average last killing frost in the spring is around mid-May. The first killing frost in the fall is late September or early October. The frost-free period is approximately 120 to 140 days, but freezing temperatures have been recorded for every month except July and August. Temperatures are generally conducive for herbaceous plant growth from April through September.

Wind velocities are relatively light most of the year with stronger winds occurring in spring and early summer. These stronger winds, which may exceed 25 miles per hour, increase transpiration rates of plants and rapidly dry the soil surface. Also, small soil particles are often displaced by the stronger winds, which can result in structural damage to native plants, particularly young seedlings.

Climate data was obtained from the WCCR web site. Using 50% probabilities for freeze-free and frost-free seasons at 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	Maximum
Frost-free period (days):	104	119
Freeze-free period (days):	134	145
Mean annual precipitation (inches):	9	14

Monthly moisture (inches) and temperature (⁰F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.52	1.79	7.6	45.6
February	.43	1.56	10.7	50.4
March	.67	1.92	16.8	56.8
April	.52	1.26	22.7	66.0
May	.62	1.26	28.8	75.5
June	.49	1.21	35.1	85.8
July	1.54	3.41	42.1	88.9
August	1.86	3.72	41.8	85.8
September	1.08	1.86	34.6	78.8
October	1.01	1.86	25.3	68.8
November	.71	1.60	16.2	56.0
December	.56	1.49	9.3	47.0

Climate Stations:

		Period					
Station ID	<u>292241</u>	Location	<u>Cuba, NM</u>	From:	<u>01/01/14</u>	To:	<u>12/31/01</u>
Station ID	<u>293422</u>	Location	<u>Gallup FAA AP, NM</u>	From:	<u>01/01/21</u>	To:	<u>12/31/01</u>

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from a 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 generally are deep and well drained. The surface soils range from sandy loam to clay loam. Subsoils range from loam to clay loam and clay. Some coarse fragments may exist in the soil profile but are generally less than 35 percent. Permeability is moderate, water-holding capacity is medium to high, and runoff is medium.

Parent Material Kind: Alluvium

Parent Material Origin: Mixed - calcareous

Surface Texture:

1. Loam
2. Silt loam
3. Clay loam
4. Sandy loam

Surface Texture Modifier:

1. Gravel

Subsurface Texture Group: Clayey

Surface Fragments <=3" (% Cover): 15 to 35

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

Subsurface Fragments <=3" (%Volume): 15 to 35

Subsurface Fragments >=3" (%Volume): N/A

	Minimum	Maximum
Drainage Class:	<u>Well</u>	<u>Well</u>
Permeability Class:	<u>Moderate</u>	<u>Moderate</u>
Depth (inches):	<u>40</u>	<u>60</u>
Electrical Conductivity (mmhos/cm):	<u>Unknown</u>	<u>Unknown</u>
Sodium Absorption Ratio:	<u>Unknown</u>	<u>Unknown</u>
Soil Reaction (1:1 Water):	<u>Unknown</u>	<u>Unknown</u>
Soil Reaction (0.1M CaCl2):	<u>Unknown</u>	<u>Unknown</u>
Available Water Capacity (inches):	<u>6</u>	<u>12</u>
Calcium Carbonate Equivalent (percent):	<u>Unknown</u>	<u>Unknown</u>

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label:** HCPC

Plant Community Narrative: Historic Climax Plant Community

This is a grassland site with scattered shrubs throughout the site. Forbs are conspicuous when in bloom but otherwise a minor component.

Canopy Cover:

Trees, shrubs and half-shrubs	10 %
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	25
Bare ground	50
Surface gravel	5
Surface cobble and stone	0
Litter (percent)	20
Litter (average depth in cm.)	1

Plant Community Annual Production (by plant type): _____

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	438	621	803
Forb	48	68	88
Tree/Shrub/Vine	108	153	198
Lichen			
Moss			
Microbiotic Crusts			
Total	600	850	1,100

Plant Community Composition and Group Annual Production: Plant species are grouped by annual production **not** by functional groups.

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	PASM	Western Wheatgrass	170 – 255	170 – 255
2	ACHY HECO26 HENE5	Indian Ricegrass Needleandthread New Mexico Feathergrass	85 – 128	85 – 128
3	PLJA	Galleta	43 – 85	43 – 85
4	BOGR2	Blue Grama	43 – 85	43 – 85
5	SPAI MUWR	Alkali Sacaton Spike Muhly	26 – 85	26 – 85
6	POFE KOMA	Muttongrass Prairie Junegrass	26 – 60	26 – 60
7	ELEL5	Bottlebrush Squirreltail	26 – 60	26 – 60
8	2GRAM	Other Grasses	9 – 43	9 – 43

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
9	ARFR4 OXYTR CACO17 ERCI6 ERIOG 2FORBS	Fringed Sagewort Locoweed spp. Indian Paintbrush Alfilaria Wildbuckwheat spp. Other Forbs	43 – 85	43 - 85

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	ARTR2	Mountain Big Sagebrush	43 – 85	43 – 85
11	ATCA2 KRLA2	Fourwing Saltbush Winterfat	43 – 85	43 – 85
12	ERNAN5 TECA2 2SD	Rubber Rabbitbrush Spineless Horsebrush Other Shrubs	9 – 43	9 – 43

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 species include: sideoats grama, sand dropseed, pine dropseed, mat muhly, cheatgrass, pingue, woolly Indianwheat, globemallow spp., prairie coneflower, oneseed juniper, pinyon pine, pale wolfberry, broom snakeweed, yucca spp., cholla cactus and antelope bitterbrush.

Plant Growth Curves

Growth Curve ID 0006NM

Growth Curve Name: HCPC

Growth Curve Description: Grassland with scattered shrubs and a minor component of forbs.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

No Data

Hydrology Functions:

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

Hydrologic Interpretations

Soil Series	Hydrologic Group
Oelop	
Buckle	
Fernando	
Silva	
Tenorio	

Recreational Uses:

This site, though not noted for its outstanding natural beauty, is well suited for horseback riding, camping and hunting.

Wood Products:

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

Other Products:

Grazing:

Approximately 90 percent of the vegetation produced on this site are suitable for grazing or browsing by domestic livestock and wildlife. Grazing distribution is generally not a problem if adequate waterings are provided. Continuous grazing, which allows repetitive grazing of the desirable plant species, eventually can lead to reduced vigor and eventual decrease in production and composition of the desirable species. Such deterioration is indicated by a decrease in western wheatgrass, muttongrass and other cool-season grasses as well as fourwing saltbush and winterfat. Species that increase include blue grama, galleta, ring and mat muhly, big sagebrush, rabbitbrush and broom snakeweed. Juniper and pinyon may invade from adjacent sites.

A planned grazing system with periodic grazing and rests is best to maintain the desired composition and high productivity.

In addition to domestic livestock, deer, pronghorn antelope, 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	2.5 – 3.4
75 – 51	3.3 – 5.1
50 – 26	5.0 – 10.0
25 – 0	10.0+

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

Plant Preference by Animal Kind:

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
Western Wheatgrass	<i>Pascopyrum smithii</i>	EP	D	D	P	P	P	D	D	D	D	D	D	D
Indian Ricegrass	<i>Achnatherum hymenoides</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Needleandthread	<i>Hesperostipa comata</i>	EP	D	D	P	P	P	D	D	D	D	D	D	D
New Mexico Feathergrass	<i>Hesperostipa neomexicana</i>	EP	D	D	P	P	P	D	D	D	D	D	D	D
Spike Muhly	<i>Muhlenbergia wrightii</i>	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Muttongrass	<i>Poa fendleriana</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Prairie Junegrass	<i>Koeleria macrantha</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Fourwing Saltbush	<i>Atriplex canescens</i>	L/S	P	P	P	P	P	D	D	D	D	D	D	P
Winterfat	<i>Krascheninnikovia lanata</i>	L/S	D	D	P	P	P	P	P	P	D	D	D	D
Some Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: New Mexico

County: Taos

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? Yes No

General Legal Description: _____

<u>Relationship to Other Established Classifications:</u>
--

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus and Mesas 36 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: McKinley & Sandoval

Characteristic Soils Are:

Oelop	Buckle
Other Soils included are:	
Fernando	Silva
Tenorio	

Site Description Approval:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester		Don Sylvester	

Site Description Revision:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Elizabeth Wright	08/07/02	George Chavez	09/11/02