

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

**ECOLOGICAL SITE DESCRIPTION**

**ECOLOGICAL SITE CHARACTERISTICS**

**Site Type:** Rangeland

**Site ID:** R036XA011NM

**Site Name:** Sandy

**Precipitation or Climate Zone:** 9 to 14 inches

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

## PHYSIOGRAPHIC FEATURES

### **Narrative:**

This site occurs on nearly level to gently sloping plains and alluvial fans. Slopes range from 1 to 8 percent and average about 5 percent or less. Elevation ranges from 6,400 to 7,200 feet above sea level.

### **Land Form:**

1. Alluvial fan
2. Plain
- 3.

### **Aspect:**

1. N/A
- 2.
- 3.

	<b>Minimum</b>	<b>Maximum</b>
<b>Elevation (feet)</b>	6,400	7,200
<b>Slope (percent)</b>	1	8
<b>Water Table Depth (inches)</b>	N/A	N/A
	<b>Minimum</b>	<b>Maximum</b>
<b>Flooding:</b>		
<b>Frequency</b>	N/A	N/A
<b>Duration</b>	N/A	N/A
	<b>Minimum</b>	<b>Maximum</b>
<b>Ponding:</b>		
<b>Depth (inches)</b>	N/A	N/A
<b>Frequency</b>	N/A	N/A
<b>Duration</b>	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. During July, August and September 4 to 6 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.

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

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

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:**

<b>System</b>	<b>Subsystem</b>	<b>Class</b>
N/A		

**If Riverine Wetland System enter Rosgen Stream Type:**

N/A

**REPRESENTATIVE SOIL FEATURES****Narrative:**

Soils are moderately deep to deep. The surface textures range from sand to loamy sand and sandy loam and do not exceed 36 inches in depth. Permeability is rapid with water-holding capacity moderately low to low. Runoff is slow.

Parent Material Kind: Alluvium

Parent Material Origin: Mixed

**Surface Texture:**

1. Sand
2. Loamy sand
3. Sandy loam

**Surface Texture Modifier:**

1. N/A
1.
3.

**Subsurface Texture Group:** Sandy

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

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

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

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

	<b>Minimum</b>	<b>Maximum</b>
<b>Drainage Class:</b>	<u>Somewhat excessively</u>	<u>Excessively</u>
<b>Permeability Class:</b>	<u>Rapid</u>	<u>Very rapid</u>
<b>Depth (inches):</b>	<u>20</u>	<u>&gt;72</u>
<b>Electrical Conductivity (mmhos/cm):</b>	<u>0.00</u>	<u>0.00</u>
<b>Sodium Absorption Ratio:</b>	<u>0.00</u>	<u>0.00</u>
<b>Soil Reaction (1:1 Water):</b>	<u>6.6</u>	<u>8.4</u>
<b>Soil Reaction (0.1M CaCl2):</b>	<u>N/A</u>	<u>N/A</u>
<b>Available Water Capacity (inches):</b>	<u>3</u>	<u>9</u>
<b>Calcium Carbonate Equivalent (percent):</b>	<u>N/A</u>	<u>N/A</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 site provides a mixed grass-shrub aspect. Fourwing saltbush and winterfat are the dominant shrubs with big sagebrush and rabbitbrush occurring in lesser amounts. Few, if any, trees occur on this site. Forbs are a minor component except during spring emergency.

Canopy Cover:

Trees, shrubs and half-shrubs	15 to 20 %
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	<u>25</u>
Bare ground	<u>60</u>
Surface gravel	<u>0</u>
Surface cobble and stone	<u>0</u>
Litter (percent)	<u>15</u>
Litter (average depth in cm.)	<u>1</u>

**Plant Community Annual Production (by plant type):** \_\_\_\_\_

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	375	525	675
Forb	20	28	36
Tree/Shrub/Vine	100	140	180
Lichen			
Moss			
Microbiotic Crusts			
<b>Total</b>	500	700	900

**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	ACHY HECO26 HENE5	Indian Ricegrass Needleandthread New Mexico Feathergrass	105 – 140	105 – 140
2	PASM	Western Wheatgrass	70 – 105	70 – 105
3	SPCO4 SPCR	Spike Dropseed Sand Dropseed	35 – 70	35 – 70
4	PLJA	Galleta	35 – 70	35 – 70
5	BOGR2	Blue Grama	21 – 35	21 – 35
6	POFE KOMA 2GRAM	Muttongrass Prairie Junegrass Other Grasses	21 – 35	21 - 35

**Plant Type - Forb**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
7	ERIOG ERCI6 PLPA2 ARFR2 OXYTR 2FORBS	Wildbuckwheat spp. Alfileria Wooly Indianwheat Fringed Sagewort Locoweed spp. Other Forbs	21 – 35	21 35

**Plant Type – Tree/Shrub/Vine**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
8	ATCA2 KRLA2	Fourwing Saltbush Winterfat	35 – 105	35 – 105
9	ARTR2 ERNAN5 TECA2 ARFI2	Big Sagebrush Rubber Rabbitbrush Spineless Horsebrush Sand Sagebrush	21 – 70	21 – 70
10	JUNIP 2SD	Juniper spp. Other Shrubs	0 – 21	0 – 21

**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 that could appear include: ring muhly, sandhill muhly, switchgrass, little bluestem, sand bluestem, wolftail, spike muhly, Mormon-tea, broom snakeweed and yucca.

**Plant Growth Curves**

Growth Curve ID 0011NM

Growth Curve Name: HCPC

Growth Curve Description: Mixed grass-shrubland with a minor forb component.

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
Pinavetes	A
Royosa	A

### **Recreational Uses:**

This site is well adapted to hunting and horseback riding, although it is not noted for having scenic beauty.

### **Wood Products:**

This site produces no significant wood products.

### **Other Products:**

Grazing:

Approximately 95 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 properly located. However, continuous grazing leads to a repetitive, selective grazing of the most desirable species, which reduced their vigor and productivity. The result is a deterioration of the potential plant community. This deterioration is indicated by a decrease in Indian ricegrass, needleandthread, New Mexico feathergrass, western wheatgrass, fourwing saltbush and winterfat. Species that increase includes dropseed spp., blue grama, ring muhly, big sagebrush, rabbitbrush and an invasion of juniper from adjacent sites. A planned grazing system, which prevents the repetitive grazing of selected species and allows for periodic replenishment of carbohydrates in the roots, is desirable.

**Other Information:**

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	2.8 – 3.9
75 – 51	3.8 – 5.8
50 – 26	5.7 – 11.6
25 – 0	11.6+

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
Indian Ricegrass	Achnatherum hymenoides	EP	P	P	P	P	P	P	P	P	P	P	P	P
Needleandthread	Hesperostipa comata	EP	D	D	P	P	P	D	D	D	D	D	D	D
New Mexico Feathergrass	Hesperostipa neomexicana	EP	D	D	P	P	P	D	D	D	D	D	D	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Muttongrass	Poa fendleriana	EP	D	D	D	D	D	D	D	D	D	D	D	D
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	D	P
Winterfat	Krascheninnikovia lanata	L/S	D	D	P	P	P	P	P	P	D	D	D	D

