

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

**ECOLOGICAL SITE DESCRIPTION**

**ECOLOGICAL SITE CHARACTERISTICS**

**Site Type:** Rangeland

**Site ID:** R070XC105NM

**Site Name:** Gyp Upland

**Precipitation or Climate Zone:** 13 to 16 inches

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

## **PHYSIOGRAPHIC FEATURES**

### **Narrative:**

This site occurs on gently to moderately rolling upland valleys and side slopes. Slopes range from 3 to 30 percent. Elevations range from 5,500 to 6,500 feet above sea level.

### **Land Form:**

1. Valley
2. Valley sides
- 3.

### **Aspect:**

1. N/A
- 2.
- 3.

	<b>Minimum</b>	<b>Maximum</b>
<b>Elevation (feet)</b>	5,500	6,500
<b>Slope (percent)</b>	3	30
<b>Water Table Depth (inches)</b>	N/A	N/A
<b>Flooding:</b>	<b>Minimum</b>	<b>Maximum</b>
<b>Frequency</b>	N/A	N/A
<b>Duration</b>	N/A	N/A
<b>Ponding:</b>	<b>Minimum</b>	<b>Maximum</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:**

The average annual precipitation ranges from 13 to 16 inches. Variations of 5 inches, more or less, are not uncommon. Seventy-five percent of the precipitation falls from April to October. Most of the summer precipitation comes in the form of high intensity-short duration thunderstorms.

Temperatures are characterized by distinct seasonal changes and large annual and diurnal temperature changes. The average annual temperature is about 50 degrees F with extremes of -29 degrees F in the winter and 103 degrees F in the summer.

The average frost-free season is 130 to 160 days. The last killing frost is in early May and the first killing frost is in early October.

The majority of the precipitation falls when temperatures favor warm-season plant growth. However, about 40 percent of the precipitation is also available for cool-season plant growth. These two factors are both favorable to cool-season species and also increase the variety and production of the vegetative community. Strong winds from the west and southwest blow across the area from February to June and dry the soil during a critical period for plant growth.

Climate data was obtained from <http://www.wrcc.sage.dri.edu/summary/climsmnm.html> web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	<b>Minimum</b>	<b>Maximum</b>
<b>Frost-free period (days):</b>	131	173
<b>Freeze-free period (days):</b>	155	187
<b>Mean annual precipitation (inches):</b>	13	16

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

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.34	.92	15.6	42.1
February	.34	.81	19.9	52.9
March	.23	.98	24.4	59.7
April	.39	.96	31.4	68.9
May	.85	1.61	39.2	77.7
June	.89	1.62	46.9	87.1
July	1.77	2.75	53.1	88.5
August	2.46	3.22	51.9	85.7
September	1.54	2.26	44.3	80.4
October	1.0	1.51	32.8	70.5
November	.57	1.02	22.2	57.5
December	.34	1.16	15.9	49.3

**Climate Stations:**

Station ID	Location	Period	
		From:	To:
291918	Clines Corners7SE, NM	12/10/19	11/30/00
292096	Corona11SSW, NM	12/01/77	09/30/92
293060	Estancia, NM	01/01/14	12/31/00
293649	Gran Quivira Natl. Monument, NM	06/01/38	12/31/00
295965	Mountainair, NM	03/01/14	12/31/00
299405	Vaughn, NM	01/01/71	12/31/00

**INFLUENCING WATER FEATURES****Narrative:**

This site is not influenced by water from wetlands or streams.

**Wetland description:**

System	Subsystem	Class
N/A		

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

N/A

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

The soils on this site are shallow, well drained soils that formed on gypsum bedrock. Surface textures are loam and silt loam. Permeability is moderate. The available water-holding capacity is very low and the effective rooting depth is 10 to 20 inches. Water erosion hazard is high and wind erosion hazard is moderate.

Parent Material Kind: Marine Deposits

Parent Material Origin: Gypsum

**Surface Texture:**

1. Loam
2. Silt loam
3.

**Surface Texture Modifier:**

1. N/A
2.
3.

Subsurface Texture Group: Loamy

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>Well</b>	<b>Well</b>
Drainage Class:	Moderately slow	Moderate
Permeability Class:	4	24
Depth (inches):	0.00	8.00
Electrical Conductivity (mmhos/cm):	N/A	N/A
Sodium Absorption Ratio:	7.4	9.0
Soil Reaction (1:1 Water):	N/A	N/A
Soil Reaction (0.1M CaCl2):	0	3
Available Water Capacity (inches):	N/A	N/A
Calcium Carbonate Equivalent (percent):		

## **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

The aspect of this site is a grassland-shrub with a scattering of oneseed juniper. Forbs are scattered and make up an important part of the potential plant community

Canopy Cover:

Trees 0 – 3 %

Shrubs and Half shrubs 3 – 10 %

Ground Cover (Average Percent of Surface Area).

Grasses & Forbs 25

Bare ground 40

Surface cobble and stone 0

Litter (percent) 35

Litter (average depth in cm.) 1

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

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	210	368	525
Forb	30	53	75
Tree/Shrub/Vine	45	79	113
Lichen			
Moss			
Microbiotic Crusts			
<b>Totals</b>	300	525	750

**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 MUPO2	Black Grama Bush Muhly	79 - 131	79 – 131
2	SPAI	Alkali Sacaton	26 - 79	26 – 79
3	PLJA PLMU3	Galleta Tobosa	26 - 53	26 – 53
4	BOBR SPNE	Gyp Grama Gyp Dropseed	53 - 105	53 – 105
5	BOGR2 BOHI2	Blue Grama Hairy Grama	26 - 53	26 – 53
6	BOCU SEVU2 BOBA3	Sideoats Grama Plains Bristlegrass Cane Bluestem	26 - 53	26 – 53
7	2GRAM	Other Grasses	5 - 26	5 - 26

**Plant Type - Forb**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
8	SEFLF	Threadleaf Groundsel	5 - 26	5 – 26
9	ISPL	Rayless Goldenrod	5 - 16	5 – 16
10	LESQU	Bladderpod	5 - 16	5 – 16
11	SPCO	Scarlet Globemallow	5 - 16	5 – 16
12	DYPA	Dyssodia	5 – 16	5 – 16
13	2FORBS	Other Forbs	5 - 16	5 - 16

**Plant Type – Tree/Shrub/Vine**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
14	ATCA2	Fourwing Saltbush	26 - 53	26 – 53
15	TIHI	Hairy Coldenia	26 – 37	26 – 37
16	EPVI	Mormon-tea	26 – 37	26 – 37
17	ARBI3	Bigelow Sage	5 - 26	5 – 26
18	JUMO	Oneseed Juniper	16 - 26	16 – 26
19	KRLA2	Winterfat	26 - 53	26 – 53
20	OPIM	Walkingstick Cholla	26 - 53	26 – 53
21	2SD	Other Shrubs	5 - 16	5 - 16

**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 include burrograss, ring muhly, threeawn, New Mexico feathergrass, needleandthread, curlyleaf muhly, vine-mesquite, bush muhly, triden, sand dropseed, and mesa dropseed.

Other shrubs include, rubber rabbitbrush, wolfberry, opuntia, yucca, and pinyon.

Other forbs include spectaclepod, annual sunflowers, verbena, wildbuckwhrat, and wooly Indian-wheat.

**Plant Growth Curves**

**Growth Curve ID** 4305NM

**Growth Curve Name:** HCPC

**Growth Curve Description:** Grassland-shrub with scattered oneseed juniper with forbs.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	5	7	10	15	25	25	8	5	0	0

## **ECOLOGICAL SITE INTERPRETATIONS**

### **Animal Community:**

Habitat for Wildlife:

This site produces habitat which supports a resident animal community that is characterized by pronghorn antelope, coyote, blacktailed jackrabbit, Ord's kangaroo rat, white-throated woodrat, northern grasshopper mouse, sparrow hawk, meadow lark, Cassin's kingbird, chipping sparrow, mourning dove, short-horned lizard, plateau whiptail, and prairie rattlesnake. Where pinyon or juniper increase with site deterioration, mule deer, gray fox, pinon mouse, scrub jay and eastern fence lizard characterize the site.

### **Hydrology Functions:**

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

#### **Hydrologic Interpretations**

<b>Soil Series</b>	<b>Hydrologic Group</b>
Tanbark	D

### **Recreational Uses:**

This site has limited potential for camping, picnicking and hiking. Due to shallow and highly erodible soils, any activity concentrates soil disturbance is discouraged. Hunting is good for small game, and some mule deer inhabit the area. The site offers a varied and, in some cases, unusual aspect to the landscape.

### **Wood Products:**

This site has very limited potential for harvest of posts and firewood from oneseed juniper.

**Other Products:****Grazing:**

This site is suited for grazing by all kinds and classes of livestock at all seasons of the year. Due to shallow, highly erosive soil on this site, grazing must be carefully managed to prevent irreparable loss of productivity. This site lends itself to grazing management which varies the season of use and provides deferment for the desirable forage species during their growing season. Mismanagement of grazing leads to a decrease in desirable forage plants such as black grama and an increase in undesirable forage plants such as threeawn, ring muhly, burrograss, groundsel, bladderpod, and other undesirable forbs.

**Other Information:****Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month**

<b>Similarity Index</b>	<b>Ac/AUM</b>
100 - 76	5.0 – 6.8
75 – 51	5.6 – 8.2
50 – 26	6.6 – 11.0
25 – 0	11.0+

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	
Black Grama	Bouteloua eriopoda	EP	P	P	P	D	D	D	D	D	D	D	D	P	P
Alkali Sacaton	Sporobolus airoides	EP	D	D	D	D	D	P	P	P	U	U	U	U	D
Blue Grama	Bouteloua gracillis	EP	D	D	D	D	P	P	P	P	P	D	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P	P
Galleta	Pleuraphis jamesii	EP	U	U	U	U	U	D	D	D	D	D	U	U	U
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	D	D	D	D	D	P	P	P	P
Winterfat	Krascheninnikovia lanata	L/S	P	P	P	D	D	D	D	D	D	P	P	P	P

**Animal Kind:** Livestock

**Animal Type:** Sheep

Common Name	Scientific Name	Plant Part	Forage Preferences												
			J	F	M	A	M	J	J	A	S	O	N	D	
Winterfat	Krascheninnikovia lanata	L/S	P	P	P	P	P	P	P	P	P	P	P	P	P
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	D	D	D	D	D	D	P	P	P	P
Scarlet Globemallow	Sphaeralcea coccinea	EP	U	U	U	P	P	P	D	D	D	D	D	U	U
Black Grama	Bouteloua eriopoda	EP	P	P	P	D	D	D	D	D	D	D	P	P	P
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D	D

**Animal Kind:** Wildlife

**Animal Type:** Antelope

Common Name	Scientific Name	Plant Part	Forage Preferences												
			J	F	M	A	M	J	J	A	S	O	N	D	
Winterfat	Krascheninnikovia lanata	L/S	D	D	D	D	D	D	D	D	D	D	D	D	D
Fourwing Saltbush	Atriplex canescens	L/S	D	D	D	D	D	D	D	D	D	D	D	D	D
Scarlet Globemallow	Sphaeralcea coccinea	EP	U	U	P	P	P	D	D	D	D	D	D	U	U
Bladderpod	Lesquerella	EP	U	U	D	D	D	D	D	D	U	U	U	U	U
Bigelow Sagebrush	Artemisia bigelovii	L/S	N/S	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: Chavez, De Baca, Guadalupe, Lincoln, Torrance

Latitude: \_\_\_\_\_

Longitude: \_\_\_\_\_

Township: \_\_\_\_\_

Range: \_\_\_\_\_

Section: \_\_\_\_\_

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 Pecos-Canadian Plains and Valleys 70 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Chaves, De Baca, Guadalupe, Lincoln, Sna Miguel, Santa Fe, Torrance.

**Characteristic Soils Are:**

Tanbark	
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**Other Soils included are:**

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**Site Description Approval:**

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester	11/25/81	Donald H. Fulton	03/03/82

**Site Description Revision:**

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Elizabeth Wright	06/19/01	George Chavez	12/17/02