

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

**ECOLOGICAL SITE DESCRIPTION**

**ECOLOGICAL SITE CHARACTERISTICS**

**Site Type:** Rangeland

**Site ID:** R041XA005NM

**Site Name:** Hills

**Precipitation or Climate Zone:** 12 to 16 inches

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

## **PHYSIOGRAPHIC FEATURES**

### **Narrative:**

This site consists of gently rolling to steep hills and low mountains, which may be dissected by numerous steep sided canyons. Rock outcrops occur interspersed within this site. They are multicolored from grays to reds. Elevations range from 3,500 to 5,000 feet above sea level. Slopes range from 30 to 60 percent.

### **Land Form:**

1. Hillside
2. Hill
- 3.

### **Aspect:**

1. N/A
- 2.
- 3.

	<b>Minimum</b>	<b>Maximum</b>
<b>Elevation (feet)</b>	3,500	5,000
<b>Slope (percent)</b>	30	60
<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:**

Precipitation ranges from 12 to 16 inches annually. More than half of this falls during July, August, and September in brief, but often-heavy thunderstorms. The rest of the moisture comes in the form of light rain or snow that falls slowly for a day or more. Snow rarely lasts more than a day. May and June are normally the driest months of the year. Humidity is generally very low.

Temperatures are mild. Freezing temperatures are common at night from December through April; however, temperatures during the day are frequently above 50 degrees F. Occasionally in December to February, brief 0 degrees F temperature may be experienced some nights. During June and rarely during July and August, some days may exceed 105 degrees F. Frost-free days range from 150 to 220 days.

The cool-season plants start growth in early spring and mature in early summer. The warm-season plants take advantage of the summer rains and are growing and nutritious from July through September. Warm-season grasses may remain green throughout the year.

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>	<u>167</u>	<u>187</u>
<b>Freeze-free period (days):</b>	<u>197</u>	<u>203</u>
<b>Mean annual precipitation (inches):</b>	<u>12</u>	<u>16</u>

### **Monthly moisture (inches) and temperature (°F) distribution:**

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.68	.89	24.0	61.0
February	.36	.59	26.9	65.0
March	.12	.45	25.5	71.5
April	.00	.23	34.7	78.7
May	.00	.20	25.5	87.0
June	.10	.55	40.0	95.1
July	1.26	2.33	46.4	95.7
August	2.28	3.15	48.5	92.6
September	.90	1.72	50.0	87.9
October	.43	1.12	36.1	80.0
November	.19	.69	31.3	67.6
December	.00	1.10	26.6	61.3

**Climate Stations:**

Station ID	Location	Period	
		From:	To:
290417	Animas, NM	1961	1990
292757	Eicks Ranch, NM	1961	1990
297534	Rodeo, NM	1961	1990

**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 surface layer is cobbly loam to gravelly loam, well covered with broken stones and coarse gravel. The subsoil is clay loam or clay over andesitic or rhyolitic bedrock within 20 inches. Plant/soil moisture relationship is good. This soil is shallow and well drained. Permeability is very slow and available water-holding capacity is low.

**Parent Material Kind:** Colluvium

**Parent Material Origin:** Mixed

**Surface Texture:**

- |               |
|---------------|
| 1. Stony loam |
| 2. Various    |
| 3.            |

**Surface Texture Modifier:**

- |           |
|-----------|
| 1. Gravel |
| 2. Cobble |
| 3. Stone  |

**Subsurface Texture Group:** Clayey

Surface Fragments  $\leq 3$ " (% Cover): 15 to 35  
 Surface Fragments  $> 3$ " (% Cover): 15 to 50

Subsurface Fragments  $\leq 3$ " (%Volume): 15 to 35  
 Subsurface Fragments  $\geq 3$ " (%Volume): 15 to 35

	<b>Minimum</b>	<b>Maximum</b>
<b>Drainage Class:</b>	Well	Well
<b>Permeability Class:</b>	Impermeable	Very slow
<b>Depth (inches):</b>	10	20
<b>Electrical Conductivity (mmhos/cm):</b>	N/A	N/A
<b>Sodium Absorption Ratio:</b>	N/A	N/A
<b>Soil Reaction (1:1 Water):</b>	6.6	8.4
<b>Soil Reaction (0.1M CaCl<sub>2</sub>):</b>	N/A	N/A
<b>Available Water Capacity (inches):</b>	0	3
<b>Calcium Carbonate Equivalent (percent):</b>	N/A	N/A

## **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 has a plant community made up of an open stand of oak/juniper woodland with a good understory of shrubs, grasses, forbs and cacti. North facing slopes have higher population of woody plants and south facing slopes have a higher population of grass plants. Plant species most likely to increase on this site as it retrogresses are blue grama, mat muhly, threeawn, manzanita and juniper. Plants and their relative proportions are based on near normal years. Fluctuations in species composition and relative production may change from year to year dependent upon abnormal precipitation or other climatic factors. The potential climax plant community has been determined by study of range relict areas, or areas protected from excessive grazing. Trends in plant communities going from heavily grazed areas to lightly grazed areas, seasonal use pastures and historical accounts have also been used.

Canopy Cover:

Trees	Unknown
Shrubs and half shrubs	Unknown
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	Unknown
Bare ground	Unknown
Surface cobble and stone	Unknown
Litter (percent)	Unknown
Litter (average depth in cm.)	Unknown

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

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	540	789	1,038
Forb	33	48	63
Tree/Shrub/Vine	98	143	188
Lichen			
Moss			
Microbiotic Crusts			
Total	650	950	1,250

**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	BOCU	Sideoats Grama	190 – 285	190 – 285
2	ERIN	Plains Lovegrass	159 – 238	159 – 238
3	BOBA2	Cane Bluestem	95 – 159	95 – 159
4	HECO10	Tanglehead	48 – 159	48 – 159
5	BOER4	Black Grama	48 – 159	48 – 159
6	BOGR2 BOHI2 ARIST MUPO2 ANCI ENDE MUEM SCSC	Blue Grama Hairy Grama Threeawn spp. Bush Muhly Texas Bluestem Spike Pappusgrass Bullgrass Little Bluestem	48 – 95	48 – 95
7	TRSE BORA BOFI BORO2 LEDU LYPH DICOA DICA8 PAHA MURI BOCH HIBE HESPE SPORO ELEL5	Crinkleawn Purple Grama Slender Grama Rothrock Grama Green Sprangletop Wolftail Fall Witchgrass Arizona Cottontop Halls Panicum Mat Muhly Sprucetop Grama Curly Mesquite Hesperostipa spp. Sporobolus spp. Bottlebrush Squirreltail	10 – 48	10 - 48

**Plant Type - Forb**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
8	2FP 2FA	Perennial Forbs Annual Forbs	10 – 95	10 - 95

**Plant Type – Tree/Shrub/Vine**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
9	BAPT MIACB YUEL OPUNT QUERC NOMI FOSP2	Yerba-de-pasmo Catclaw Mimosa Soaptree Yucca Cactus spp. Oak spp. Sacahuista Ocotillo	48 – 95	48 – 95
10	JUNIP AGAVE CEMOP DAWH2	Juniper spp. Agave spp. Hairy Mountainmahogany Sotol	10 – 48	10 – 48
11	ARPU	Mexican Manzanita	0 – 10	0 – 10
12	RHTR	Skunkbush Sumac	0 – 48	0 - 48

**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

**Plant Growth Curves**

Growth Curve ID 1905NM

Growth Curve Name: HCPC

Growth Curve Description: Open stand of oak/juniper woodland with a good understory of shrubs, grasses, forbs and cacti.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	7	10	10	15	25	25	8	3	0	0

## **ECOLOGICAL SITE INTERPRETATIONS**

### **Animal Community:**

#### Habitat for Wildlife:

Water is located in potholes and man-made impoundments. Very few, if any, springs or seeps occur on the site. Vegetation is predominantly grass with some shrubs scattered throughout the site. Shrubs are mostly oaks. Wildlife prefer these areas. Dissecting canyons, while not part of the site, are important as cover and nesting for wildlife that feed on this site. Wildlife species include: pronghorn antelope, white-tailed deer, mule deer, desert cottontail, antelope jackrabbit, javelina and scaled quail.

### **Hydrology Functions:**

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

#### **Hydrologic Interpretations**

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

### **Recreational Uses:**

Seasonal color changes of the native plants plus a variety of growth forms creates a good aesthetic appeal. Summer days are cool and sometimes breezy. Winter days are sometimes brisk, but usually comfortable, and winter nights are cold with freezing temperatures December through April. Horseback riding, hunting, wildlife observation, photography, camping, picnicking, and nature studies are the main activities on this site.

### **Wood Products:**

No Data.

### **Other Products:**

#### Grazing:

Cattle grazing distribution on the site is poor when adjacent ecological sites are level and have fewer rocks on the surface. Stocking rates should be evaluated and livestock numbers adjusted bases on actual use experience and climatic fluctuations.

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

<b>Similarity Index</b>	<b>Ac/AUM</b>
100 - 76	4.0 – 6.0
75 – 51	6.5 – 8.5
50 – 26	9.0 – 13.0
25 – 0	13.0+

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
Sideoats Grama	<i>Bouteloua curtipendula</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Plains Lovegrass	<i>Eragrostis intermedia</i>	EP	U	U	U	U	U	D	D	D	U	U	U	U
Cane Bluestem	<i>Bothriochloa barbinodis</i>	EP	U	U	U	U	U	U	P	P	D	U	U	U
Tanglehead	<i>Heteropogon contortus</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
Black Grama	<i>Bouteloua eriopoda</i>	EP	P	P	P	D	D	D	D	D	D	D	P	P
Blue Grama	<i>Bouteloua gracilis</i>	EP	D	D	D	D	P	P	P	P	P	D	D	D
Hairy Grama	<i>Bouteloua hirsuta</i>	EP	D	D	D	D	P	P	P	P	P	D	D	D
Threeawn spp.	<i>Aristida</i> spp.	L	U	U	D	D	D	U	U	U	U	U	U	U
Bush Muhly	<i>Muhlenbergia porteri</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P
Texas Bluestem	<i>Andropogon cirratus</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
Spike Pappusgrass	<i>Enneapogon desvauxii</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
Bullgrass	<i>Muhlenbergia emersleyi</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
Little Bluestem	<i>Schizachyrium scoparium</i>	EP	U	U	U	P	P	P	D	D	D	D	U	U
Perennial 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
Annual 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
Yerba-de-pasmo	<i>Baccharis pteronioides</i>	L	E	E	E	E	E	E	E	E	E	E	E	E
Catclaw Mimosa	<i>Mimosa aculeaticarpa</i>	L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Soaptree Yucca	<i>Yucca elata</i>	F/L	D	D	D	D	P	P	U	U	U	U	U	D
Cactus spp.	<i>Opuntia</i> spp.	EP	E	E	E	E	E	E	E	E	E	E	E	E
Oak spp.	<i>Quercus</i> spp.	L/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	NS
Sacahuista	<i>Nolina microcarpa</i>	F/L	U	U	U	U	P	P	D	U	U	U	U	U
Ocotillo	<i>Fouquieria splendens</i>	F	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

Animal Kind: Wildlife

Animal Type: Deer

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Sideoats Grama	<i>Bouteloua curtipendula</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Plains Lovegrass	<i>Eragrostis intermedia</i>	EP	U	U	U	U	D	D	D	D	U	U	U	U
Cane Bluestem	<i>Bothriochloa barbinodis</i>	EP	U	U	U	U	U	U	D	D	D	U	U	U
Tanglehead	<i>Heteropogon contortus</i>	L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Black Grama	<i>Bouteloua eriopoda</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Blue Grama	<i>Bouteloua gracilis</i>	EP	U	U	U	U	U	D	D	D	D	D	U	U
Hairy Grama	<i>Bouteloua hirsuta</i>	EP	U	U	U	U	U	D	D	D	D	D	U	U
Threeawn spp.	<i>Aristida</i> spp.	L	U	U	D	D	D	U	U	U	U	U	U	U
Bush Muhly	<i>Muhlenbergia porteri</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Texas Bluestem	<i>Andropogon cirratus</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
Spike Pappusgrass	<i>Enneapogon desvauxii</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
Bullgrass	<i>Muhlenbergia emersleyi</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
Little Bluestem	<i>Schizachyrium scoparium</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
Perennial 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
Annual 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
Yerba-de-pasmo	<i>Baccharis pteronioides</i>	L	E	E	E	E	E	E	E	E	E	E	E	E
Catclaw Mimosa	<i>Mimosa aculeaticarpa</i>	L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Soaptree Yucca	<i>Yucca elata</i>	F/L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Cacti spp.	<i>Opuntia</i> spp.	EP	E	E	E	E	E	E	E	E	E	E	E	E
Oak spp.	<i>Quercus</i> spp.	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
Sacahuista	<i>Nolina microcarpa</i>	F/L	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Ocotillo	<i>Fouquieria splendens</i>	F	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: Hidalgo

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

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

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

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

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

Is the type locality sensitive?    Yes             No

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

**Relationship to Other Established Classifications:**

**Other References:**

Data collection for this site was done in conjunction with the progressive soil surveys within the SE Arizona Basin and Range 41 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Hidalgo

**Characteristic Soils Are:**

Lehmans

**Other Soils included are:**

**Site Description Approval:**

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester	07/21/80	Don Sylvester	07/21/80

**Site Description Revision:**

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Elizabeth Wright	07/12/02	George Chavez	2/12/03