

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

**ECOLOGICAL SITE DESCRIPTION**

**ECOLOGICAL SITE CHARACTERISTICS**

**Site Type:** Rangeland

**Site ID:** R041XA002NM

**Site Name:** Clay Loam Upland

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

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

## PHYSIOGRAPHIC FEATURES

### **Narrative:**

This site occurs on valley slopes and plains or broad fans from 4,500 to 5,500 feet above sea level. Slopes are mainly less than 10 percent, but may go to 30 percent.

### **Land Form:**

1. Valley side

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2. Plain

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3. Alluvial fan

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### **Aspect:**

1. N/A

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- 2.

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- 3.

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	<b>Minimum</b>	<b>Maximum</b>
Elevation (feet)	4,500	5,500
Slope (percent)	10	30
Water Table Depth (inches)	N/A	N/A
	<b>Minimum</b>	<b>Maximum</b>
<b>Flooding:</b>		
Frequency	N/A	N/A
Duration	N/A	N/A
	<b>Minimum</b>	<b>Maximum</b>
<b>Ponding:</b>		
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	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 degree 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 170 to 230 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	From:	Period	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:**

These are deep, well-drained soils with moderately fine and gravelly moderately fine textured surface layers and moderately fine and fine textured subsoils, which can contain lime. They have moderate to high available water-holding capacity, with moderate intake rates and moderate to slow permeability.

**Parent Material Kind:** Alluvium

**Parent Material Origin:** Limestone unspecified

**Surface Texture:**

1. Loam
2. Clay loam
3.

**Surface Texture Modifier:**

1. Gravel
2.
3.

**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

	<b>Minimum</b>	<b>Maximum</b>
<b>Drainage Class:</b>	<u>Well</u>	<u>Well</u>
<b>Permeability Class:</b>	<u>Impermeable</u>	<u>Very slow</u>
<b>Depth (inches):</b>	<u>60</u>	<u>&gt;72</u>
<b>Electrical Conductivity (mmhos/cm):</b>	<u>0.00</u>	<u>2.00</u>
<b>Sodium Absorption Ratio:</b>	<u>N/A</u>	<u>N/A</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>6</u>	<u>12</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  
75 to 95 percent grass and 10 percent shrubs and forbs characterize this plant community. Plant species most likely to increase or invade are mesquite, broom snakeweed, cacti and annuals. 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	510	808	1,105
Forb	18	29	39
Tree/Shrub/Vine	18	29	39
Lichen			
Moss			
Microbiotic Crusts			
<b>Total</b>	600	950	1,300

**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	BUDA	Buffalograss	95 – 143	95 – 143
2	PLMU3	Tobosa	285 – 380	285 – 380
3	BOCU	Sideoats Grama	143 – 238	143 – 238
4	BOGR2 BOBA3 ERIN	Blue Grama Cane Bluestem Plains Lovegrass	95 – 143	95 – 143
5	PAOB DICA8 SEVU2 SPCR LYPH BOER4	Vine-mesquite Arizona Cottontop Plains Bristlegrass Sand Dropseed Wolftail Black Grama	48 – 95	48 – 95
6	DICOA DAPU7 LEDU PAHA MUHLE BORA SPCO4 ARIST BOHI2 ELEL5	Fall Witchgrass Fluffgrass Green Sprangletop Halls Panicum Muhlenbergia spp. Purple Grama Spike Dropseed Threeawn spp. Hairy Grama Bottlebrush Squirreltail	10 – 48	10 - 48

**Plant Type - Forb**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
7	LESQU PLPA2 AMARA HELIO SPHAE OEBI ERIOG	Bladderpod Wooly Indianwheat Pigweed Goldeneye spp. Globemallow spp. Evening Primrose Buckwheat spp.	10 – 48	10 – 48

**Plant Type – Tree/Shrub/Vine**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
8	YUEL EPTR AGAVE OPUNT PROSO	Soaptree Yucca Longleaf Mormon-tea Agave spp. Cacti spp. Mesquite spp.	10 – 48	10 - 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 1902NM

Growth Curve Name: HCPC

Growth Curve Description: Grassland with minor shrub and forb component.

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 can be quite extensive in size. Free water is not common and springs and seeps are rare. Wildlife requiring free water is not normally found unless water has been developed. Drainages are found within the site, but are not considered as part of the site. These drainages and bottom type areas contain the majority of habitat for most wildlife species. The site provides grasses as the main food elements for wildlife. It provides nesting and protective cover for ground nesting birds and small mammals. Wildlife species found on this site are: pronghorn antelope, white-tailed deer, mule deer, desert cottontail, bannertail kangaroo rat, javelina, and Gambels 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>
Cloverdale	D
Eicks	C
Stellar	c

### **Recreational Uses:**

Lack of variety in the plant community keeps the aesthetic appeal low on this site. Very few days are too uncomfortable to limit outdoor activities. Horseback riding, hunting, wildlife observation, photography, and nature studies are the principal activities on this site.

### **Wood Products:**

No Data

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

Livestock prefer this site to most others, because of the gentle topography. Sheet and gully erosion is a problem when the grass cover is removed. Stocking rates should be evaluated and livestock numbers adjusted based 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	0.4 – 6.0
75 – 51	6.5 – 8.5
50 – 26	9.0 – 12.0
25 – 0	12.0+

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
Buffalograss	Buchloe dactyloides	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
Tobosa	Pleuraphis mutica	EP	U	U	U	U	U	D	D	D	D	D	U	U
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Cane Bluestem	Bothriochloa barbinodis	EP	U	U	U	U	U	U	P	P	D	U	U	U
Plains Lovegrass	Eragrostis intermedia	EP	U	U	U	U	D	D	D	U	U	U	U	U
Vine-mesquite	Panicum obtusum	EP	D	D	D	D	D	D	D	D	D	D	D	D
Arizona Cottontop	Digitaria californica	EP	U	U	U	U	U	U	P	P	D	U	U	U
Plains Bristlegrass	Setaria vulpisetia	EP	P	P	P	P	P	P	P	P	P	P	P	P
Sand Dropseed	Sporobolus cryptandrus	EP	D	D	D	D	D	D	D	D	D	D	D	D
Wolftail	Lycurus phleoides	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	Bouteloua eriopoda	EP	P	P	P	D	D	D	D	D	D	D	P	P
Fall Witchgrass	Digitaria cognata	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
Fluffgrass	Dasyochloa pulchella	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
Green Sprangletop	Leptochloa dubia	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
Halls Panicum	Panicum hallii	EP	D	D	D	D	P	P	P	P	D	D	D	D
Muhly	Muhlenbergia spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Purple Grama	Bouteloua radicata	EP	D	D	D	D	P	P	P	P	P	D	D	D
Spike Dropseed	Sporobolus contractus	EP	D	D	D	D	D	D	D	D	D	D	D	D
Threeawn	Aristida spp.	L	U	U	D	D	D	U	U	U	U	U	U	U
Hairy Grama	Bouteloua hirsuta	EP	D	D	D	D	P	P	P	P	P	D	D	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Bladderpod	Lesquerella spp.	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
Woolly Indianwheat	Plantago purshii	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
Pigweed	Amaranthus spp.	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 Goldeneye	Heliomeris spp.	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
Globemallow	Sphaeralcea spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Evening Primrose	Oenothera biennis	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
Buckwheat	Eriogonum spp.	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
Soaptree Yucca	Yucca elata	F/L	D	D	D	D	P	P	U	U	U	U	U	D
Longleaf Mormon-tea	Ephedra trifurca	L/S	D	D	D	D	D	D	D	D	D	D	P	P
Agave	Agave spp.	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	Opuntia spp.	EP	E	E	E	E	E	E	E	E	E	E	E	E
Mesquite	Prosopis spp.	F/S/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

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
Buffalograss	<i>Buchloe dactyloides</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
Tobosa	<i>Pleuraphis mutica</i>	EP	U	U	U	U	U	U	D	D	D	D	U	U
Sideoats Grama	<i>Bouteloua curtipendula</i>	EP	D	D	D	D	D	P	P	P	D	D	D	D
Blue Grama	<i>Bouteloua gracilis</i>	EP	U	U	U	U	D	D	D	D	D	D	D	U
Cane Bluestem	<i>Bothriochloa barbinodis</i>	EP	U	U	U	U	U	U	D	D	D	U	U	U
Plains Lovegrass	<i>Eragrostis intermedia</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
Vine-mesquite	<i>Panicum obtusum</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
Arizona Cottontop	<i>Digitaria californica</i>	EP	U	U	U	U	U	U	D	D	D	U	U	U
Plains Bristlegrass	<i>Setaria vulpiseta</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Sand Dropseed	<i>Sporobolus cryptandrus</i>	EP	U	U	D	D	D	U	U	U	U	U	U	U
Wolftail	<i>Lycurus phleoides</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	D	D	D	D	D	D	D	D	D	D	D	D
Fall Witchgrass	<i>Digitaria congata</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/
Fluffgrass	<i>Dasyochloa pulchella</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
Green Sprangletop	<i>Leptochloa dubia</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
Halls Panicum	<i>Panicum hallii</i>	EP	D	D	D	D	P	P	P	P	D	D	D	D
Muhly	<i>Muhlenbergia spp.</i>	EP	U	U	D	D	D	D	D	D	U	U	U	U
Purple Grama	<i>Bouteloua radicata</i>	EP	U	U	U	U	D	D	D	D	D	D	D	U
Spike Dropseed	<i>Sporobolus contractus</i>	EP	U	U	D	D	D	U	U	U	U	U	U	U
Threeawn	<i>Aristida spp.</i>	L	U	U	D	D	D	U	U	U	U	U	U	U
Hairy Grama	<i>Bouteloua hirsuta</i>	EP	U	U	U	U	D	D	D	D	D	D	D	U
Bottlebrush Squirreltail	<i>Elymus elymoides</i>	EP	U	U	D	D	D	U	U	U	U	U	U	U
Bladderpod	<i>Lesquerella spp.</i>	EP	U	U	D	D	D	D	D	D	U	U	U	U
Woolly Indianwheat	<i>Plantago purshii</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
Pigweed	<i>Amaranthus spp</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
Annual Goldeneye	<i>Heliomeris spp.</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
Globemallow	<i>Sphaeralcea spp.</i>	EP	U	U	D	D	D	D	D	D	U	U	U	U
Evening Primrose	<i>Oenothera biennis</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
Buckwheat	<i>Eriogonum spp.</i>	EP	U	U	D	D	D	D	D	D	U	U	U	U
Soaptree Yucca	<i>Yucca elata</i>	F/L	U	U	U	U	D	D	D	U	U	U	U	U
Longleaf Mormon-tea	<i>Ephedra trifurca</i>	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
Agave	<i>Agave spp.</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
Cacti	<i>Opuntia spp.</i>	F/F/L	E	E	E	E	E	E	E	E	E	E	E	E
Mesquite	<i>Prosopis spp.</i>	L/F/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: Hidalgo

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

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

Township: 33 S.

Range: 20 W.

Section: 3

Is the type locality sensitive? Yes  No

General Legal Description: Flat south of Gray Ranch HDQTRS, upper Animas Valley, T. 33 S., R. 20 W., section 3.

<b><u>Relationship to Other Established Classifications:</u></b>
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**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:**

Cloverdale	Eicks
Stellar	

**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	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