

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

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R041XA003NM

Site Name: Clay Hills

Precipitation or Climate Zone: 12 to 16 inches

Phase: _____

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on low rolling foothills dissected by numerous watercourses. The smooth appearing grassy hills often have cobbly surfaces. Elevations range from 4,000 to 5,500 feet above sea level.

Land Form:

1. Hillside

2.

3.

Aspect:

1. N/A

2.

3.

	Minimum	Maximum
Elevation (feet)	4,000	5,500
Slope (percent)	3	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:

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 temperatures 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 180 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.

	Minimum	Maximum
Frost-free period (days):	167	187
Freeze-free period (days):	197	203
Mean annual precipitation (inches):	12	16

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:

		Period					
Station ID	<u>290417</u>	Location	<u>Animas, NM</u>	From:	<u>1961</u>	To:	<u>1990</u>
Station ID	<u>292757</u>	Location	<u>Eicks Ranch, NM</u>	From:	<u>1961</u>	To:	<u>1990</u>
Station ID	<u>297534</u>	Location	<u>Rodeo, NM</u>	From:	<u>1961</u>	To:	<u>1990</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 on this site are deep with gravelly and/or cobbly medium textured surface layer and fine textured subsoil. They have moderate available water-holding capacity with moderate intake rates and slow permeability.

Parent Material Kind: Alluvium

Parent Material Origin: Limestone unspecified

Surface Texture:

1. Stony clay loam
2.
3.

Surface Texture Modifier:

1. Stone
2.
3.

Subsurface Texture Group: Clayey

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

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

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

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

	Minimum	Maximum
Drainage Class:	<u>Well</u>	<u>Well</u>
Permeability Class:	<u>Impermeable</u>	<u>Slow</u>
Depth (inches):	<u>60</u>	<u>>72</u>
Electrical Conductivity (mmhos/cm):	<u>0.00</u>	<u>2.00</u>
Sodium Absorption Ratio:	<u>N/A</u>	<u>N/A</u>
Soil Reaction (1:1 Water):	<u>6.6</u>	<u>8.4</u>
Soil Reaction (0.1M CaCl2):	<u>N/A</u>	<u>N/A</u>
Available Water Capacity (inches):	<u>5</u>	<u>7</u>
Calcium Carbonate Equivalent (percent):	<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 has a plant community that is dominated by short and mid-grasses that produce most of their growth during July, August, and September. Scattered small shrubs also make up a small portion of the plant community. Cacti, especially cholla, seem to invade this site. 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	680	1,339	1,998
Forb	24	47	71
Tree/Shrub/Vine	24	47	71
Lichen			
Moss			
Microbiotic Crusts			
Total	800	1,575	2,350

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	394 – 551	394 – 551
2	BOER4	Black Grama	315 – 473	315 – 473
3	PLMU2	Tobosa	158 – 315	158 – 315
4	BOBA3 HIBE LEDU MUPO2 BOGR2	Cane Bluestem Curly Mesquite Green Sprangletop Bush Muhly Blue Grama	79 – 158	79 – 158
5	HECO10 BOHI2 SEVU2 ARIST LYPH DICOA ERIN ELEL5 PAOB	Tanglehead Hairy Grama Plains Bristlegrass Threeawn spp. Wolftail Fall Witchgrass Plains Lovegrass Bottlebrush Squirreltail Vine-mesquite	16 – 79	16 – 79

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
6	2FA 2FP	Annual Forbs Perennial Forbs	16 – 79	16 - 79

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
7	NOMI KRLA2 EPHED YUEL LYPA MIACB	Sacahuista Winterfat Mormon-tea spp. Soaptree Yucca Pale Wolfberry Catclaw Mimosa	16 – 79	16 – 79

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 1903NM

Growth Curve Name: HCPC

Growth Curve Description: Grassland with scattered shrubs and a minor 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:

Drianages and adjacent sites, in combination with this site, provide most habitat requirements for various species of wildlife. The lack of shrubs and trees limits the site for some species. Ground nesting birds, rodents and reptiles are the main types of wildlife. If water is developed larger mammals may move onto the site. Wildlife species include: pronghorn antelope, white-tailed deer, mule deer, antelope jackrabbit, bannertailed kangaroo rat, scaled quail, and Gambel's quail.

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
Cloverdale	D

Recreational Uses:

Grassland with very few woody plants makes this site only moderately pleasing esthetically. Warm winters and relatively cool summers provide comfortable conditions for outdoor activities. Hunting, and rock collecting are the principal activities on this site.

Wood Products:

No Data

Other Products:

Grazing:

This site has not been invaded by weeds and brush to the extent that most others have. The site does not respond to small amounts of moisture, but when adequate moisture is available it makes rapid growth.

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

Similarity Index	Ac/AUM
100 - 76	2.7 – 4.0
75 – 51	4.2 – 6.0
50 – 26	6.6 – 8.4
25 – 0	8.4+

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
Black Grama	<i>Bouteloua eriopoda</i>	EP	P	P	P	D	D	D	D	D	D	D	D	P
Tobosa	<i>Pleuraphis mutica</i>	EP	U	U	U	U	U	D	D	D	D	U	U	U
Cane Bluestem	<i>Bothriochloa barbinodis</i>	EP	U	U	U	U	U	U	P	P	D	U	U	U
Curly Mesquite	<i>Hilaria belangeri</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	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
Blue Grama	<i>Bouteloua gracilis</i>	EP	D	D	D	D	P	P	P	P	P	D	D	D
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
Hairy Grama	<i>Bouteloua hirsuta</i>	EP	D	D	D	D	P	P	P	P	P	D	D	D
Plains Bristlegrass	<i>Setaria vulpiseta</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
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
Fall Witchgrass	<i>Digitaria cognata</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
Plains Lovegrass	<i>Eragrostis intermedia</i>	EP	U	U	U	U	D	D	D	U	U	U	U	U
Bottlebrush Squirreltail	<i>Elymus elymoides</i>	EP	U	U	D	D	D	U	U	U	D	D	D	U
Vine-mesquite	<i>Panicum obtusum</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
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
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
Sacahuista	<i>Nolina microcarpa</i>	F/L	U	U	U	U	P	P	P	U	U	U	U	U
Winterfat	<i>Krascheninnikovia lanata</i>	L/S	D	D	P	P	P	P	P	P	D	D	D	D
Mormon-tea	<i>Ephedra</i> spp.	L/S	D	D	D	D	D	D	D	D	D	D	P	P
Soaptree Yucca	<i>Yucca elata</i>	F/L	D	D	D	D	P	P	U	U	U	U	U	D
Pale Wolfberry	<i>Lycium pallidum</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
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

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
Sideoats Grama	<i>Bouteloua curtipendula</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Black Grama	<i>Bouteloua eriopoda</i>	EP	P	P	P	D	D	D	D	D	D	D	P	P
Tobosa	<i>Pleuraphis mutica</i>	EP	U	U	U	U	U	U	D	D	D	D	U	U
Cane Bluestem	<i>Bothriochloa barbinodis</i>	EP	U	U	U	U	U	U	D	D	D	U	U	U
Curly Mesquite	<i>Hilaria belangeri</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	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
Blue Grama	<i>Bouteloua gracilis</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
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
Hairy Grama	<i>Bouteloua hirsuta</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Plains Bristlegrass	<i>Setaria vulpiseta</i>	EP	D	D	D	D	D	D	D	D	D	D	D	D
Threeawn spp.	<i>Aristida</i> spp.	L	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
Fall Witchgrass	<i>Digitaria cognata</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
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
Bottlebrush Squirreltail	<i>Elymus elymoides</i>	EP	U	U	D	D	D	U	U	U	U	U	U	U
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
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
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
Sacahuista	<i>Nolina microcarpa</i>	F	U	U	U	U	D	D	U	U	U	U	U	U
Winterfat	<i>Krascheninnikovia lanata</i>	L/S	D	D	D	D	D	D	D	D	D	D	D	D
Mormon-tea	<i>Ephedra</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
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
Pale Wolfberry	<i>Lycium pallidum</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
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

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: 10 W

Section: 35

Is the type locality sensitive? Yes No

General Legal Description: On San Luis Pass, T. 33 S., R. 19 W., Section 35.

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:

Cloverdale

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