

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R036XB128NM

Site Name: Clayey

Precipitation or Climate Zone: 10-16"

Phase: _____

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on moderately sloping valley side slopes. It can also occur as sloping benches or rolling hills above valley bottoms and floodplain positions. Slopes range from 5 to 15 percent. Elevations range from 6,000 to 7,300 feet.

Land Form:

1. hillside

2. valley side

3. sloping benches

Aspect:

1. not significant

- 2.

- 3.

Elevation (feet)	Minimum 5900	Maximum 7800
Slope (percent)	1	24
Water Table Depth (inches)	--	--
Flooding:	Minimum	Maximum
Frequency	none	rare
Duration	none	Very brief
Ponding:	Minimum	Maximum
Depth (inches)	--	--
Frequency	--	--
Duration	--	--

Runoff Class:

Medium to very high

Hydrologic units B, C & D

CLIMATIC FEATURES

Narrative:

Average annual precipitation varies from about 10 inches to just over 16 inches. Fluctuations ranging from about 5 inches to 25 inches are not uncommon. The overall climate is characterized by cold dry winters in which winter moisture is less than summer. As much as half or more of the annual precipitation can be expected to come during the period of July through September. Thus, fall conditions are often more favorable for good growth of cool-season perennial grasses, shrubs, and forbs than are those of spring.

The average frost-free season is about 120 days and extends from approximately mid-May to early or mid-September. Average annual air temperatures are 50 degrees F or lower and summer maximums rarely exceed 100 degree F. Winter minimums typically approach or go below zero. Monthly mean temperatures exceed 70 degree F for the period of July and August.

Rainfall patterns generally favor warm-season perennial vegetation, while the temperature regime tends to favor cool-season vegetation. This creates a somewhat complex community of plants on a given range site which is quite susceptible to disturbance and is at or near its productive potential only when both the natural warm- and cool- season dominants are present.

	Minimum	Maximum
Frost-free period (days):	51	171
Freeze-free period (days):	130	252
Mean annual precipitation (inches):	10	16

Monthly moisture (inches) and temperature (⁰F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.40	.91	12.9	47.0
February	.43	.65	16.6	51.2
March	.47	1.10	20.9	57.1
April	.30	.49	26.1	65.3
May	.46	.98	33.4	74.2
June	.51	.57	41.4	84.2
July	2.15	3.45	50.4	85.1
August	2.28	3.03	48.7	82.4
September	1.29	1.68	41.4	77.9
October	.81	1.12	29.4	69.2
November	.38	.71	19.1	57.3
December	.53	.95	13.1	48.9

Climate Stations:					
Station ID	290640	Location	Augustine 2E	From:	<div style="text-align: center;">Period</div> 05/01/26 To 07/31/00
Station ID	296812	Location	Pietown 19NE	From:	<div style="text-align: center;">Period</div> 09/01/88 To 07/31/00
Station ID	297180	Location	Quemado	From:	<div style="text-align: center;">Period</div> 08/01/15 To 07/31/00

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:

Soils are typically moderately fine to fine-textured on the surface (clay loam, clay, silty clay loam) over fine textured subsoils. They are usually deep, but may be moderately deep. Water intake rates are slow to moderately slow. Permeability is slow, and water-holding capacity is high. Runoff from this site is usually excessive in the absence of adequate vegetative cover. It may also be excessive during periods of heavy rainfall or spring snowmelt. The erosion hazard is high when the vegetative cover deteriorates.

Parent Material Kind: alluvium

Parent Material Origin: Mixed- derived from shale and sandstone

Surface Texture:

1. clay
2. silty clay loam
3. clay loam

Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: N/A

Surface Fragments $\leq 3''$ (% Volume): --

Surface Fragments $> 3''$ (% Volume): --

Subsurface Fragments $\leq 3''$ (%Volume): 2-36

Subsurface Fragments $\geq 3''$ (%Volume): -- -2

	Minimum	Maximum
Drainage Class:	--	well
Permeability Class:	impermeable	Moderately slow
Depth (inches):	0	75
Electrical Conductivity (mmhos/cm):	0.00	8.00
Sodium Absorption Ratio:	0.00	13.00
Soil Reaction (1:1 Water):	6.6	9.0
Soil Reaction (0.1M CaCl ₂):	--	--
Available Water Capacity (inches):	2	8
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:

Typically this site is dominated by alkali sacaton. Western wheatgrass, galleta and blue grama occur in lesser amounts but are common and important components of the potential plant community. Giant sacaton is scattered throughout the site. Shrubs include fourwing saltbush, rabbitbrush, and winterfat. Forbs occur in relative abundance in years of above-average precipitation and annual forbs make up a significant percentage of the available forage.

Ground Cover (Average Percent of Surface Area).

Grasses & Forbs	25
Bare ground	65
Surface gravel	
Surface cobble and stone	--
Litter (percent)	10-15
Litter (average depth in cm.)	0-1
Surface Gravel (% cover)	

Plant Community Annual Production (by plant type):

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	600	750	900
Forb	60	75	90
Tree/Shrub/Vine	80	100	120
Lichen	--	--	--
Moss	--	--	--
Microbiotic Crusts	--	--	--
Totals	800	1000	1200

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	SPAI SPWR2	Alkali sacaton Giant sacaton	200-250	200-250
2	PASM	Western wheatgrass	200-300	200-300
3	PLJA	Galleta	100-150	100-150
4	BOGR2	Blue grama	50-200	50-200
5	PAOB	Vine-mesquite	0-50	0-50
6	ELEL5 ACHY	Bottlebrush squirreltail Indian ricegrass	50-100	50-100
7	MUWR	Spike muhly	30-50	30-50
8	MURI	Mat muhly	10-50	10-50
9	SPORO	Dropseed spp.	10-50	10-50
10	--	others	10-50	10-50

Plant Type - Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	ATCA2 KRLA2	Fourwing saltbush Winterfat	50-100	50-100
12	GUSA2 ERNAN5	Broom snakeweed Rabbitbrush	10-50	10-50

Plant Type – Forb

13	2FP	Perennial forbs	10-80	10-80
14	2FA	Annual forbs	10-50	10-50

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 NM 0318

Growth Curve Name: HCPC

Growth Curve Description: WP-2 Clayey - HCPC Warm/Cool season perennial plant community.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	8	15	10	9	20	25	8	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Wildlife species indigenous to this site will be added when data is available.

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
Crown clay loam	D
Kimbeto clay loam (McKinley Co.)	C
Moncha silty clay loam	C
Silkie clay loam	C
Teco variant (mapped in Cibola Co.)	C
Las Lueas loam	C
Moriarity silty clay	D

Recreational Uses:

This site offers a limited opportunity for establishing small intermittent water areas in the form of pit tanks. It has the potential for hiking, observing wildlife, horseback riding, photography, picnicking and camping. Trail establishment for hiking or horseback riding should be selected with care. Frequently used trails could create opportunities for overland flow to channelize and form gullies.

Wood Products:

This site has no value for wood products.

Other Products:

Other Information:

This site is suitable for grazing by all kinds and classes of livestock. Excessive grazing use over a prolonged period will result in a decrease of alkali sacaton, western wheatgrass and spike muhly. Blue grama and galleta may increase initially, but will eventually decrease if the heavy grazing continues. The site then becomes subject to the invasion of broom snakeweed, rabbitbrush and cacti. Ring muhly, threeawns, Russian thistle and tansy mustard increase significantly. The site may become severely eroded with deep vertical walled gullies when plant cover decreases.

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	3.5- 4.5
75 – 51	4.5- 6.5
50 – 26	6.5- 10.0
25 – 0	10.0+

Plant Preference by Animal Kind:

	Code	Species Preference	Code
Stems	S	None Selected	N/S
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruit/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

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
Alkali sacaton	<i>Sporobolus airoides</i>	EP	D	D	D	D	D	P	P	P	D	D	D	D
Western wheatgrass	<i>Pascopyrum smithii</i>	EP	D	D	P	P	P	D	D	D	D	D	D	D
Vine mesquite	<i>Panicum obtusum</i>	EP	D	D	D	D	D	D	D	D	P	P	D	D
Spike muhly	<i>Muhlenbergia wrightii</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
Giant sacaton	<i>Sporobolus wrightii</i>	EP	D	D	D	D	D	P	P	P	D	D	D	D
Bottlebrush squirreltail	<i>Elymus elymoides</i>	EP	U	U	D	D	D	U	U	U	D	D	D	U
Winterfat	<i>Krascheninnikovia lanata</i>	EP	D	D	P	P	P	P	P	P	D	D	D	D
Fourwing saltbush	<i>Atriplex canescens</i>	EP	P	P	P	P	P	D	D	D	D	D	D	P
Indian ricegrass	<i>Achnatherum hymenoides</i>	EP	P	P	P	P	P	P	P	P	P	P	P	P

Supporting Information

Associated Sites:

<u>Site Name</u>	<u>Site ID</u>	<u>Site Narrative</u>
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Similar Sites:

<u>Site Name</u>	<u>Site ID</u>	<u>Site Narrative</u>
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State Correlation:

This site has been correlated with the following states:

Inventory Data References:

<u>Data Source</u>	<u>Number of Records</u>	<u>Sample Period</u>	<u>State</u>	<u>County</u>
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Type Locality:

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus & Mesas Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: McKinley, Catron, Cibola, Socorro and Sandoval.

Characteristic Soils Are:

Crown clay loam 3-8%	Kimbeto clay loam 1-8%
Moncho silty clay loam 4-8%	Teco 4-8%
Silkie clay loam	
<u>Other Soils included are:</u>	

Site Description Approval:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester	05/09/84	Don Sylvester	05/09/84

Site Description Revision:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Brenda Simpson	07/24/02	George Chavez	12/16/02

