UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R070XA013NM

Site Name: Salt Meadow

Precipitation or Climate Zone: 14 to 16 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This is on nearly level to gently sloping bottoms and fans. Elevation ranges from 5,800 to 7,200 feet above sea level. Slopes are concave and range from 0 to 4 percent. These sites receive water from surrounding sites, either as shallow ground water or surface runoff.

Land Form:

1. Basin floor
2. Depression
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	5,800	7,200
Slope (percent)	0	4
Water Table Depth (inches)	Unknown	Unknown

Flooding:	**Minimum**	**Maximum**
Frequency	Unknown	Unknown
Duration	Unknown	Unknown

Ponding:	**Minimum**	**Maximum**
Depth (inches)	Unknown	Unknown
Frequency	Unknown	Unknown
Duration	Unknown	Unknown

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

The climate of this area can be classified as "semi-arid continental".

Precipitation averages 14 to 16 inches. Seventy seven percent of the year's moisture normally falls during the period of May through October. Practically all of it is brought by brief afternoon and evening thunderstorms. In July and August, normally the wettest months of the year, one can expect about one day in five when rainfall exceeds one-tenth inch. Early spring precipitation in May benefits the cool-season plants. Winter precipitation, supplying 24 percent of the year's moisture, normally has no more than two days a month with as much as one-tenth inch of moisture. Much of the winter precipitation falls as snow.

Air temperatures vary from a monthly mean of 20 degrees F in January to 69 degrees F in July. Daily high temperatures average in the 80's and low 90's during the summer. Winter low temperatures fall below the freezing mark much of the time from November through March with minimum temperatures approaching 25 degrees F below zero. Dates of the last killing frost may vary from May 9th through May 17th, and the first killing frost from September 27th to October 8th. The frost-free season ranges from 141 days to 153 days from early May to early October.

Wind velocities for the area average 10 to 12 miles per hour and prevail from the south and southwest. Generally, March is the windiest month. Strong winds during the spring cause rapid drying of the soil surface.

Nearby mountains to the west intercept much of the precipitation from the Pacific storms coming through this area during the winter. About 70 percent of the 14 to 16 inches of annual precipitation falls in the form of rainfall during the frost-free season. About 40 percent of the annual precipitation benefits cool-season plants, 50 percent benefits warm-season plants and 10 percent falls during the season of plant dormancy. Relative humidity is moderately low. The sun shines approximately 75 percent of the time.

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):	132	149
Freeze-free period (days):	153	171
Mean annual precipitation (inches):	14	16

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.27	.40	10.4	48.2
February	.26	.43	14.1	52.7
March	.56	.78	20.4	59.6
April	.85	1.20	28.7	67.9
May	1.68	2.49	38.3	76.4
June	1.77	2.21	46.3	85.7
July	2.53	3.43	50.9	88.8
August	2.95	3.57	50.6	86.6
September	1.56	2.02	42.9	80.7
October	1.02	1.20	31.4	71.4
November	.44	.59	19.9	57.6
December	.25	.51	12.3	50.5

Climate Stations:

				Period		
Station ID	293706	Location	Grenville, NM	From: 01/01/41	To:	12/31/01
Station ID	294856	Location	Las Vegas FAA Airport, NM	From: 01/01/41	To:	12/31/01
Station ID	295490	Location	Maxwell, NM	From: 01/01/14	To:	12/31/01
Station ID	297280	Location	Raton KRTN Radio, NM	From: 12/01/78	To:	12/31/01
Station ID	298501	Location	Springer, NM	From: 01/01/14	To:	12/31/01
Station ID	299330	Location	Valmora, NM	From: 03/01/17	To:	12/31/01

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 very poorly drained to somewhat poorly drained. Permeability is moderate to slow. The available water-holding capacity is high. Effective rooting depth ranges from 12 to more than 60 inches. The effective rooting depth is sometimes determined by high saline content in the subsoil. These soils have water tables at or near the surface much of the growing season

Parent Material Kind: Marine deposits
Parent Material Origin: Gypsum

Surface Texture:

1. Unknown
2.
3.

Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: Unknown
Surface Fragments <=3" (% Cover): N/A
Surface Fragments >3" (% Cover): N/A

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

	Minimum	Maximum
Drainage Class:	Very poorly	Somewhat poorly
Permeability Class:	Slow	Moderate
Depth (inches):	12	>72
Electrical Conductivity (mmhos/cm):	Unknown	Unknown
Sodium Absorption Ratio:	Unknown	Unknown
Soil Reaction (1:1 Water):	Unknown	Unknown
Soil Reaction (0.1M CaCl2):	Unknown	Unknown
Available Water Capacity (inches):	9	12
Calcium Carbonate Equivalent (percent):	Unknown	Unknown

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 is a grassland mixed with shrubs. Vegetation is tolerant to saline or alkaline factors, which dominate this site. Grasses such as alkali sacaton, desert saltgrass, western wheatgrass and vine-mesquite dominate the site, with shrubs and forbs making up an important part of the vegetative community.
Since moisture for plant growth is supplied principally by a shallow water table, the annual amount of precipitation received is not as critical for this site as for the drier upland sites.

Canopy Cover:	
Trees	0
Shrubs and half shrubs	0 – 5 %
Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs	35 – 45
Bare ground	35 – 40
Surface gravel	0
Surface cobble and stone	0
Litter (percent)	10 – 15
Litter (average depth in cm.)	3

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	876	1,825	2,774
Forb	96	200	304
Tree/Shrub/Vine	156	325	494
Lichen			
Moss			
Microbiotic Crusts			
Total	1,200	2,500	3,800

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	Alkali Sacaton	750 – 875	750 – 875
2	DISP	Desert Saltgrass	250 – 375	250 – 375
3	PASM	Western Wheatgrass	250 – 375	250 – 375
4	PAOB	Vine-mesquite	125 – 250	125 – 250
5	MURI	Mat Muhly	75 – 125	75 – 125
6	MUAS	Alkali Muhly	75 – 125	75 – 125
7	HOBR2	Meadow Barley	75 – 125	75 – 125
8	BOGR2	Blue Grama	75 – 125	75 – 125
9	PLJA	Galleta	75 – 125	75 – 125
10	CATTAS	Saltsedge	75 – 125	75 – 125

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	ATRIP	Annual Saltbush spp.	75 – 125	75 – 125
12	2FP	Other Perennial Forbs	75 – 125	75 – 125
13	2FA	Other Annual Forbs	75 – 125	75 – 125

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
14	ATCA2	Fourwing Saltbush	250 – 375	250 – 375
15	SUSU	Seepweed	75 – 125	75 – 125
16	2SD	Other Shrubs	0 – 125	0 – 125

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 shrubs that could appear include: black greasewood.
Other forbs that could appear include: tumbling saltbush and Rocky Mountain glasswort.

Plant Growth Curves

Growth Curve ID **3713NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **Grassland mixed with shrubs with a minor component of forbs.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This site provides habitats which support a resident animal community that is characterized by coyote, desert cottontail, meadow mole, sparrow hawk, scaled quail, mourning dove, roadrunner, bullsnake, ornate box turtle and great plains skunk.

The killdeer will often use these habitats for breeding. There may be seasonal use by pronghorn antelope.

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**
Swastika	C
Vermejo	C

Recreational Uses:

This site, due to the open space dotted with shrubs, has fair aesthetic appeal. It is poor for camping, hiking and picnicking. Hunting is poor to fair for antelope, rabbits and upland game birds. This site provides a fair winter range for big game where it is located in the foothills of the mountains.

Wood Products:

This site has no significant potential for wood products.

Other Products:

Grazing:

This site is suitable for late winter, spring and early summer grazing but may be restricted because of boggy conditions. Open water may be present during this time causing bogs. Forage could best be utilized by grazing cattle or horses due to the coarseness of the forage produced by alkali sacaton. When alkali sacaton dominates the site, maximum available forage production from this site can be achieved by mowing in late winter and concentrating livestock in small pastures during the summer and by grazing and resting the pastures in alternate years. Approximately 85 percent of the total annual yield are from species that furnish forage for livestock. Continuous grazing during the growing season will cause the more desirable forage plants such as western wheatgrass, vine-mesquite, blue grama and fourwing saltbush to decrease. Species most likely to increase are alkali sacaton, saltgrass, mat muhly, alkali muhly and salt sagebrush. As the ecological conditions deteriorate, it is accompanied by a sharp increase of saltgrass or alkali sacaton. As deterioration advances, saltgrass and a reduction of plant cover may dominate the plant community. A system of deferred grazing, which varies the time of grazing and rest in a pasture during successive years, is needed to maintain or improve the plant community. Rest during April, May and June is especially beneficial to western wheatgrass.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	1.0 – 1.9
75 – 51	1.8 – 2.6
50 – 26	2.5 – 5.9
25 – 0	5.9+

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
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D

Animal Kind: Livestock
Animal Type: Horse

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D

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
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D

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
Fourwing Saltbush	Atriplex canescens	L/S	P	P	D	D	D	D	D	D	D	D	D	P

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
Annual Saltbush	Atriplex 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

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: **Colfax, Mora, San Miguel**

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 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: Colfax, Mora, San Miguel, Union.

Characteristic Soils Are:	
Swastika	Vermejo
Other Soils included are:	

Site Description Approval:

Author	**Date**	**Approval**	**Date**
Don Sylvester	04/25/80	Durwood E. Ball	04/29/80

Site Description Revision:

Author	**Date**	**Approval**	**Date**
Elizabeth Wright	08/26/02	George Chavez	12/17/02