

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

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R070XC124NM

Site Name: Gyp Hills (CP-3, WP-3)

Precipitation or Climate Zone: 13 to 16 inches

Phase: _____

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on hillsides and on footslopes of higher mountains. Slopes range from 15 to 60 percent but average 20 to 30 percent. Aspect of slope varies but is not significant. Elevation ranges from 5,000 to 7,000 feet above sea level.

Land Form:

1. Hillside

2.

3.

Aspect:

1. N/A

2.

3.

	Minimum	Maximum
Elevation (feet)	5,000	7,000
Slope (percent)	15	60
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:

The average annual precipitation ranges from 13 to 16 inches. Variations of 5 inches, more or less, are not uncommon. Seventy-five percent of the precipitation falls from April to October. Much of the summer precipitation comes in the form of high-intensity, short-duration thunderstorms.

The average frost-free season ranges from 130 to 160 days in the CP-3 subland resource area and from 160 to 190 days in the WP-3 subland resource area.

Growing conditions favor warm-season perennial vegetation, however, late winter and late summer precipitation is also available for cool-season plant growth. Strong winds blow across these areas in the spring and can dry the soil profile rapidly during a critical period for cool-season plant growth.

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):	131	173
Freeze-free period (days):	155	187
Mean annual precipitation (inches):	13	16

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

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.34	.92	15.6	42.1
February	.34	.81	19.9	52.9
March	.23	.98	24.4	59.7
April	.39	.96	31.4	68.9
May	.85	1.61	39.2	77.7
June	.89	1.62	46.9	87.1
July	1.77	2.75	53.1	88.5
August	2.46	3.22	51.9	85.7
September	1.54	2.26	44.3	80.4
October	1.00	1.51	32.8	70.5
November	.57	1.02	22.2	57.5
December	.34	1.16	15.9	49.3

Climate Stations:

Station ID	Location	Period	
		From:	To:
291918	Clines Corners 7SE, NM	12/10/68	11/30/00
292096	Corona 11SSW, NM	12/01/77	09/30/92
293060	Estancia, NM	01/01/14	12/31/00
293649	Gran Quivira Natl. Monument, NM	06/01/38	12/31/00
295965	Mountainair, NM	03/01/14	12/31/00
299405	Vaughn, NM	01/01/71	12/31/00

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 shallow, well drained soils that formed on gypsum bedrock. Surface textures range from a sandy loam to a channery loam overlaying dense layers of soft or cemented gypsum material. These gypsum materials commonly outcrop to the surface as inclusions of raw gypsum-land, which are void of vegetation and not part of the ecological site. The soils have moderate permeability and water-holding capacity is very low. Water erosion hazard is high and wind erosion hazard is moderate.

Parent Material Kind: Marine deposits
 Parent Material Origin: Gypsum

Surface Texture:

1. Sandy loam
2. Very fine sandy loam
3. Fine sandy loam
4. Channery loam

Surface Texture Modifier:

1. Channery
2.
3.

Subsurface Texture Group: Loamy
 Surface Fragments <=3" (% Cover): N/A
 Surface Fragments >3" (% Cover): 15 to 35

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

	Minimum	Maximum
Drainage Class:	Well	Well
Permeability Class:	Moderately slow	Moderately rapid
Depth (inches):	0	>72
Electrical Conductivity (mmhos/cm):	0.00	2.00
Sodium Absorption Ratio:	N/A	N/A
Soil Reaction (1:1 Water):	6.6	8.4
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	0	3
Calcium Carbonate Equivalent (percent):	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

The aspect of this site is a grassland/shrub with a scattering of oneseed juniper. Forbs are scattered and make-up an important part of the potential natural plant community.

Canopy Cover:

Trees	3 %
Shrubs and half shrubs	10 %
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	12
Bare ground	60
Surface cobble and stone	10
Litter (percent)	5
Litter (average depth in cm.)	1

Plant Community Annual Production (by plant type): _____

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	150	263	356
Forb	8	14	19
Tree/Shrub/Vine	36	63	86
Lichen			
Moss			
Microbiotic Crusts			
Total	200	350	475

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	SPNE	Gyp Dropseed	35 – 70	35 – 70
2	SPAI	Alkali Sacaton	35 – 53	35 – 53
3	PLJA	Galleta	18 – 35	18 – 35
4	BOER4 MUPO2 BOCU ACHNA	Black Grama Bush Muhly Sideoats Grama Needlegrass	18 – 35	18 – 35
5	BOGR2 BOHI2	Blue Grama Hairy Grama	4 – 18	4 – 18
6	2GRAM	Other Grasses	18 – 25	18 - 25

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
7	SPHAE	Globemallow	4 – 11	4 – 11
8	DYPA	Dyssodia	4 – 11	4 – 11
9	SEFLF	Threadleaf Groundsel	4 – 11	4 – 11
10	2FROBS	Other forbs	4 – 11	4 - 11

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	TIHI	Hairy Coldenia (crinklemat)	18 – 35	18 – 35
12	MATR3	Algerita	11 – 18	11 – 18
13	YUBA	Banana Yucca	4 – 11	4 – 11
14	ARBI3	Bigelow Sagebrush	4 – 18	4 – 18
15	EPVI	Mormontea	11 – 18	11 – 18
16	JUMO	Oneseed Juniper	4 – 18	4 – 18
17	ATCA2 KRLA2	Fourwing Saltbush Winterfat	18 – 25	18 – 25
18	2SD	Other Shrubs	4 – 11	4 - 11

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 grasses that could appear include: threeawn spp., ring muhly, curlyleaf muhly, tridens spp., and sand dropseed.

Other woody species include: opuntia spp., skunkbush sumac, pale wolfberry, and pinyon.

Other forb species include: penstemon, bladderpod, annual sunflowers, and buckwheat.

Plant Growth Curves

Growth Curve ID 4324NM

Growth Curve Name: HCPC

Growth Curve Description: Mixed grassland/shrub w/ scattered oneseed juniper & forbs

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 produces habitat which supports a resident animal community that is characterized by mule deer, coyote, bobcat, Ord's kangaroo rat, white throated woodrat, sparrow hawk, red tailed hawk, scrub jay, common raven, great horned owl, chipping sparrow, collared lizard, desert short horned lizard, and black tailed rattlesnake.

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
Clovis	B
La Fonda	B
Palma	B
Tanbark	C

Recreational Uses:

This site has a limited potential for camping, picnicking and hiking. Due to its steep slopes, sparse vegetation, and its shallow, highly erodible soils, any activity, which would concentrate any soil disturbance, is not recommended. This site offers a varied and in some cases unusual aspect to the site.

Wood Products:

This site has a very limited potential for harvest of posts and firewood from oneseed juniper.

Other Products:**Grazing:**

This site is suitable for grazing by all classes of livestock during all seasons of the year. Steep slopes may limit access on portions of the site. Due to the shallow highly erosive soils grazing must be carefully managed to prevent irreparable loss of productivity. Mismanagement of grazing leads to a decrease in the desirable forage plants such as alkali sacaton, black grama, bush muhly, the needlegrasses and sideoats grama, and an increase in undesirable forage plants such as gyp dropseed, threeawn spp., ring muhly, and hairy coldenia.

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

Similarity Index	Ac/AUM
100 - 76	7.6 – 9.8
75 – 51	9.0 – 11.5
50 – 26	10.5 – 16.0
25 – 0	20.0+

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
Black Grama	Bouteloua eriopoda	EP	P	P	P	D	D	D	D	D	D	D	P	P
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
New Mexico Feathergrass	Hesperostipa neomexicana	EP	D	D	P	P	P	D	D	D	D	D	D	D
Bush Muhly	Muhlenbergia porteri	EP	P	P	P	P	P	P	P	P	P	P	P	P
Alkali Sacaton	Sporobolus airoides	EP	D	D	D	D	D	P	P	P	U	U	U	D
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	D	P
Winterfat	Krascheninnikovia lanata	L/S	D	D	P	P	P	P	P	P	D	D	D	D
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	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
Winterfat	Krascheninnikovia lanata	L/S	P	P	P	P	P	P	P	P	P	P	P	P
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	D	P
Black Grama	Bouteloua eriopoda	EP	P	P	P	P	P	P	P	P	P	P	P	P
New Mexico Feathergrass	Hesperostipa neomexicana	EP	U	U	P	P	P	D	D	D	U	U	U	U
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D

Animal Kind: Livestock

Animal Type: Goats

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Winterfat	Krascheninnikovia lanata	L/S	D	D	D	D	D	D	D	D	D	D	D	D
Fourwing Saltbush	Atriplex canescens	L/S	P	P	D	D	D	D	D	D	D	D	D	P
Mormontea	Ephedra viridis	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

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
Winterfat	<i>Krascheninnikovia lanata</i>	L/S	D	D	D	D	D	D	D	D	D	D	D	D
Fourwing Saltbush	<i>Atriplex canescens</i>	L/S	P	P	D	D	D	D	D	D	D	D	D	P
Mormontea	<i>Ephedra viridis</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

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: Catron, Lincoln, Sierra, Socorro, Torrance, Valencia

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? Yes No

General Legal Description: _____

Relationship to Other Established Classifications:

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Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the Pecos-Canadian Plains and Valleys and the NM and Az. Plateaus and Mesas Major Land Resource Areas of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Lincoln, Torrance, Socorro, Sierra, Socorro, Grant, Chaves, De Baca, Guadalupe, Lincoln, Sna Miguel, Santa Fe, Torrance.

Characteristic Soils Are:

Tanbark	
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Other Soils included are:

Clovis	La Fonda
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Palma	
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Site Description Approval:

Author

Don Sylvester

Date

05/25/84

Approval

Don Sylvester

Date

05/25/84

Site Description Revision:

Author

Elizabeth Wright

Date

07/05/02

Approval

George Chavez

Date

12/17/02