

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

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R039XB015NM

Site Name: Mountain Upland

Precipitation or Climate Zone: 14 to 18 inches

Phase: _____

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on slopes ranging to 15 percent but averaging 5 percent or less. The landscape is typically that of a large intermountain park or plain, which small drainages and swales may interrupt. Elevations range upward from 6,500 feet above sea level.

Land Form:

1. Mountainside

2.

3.

Aspect:

1. N/A

2.

3.

	Minimum	Maximum
Elevation (feet)	6,500	6,500+
Slope (percent)	0	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:

Average annual precipitation varies from approximately 14 to 18 inches, depending upon where the site is found. Year to year fluctuations in precipitation is common. Half or more of the precipitation occurring during the late fall through early spring period, often in the form of snow. The balance of the precipitation falls typically from mid June through September and is characterized by short-duration, high intensity thunderstorms.

The average frost-free season is about 103 days but is highly variable from location to location. The last killing frost in the spring occurs about June 1st, and the first killing frost in the fall normally occurs by October 1st. Lighter frosts may occur anytime in June and again in late August or early September. Average annual air temperature is about 50 degrees F. Monthly average air temperatures vary from 30 degrees F in January to just under 70 degrees F in August.

Both the air temperature and moisture regimes of this climate favor cool-season vegetation.

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):	81	112
Freeze-free period (days):	105	133
Mean annual precipitation (inches):	14	18

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

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.79	1.00	11.1	48.2
February	.74	.81	15.0	51.6
March	.70	.85	18.3	58.3
April	.45	.65	22.3	66.4
May	.50	.56	28.5	74.5
June	.60	.74	36.3	83.6
July	2.37	2.99	46.7	84.3
August	3.15	3.29	45.5	81.1
September	1.81	2.01	37.8	77.8
October	1.15	1.57	26.5	68.8
November	.48	.84	16.3	57.3
December	1.03	1.21	11.2	49.8

Climate Stations:

Station ID	Location	Period	
		From:	To:
290818	Beaverhead Ranger Station, NM	01/01/39	12/31/00
295273	Luna Ranger Station, NM	01/01/14	12/31/00
294375	Jewett Ranger Station, NM	01/01/33	09/30/67

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:**

Soils are moderately deep to deep. Surface textures are medium to moderately fine with generally few coarse fragments in the profile. Subsurfaces are clay loams to very gravelly loams. They are well drained and have moderately slow permeability. Organic matter is moderate and runoff is medium. Available water-holding capacity is moderate to high.

Parent Material Kind: Alluvium

Parent Material Origin: Mixed

Surface Texture:

1. Sandy clay loam
2. Loam
3. Gravelly sandy loam
4. Gravelly loam

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): 39 to 86

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

	Minimum	Maximum
Drainage Class:	<u>Well</u>	<u>Well</u>
Permeability Class:	<u>Very slow</u>	<u>Slow</u>
Depth (inches):	<u>20</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>9.0</u>
Soil Reaction (0.1M CaCl2):	<u>N/A</u>	<u>N/A</u>
Available Water Capacity (inches):	<u>6</u>	<u>12</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 is an open grassland characterized by mid and short-grasses. Shrubs and half-shrubs are few. Forbs include Rocky Mountain beeplant, aster, Rocky Mountain zinnia, wildbuckwheat, trailing fleabane and Carruth sagewort. Blue grama, muttongrass, Arizona fescue, prairie junegrass, and bottlebrush squirreltail are characteristic of the natural potential vegetation. Western wheatgrass is found largely on the finer textured soils and in slight depressions. Spike muhly is found evenly distributed but in lesser amounts than most other species characterizing the site. Broom snakeweed comes and goes cyclically. Scattered plants of rabbitbrush are common.

Canopy Cover:

Trees	0
Shrubs and half shrubs	5 %
Ground Cover (Average Percent of Surface Area).	
Grasses & Forbs	30
Bare ground	53
Surface gravel	3
Surface cobble and stone	0
Litter (percent)	14
Litter (average depth in cm.)	2

Plant Community Annual Production (by plant type): _____

Plant Type	Annual Production (lbs/ac)		
	Low	RV	High
Grass/Grasslike	638	829	1,020
Forb	60	78	96
Tree/Shrub/Vine	45	59	72
Lichen			
Moss			
Microbiotic Crusts			
Total	750	975	1,200

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	BOGR2	Blue Grama	98 – 146	98 – 146
2	FEAR2 POFE	Arizona Fescue Muttongrass	146 – 244	146 – 244
3	KOMA	Prairie Junegrass	29 – 49	29 – 49
4	PASM	Western Wheatgrass	98 – 146	98 – 146
5	MUWR	Spike Muhly	49 – 98	49 – 98
6	MUMO	Mountain Muhly	10 – 49	10 – 49
7	ELEL5	Bottlebrush Squirreltail	49 – 146	49 – 146
8	2GRAM	Other Grasses	49 – 98	49 - 98

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
9	2FP	Perennial Forbs	29 – 78	29 - 78
10	2FA	Annual Forbs	10 – 49	10 - 49

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	ERICA ARCA14 ARFR4	Rabbitbrush Carruth Sagewort Fringed Sagewort	10 – 49	10 – 49
12	2SD	Other Shrubs	10 – 29	10 - 29

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 species may include: muhly spp., threeawn spp., wolftail, broom snakeweed, green sagewort, pingue, and winterfat. Kentucky bluegrass may have become naturalized to this site.

Plant Growth Curves

Growth Curve ID 1305NM

Growth Curve Name: HCPC

Growth Curve Description: Mixed mid/short-grassland with scattered forbs and shrubs.

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, badger, eastern cottontail, thirteen-lines ground squirrel, Gunnison's prairie dog, Botta's pocket gopher, sparrow hawk, mourning dove, horned lark, meadow lark, tiger salamander, short-horned lizard, Sonora gopher snake and prairie rattlesnake.

Elk and deer range into the site and golden eagle and common raven hunt over it.

Where the site occurs as a large intermountain plain, pronghorn antelope may be resident.

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
Bario	B
Big Red	C
Luera	C
Pleioville	C

Recreational Uses:

This site offers recreation potential for picnicking, camping, horseback riding, nature observation and photography. Hunting for elk and deer is limited except where found adjacent or near to wooded areas. In these instances hunting may be fair to good. Natural beauty is enhanced by the mountainous surroundings typical of the site.

Wood Products:

This site has no significant potential for wood products naturally.

Other Products:

Grazing:

Eighty-five percent of the annual vegetative production on this site comes from plants that provide forage for grazing animals, including domestic livestock. Although the site may in some areas be suited to year round use, continuous use in the same season, year after year, may result in a decrease of the better forage species. Continued heavy use will almost certainly cause a decrease in Arizona fescue, muttongrass, and other cool-season species. Blue grama tends to increase under this circumstance and will eventually assume a sodlike, low-vigor form that is very unproductive when compared to the natural potential plant community. Rabbitbrush may increase substantially also, along with other low-value plants such as broom snakeweed. A system of deferred grazing that varies the season of use from year to year is needed to maintain a healthy balance of plants in the plant community. Deferral during late spring is especially helpful to cool-season species. In addition to domestic livestock, elk, small mammals, and birds also use the site. On a more occasional basis, deer and pronghorn antelope may be seen.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	2.7 – 3.5
75 – 51	3.2 – 5.0
50 – 26	4.5 – 9.0
25 – 0	9.0+

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
Arizona Fescue	Festuca arizonica	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
Muttongrass	Poa fendleriana	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
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Spike Muhly	Muhlenbergia wrightii	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

Animal Kind: Livestock

Animal Type: Horses

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Arizona Fescue	Festuca arizonica	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
Muttongrass	Poa fendleriana	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
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Spike Muhly	Muhlenbergia wrightii	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

Animal Kind: Wildlife

Animal Type: Elk

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Arizona Fescue	Festuca arizonica	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
Muttongrass	Poa fendleriana	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
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Spike Muhly	Muhlenbergia wrightii	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
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
Carruth Sagewort	Artemisia carruthii	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

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
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
Carruth Sagewort	Artemisia carruthii	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

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
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
Carruth Sagewort	Artemisia carruthii	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: Catron, Grant, Sierra, Socorro

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 Arizona and New Mexico Mountains 39 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys : Socorro, Catron, Sierra and Grant.

Characteristic Soils Are:

Barrio	Pleioville
Big Red	
Luera	

Other Soils included are:

--	--

Site Description Approval:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester		Don Sylvester	

Site Description Revision:

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Elizabeth Wright	5/8/02	George Chavez	2/12/03