UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R048BY007NM

Site Name: Mountain Valley

Precipitation or Climate Zone: 16 to 30 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on broad valleys, overflow areas adjacent to intermittent streams and depressional areas subject to run-in of moisture from adjacent sites. However, this site is often highly dissected, and run-in is non-effective. Slopes range from 0 to 5 percent but averages less than 3 percent. Elevation ranges from 7,400 to 8,800 feet above sea level.

Land Form:

1. Mountain valley
2.
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	7,400	8,800
Slope (percent)	0	5
Water Table Depth (inches)	N/A	N/A

Flooding:	**Minimum**	**Maximum**
Frequency	N/A	N/A
Duration	N/A	N/A

Ponding:	**Minimum**	**Maximum**
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 climate is characterized by cold, wet winters in which more than 50 percent of the total annual precipitation is received during the winter. The balance of the precipitation is received in the summer months, some of it in the form of high intensity thunderstorms. Average annual precipitation is about 22 inches but ranges from 16 to 30 inches and yearly fluctuations are common.

The average frost-free period is about 80 days but ranges from 60 days at the highest elevations to 110 days at the lowest elevations; however, the period lengths vary. The average last killing frost in the spring occurs about June 10th. The average first killing frost in the fall occurs about September 20th. Average annual air temperature is 22.6 degrees F in January and 64.5 degrees F in July with extremes ranging from -40 degrees F to 95 degrees F.

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):	67	93
Freeze-free period (days):	95	115
Mean annual precipitation (inches):	16	30

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

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	0.67	1.91	2.1	39.7
February	0.61	1.70	7.0	44.1
March	1.01	1.85	14.5	50.5
April	0.97	1.75	21.8	60.1
May	0.99	1.79	28.7	69.9
June	0.83	1.29	35.0	80.6
July	1.81	2.90	40.8	85.2
August	2.34	3.18	40.2	82.1
September	1.25	1.98	32.9	76.1
October	0.96	1.72	22.5	65.7
November	0.74	1.37	13.5	51.3
December	0.70	1.79	4.8	41.9

Climate Stations:

				Period		
Station ID	291664	Location	Chama, New Mexico	From: 01/01/14	To:	12/31/01
Station ID	292700	Location	Eagle Nest, New Mexico	From: 11/01/37	To:	12/31/01
Station ID	292837	Location	El Vado Dam, New Mexico	From: 09/01/23	To:	12/31/01
Station ID	297323	Location	Red River, New Mexico	From: 01/01/15	To:	12/31/01

INFLUENCING WATER FEATURES

Narrative:

This site may be influenced by water from a stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

The soils are deep and well drained. Surface textures range from very fine sandy loams to silty clay loams and clay loams. Subsoils range from loams to clays. Permeability is moderately slow to slow. Available water-holding capacity is high. Runoff is slow to medium

Parent Material Kind: Alluvium
Parent Material Origin: Mixed

Surface Texture:

1. Very fine sandy loam
2. Silty clay loam
3. Clay loam

Surface Texture Modifier:

1. N/A
2.

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

Subsurface Fragments <=3" (%Volume): 60+
Subsurface Fragments >=3" (%Volume): 15 to 60

	Minimum	Maximum
Drainage Class:	Well	Well
Permeability Class:	Impermeable	Moderately slow
Depth (inches):	60	>72
Electrical Conductivity (mmhos/cm):	0.00	2.00
Sodium Absorption Ratio:	0.00	5.00
Soil Reaction (1:1 Water):	6.1	8.4
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	9	12
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
This is predominantly a grassland site with only scattered shrubs and trees present on the site. Ponderosa pine may be scattered about the site in small amounts. Forbs are usually detectable, especially when in bloom.
Because good soil-moisture relationships result from periodic deep wetting, this site may be considerably more productive and begins to green-up earlier than adjacent sites.

Canopy Cover:	
Trees, shrubs and half-shrubs (average)	5 %
Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs	37
Bare ground	22
Surface gravel	5
Surface cobble and stone	0
Litter (percent)	35
Litter (average depth in cm.)	2

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	850	1,275	1,700
Forb	50	75	100
Tree/Shrub/Vine	50	75	100
Lichen			
Moss			
Microbiotic Crusts			
Total	1,000	1,500	2,000

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	PASM MUWR	Western Wheatgrass Spike Muhly	375 – 525	375 – 525
2	POFE KOMA	Muttongrass Prairie Junegrass	45 – 150	45 – 150
3	FEOV	Sheep Fescue	45 – 105	45 – 105
4	CAREX	Sedge spp.	45 – 105	45 – 105
5	BOGR2 PLJA	Blue Grama Galleta	45 – 105	45 – 105
6	FEAR2 FETH	Arizona Fescue Thurber Fescue	45 – 105	45 – 105
7	ELEL5	Bottlebrush Squirreltail	45 – 75	45 – 75
8	SPAI	Alkali Sacaton	0 – 105	0 – 105
9	POPR BRIN2 DECA18 2GRAM	Kentucky Bluegrass Smooth Brome Tufted Hairgrass Other Grasses	45 – 150	45 – 150

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	ACMI2 ERCI6 DECO3 VICIA RATIB IRMI 2FORB	Western Yarrow (Common) Redstem Filaree Larkspur Vetch spp. Coneflower spp. Iris spp. Other Forbs	45 – 105	45 – 105

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	DAFI3 ARAN7	Shrubby Cinquefoil Silverweed Cinquefoil	45 – 75	45 – 75
12	RIMO2 RHTR KRLA2 ARTR2 ARDO3	Currant Skunkbush Sumac Winterfat Mountain Big Sagebrush Green Sagewort	15 – 75	15 – 75

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 that could appear on this site include: sleepygrass, mat muhly, Canada wildrye, oatgrass spp., needleandthread, thistle, penstemon, pussytoes, snowberry, serviceberry, oak spp., fourwing saltbush and ponderosa pine.

Plant Growth Curves

Growth Curve ID **3307NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **Grassland with minor components of forbs and shrubs.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	5	10	25	30	15	7	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This site provides habitats which support a resident animal community that is characterized by black-tailed jackrabbit, long-tailed vole, golden-mantled ground squirrel, Gunnison's prairie dog, western bluebird, horned lark, leopard frog, smooth green snake. Breeding violet-green swallows and turkey uses these sites. Mule deer and elk use these sites seasonally.

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
Arosa	C
Cosey	B
Roques	D

Recreational Uses:

This site in itself is not noted for its beauty, but it is enhanced by the close proximity to a mountain setting. The site is suited to horseback riding and camping.

Wood Products:

Although a few scattered trees may occur on this site, their numbers are few and not capable of a sustained yield of wood products.

Other Products:

Grazing:

Approximately 95 percent of the vegetation produced on this site are suitable for grazing or browsing by domestic livestock and wildlife. Grazing pressure on this site may be a problem due to the lush vegetation on this site compared with adjacent sites. Water and salt should be distributed away from this site to prevent its constant overuse.

Deterioration of the potential plant community is indicated by a decrease in western wheatgrass, spike muhly, muttongrass, prairie junegrass and Arizona fescue. Species that increase include blue grama, galleta, mat muhly, bottlebrush squirreltail and woody species. A planned grazing system with periodic grazing and rest is best to maintain the natural balance between plant species and to maintain high productivity.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	**Ac/AUM**
100 - 76	1.3 – 1.7
75 – 51	1.6 – 2.6
50 – 26	2.5 – 5.2
25 – 0	5.2+

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	D	D	D	D	D	D	D	D	D	D	D	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	D	P	P	P	D	D	D	D	D	D
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Muttongrass	Poa fendleriana	EP	P	P	P	P	P	P	P	P	P	P	P	P
Spike Muhly	Muhlenbergia wrightii	EP	D	D	D	D	D	D	D	D	D	D	D	D
Spike Muhly	Muhlenbergia wrightii	EP	D	D	D	D	D	D	D	D	D	D	D	D
Tufted Hairgrass	Deschampsia caespitosa	EP	D	D	P	P	P	P	P	P	D	D	D	D
Kentucky Bluegrass	Poa pratensis	EP	P	P	P	P	P	P	P	P	P	P	P	P
Smooth Brome	Bromus inermis	EP	D	D	D	D	D	D	D	D	D	D	D	D
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	P	P
Winterfat	Krascheninnikovia lanata	L/S	D	D	D	P	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
Muttongrass	Poa fendleriana	EP	P	P	P	P	P	P	P	P	P	P	P	P
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Western Wheatgrass	Pascopyrum smithii	EP	U	U	D	D	D	D	D	D	D	D	D	U
Spike Muhly	Muhlenbergia wrightii	EP	D	D	D	D	D	D	D	D	D	D	D	D
Tufted Hairgrass	Deschampsia caespitosa	EP	D	D	P	P	P	P	P	P	D	D	D	D
Kentucky Bluegrass	Poa pratensis	EP	D	D	P	P	P	D	D	D	D	D	D	D
Sheep Fescue	Festuca ovina	EP	D	D	D	D	D	D	D	D	D	D	D	D
Smooth Brome	Bromus inermis	EP	D	D	D	D	D	D	D	D	D	D	D	D
Sedge	Carex spp.	EP	U	U	D	D	D	U	U	U	U	U	U	U
Some 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
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	P	D	D	D	D	D	P	P
Winterfat	Krascheninnikovia lanata	L/S	P	P	P	P	P	P	P	P	P	P	P	P

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
Willow	Salix spp.	L/S	D	D	U	U	U	D	D	D	D	D	D	D
Wheatgrass spp.	Pascopyrum spp.	EP	D	D	D	P	P	P	D	D	D	D	D	D
Bromegrass spp.	Bromus spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Fescue spp.	Festuca spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Sedge	Carex spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Clover	Trifolium spp.	EP	P	P	P	P	P	P	P	P	P	P	P	P
Marigold spp.	Baileya spp	EP	U	U	D	D	D	D	D	D	D	D	D	U
Dandelion	Agoseris	EP	U	U	P	P	P	D	D	D	D	D	D	U

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
Wildbuckwheat	Eriogonum spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Fleabane	Erigeron spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Larkspur	Delphinium confertiflorum	EP	U	U	D	D	D	D	D	D	U	U	U	U
Sweet Clover	Melilotus spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Lupine	Lupinus alpestris	EP	U	U	D	D	D	D	D	D	U	U	U	U
Penstemon	Penstemon spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Indian Paintbrush	Castilleja coccinea	EP	U	U	D	D	D	D	D	D	U	U	U	U
Dandelion	Agoseris spp.	EP	U	U	P	P	P	D	D	D	D	D	D	U
Geranium	Geranium spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Aster	Aster spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Redstem Filaree	Erodium cicutarium	EP	U	U	D	D	D	D	D	D	U	U	U	U
Dock	Rumex spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Clover	Trifolium spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Phlox	Phlox spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U

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: **McKinley, Rio Arriba, Sandoval, Santa Fe, Taos**

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 Southern Rocky Mountains 48 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Taos, Santa Fe, Rio Arriba, Los Alamos, and Sandoval county surveys.

Characteristic Soils Are:	
Arosa	Cosey
Roques	

Other Soils included are:	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester	03/25/82	Don Sylvester	03/25/82

Site Description Revision:

Author	Date	Approval	Date
Elizabeth Wright	02/28/03	George Chavez	10/31/03