

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Field Office

COBBLY SLOPES, 5-8" p.z.
RANGE SITE DESCRIPTION

Major Land Resource Unit: D-37A
Site No.: 037AY017NM

Date: AUG 24 1993

Approved By: R.S. Carmichael

A. PHYSICAL CHARACTERISTICS

1. Physiographic Features

This upland site occurs on the riser part of high stream terraces. It suffers from excessive drainage and is subject to significant amounts of runoff. Slopes range from 15 to 60 percent. Elevations range from 4,600 to 6,100 feet.

2. Soils

- a. The soils are moderately deep and well drained. They are formed in alluvium derived from quartzite and residuum from siltstone. Surface textures include very cobbly fine sandy loam. The subsoil has textures of gravelly fine sandy loam, clay loam, very cobbly fine sandy loam, silt loam, and gravelly sandy clay loam. Siltstone occurs between 31 to 34. Permeability is moderately slow. Available water capacity is low. Runoff is rapid and the hazard of water erosion is moderate. The hazard of soil blowing is moderate. The soils are slightly saline (EC 4-8); slightly sodic (SAR 5-13); and moderately to strongly alkaline (pH 7.9-9.0).

- b. Major soils associated with this site are:

Soil Taxonomic Unit

Shiprock SSA:

102 -- Blackston - Camac - Rock Outcrop complex (Camac part)

265 -- Camac - Kimbeto - Badland Assoc. (Camac part)

Additional information may be found in Section II of the Field Office Technical Guide.

3. Climatic Features

- a. Mean annual precipitation varies from 5 to 8 inches. About 60 percent of this moisture comes as rain during the months of April through October. May and June are the driest months. Most of the moisture from November through March comes as snow. Winds of high velocity during late winter and early spring are common.
- b. Mean temperatures for the hottest month, July, are about 83° F. The coldest month is January, when the mean temperature is about 27° F. Extreme temperatures of 104° F. for a high and -17° F. for a low have been recorded. Frost free period ranges from 140 to 160 days.
- c. The cool-season plants start growth in March and end with plant maturity and seed dissemination about mid-June. During June, July, August and September, the warm-season plants make optimum growth taking advantage of the warm temperature and moisture from tropical air out of the Gulf of Mexico. About 40 percent of the total precipitation is received during these summer months. The other 60 percent received during the fall-winter-spring months influence cool-season plants.

4. Native (potential or climax) Vegetation

- a. This range site has a plant community made up primarily of grasses, shrubs and minor amounts of forbs. In the original plant community there is a mixture of cool and warm season plants.
- b. Plant species most likely to invade or increase on this site when it deteriorates are cheatgrass, Russian thistle, other annual forbs, shadscale and Castle Valley clover. Continuous livestock grazing use during the winter and spring periods will decrease the cool season species, which are replaced by lower forage value plants.
- c. The following is a list of plants that are found in the potential plant community. Range condition of areas within this site is determined by comparing the present plant community with that of this potential plant community. Count as potential no more than the maximum percent shown on the guide for any species. Four condition classes are used to express this degree of comparison of the present plant community to that of the potential:

Excellent	76-100
Good	51-75
Fair	26-50
Poor	0-25

Relative percentage of total plant community by weight:

<u>Grasses and Grasslike (50-60%)</u>	<u>Percent</u>
galleta (HIJA)	20-25
alkali sacaton (SPAI)	1-5
Indian ricegrass (ORHY)	20-25
sand dropseed (SPCR)	1-5
Fendler threeawn (ARFE4)	0-1
bottlebrush squirreltail (SIHY)	0-2
other perennial grasses (PPGG)	0-5

<u>Forbs (2-5%)</u>	<u>Percent</u>
perennial forbs (PPFF)	0-2
annual forbs (AFFF)	0-2

<u>Shrubs and Trees (30-40%)</u>	<u>Percent</u>
Castle Valley clover (ATCU)	15-20
shadscale (ATCO)	10-15
bud sagebrush (ARSP5)	0-5
broom snakeweed (GUSA2)	0-1
plains pricklypear (OPPO)	0-1
other shrubs (SSSS)	0-3

This list of plants and their relative proportions are based on near normal years. Fluctuations in species composition and relative production may change from year to year dependent upon abnormal precipitation or other climatic factors.

The potential (climax) plant community has been determined by study of range relict areas, or areas protected from excessive grazing. Trends in plant communities going from heavily grazed areas to lightly grazed areas, seasonal use pastures and historical accounts have also been used.

5. Total Annual Production

In excellent condition this site will produce approximately the following amounts of air dry herbage per acre in:

favorable year	<u>450 lbs.</u>
normal year	<u>350 lbs.</u>
unfavorable year	<u>250 lbs.</u>

B. MAJOR USES

1. Livestock

a. Site factors influencing management

This site is steep which severely restricts use by livestock. Proper distribution is often impossible to attain; and heavy use occurs by livestock in the limited accessible areas. Care should be taken not to over use this site as recovery will be very slow and erosion will be accelerated.

b. Guide to Initial Stocking Rate

The following stocking rates may be used as a guide to establish a safe starting stocking, but should be evaluated and livestock numbers adjusted based on actual use experience and climatic fluctuations.

<u>Condition Class</u>	<u>Percent Climax Vegetation</u>	<u>AC/AUM</u>	<u>AUM/AC</u>
Excellent	76-100	10-20	.05-.10
Good	51- 75	15-25	.04-.06
Fair	26- 50	20 35	.02-.05
Poor	0- 25	35-55	.01-.02

2. Wildlife

a. Site factors influencing wildlife.

The steep topography provides cover for big game species. Water is not found naturally.

b. Guide to site plant use by wildlife species.

Plant Species	Selected Wildlife Species			
	Cottontail Rabbit	Mule Deer	Pronghorn	Mourning Dove
galleta		F-Leaves	F-Leaves	
Indian ricegrass	X	G-Leaves	G-Leaves	G-Seed
bottlebrush squirreltail		F-Leaves	F-Leaves	
perennial forbs	G-Foliage	G-Foliage	G-Foliage	G-Seed
shadscale			G-Foliage	
bud sagebrush		G-Foliage	G-Foliage	
plains pricklypear		G-Blossoms	X-Blossoms	G-Seed

G = Good F = Fair P = Poor X = Used, Extent Unknown

3. Recreation and Natural Beauty

a. Land Form -

Riser part of high stream terraces.

b. Landscape Quality -

The aesthetic appeal is excellent because of the visual effect in contrast to the surrounding topography.

c. Climate -

Winters are cold. Spring time is usually windy. Summer is relatively mild with typical southwest thunderstorms.

d. Activities -

Hiking, rock hounding and photography are recreational activities.

4. Other Uses -

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C. THREATENED OR ENDANGERED PLANTS AND ANIMALS

1. Plants -

None known.

2. Animals -

None known.

D. LOCATION OF TYPICAL EXAMPLE OF THE SITE

1. State location - Rattlesnake Quad - 2 miles WNW of Cudei, NM - Sec 26, T31N, R19W - Navajo Res., NM.

2. Field office site location -

E. FIELD OFFICES

Shiprock, NM; Aztec, NM.