

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Field Office

SALINE-SODIC UPLAND, 5-8" p.z.
RANGE SITE DESCRIPTION

Major Land Resource Unit: D-37A
Site No.: 037AY025NM

Date: AUG 24 1993

Approved By: R. J. Carmichael

A. PHYSICAL CHARACTERISTICS

1. Physiographic Features

This site occurs on ridges, toeslopes, footslopes and knolls of undulating plateaus. It does not benefit from run-in moisture from adjacent areas, but suffers from runoff. Slopes range from 0 to 45 percent. Elevations range from 5,000 to 5,600 feet.

2. Soils

a. The soils are moderately deep to very deep and well drained. They are formed in alluvium and residuum derived from shale and siltstone. Surface textures include loam and silt loam. The subsoil has textures of loam, silt loam, silty clay loam, clay loam and clay. Permeability is slow to moderate. Available water capacity is very low to low. Runoff is rapid to medium and the hazard of water erosion is moderate to severe. The hazard of soil blowing is severe. The soils are strongly saline (EC 16+); strongly sodic (SAR 30+); and moderately to strongly alkaline (pH 7.9-9.8).

b. Major soils associated with this site are:

Soil Taxonomic Unit

Shiprock SSA:

220 - Chinde loam.

250 - Littlehat-Persayo-Nataani Complex (Littlehat part).

260 - Littlehat-Persayo-Badland Complex (Littlehat 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 low growing shrubs and a sparse grass cover. Some perennial and annual forbs frequent the site. The original plant community has a mixture of warm and cool season plants.
- b. Plant species most likely to invade or increase on this site when it deteriorates are Russian thistle, mustard, nodding wildbuckwheat and mat saltbush. Because of the high salts and sodium of the soil, mat saltbush will always dominate the site. It has adapted well to the site where other plants are coming in as the soil further develops.
- 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 (10-15%)</u>	<u>Percent</u>
alkali sacaton (SPAI)	5-10
bottlebrush squirreltail (SIHY)	0-3
Indian ricegrass (ORHY)	0-5
other perennial grasses (PPGG)	0-5

<u>Forbs (5-10%)</u>	<u>Percent</u>
nodding wildbuckwheat (ERCE2)	0-1
scarlet globemallow (SPCO)	0-1
onion (ALLIU)	0-1
purple springparsley (CYPV)	0-1
perennial forbs (PPFF)	1-2
annual forbs (AAFF)	1-5

<u>Shrubs and Trees (70-80%)</u>	<u>Percent</u>
mat saltbush (ATC04)	60-75
sickle saltbush (ATFA)	0-5
Castle Valley clover (ATCU)	0-5
plains pricklypear (OPPO)	0-1
other shrubs (SSSS)	0-2

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>200 lbs.</u>
normal year	<u>150 lbs.</u>
unfavorable year	<u>100 lbs.</u>

B. MAJOR USES

1. Livestock

a. Site factors influencing management

This site has limited use potential for most classes of livestock. The sparse cover limits readily available forage for animals. Sheep and goats would benefit best, grazing the site in the winter season. This site will seldom be used as a key management area for livestock. Planned grazing systems can be adapted to this site. Grazing should be conducted to leave as much cover and residue as possible to help control the natural erosion that occurs.

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	9-22	.04-.11
Good	51- 75	10-25	.04-.10
Fair	26- 50	12-28	.03-.08
Poor	0- 25	14-33	.03-.07

2. Wildlife

a. Site factors influencing wildlife.

Wintering area for mule deer and pronghorn antelope. Topography provides cover for big game.

b. Guide to site plant use by wildlife species.

Plant Species	Selected Wildlife Species			
	Cottontail Rabbit	Mule Deer	Pronghorn	Mourning Dove
alkali sacaton	X			
bottlebrush squirreltail		F-Foliage	F-Foliage	
Indian ricegrass	X	G-Foliage	G-Foliage	G-Seed
nodding wild buckwheat	G-Foliage	G-Foliage	G-Foliage	G-Seed
scarlet globemallow	G-Foliage	G-Foliage	G-Foliage	G-Seed
perennial forbs	G-Foliage	G-Foliage	G-Foliage	G-Seed
plains prickly pear		G-Fruit	G-Fruit/Pads	

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

3. Recreation and Natural Beauty

a. Land Form -

On ridges, toeslopes, footslopes and knolls of undulating plateaus.

b. Landscape Quality -

The bareness and sparse plant cover of the site provides an interesting scene from that of adjacent sites.

c. Climate -

Winters are cold. Spring time is usually windy. The summers are mild with typical southwest thunderstorms.

d. Activities -

Hiking, photography, wildlife observations are occasional recreational activities.

4. Other Uses -

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C. THREATENED OR ENDANGERED PLANTS AND ANIMALS

1. Plants -

Mesa Verde cactus (*Sclerocactus mesae-verde*).

2. Animals -

None known.

D. LOCATION OF TYPICAL EXAMPLE OF THE SITE

1. State location - Table Mesa Quad - 6 miles SE of Table Mesa - Sec. 6, T27N, R17W - Navajo Res., NM.

2. Field office site location -

E. FIELD OFFICES

Shiprock, NM; Aztec, NM.