

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Field Office

SILTY UPLAND (SODIC), 5-8" p.z.
RANGE SITE DESCRIPTION

Major Land Resource Unit: D-37A
Site No.: 037AY040NM

Date: AUG 24 1993

Approved By: R. S. Carmichael

A. PHYSICAL CHARACTERISTICS

1. Physiographic Features

This upland site occurs on toeslopes, footslopes and hillslopes below benches and cuesta dipslopes of undulating plateaus and treads of fan terraces. It does not benefit from run-in moisture nor does it suffer from excessive loss from runoff. It occurs on all exposures. Slopes range from 0-25 percent. Elevations range from 4,800 to 5,600 feet.

2. Soils

- a. The soils are moderately deep to very deep and well drained. Surface textures include very fine sandy loam, channery loam and loam. The subsoil has textures of silty clay loam, loam, clay, clay loam, channery clay loam, silty clay, silty clay loam. Permeability is moderately slow to slow. Available water capacity is very low to moderate. Runoff is medium to rapid and the hazard of water erosion is moderate. The hazard of wind erosion is moderate to severe. The soils are moderately to strongly saline (EC 8-16+); moderately to strongly sodic (SAR 13-30+); mildly to moderately alkaline (pH 7.4-8.4).

b. Major soils associated with this site are:

Soil Taxonomic Unit

Shiprock SSA:

- 113 - Gyptur very fine sandy loam
- 137 - Persayo-Carin-Patel Complex (Patel part)
- 167 - Hoskay-Patel-Badland Comple (Hoskay-Patel parts)
- 183 - Gyptur loam

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 mid grasses, short shrubs and a small percentage of forbs. In the original plant community, there is a mixture of both cool and warm season grasses.
- b. Plant species most likely to invade or increase on this site when it deteriorates are cheatgrass, annual wheatgrass, annual barley, Russian thistle and Castle Valley clover. Continuous livestock grazing during the winter and spring will decrease the cool season grasses, which are replaced by lower forage value grasses and shrubs.
- 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:Grasses and Grasslike (40-50%) Percent

Indian ricegrass (ORHY)	20-25
galleta (HIJA)	5-10
alkali sacaton (SPAI)	5-10
bottlebrush squirreltail (SIHY)	1-5
sand dropseed (SPCR)	0-1
other perennial grasses (PPGG)	0-2

Forbs (1-5%) Percent

globemallow (SPHAL)	0-2
perennial forbs (PPFF)	1-3
annual forbs (AAFF)	0-2

Shrubs and Trees (45-55%) Percent

Castle Valley clover (ATCU)	20-25
bud sagebrush (ARSP5)	0-5
shadscale (ATCO)	0-5
sickle saltbush (ATFA)	0-5
mat saltbush (ATCO4)	5-10
other shrubs (SSSS)	1-5

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>500</u> lbs.
normal year	<u>400</u> lbs.
unfavorable year	<u>300</u> lbs.

B. MAJOR USES

1. Livestock

a. Site factors influencing management

This site is suitable for grazing by all classes of livestock most seasons of the year. Grazing systems adapt well to this site and should be used. When vegetation deteriorates this site is susceptible to erosion.

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	5-8	.12-.20
Good	51- 75	6-10	.10-.16
Fair	26- 50	9-13	.07-.11
Poor	0- 25	13-22	.04-.07

2. Wildlife

a. Site factors influencing wildlife.

Wildlife species are transient from adjacent sites.

b. Guide to site plant use by wildlife species.

<u>Plant Species</u>	<u>Selected Wildlife Species</u>			
	<u>Jackrabbit</u>	<u>Spotted Ground Squirrel</u>	<u>Mule Deer</u>	<u>Pronghorn</u>
Indian ricegrass	G-Foliage	G-Seed	G-Foliage	G-Foliage
alkali sacaton	G-Foliage	G-Seed		
galleta	G-Foliage		F-Foliage	F-Foliage
perennial forbs		G-Seed	G-Foliage	G-Foliage
fourwing saltbush	G-Foliage		G-Foliage	G-Foliage
winterfat	G-Foliage		G-Foliage	G-Foliage
Castle Valley clover	G-Foliage		G-Foliage	G-Foliage

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

3. Recreation and Natural Beauty

a. Land Form -

Toeslopes, footslopes and hillslopes below benches and cuesta dipslopes of undulating plateaus and treads of fan terraces.

b. Landscape Quality -

The grass-shrub texture gives good aesthetic appeal.

c. Climate -

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

d. Activities -

Hiking, photography and wildlife observations are occasional recreational activities.

4. Other Uses -

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 - Sulfur Springs Quad - about 5 miles SE of Shiprock, NM
- Sec. 16, T29N, R17W - Navajo Res., NM.

2. Field office site location -

E. FIELD OFFICES

Shiprock, NM; Aztec, NM.