

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
Field Office

SANDY LOAM UPLAND (Saline),  
5-8" p.z.  
RANGE SITE DESCRIPTION

Major Land Resource UNIT: D-37A  
Site No.: 037AY032NM

Date: AUG 24 1993  
Approved By: *R.S. Caimechal*

A. PHYSICAL CHARACTERISTICS

1. Physiographic Features

This upland site occurs on toeslopes, dipslopes, knolls of undulating plateaus, structural benches, mesas, cuestras and on fan terraces and treads of high stream terraces. It does not benefit from run-in moisture from adjacent areas nor does it suffer from excessive loss from runoff. It occurs on all exposures. Slopes range from 0 to 15 percent. Elevations range from 4,800 to 6,300 feet.

2. Soils

a. The soils are moderately deep to very deep and well drained. They are formed in alluvium, residuum and eolian derived from sandstone, shale, quartzite and tuff-breccia. Surface textures include loamy fine sand, fine sandy loam, gravelly loamy sand and very fine sandy loam. The subsoil has textures of fine sandy loam, channery fine sandy loam, very fine sandy loam, sandy clay loam, cobbly sandy clay loam, sandy loam, loam loamy fine sand and gravelly loamy sand. Siltstone is at a depth of 34 inches for the moderately deep soils and soft sandstone at a depth of about 42 to 60 inches for the deep soils. Permeability is moderately slow to moderately rapid. Available water capacity is low to moderate. Runoff is slow to medium and the hazard of water erosion is slight to moderate. The hazard of soil blowing is severe. These soils are slightly to moderately saline (EC 4-16); mildly to very strongly alkaline (pH 7.4 - 9.2); and slightly to moderately sodic (SAR 5-30).

b. Major soils associated with this site are:

Soil Taxonomic Unit

Shiprock SSA:

- 110 - Brimhall-Benally-Genats Assoc. (Brimhall part)
- 125 - Kimbeto loamy fine sand.
- 180 - Kimbeto-Huerfano Complex (Kimbeto part)
- 215 - Persayo-Fordbutte Assoc. (Fordbutte part)
- 235 - Wingrock-Rock outcrop Assoc. (Wingrock part)
- 265 - Camac-Kimbeto-Badland Assoc. (Kimbeto 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 with some shrubs and minor amounts of forbs. In the original plant community, there is a mixture of both cool and warm season grasses. The salinity of the soil influences the kinds of plants in the community.
- b. Plant species most likely to invade or increase on this site when it deteriorates are Russian thistle, annual mentzelia, alkali sacaton, and shadscale. Continuous livestock grazing use during the winter and spring periods will decrease the cool season grasses which are replaced by lower forage value species.
- 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 (55-65%)</u>	<u>Percent</u>
alkali sacaton (SPAI)	25-30
galleta (HIJA)	10-15
Indian ricegrass (ORHY)	10-15
sand dropseed (SPCR)	0-3
bottlebrush squirreltail (SIHY)	0-5
Fendler threeawn (ARFE4)	0-1
other perennial grasses (PPGG)	0-5

<u>Forbs (1-5%)</u>	<u>Percent</u>
globemallow (SPHAL)	0-1
purple spring parsley (CYPU)	0-1
smallflower aster (LEER)	0-1
perennial forbs (PPFF)	0-3
annual forbs (AAFF)	0-2

<u>Shrubs and Trees (20-30%)</u>	<u>Percent</u>
shadscale (ATCO)	10-20
sickle saltbush (ATFA)	0-3
winterfat (EULA5)	0-2
plains pricklypear (OPPO)	0-1
mound saltbush (ATOB)	0-1
Castle Valley clover (ATCU)	0-1
other shrubs (SSSS)	0-5

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>550 lbs.</u>
normal year	<u>450 lbs.</u>
unfavorable year	<u>350 lbs.</u>

B. MAJOR USES

1. Livestock

a. Site factors influencing management

This site is suitable for year-long grazing by all classes of livestock. Grazing systems adapt well to this site and should be used. Soils in this site have a high wind erosion hazard and with site deterioration erosion occurs on overgrazed areas, roads, cattle trails and concentration areas.

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	4-7	.14-.25
Good	51- 75	5-8	.12-.20
Fair	26- 50	6-9	.11-.16
Poor	0- 25	8-11	.09-.12

2. Wildlife

a. Site factors influencing wildlife.

This site is preferred by digging animals. The lack of water and cover limits the use of the area by large mammals to foraging.

b. Guide to site plant use by wildlife species.

Plant Species	Selected Wildlife Species			
	Cottontail Rabbit	Ord's Kangaroo Rat	Pronghorn	Mourning Dove
alkali sacaton	X	G-Seed		
galleta			F-Foliage	
Indian ricegrass	X	G-Seed	G-Foliage	G-Seed
bottlebrush squirreltail		G-Seed	F-Foliage	
globemallow	G-Foliage	G-Seed	G-Foliage	G-Seed
perennial forbs	G-Foliage	G-Foliage	G-Foliage	G-Seed
shadscale			G-Foliage	
winterfat			G-Foliage	
plains pricklypear		G-Seed	G-Fruit/Pads	

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

3. Recreation and Natural Beauty

a. Land Form -

Undulating plateaus, tilted uplands, and structural benches.

b. Landscape Quality -

The grassy aspect gives good aesthetic appeal.

c. Climate -

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

d. Activities -

Hunting, horseback riding and wildlife observation are occasional recreation activities on the site.

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 - Table Mesa Quad - 2.5 miles S. of Table Mesa - Sec. 23, T27N, R18W - Navajo Res., NM.

2. Field office site location -

E. FIELD OFFICES

Shiprock, NM; Window Rock, AZ; Aztec, NM; Gallup, NM.