

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
Field Office

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

Major Land Resource Unit: D-37A  
Site No.: 037AY031NM

Date: AUG 24 1993

Approved By: R. S. Carmichael

A. PHYSICAL CHARACTERISTICS

1. Physiographic Features

This upland site occurs on treads of high stream terraces and benches and cuesta dipslopes of undulating plateaus. 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 to 5 percent. Elevations range from 4,600 to 5,400 feet.

2. Soils

a. The soils are deep to very deep and well drained. Surface textures include gravelly sandy loam, channery fine sandy loam. The subsoil has textures of sandy loam, gravelly sandy clay loam, very gravelly coarse sandy loam, very cobbly loamy coarse sand, loam, very channery loam, extremely flaggy coarse sandy loam, and extremely channery coarse sandy loam. Permeability is moderate. Available water capacity is very low to low. Runoff is slow to medium and the hazard of water erosion is slight to moderate. The hazard of soil blowing is moderate. The soils are non-saline to slightly saline (EC 0-8), moderately alkaline (pH 7.9-8.4) and non sodic (SAR 0-5).

b. Major soils associated with this site are:

Soil Taxonomic Unit

Shiprock SSA:

- 102 - Blackston-Camac-Rockoutcrop Complex (Blackston part)
- 137 - Persayo-Cairn-Patel Complex (Cairn 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 mid and short 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, Russian thistle, galleta and broom snakeweed. 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:

| <u>Grasses and Grasslike (55-65%)</u> | <u>Percent</u> |
|---------------------------------------|----------------|
| Indian ricegrass (ORHY)               | 25-30          |
| galleta (HIJA)                        | 10-15          |
| bottlebrush squirreltail (SIHY)       | 5-10           |
| sand dropseed (SPCR)                  | 5-10           |
| alkali sacaton (SPAI)                 | 0-1            |
| Fendler threeawn (ARFE4)              | 0-1            |
| other perennial grasses (PPGG)        | 0-2            |

| <u>Forbs (1-5%)</u>      | <u>Percent</u> |
|--------------------------|----------------|
| globemallow (SPHAL)      | 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)                 | 15-20          |
| broom snakeweed (GUSA2)          | 1-5            |
| winterfat (EULA5)                | 0-2            |
| plains pricklypear (OPPO)        | 0-1            |
| Castle Valley clover (ATCU)      | 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>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. This site has 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                           | 7-12          | .08-.14       |
| Poor                   | 0- 25                            | 12-19         | .05-.08       |

2. Wildlife

a. Site factors influencing wildlife.

This site is used by grassland wildlife. Lack of natural water limits use.

b. Guide to site plant use by wildlife species.

| Plant Species               | Selected Wildlife Species |              |           |                  |
|-----------------------------|---------------------------|--------------|-----------|------------------|
|                             | Cottontail<br>Rabbit      | Mule<br>Deer | Pronghorn | Mourning<br>Dove |
| Indian ricegrass            | X                         | G-Foliage    | G-Foliage | G-Seed           |
| galleta                     |                           | F-Foliage    | F-Foliage |                  |
| bottlebrush<br>squirreltail |                           | F-Foliage    | F-Foliage |                  |
| globemallow                 | G-Foliage                 | G-Foliage    | G-Foliage | G-Seed           |
| perennial forbs             | G-Foliage                 | G-Foliage    | G-Foliage | G-Seed           |
| shadscale                   |                           |              | G-Foliage |                  |
| winterfat                   |                           | G-Foliage    | G-Foliage |                  |
| plains<br>pricklypear       |                           | G-Fruit      | G-Fruit   |                  |

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

3. Recreation and Natural Beauty

a. Land Form -

High stream terraces and benches and cuesta dipslopes of undulating plateaus.

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 observations 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 - Sallies Spring Quad - about 16 miles NW of Shiprock, NM - Sec. 31, T32N, R19W - Navajo Res., NM.

2. Field office site location -

E. FIELD OFFICES

Shiprock, NM; Aztec, NM.