USDA-SCS
Section II-E
Technical Guide
Area 2, Texas

LAKEBED
RANGE SITE DESCRIPTION
PE 29-31

Land Resource Area HP
Location
Date
Approved by:

1. PHYSIOGRAPHIC FEATURES: This site consist of nearly level areas in playa bottoms. Slopes are plane to concave and are commonly less than 0.5 percent. Elevations range from about 3000 feet to about 4500 feet.

2. SOILS:

a. These are deep, somewhat poorly drained, very slowly permeable, calcareous clay soils. Water enters the soil rapidly when dry and cracked, and very slowly when wet. The water holding capacity is high. The natural fertility is high. The root zone is restricted due to the dense clayey textures.

b. Major soil associated with this site:

Randall C; Lipan C; Hess C

thermic site

c. Specific Site Location.

| APPROVAL SIGNATURE | DATE |
|---|---|
| Area Conservationist | 2/23/79 |
| Field Specialist-Range | 3/2/79 |
| Field Specialist-Biology | 3/16/79 |

3. CLIMATE:

See Field office climate description

4. CLIMAX VEGETATION:

a. The climax plant community varies considerably among playa lakes and is dependent upon size inundation period, and available runoff. However, the climax plant community is dominated by short and mid-grasses, sedges and forbs. The smaller lakes in many cases primarily support stands of western wheatgrass while others that have long periods of inundation primarily support sedges and rushes. Still other lakebed areas support 10-12 species, many of which may be annuals. Areas supporting the large variety of vegetation are usually the larger lakebeds.

RELATIVE PERCENT OF TOTAL PLANT COMMUNITY (Air-dry weight)

| Grasses, Sedges 75% | | Forbs 25% | |
|---|---|---|---|
| western wheatgrass | ) | smartweed 10 | |
| spike sedges | ) 60 | arrowhead | ) |
| buffalograss 10 | | slimleaf goosefoot | ) 15 |
| blue grama 5 | | beakpod evening primrose | ) |
| knotgrass T | | bur ragweed T | |
| vine mesquite T | | kochia T | |
| rushes T | | fleabane T | |

b. As retrogression occurs on areas with recent dry water regime, short grasses such as buffalograss and blue grama increase dramatically. Annual grasses such as little barley, barnyard grass, and 6 weeks fescue invade the site with a variety of forbs.

Changes in vegetation caused by prolonged flooding are a disappearance of buffalograss and blue grama, a severe decrease in western wheatgrass, and a dramatic increase in the percentage of sedges and rushes.

When all the water evaporates following a period of prolonged flooding, the sedges and rushes decrease rapidly and western wheatgrass increases rapidly. Under continued dry conditions buffalograss and blue grama increase slowly.

Plant composition and production on this site is more dependent on available moisture, rainfall and runoff accumulation rather than grazing pressure.

c. The annual yields vary widely from year to year and are dependent on available runoff water. Approximate total annual yields of this site in excellent condition ranges from 500 pounds in dry years to as much as 5,000 pounds, depending on inundation or ideal moisture for forage production.

5. WILDLIFE ADAPTED TO THE SITE: This site is inhabited by quail, dove, and pheasant. When flooded, shorebirds and migratory waterfowl frequent this site. Most of the forbs on this site produce food and limited cover for these species.

6. ESTHETIC AND RELATED VALUES: Pink flowers of the smartweed can add considerable color to lakebeds during the Spring when adequate moisture is available. Also white flowers of arrowhead can add color to these areas. Often livestock can be seen standing in the water grazing various plants. During the Fall, many times migratory waterfowl can be seen using these lakes as rest stops on their way South.

7. HYDROLOGIC CHARACTERISTICS: When wet, these soils have very slow infiltration and transmission rates. These soils receive runoff from surrounding uplands. There is no runoff from these depressed areas. They are seasonably wet and some areas are inundated for long periods following rains. Theses soils are in wind erodibility group 4. They are moderately suceptible to soil blowing.

C. GUIDE TO INITIAL STOCKING RATE:

Percent

| a. Condition Class | Climax Vegetation | Acres/AU/Year long |
|---|---|---|
| Excellent | 76-100 | 6-10 |
| Fair | 51-75 | 8-20 |
| Fair | 26-50 | 18-35 |
| Poor | 0-25 | 32 + |

RELATIVE FORAGE QUALITY OF SPECIES 1/

a. For cattle:

| Primary 2/ | Secondary 3/ | Low Value 4/ |
|---|---|---|
| western wheatgrass | smartweed | perennial threeawn |
| blue grama | kochia | arrowhead |
| buffalograss | beakpod eveing primrose | bur ragweed |
| knotgrass | slimleaf goosefoot | fleabane |
| sedges | | buffalo-bur |
| rushes | | annual grasses and forbs |

b. For Dove, Quail, Pheasant 5/

| | | |
|---|---|---|
| buffalo-bur | vine mesquite | perennial threeawn |
| knotgrass | sedges | rushes |
| bur ragweed | smartweed | blue grama |
| annual weed seed | kochia | buffalograss |
| | barnyard grass | western wheatgrass |
| | beakpod evening primrose | arrowhead |
| | | slimleaf goosefoot |

c. For migratory waterfow 5/

| | | |
|---|---|---|
| smartweed | algae and other | most grasses |
| slimleaf goosefoot | guatic vegetation | |
| barnyard grass | rushes | |
| arrowhead | | |

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1/ This rating system provides general guidance as to animal preference for plant species. It also indicates competition between kinds of animals for the various plants. Grazing preference changes from time to time and place to place depending upon the animal, plant palatability and nutritive value, stage of growth and season of use, relative abundance, and associated plants. Grazing preference does not necessarily reflect the place of a plant in the range ecosystem.

2/ These species generally decrease under prolonged heavy grazing.

3/ These plants usually increase initially, then decrease under prolonged heavy use.

4/ These plants continue to increase with heavy grazing use.

5/ For these wildlife species the terms primary, secondary and low value indicat animal preference only. They do not indicate plant response to feeding pressure; ~~nor do they have any ecological significance~~.

GLB