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

SAND HILLS
RANGE SITE DESCRIPTION
PE 28-33

Land Resource Area HP & RR
Location _____

Date _____
Approved by _____

1. PHYSIOGRAPHIC FEATURES: This site consist of gently undulating to rolling hummocks and dunes. They are 3 to 30 feet high with sideslopes of 3 to 12 percent.

2. SOILS:

   a. These are deep, excessively drained, noncalcareous sandy soils. They have light colored fine sand surface layers and rapidly permeable fine sand lower layers. They take in water rapidly and the water holding capacity is low. The natural fertility is low.

   b. Major soils associated with this site:

      Tivoli fs; Valentine fs

   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 is tall grass dominated by switchgrass, Indiangrass and sand bluestem. A distinct characteristic of this site is the presence of big sandreed. Though this species is low in palatibility it occurred in the climax and has a tendency to come and go as influenced by the grazing use of associated climax species.

Relative Percentage of Total Plant Community (air-dry weight)

Grasses	75%	Woody Plants	15%	Forbs	10%
little bluestem	15	sand plum	5	western indigo	
sand bluestem	30	skunkbush sumac	5	prairie spiderwort	
sideoats grama		yucca	5	Illinois bundleflower	
big sandreed		sand sagebrush		mentzelia	
		shin oak		wild alfalfa	
Iandiangrass	15	lead plant		prairie clovers	
switchgrass				gaura	
needle-and-thread				catclaw sensitivebriar	
				penstemons	
hairy grama	15			Engelmanndaisy	
perennial threeawns				lyreleaf greeneyes	
sand dropseed					
Canada wildrye	T				
giant dropseed					
sand lovegrass					
silver bluestem					
sand paspalum					

b. As retrogression occurs tall grasses decrease while sand dropseed, perennial threeawns, fall witchgrass, red lovegrass, tumble windmill-grass, tumble lovegrass and sand sagebrush will increase. With further retrogression forbs such as western ragweed, queen's delight, perennial broomweed and skunkbush sumac will increase.

c. Approximate total annual production in excellent condition ranges from 1500 to 4000 pounds of air-dry vegetation per acre, depending upon rainfall and growing conditions.

5. WILDLIFE ADAPTED TO THE SITE: This site is inhabited by deer, quail and dove. Predator animals such as coyotes also occupy the site. Other small animals and birds feed, nest, and raise their young on the site.

6. ESTHETIC AND RELATED VALUES: Colorful blue, yellow, lavender and white flowers of forbs dot the landscape during spring and fall when moisture is adequate. White flowers of yucca add color to the site. This plant is also used in landscaping.

7. HYDROLOGIC CHARACTERISTICS: Water infiltration and transmission rates are rapid. Surface runoff is slow and sediment potentials are low. There is some ground water recharge following heavy rains. These soils are in wind erodibility group 1. The hazard of soil blowing is severe.

8. GUIDE TO INITIAL STOCKING RATE:

a.

Condition class	Percent Climax Vegetation	Acres/AU/yearlong
Excellent	76-100	20-26
Good	51-75	24-34
Fair	26-50	30-44
Poor	0-25	40+

b. Seeded areas

	*100-76	75-51	50-26	25-0
sand bluestem or switchgrass	15-20**	21-26	27-35	35+
sideoats grama	20-25	26-30	31-40	40+
mixture (above)	18-24	25-30	31-40	40+

*Percent ground cover
**Acres/AU/yearlong

RELATIVE FORAGE QUALITY OF SPECIES 1/

a. For Cattle:

Primary 2/	Secondary 3/	Low Value 4/
sand bluestem	big sandreed	hairy grama
switchgrass	sand dropseed	perennial threeawns
sideoats grama	silver bluestem	sand plum
Indiangrass	giant dropseed	skunkbush sumac
little bluestem	western indigo	yucca
needle-and-thread	Illinois bundleflower	sand sagebrush
Canada wildrye	wild alfalfa	shin oak
sand paspalum	prairie clovers	prairie spiderwort
lead plant	lyreleaf greeneyes	mentzelia
yucca blooms		gaura
Engelmanndaisy		penstemons
sand lovegrass		

b. For Deer:

prairie clovers	needle-and-thread	sand sagebrush
wild alfalfa	Canada wildrye	mentzelia
yucca blooms	sand paspalum	wild buckwheat
penstemons	sand plum	sideoats grama
catclaw sensitivebriar	skunkbush sumac	big sandreed
Illinois bundleflower	shin oak	switchgrass
primrose sp.	prairie spiderwort	hairy grama
lead plant	gaura	sand dropseed
western indigo		sand lovegrass
Engelmanndaisy		bluestems
lyreleaf greeneyes		

c. For Dove and Quail 5/

western ragweed	prairie clovers	fuzzy seeded
wild alfalfa	penstemons	grasses and forbs
catclaw sensitivebriar	sand dropseed	sideoats grama
annual broomweed	skunkbush sumac	buffalograss
buffalo bur	shin oak	perennial threeawns
sunflowers	mentzelia	hairy grama
crotons	gaura	needle-and-thread
Illinois bundleflower	sand plum	sand sagebrush
sand paspalum	western indigo	yucca
erect dayflower	Engelmanndaisy	lead plant
fall witchgrass		prairie spiderwort
		lyreleaf greeneyes

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 indicate animal preference only. They do not indicate plant response to feeding pressure; ~~nor do they have any ecological significance~~.