UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service, Colorado

Technical Guide
Section II E

RANGE SITE NO. 402
Field Office
August 1975

RANGE SITE DESCRIPTION

for

SANDY SALTDESERT

Land Resource Area: Central Desertic Basins, Mountains, and Plateaus (34)
Colorado and Green Rivers Plateaus (35)
San Juan River Valley Mesas and Plateaus (37)

A. PHYSICAL CHARACTERISTICS

1. Physiographic Features

This site is generally in upland position---gently sloping to rolling hills. Degree of slope ranges from 0 to 25 percent. Direction does not influence the site.

Elevation ranges from 5000 feet to 6500 feet above sea level.

2. Climatic Features

Annual precipitation is less than 12 inches. About 60 percent of this occurs as rain from May through September. Optimum growing season is April, May, September, and October. Growth begins in early March.

Late May, June, and early July are usually the driest months.

3. Native (potential) Vegetation

This is a grassland plant community, but quickly becomes shrub dominated with site deterioration. Important grasses are galleta, needle-and-thread, Indian ricegrass, sand dropseed, and squirreltail. Important shrubs include shadscale, big sagebrush, black sage, spiny and spineless hopsage.

This site is treeless.

Optimum ground cover is 20 percent.

Invaders on this site are Russian thistle, halogeton, annual mustards, and cheatgrass.

Native (potential) Vegetation and Guide for Determining Range Condition.

Percentage composition by weight of the principal species may total as much as:

Grasses and grasslike:	
Needle-and-thread	25
Indian ricegrass	10
Sand dropseed	10
Galleta	5
Sandberg bluegrass	5
Squirreltail	5
Three-awn	3
Forbs;	
Globemallow)	
Phlox)	
Buckwheat)	
Aster)	15
Mentzelia)	
Sandverbena)	
Prickly pear cactus)	
Shrubs:	
Shadscale	15
Big sagebrush and black sagebrush	15
Small rabbitbrush)	
Tall rabbitbrush)	10
Douglas rabbitbrush)	
Smooth horsebrush	5
Spiny horsebrush	5
Ephedra	2
Winterfat	2
Fourwing saltbush	2

4. <u>Total Annual Production</u>

Favorable years	700	Pounds per Acre Air Dry
Unfavorable years	300	" " " " "
Median years	500	" " " " "

5. Soils

a. Light colored sandy loam to loamy sand moderately deep to deep. Permeability is rapid and water holding capacity is low making the soil quite droughty and plant production dependent on current precipitation.

b. Soils in this site are:

6. Rare, Threatened or Endangered Plants and Animals

(To be added when known)

7. Location of Typical Example of the Site

Ranches and low hills east of Green River, Brown's Park Refuge, Brown's Park, Moffat County, Colorado.

8. Field Offices in Colorado where the site occurs:

314 Cortez
315 Craig
318 Delta
328 Grand Junction
343 Meeker

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B. Major Uses and Interpretations for the Sandy Saltdesert Range Site

Use of Product	Value Rating				
	High	Medium	Low	Not Applicable	
1. Grazing					
Cattle			X		
Sheep		X			
Horses			X		
2. Wood Products				X	
3. Wildlife					
Antelope		X			
Bison			X		
Deer			X		
Elk			X		
Cottontail		X			
Jackrabbit		X			
Upland game birds		X			
Waterfowl			X		
4. Watershed			X		
5. Recreation and Natural Beauty		X			

Ecological Reference Sheet

MLRA: 34A **Ecological Site:** Sandy Salt Desert

Date: 01/20/05 **Author(s)/participant(s):** C. Holcomb, F. Cummings, S. Jaouen

Contact for lead author: _____

This *must* be verified based on soils and climate (see Ecological Site Description). Current plant community *cannot* be used to identify the ecological site.

Composition (indicators 10 and 12) based on: X Annual Production, __Cover Produced During Current Year __Biomass

Indicators. For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above- and below-average years and natural disturbance regimes for **each** community within the reference state, when appropriate & (3) cite data. Continue descriptions on separate sheet.

1. Number and extent of rills: None

2. Presence of water flow patterns: Flow paths expected, short and usually disconnected with few debris dams obvious after rainfall events.

3. Number and height of erosional pedestals or terracettes: Pedestals infrequent, usually around shrubs.

4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground): Expect 30-40% bare ground. Extended drought can cause bare ground to increase.

5. Number of gullies and erosion associated with gullies: Some, depending on landscape position & offsite influences.

6. Extent of wind scoured, blowouts and/or depositional areas: Slight to moderate, on exposed areas.

7. Amount of litter movement (describe size and distance expected to travel): Litter movement associated with flow paths and disturbed areas. Movement is typically short (1-2 feet), but can be moderate under intense rainfall events.

8. Soil surface (top few mm) resistance to erosion (stability values are averages – most sites will show a range of values): Stability class rating anticipated to be 2-4 in the interspaces at soil surface.

9. Soil surface structure and SOM (soil organic matter) content (include type and strength of structure, and A-horizon color and thickness): Deep, moderately well drained soil. Surface texture ranges from a sandy loam to fine sandy loam with a moderate to strong very fine to medium platy structure. The A-horizon is 0-5 inches in depth, pale brown to light brownish gray in color.

10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff:
Diverse shrub, grass and forb functional/structural groups and diverse root structure/patterns reduces raindrop impact slows overland flow providing increased time for infiltration to occur. Soil texture promotes infiltration.

11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): None

12. Functional/Structural Groups (list in order of descending dominance by above-ground production or live foliar cover (specify) using symbols: >>, >, = to indicate much greater than, greater than, and equal to; place dominants, subdominants and "others" on separate lines):
Dominants: shrubs >
Sub-dominants: cool season bunchgrass > warm season bunchgrass > forbs >
Other: warm season rhizomatous grass

13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Typically minimal. Expect slight shrub and grass mortality/decadence during and following drought.

14. Average percent litter cover (_____%) and depth (_____ inches). 10-20% litter cover at 0.25 inch depth. Litter cover declines during and following extended drought.

15. Expected annual production (this is TOTAL above-ground production, not just forage production):
300 lbs./ac. low precip years; 500 lbs./ac. average precip years; 700 lbs./ac. above average precip years. After extended drought or the first growing season following wildfire, production may be significantly reduced by 100 – 250 lbs./ac. or more.

16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do, continue to increase regardless of the management of the site and may eventually dominate the site": Cheatgrass, halogeton, annual mustards, Russian thistle, sand dropseed, and other noxious weeds.

17. Perennial plant reproductive capability: The only limitations are weather-related, wildfire, natural disease, inter-species competition, wildlife, and insects that may temporarily reduce reproductive capability.

Functional/Structural Groups Sheet

State: _____ Office: _____ Ecological Site: Sandy Salt Desert Site ID: R034AY402CO

Observers: _____ Date: _____

Functional/Structural Groups			**Species List for Functional/Structural Groups**
Name	Potential[1]	Actual[2]	Plant Names
Shrubs	D		Shadscale, black sagebrush, big sagebrush, winterfat, rabbitbrush, fourwing saltbush, spiny horsebrush, ephedra
Cool season bunch grass	S		Indian ricegrass, needleandthread, bottlebrush squirreltail, sandberg bluegrass
Warm season bunch grass	S		Sand dropseed, blue grama, three-awn
Forbs	S		Buckwheat, scarlet globemallow, asters, phlox, mentzelia, sandverbena, prickly pear cactus
Warm season rhizomatous grass	M		Galleta
Noxious Weeds			
Invasive Plants			
Biological Crust[3]	T		

Indicate whether each "structural/functional group" is a Dominant (D) (roughly 40-100 % composition), **a Sub-dominant (S)** (roughly 10-40% composition) **a Minor Component (M)** (roughly 2-5% composition), or a Trace Component **(T)** (<2% composition) based on weight or cover composition in the area of interest (e.g., "Actual[2]" column) relative to the "Potential[2] " column derived from information found in the ecological site/description and/or at the ecological reference area.

Biological Crust [3] dominance is evaluated solely on **cover** not composition by weight.