UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service, Colorado

Technical Guide
Section II E

RANGE SITE NO. 410
Field Office
August 1975

RANGE SITE DESCRIPTION

for

SILTY SALTDESERT

Land Resource Area: Central Desertic Basins, Mountains, and Plateaus (34)
Colorado and Green Rivers Plateaus (35)

A. PHYSICAL CHARACTERISTICS

1. Physiographic Features

The topography is hilly, hummocky, and undulating terrain generally in the main valley floors and at the base of more precipitous hills. It is dissected by gullies forming a highly developed dendritic drainage pattern. Gullies are more frequent as the slope increases.

Degree of slope ranges between 3 and 25% (mostly between 6 and 20%). Exposure is not a factor at the lower elevations and precipitation zones, however. The slope is more southerly (drier exposures) as the precipitation and elevation increase.

This site occurs between 4700 and 6200 feet above sea level. It may range slightly higher on southwest exposures and in rain shadows.

2. Climatic Features

Annual precipitation ranges between 10 and 12 inches. About one-third of this comes during winter (November to March). Optimum growing season for the native plants is March to October. Winters are typically cold averaging about 30° F, with the temperature averaging 60° F during the growing season.

June, July, and August are very warm and usually dry months. Therefore, cool season grasses are favored by making good spring growth from winter moisture.

3. Native (potential) Vegetation

The aspect of this site is a shadscale grass community. Galleta is the dominant plant on this site. Other grasses include Salina wildrye, Indian ricegrass, squirreltail, needle-and-threadgrass, three-awn, and sand dropseed. Forbs include scarlet globemallow, paintbrush, sego lily, buckwheat, phlox, primrose, and death camas. Shrubs which grow on this site are shadscale, Gardner saltbush, Douglas rabbitbrush, bud sage, big sagebrush, winterfat, spiny horsebrush, and prickly pear.

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:	
Galleta	40
Indian ricegrass	10
Salina wildrye	10
Squirreltail	5
Forbs:	15
Shrubs:	
Shadscale	20
Gardner saltbush	5
Douglas rabbitbrush	5

This site is treeless.

Optimum ground cover is about 20 percent.

Invaders on this site include halogeton, cheatgrass, and Russian thistle.

4. Total Annual Production

Favorable years	650	Pounds per Acre Air Dry
Unfavorable years	400	" " " " "
Median years	575	" " " " "

5. Soils

a. Surface soil textures are silty, ranging from light silty loams to silty clay loams. In some areas there may be a light stone or channery litter. The soils are usually limy to the surface and typically yellowish brown in color high in crystalline gypsum. The soils are normally shallow but may include minor areas of moderately deep soils. Predominant parent materials are sandy members of the Mancos shale formation. Natural erosion is common.

b. Soils in this site are

Persayo silty loam
Persayo silty clay loam
Menok

6. Rare, Threatened or Endangered Plants and Animals

(To be added when known)

7. Location of Typical Example of the Site

Along Highway 6-50 between Mack, Colorado and the Utah state line in Mesa County.

8. Field Offices in Colorado where the site occurs:

315 Craig
318 Delta
328 Grand Junction
343 Meeker
345 Montrose

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B. Major Uses and Interpretations for the SILTY 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			

<u>Draft</u> Ecological Reference Sheet

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

Date: 6/13/07 **Author(s)/participant(s):** L. Santana, J. Murray

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: If present, shallow and short. Generally linear and more apparent on steeper slopes where ground cover has been reduced
2. Presence of water flow patterns: Flow paths expected, short and usually disconnected with numerous debris dams obvious after rainfall events.
3. Number and height of erosional pedestals or terracettes: Slight pedestalling common, occurring in or near flow paths.
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground): Expect 40-50% bare ground. Extended drought can cause bare ground to increase.
5. Number of gullies and erosion associated with gullies: Some, depending on landscape position. They can be slumped with blunted edges. Gullies are typically small and wide spread unless flows have been concentrated from off-site drainage.
6. Extent of wind scoured, blowouts and/or depositional areas: None
7. Amount of litter movement (describe size and distance expected to travel): Litter movement associated with flow paths. 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 4-5 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): Surface textures are silty, ranging from light silty loams to silty clay loams. Some areas may have light stone or channery appearance. Predominant parent materials are sandy members of the Mancos shale formation. Natural erosion is common.
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Grass and shrub canopy, basal cover, and inherent interspaces between plants allow for some overland flow, providing a lost opportunity for infiltration to occur, especially during or after high intensity rainfall events. Flows from off-site drainage common, usually associated with Bad Lands or Clayey Salt Desert sites.
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**: warm season rhizomatous grass > **Sub-dominants**: shrubs = cool season bunchgrass > **Other**: forbs > warm season bunchgrass
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 or lack of disturbance.
14. Average percent litter cover (_____%) and depth (_____ inches). 5-15% 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): 400 lbs./ac. low precip years; 575 lbs./ac. average precip years; 650 lbs./ac. above average precip years. After extended drought or the first growing season following wildfire, production may be significantly reduced by 150 – 350 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 wheatgrass, and other noxious weeds.
17. Perennial plant reproductive capability: Variable due to unreliable moisture availability. The only limitations are weather-related, wildfire, natural disease, inter-species competition, wildlife, and insects that may temporarily reduce reproductive capability. This site is temperature driven with most of the growing accruing during the cool winter months.

Functional/Structural Groups Sheet

State: Colorado **Office:** Montrose **Ecological Site:** Silty Salt Desert **Site ID:** R034Y410CO

Observers: Lars Santana, John Murray **Date:** 6/13/07

Functional/Structural Groups			Species List for Functional/Structural Groups
Name	Potential[1]	Actual[2]	Plant Names
Warm season rhizomatous grass	D		Galleta
Shrubs	S		Shadscale, Gardner saltbush, winterfat, bud sagebrush, mat salt bush, fourwing saltbush, spiny horsebrush, prickly pear
Cool season bunch grass	S		Indian ricegrass, needleandthread, bottlebrush squirreltail, sandberg bluegrass
Forbs	M		Buckwheat, scarlet globemallow, scarlet gilia, asters, daisy, phlox, sego lily, biscuitroot, primrose
Warm season bunch grass	T		blue grama, sand dropseed
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.