

RANGE SITE DESCRIPTION

for

SALT MEADOW

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 gently sloping to flat in lowland position subject to a beneficial water table and sometimes overflow water. Elevation ranges from 5000 feet to 7500 feet.

2. Climatic Features

The average annual precipitation is 8 to 15 inches. Optimum growing season for native plants is April 15 to September 1. Plant growth is enhanced over that of upland sites in this climatic zone because of water supplied from the water table.

3. Native (potential) Vegetation

Alkali sacaton, saltgrass, alkali grass, western wheatgrass, sedges, and rushes give this site the meadow aspect. A few fourwing saltbush, rabbitbrush and greasewood shrubs are scattered over the meadow. Other salt meadow plants include alkali cordgrass, slender wheatgrass, foxtail barley, common reed, aster, seepweed and arrowgrass. Basin wildrye grows on less alkaline places in the site.

Ground cover totals as much as 60 percent.

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

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

Alkali sacaton	40
Saltgrass	10
Western wheatgrass	10
Sedges	10
Rushes	5
Alkali grass	5
Foxtail barley	5
Slender wheatgrass	5
Basin wildrye	5
Fourwing saltbush	5
Tall rabbitbrush	5
Greasewood	5
Other (listed above)	10

4. Total Annual Production

Favorable years	2500	Pounds	per	Acre	Air	Dry
Unfavorable years	1500	"	"	"	"	"
Median years	2000	"	"	"	"	"

5. Soils

a. Soils are dark brown to almost white, strongly saline-alkaline, poorly drained, sandy loam to clay bottomland, swale, or depression soils. The entire profile is strongly gleyed and is affected by salt and a high water table. These soils have a high pH which is restrictive to kinds, and often amounts, of plant growth. Salt crusts often form on the surface of the soil.

b. Soils in this site are:

Saline wetlands

6. Rare, Threatened or Endangered Plants and Animals

(To be added when known)

7. Location of Typical Example of the Site

Section 8, T6S, R92W, Garfield County.
Along river bottoms of Green, Yampa, White, Colorado, Dolores
and other western Colorado rivers, where water table and
saline soils exist.

8. Field Offices in Colorado where the site occurs:

314 Cortez
315 Craig
318 Delta
320 Durango
321 Eagle
326 Glenwood Springs
328 Grand Junction
343 Meeker
345 Montrose
346 Norwood
347 Pagosa Springs

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B. Major Uses and Interpretations for the SALT MEADOW Range Site

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

Ecological Reference Sheet

MLRA: 34A Ecological Site: Salt Meadow

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: 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: None

3. Number and height of erosional pedestals or terracettes: None

4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground): Expect 5-10% bare ground. Extended drought or increased salt concentrations can cause bare ground to increase.

5. Number of gullies and erosion associated with gullies: None to rare. Due to off-site influence. If present, edges rounded and vegetated.

6. Extent of wind scoured, blowouts and/or depositional areas: None

7. Amount of litter movement (describe size and distance expected to travel): Typically slight, however during major flooding events this site slows water flow and captures litter and sediment.

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 3-5 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): Soils are typically deep and poorly drained with a high water table. Surface texture ranges from loam to fine sandy loam with a moderate medium sub-angular blocky structure. The A-horizon ranges from 0-8 inches in depth. Color varies from light gray to pale brown. Moderate to strongly saline-alkali. Surface salts may be obvious.

10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff:
Diverse grass, sedge/rush, shrub and forb functional/structural groups and diverse root structure/patterns reduces raindrop impact slows overland flow providing increased time for infiltration to occur. However, the high water table inherent to this site has more effect on infiltration than does plant community.

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 bunchgrass >>
Sub-dominants: shrubs = sedges/rushes > warm season rhizomatous grass = cool season bunchgrass = cool season rhizomatous grass >
Other: forbs

13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Minimal. Decadence and mortality may occur due to drought and lack of disturbance.

14. Average percent litter cover (_____ %) and depth (_____ inches). 40-50% litter cover and ranges from 0.50 to 1.0 inches in depth. Litter cover declines during and following extended drought.

15. Expected annual production (this is TOTAL above-ground production, not just forage production):
1500 lbs./ac. low precip years; 2000 lbs./ac. average precip years; 2500 lbs./ac. above average precip years. After extended drought, production may be reduced by 350 – 800 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”: Greasewood, rabbitbrush, foxtail barley, inland saltgrass.

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: Salt Meadow

Site ID: R034AY266CO

Observers: _____

Date: _____

Functional/Structural Groups			Species List for Functional/Structural Groups
Name	Potential ¹	Actual ²	Plant Names
Warm season bunchgrass	D		Alkali sacaton
Sedges/rushes	S		Spike rush, other sedges/rushes
Shrubs	S		Fourwing saltbush, greasewood, rabbitbrush
Warm season rhizomatous grass	S		Inland saltgrass, alkali cordgrass
Cool season bunch grasses	S		Alkali grass, foxtail barley, bottlebrush squirreltail, slender wheatgrass, basin wildrye
Cool season rhizomatous grass	S		Western wheatgrass
Forbs	M		Arrowgrass, woody aster, seepweed
Noxious Weeds			
Invasive Plants			
Biological Crust ³			

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., “Actual²” column) relative to the “Potential²” column derived from information found in the ecological site/description and/or at the ecological reference area.

Biological Crust³ dominance is evaluated solely on **cover** not composition by weight.