UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service, Colorado

Technical Guide
Section II E

RANGE SITE NO. 231
Field Office
August 1975

RANGE SITE DESCRIPTION

for

DRY MOUNTAIN LOAM

Land Resource Area: Southern Rocky Mountains (48)

A. PHYSICAL CHARACTERISTICS

1. Physiographic Features

Topography is gently sloping to steep hilly lands. Slope is usually less than 25%. Elevation ranges from 7500 feet to 8500 feet.

2. Climatic Features

Average annual precipitation is 12 to 14 inches with 50% or more of the moisture received as snow.

Optimum growing season for native plants is May 15 to July 1. The frost-free period ranges from 30 to 100 days. Temperature ranges from the 70°s to (-) 40°s. Mean annual temperature is less than 40 degrees F.

Associated with this site are areas limited in plant growth conditions because of exposure and wind.

3. Native (potential) Vegetation

Bluebunch wheatgrass, sheep fescue, pine needlegrass, needle-and-thread, June grass, streambank wheatgrass, squirreltail, Nevada bluegrass, mutton grass and sedges contribute toward a rather sparse grassland appearance. Sagebrush has a noticeable place on this site. Low rabbitbrush, snowberry, serviceberry, and bitterbrush may be present in small amounts. Low phlox, pussytoes, buckwheat, stonecrop and fringed sage are common.

Optimum ground cover is 35%. The following species are most likely to invade this site: Tall rabbitbrush.

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

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

Bluebunch wheatgrass	30
Needlegrasses	30
Streambank wheatgrass	25
Sheep fescue	20
Muttongrass	20
Nevada bluegrass	20
Junegrass	15
Big sagebrush	15
Indian ricegrass	10
Squirreltail	10
Sedge	10
Blue grama	5
Low rabbitbrush	5
Fringed sage	5
Bitterbrush	5
Snowberry	5
Serviceberry	5
Others (as listed above)	10

4. Total Annual Production

Favorable years	1000	Pounds	per	Acre	Air	Dry
Unfavorable years	500	"	"	"	"	"
Median years	750	"	"	"	"	"

5. Soils

a. Soils are gritty loams to sandy loams, dark colored, with a depth of top soil holding to about 7 inches. The subsoil is inclined to be hard and slowly permeable when dry. A strong lime zone (very mature and developed) is present at about 27 inches on gentle slopes. Some soils have a tendency to form crusts which restrict infiltration and tend to create droughty conditions, thus inhibiting plant growth.

b. Soils of this site are:

Barishman loam
Cabin sandy loam
Carpening loam
Cathedral gravelly sandy loam
Cheadle gravelly sandy loam
Forelle loam
Grafen
Hopkins channery loam
Mergel gravelly loam
Morset loam
Randman sandy loam
Spring Creek stony loam
Tiagos fine sandy loam

6. Rare, Threatened or Endangered Plants and Animals

(To be added when known)

7. Location of Typical Example of the Site

8. Field Offices in Colorado where the site occurs:

315 Craig
321 Eagle
323 Fort Collins
326 Glenwood Springs
337 Kremmling
343 Meeker
353 Steamboat Springs
358 Walden

RANGE SITE DESCRIPTION - Colorado - 1974

B. Major Uses and Interpretations for the DRY MOUNTAIN LOAM 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: 48A **Ecological Site:** Dry Mountain Loam

Date: 12/8/04 **Author(s)/participant(s):** J. Murray, C. Holcomb, L. Santana, F. Cummings, A. Jones, P. Billig, 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: Slight on slopes less than 10%. Rills can be more defined on slopes ranging from 15-25%, especially following intense storms.
2. Presence of water flow patterns: Slight. Flow paths becoming more apparent on slopes exceeding 15%.
3. Number and height of erosional pedestals or terracettes: Slight. Pedestals may occur on steeper slopes.
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground): Expect 20-30% bare ground. Extended drought can cause bare ground to increase.
5. Number of gullies and erosion associated with gullies: Occasionally, depending on soil texture, slope steepness and length.
6. Extent of wind scoured, blowouts and/or depositional areas: Some wind scouring is possible where surface roughness (rock and/or fragments) is lacking.
7. Amount of litter movement (describe size and distance expected to travel): Litter movement associated with flow paths. Movement expected to be moderate.
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 2-5 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 texture ranges from a gritty loam to sand loam with a fine granular structure. Depth of the A-horizon is typically 0-4 inches deep, well drained and pale brown in color.
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Grasses, forbs, shrub canopy, basal cover and inherent interspaces between plants allow for some overland flow, providing a lost opportunity for infiltration to occur.
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**: cool season bunchgrass = **Sub-dominants**: shrub (non-sprouter) = forbs > cool season rhizomatous grasses = shrub (sprouter) > **Other**: sedges > 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). 30-50% 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): 500 lbs./ac. low precip years; 750 lbs./ac. average precip years; 1000 lbs./ac. above average precip years. After extended drought or the first growing season following wildfire, production may be significantly reduced by 250 – 500 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 and 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: Dry Mountain Loam Site ID: R048AY231CO

Observers: _____ Date: _____

Functional/Structural Groups			**Species List for Functional/Structural Groups**
Name	Potential[1]	Actual[2]	Plant Names
Cool season bunch grasses	D		Arizona fescue, bluebunch wheatgrass, needlegrasses, native bluegrasses, Indian ricegrass, prairie junegrass, bottlebrush squirreltail
Shrubs – non-sprouter	S		Big sagebrush, black sagebrush
Forbs	S		Western yarrow, lupine, buckwheat, Indian paintbrush, balsamroot, scarlet globemallow, scarlet gilia, asters, daisy, phlox
Cool season rhizomatous grasses	S		Western wheatgrass, streambank wheatgrass
Shrubs – sprouter	S		Rabbitbrush, snowberry, serviceberry, bitterbrush
Sedges	M		Threadleaf sedge
Warm season bunch grass	T		Blue grama
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.