

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service, Colorado

Technical Guide
Section II E

RANGE SITE NO. 303
Field Office
August 1975

RANGE SITE DESCRIPTION

for

LOAMY SLOPES

Land Resource Area: Wasatch and Uinta Mountains (47)
Central Desertic Basins, Mountains,
and Plateaus (34)
Southern Rocky Mountains (48)

A. PHYSICAL CHARACTERISTICS

1. Physiographic Features

This site occurs on moderate to very steep stony slopes. Direction of slope in the upper foothill zone is north and east, and in the lower oakbrush zone is south and west.

Elevation ranges from 6000 to 8000 feet.

2. Climatic Features

Annual precipitation varies from 14 to 18 inches. More than one-half of the effective moisture is snow. Optimum growing season for the native vegetation is May 15 to June 30. Winters are typically cold, averaging below freezing.

June, July, and August are generally the drier months. April and May are usually windy.

3. Native (potential) Vegetation

This is a browse-grass plant community. Approximately one-half of the annual production is made up of grass species. Bluebunch wheatgrass, Indian ricegrass, western wheatgrass, prairie Junegrass, and bottlebrush squirreltail are the most abundant grasses. The main browse plants are mountain mahogany, antelope bitterbrush, serviceberry, and big sagebrush. Principal forb species include Indian paintbrush, arrowleaf balsamroot, low larkspur, buckwheat, and longleaf phlox.

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:	
Bluebunch wheatgrass	10
Western wheatgrass	10
Prairie Junegrass	10
Indian ricegrass	10
Bottlebrush squirreltail	5
Muttongrass	5
Needle-and-thread and other natives	5

Forbs:	
Indian paintbrush)
Arrowleaf balsamroot)
Low larkspur)
Longleaf phlox) 10
Buckwheat)
Fremont penstemon)
Scarlet globemallow)

Shrubs:	
Mountain mahogany	15
Antelope bitterbrush	15
Serviceberry	10
Big sagebrush	10
Douglas rabbitbrush	5
Snowberry and other natives	5

This site may have scattered pinyon pine and/or Utah juniper. Optimum ground cover is 25 percent.

Invaders of this site are cheatgrass, cactus, thistle species, plus numerous other annual species which move in as the plant community deteriorates.

4. Total Annual Production

Favorable years	1200	Pound	per	Acre	Air	Dry
Unfavorable years	500	"	"	"	"	"
Median years	900	"	"	"	"	"

5. Soils

- a. Soils in this range site are moderately deep to deep stone-filled sandy loam to light clay loam. Permeability is moderate; moisture holding capacity is reduced due to stoniness. These soils are drouthy because of steepness of slopes. Stones in the profile enhance plant growth by increasing water available in a given volume of soil.
- 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

- a. Sec. 29, T6N, R100W, Moffat County, Colorado - south side of Yampa Bench Road at the foot of the Castle Park Dugway.
- b. Sec. 27, T6S, R89W, Garfield County, Colorado - east side of the Four Mile Road.

8. Field Offices in Colorado where the site occurs:

315 Craig
321 Eagle
326 Glenwood Springs
328 Grand Junction
337 Kremmling
343 Meeker
353 Steamboat Springs

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B. Major Uses and Interpretations for the LOAMY SLOPES 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>				X
4. <u>Watershed</u>			X	
5. <u>Recreation and Natural Beauty</u>		X		

Ecological Reference Sheet

MLRA: 34A Ecological Site: Loamy Slopes

Date: 01/18/05 Author(s)/participant(s): J. Murray, C. Holcomb, L. Santana, 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

<p>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 <u>each</u> community within the reference state, when appropriate & (3) cite data. Continue descriptions on separate sheet.</p>
<p>1. Number and extent of rills: None</p>
<p>2. Presence of water flow patterns: Flow paths are inherent to this site. Some path lengths will be short, broken up by surface rock, others may be longer and connected.</p>
<p>3. Number and height of erosional pedestals or terracettes: Pedestals associated with flow paths. Surface rocks act as small dams catching litter, debris and/or sediment.</p>
<p>4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are <i>not</i> bare ground): Expect 40-50% bare ground. Extended drought can cause bare ground to increase. Surface and sub-surface rock are inherent to this site.</p>
<p>5. Number of gullies and erosion associated with gullies: Lack of ground cover and steepness of slope contribute to occasional gullies.</p>
<p>6. Extent of wind scoured, blowouts and/or depositional areas: None</p>
<p>7. Amount of litter movement (describe size and distance expected to travel): Some movement is expected. Distance varies from 1-5 feet following intense rainfall events.</p>
<p>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.</p>
<p>9. Soil surface structure and SOM (soil organic matter) content (include type and strength of structure, and A-horizon color and thickness): Surface soils are moderately deep to deep stone filled and well drained, formed in glacial outwash and/or sandstone. The A-horizon ranges from 0-8 inches in depth and color ranges from reddish brown to brown. Surface structure is moderate medium to coarse granular.</p>
<p>10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Lack of understory vegetation, shrub dominance and inherent interspaces between plants allow for overland flow, providing a lost opportunity for infiltration to occur. The composition of the plant community has less affect on infiltration and runoff than does affects of slope and rock.</p>
<p>11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): None</p>
<p>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 > forbs > Other: cool season rhizomatous grass</p>
<p>13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Typically minimal, except for weather related.</p>
<p>14. Average percent litter cover (_____ %) and depth (_____ inches). 20-30% litter cover at 0.25 inch depth. Extended drought can reduce litter to 10-15%.</p>
<p>15. Expected annual production (this is TOTAL above-ground production, not just forage production): 500 lbs./ac. low precip years; 900 lbs./ac. average precip years; 1200 lbs./ac. above average precip years. After extended drought or the first growing season following wildfire, production may be significantly reduced by 200 – 400 lbs./ac. or more.</p>
<p>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</p>
<p>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.</p>

Functional/Structural Groups Sheet

State: _____ Office: _____

Ecological Site: Loamy Slopes

Site ID: R034AY303CO

Observers: _____

Date: _____

Functional/Structural Groups			Species List for Functional/Structural Groups
Name	Potential ¹	Actual ²	Plant Names
Shrubs	D		Mountain mahogany, snowberry, serviceberry, antelope bitterbrush, big sagebrush
Cool season bunchgrass	S		Needlegrasses, bluebunch wheatgrass, native blue grasses, Indian ricegrass, prairie junegrass, bottlebrush squirreltail
Forbs	S		Western yarrow, lupine, buckwheat, Indian paintbrush, hairy goldaster, penstemons, asters, daisy, stemless goldenweed, scarlet globemallow, prickly pear cactus
Cool season rhizomatous grass	M		Western wheatgrass
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.

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