

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

This draft ecological site description is approved for field use and testing for a one year period beginning MM, YYYY.
Additional information and comments on this site should be sent to the Utah State Range Management Specialist.

STATE: Utah

SITE TYPE: Rangeland

ECOLOGICAL SITE NAME: Desert Sand (Sand sagebrush)

SITE NUMBER: 035XY115UT

MLRA: 035

Original Site Description: Author: GSC

Date: 04/08/1983

Revised Site Description: Author: GSC

Date: 09/13/1993

Approved by: Title: State Range Cons. Signed: Pat Shaver

Date: 05/27/1994

Ecological Site Definition - A distinctive kind of land, with specific physical characteristics, which differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation, and in its response to management.

A. PHYSICAL CHARACTERISTICS

(description narrative of this particular site)

1. SOILS

Depth: 40->60 inches

Surface Textures:

Surface Fragments(<=3" % cover, >3" % cover):

Subsurface Textures:

Subsurface Fragments(<=3" % vol, >3" % vol):

Geologic Parent Materials: Eolian from Sandstone

Moisture Regime:

Temperature Regime: Mesic

Runoff:

Permeability(min-max):

Drainage Class(min-max): Excessively Well Drained

Water Erosion Hazard:

Wind Erosion Hazard:

Electrical Conductivity (EC in mmhos/cm):

Sodium Adsorption Ration (SAR):

Soil Reaction (1:1 water):

Soil Reaction (0.1 M CaCl₂):

pH Range:

Available Water Capacity (inches):

Major Soils Associated With This Site:

Soil Survey Area: 638

Sheppard FS, LFS, S

Additional information may be found in Section II of the Field Office Technical Guide.

2. PHYSIOGRAPHIC FEATURES

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1. Potential Plant Community Description and Ecological Factors

The dominant aspect of the plant community is Indian ricegrass and sand sagebrush. The composition by air-dry weight is approximately 55 percent perennial grasses, 15 percent forbs and 30 percent shrubs.

2. Plant Community Composition by Weight and Percentage

Grasses and Grasslike, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Indian ricegrass	ACHY		80	120	20	30
Sand dropseed	SPCR		40	40	10	10
Sandhill nuhly	MUPU2		12	12	3	3
Mesa dropseed	SPFL2	1	4	12	1	3
Spike dropseed	SPCO4	1	4	12	1	3
Tall dropseed	SPAS	1	4	12	1	3
Purple threeawn	ARPU9	1	4	12	1	3
Galleta	HIJA	1	4	12	1	3
Needleandthread	HECO26	1	4	12	1	3
Other perennial grasses	PPGG	1	20	40	5	10
Other annual grasses	AAGG	1	20	40	5	10

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Gooseberry globemallow	SPGR2		12	20	3	5
James wild buckwheat	ERJA		8	12	2	3
Tufted evening primrose	OECE2		8	12	2	3
Painted milkvetch	ASCE		4	8	1	2
Low lupine	LUPU		4	8	1	2
Woolly bluestar	AMTO2	2	0	4	0	1
Utah firecracker	PEUT	2	0	4	0	1
Stemless fournerve daisy	TEACA2	2	0	4	0	1
Pacific aster	ASCH2	2	0	4	0	1
Hearts delight	ABFR2	2	0	4	0	1
Annual ragweed	AMAR2	2	0	4	0	1
Paria spurge	EUNE2	2	0	4	0	1
Western sticktight	LAOC3	2	0	4	0	1
Whitestem stickleaf	MEAL6	2	0	4	0	1
Veiny dock	RUVE2	2	0	4	0	1
Other perennial forbs	PPFF	2	12	20	3	5
Other annual forbs	AAFF	2	12	20	3	5

Shrubs/Vines, %

Common Name	National	Group	Pounds per Acre	% by Weight of
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	Symbol				Total Composition	
			Low	High	Low	High
Sand sagebrush	ARFI2		20	40	5	10
Fourwing saltbush	ATCA2		12	20	3	5
Mormontea	EPVIV2		12	20	3	5
Sand wild buckwheat	ERLE9		12	20	3	5
Broom snakeweed	GUSA2	3	4	12	1	3
Fineleaf yucca	YUAN2	3	4	12	1	3
Shinnery oak	QUHA3	3	4	12	1	3
Mormontea	EPVI	3	4	12	1	3
Hoary rosemarymint	POIN3	3	4	12	1	3
Crispleaf wild buckwheat	ERCO14	3	4	12	1	3
Fremont smokebush	PSFR	3	4	12	1	3
Thompson smokebush	PSTH	3	4	12	1	3
Pillar false gumweed	VAST3	3	4	12	1	3
Central pricklypear	OPPO	3	4	12	1	3
Winterfat	KRLA2	3	4	12	1	3
Sand rubber rabbitbrush	CHNAA4	3	4	12	1	3
Bigelow sagebrush	ARBI3	3	4	12	1	3
Low rabbitbrush	CHVI8	3	4	12	1	3
Other shrubs	SSSS	3	20	40	5	10

Trees, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High

3. Plant Community Annual Production

At the highest potential similarity index, this site will produce approximately the following amount of air-dry herbage, expressed as pounds/acre:

	Low	High
Favorable Year	670	720
Average Year	370	400
Unfavorable Year	170	200

4. Ground Cover and Structure

a. Vegetative

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035XY121UT
 Desert Sandy Loam (Blackbrush)

035XY133UT
 Desert Shallow Sandy Loam (Blackbrush)

035XY130UT
 Desert Shallow Sandy Loam (Shadscale)

9. Correlated Sites in Other States

(Give site name and number)

D. MAJOR USES OF THIS SITE

1. Livestock

a. Site Factors Influencing Management

This site is properly grazed by cattle and sheep all seasons of the year.

b. Guide to Forage Quality (Plant preference by season)

Species	Oct-Nov	Dec-Feb	Mar-May	Jun-Sep

VG = Very Good G = Good F = Fair P = Poor

2. Wildlife

a. Site Factors Influencing Management

This site provides food and cover for wildlife.

b. List of Potential Species Present

Wildlife using this site include jackrabbit, coyote, bobcat, sparrow, hawk, kangaroo rat, mice, and snake.

This is a short list of the more common species found. Many other species are present as well and migratory birds are present at times.

c. Guide to Forage Preference of Managed Wildlife Species

Wildlife Species →				
Plant Species ↓	Use	Season	Use	Season

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Use - A = preferred or desirable
 B = some use, but less important
 C = little use or used occasionally

Season - F = Fall (Oct-Nov)
 W = Winter (Dec-Feb)
 Sp. = Spring (Mar-May)
 Su. = Summer (Jun-Sep)

3. Recreational Uses

Recreation activities are hiking and hunting.

4. Wood Products

None

5. Other Uses

E. THREATENED AND ENDANGERED SPECIES

1. Plants
2. Animals

F. MODAL LOCATION AND DOCUMENTATION

State: Utah County:
 Latitude: Longitude:

Modal Soil: Sheppard FS, LFS, S — mixed, mesic Typic Torripsamments

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Type Location: Goosenecks, Junction of 276 and 95

General Legal Description:

Field Office Site Location

Price
 Cedar City

Data Collected and References

Sampling Source	Number of Records	Range Similarity Index			
		> 76%	51-75%	26-50%	0-25%
NRCS - ECS - 417					
UTAH - RANGE - 2					
Permanent Transect Location					

Other References

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Attachment 1

Ecological Reference Worksheet

Author(s)/participant(s): V. Keith Wadman
 Contact for lead author: _____ Reference site used? Yes/No
 Date: 6/21/04 MLRA: 035X Ecological Site: Desert Sand (035X115UT) Sand sagebrush, Indian ricegrass, Sand dropseed. This must be verified based on soils and climate (see Ecological Site Description). Current plant community cannot be used to identify the ecological site.

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 for each community within the reference state, when appropriate & (3) cite data. Continue descriptions on separate sheet.

1. Number and extent of rills: None to few. Any rills present should be somewhat short in length (less than 4 feet long) and follow the surface micro-features. Old rills will weather quickly because of loose surface textures. An increase in rill formation may be seen major disturbance events such as severe thunderstorms.

2. Presence of water flow patterns: Flow patterns wind around perennial plants bases and show minor evidence of erosion. They are short and stable and there is slight evidence of deposition. Evidence of flow may increase slightly with slope.

3. Number and height of erosional pedestals or terracettes: Plants should show no pedestaling. Terracettes should be absent.

4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bareground): 40 - 60%.

5. Number of gullies and erosion associated with gullies: None to few. Any gullies present should show little sign of active erosion and should be stabilized with vegetation.

6. Extent of wind scoured, blowouts and/or depositional areas: Some wind generated soil movement is normal. Wind caused blowouts and deposition are mostly stable or have healed over. Coppice mounding around perennial vegetation is common. Increased wind generated soil movement and saltation can occur after severe wind events.

7. Amount of litter movement (describe size and distance expected to travel): Some redistribution caused by both wind and water. Minor litter removal may occur in flow channels with deposition occurring at points of obstruction. Fine litter may be removed from the site by wind action.

8. Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values for both plant canopy and interspaces, if different): 60 to 70% of this site should have an erosion rating of 4 or 6. 30 to 40% may have a rating of 3 to 4. The average should be a 4.

9. Soil surface structure and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different): Soil surface varies from 1 to 2 inches. Structure is weak platy. Color is reddish yellow (5YR6/6). Little difference in color under vegetation.

10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: When perennial grasses decrease, reducing ground cover and increasing bare ground, runoff can increase and infiltration be reduced. A reduction in vegetative structure can cause increased saltation and soil movement.

11. Presence and thickness of compaction layer (usually none; describe soil profile

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<p>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 weight using symbols: », >, = to indicate much greater than, greater than, and equal to): Assumed fire cycle of 60-70+ years. Perennial bunchgrasses, non-sprouting shrubs > rhizomatous grasses, sprouting shrubs, annuals > invaders such as Russian thistle & Rush pea. Dominants: Indian ricegrass & Sand dropseed; Sub-dominants: Sand sagebrush, Fourwing saltbush & Mormontea. The perennial grass/non-sprouting shrub functioning groups are expected on this site.</p>
<p>13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): All age classes of perennial grasses should be present.</p>	<p>14. Average percent litter cover (5-10%) and depth (.25-.50 inch).</p>
<p>15. Expected annual production (this is TOTAL above-ground production, not just forage production): 370 - 400 #/acre on an average year.</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": Low green rabbitbrush, Pricklypear, Rush pea.</p>
<p>17. Perennial plant reproductive capability: All perennial plants should have the ability to reproduce in all years, except in extreme drought years.</p>	