

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: Semidesert Shallow Hardpan (10-14 PPT)

SITE NUMBER: 028AY230UT

MLRA: 028A

Original Site Description: Author: DJS

Date: 01/01/1981

Revised Site Description: Author: DJS

Date: 06/22/1993

Approved by: Title: State Range Cons.

Signed: Pat Shaver

Date: 08/30/1993

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: 10-20 inches

Surface Textures:

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

Subsurface Textures: Moderately Coarse to Moderately Fine

Subsurface Fragments(<=3" % vol, >3" % vol): 15-60%

Geologic Parent Materials: Alluvium & Colluvium from Tuffaceous Limestone and Sandstone, with Local Influences from Quartzite and Rhyolite

Moisture Regime:

Temperature Regime:

Runoff:

Permeability(min-max): Moderate to Moderately Slow

Drainage Class(min-max): 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): 1-4

Major Soils Associated With This Site:

Soil Survey Area: 601

Acana GR-L

Scalade GR-SL, FSL

Plegomir GR-L

Spager GR-L

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

1. Potential Plant Community Description and Ecological Factors

The dominant aspect of this plant community is black sagebrush, shadscale, and Indian ricegrass. The composition by air-dry weight is approximately 45 percent perennial grasses, 10 percent forbs, and 45 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		60	120	10	20
Bluebunch wheatgrass	PSSP6		60	120	10	20
Needleandthread	HECO26		18	30	3	5
Bottlebrush squirreltail	ELEL5		18	30	3	5
Galleta	HIJA	1	6	18	1	3
Purple threeawn	ARPU9	1	6	18	1	3
Sandberg bluegrass	POSE	1	6	18	1	3
Sand dropseed	SPCR	1	6	18	1	3
Other perennial grasses	PPGG	1	18	30	3	5
Other annual grasses	AAGG	1	18	30	3	5

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Utah milkvetch	ASUT	2	6	18	1	3
Cushion wild buckwheat	EROV	2	6	18	1	3
Carpet phlox	PHHO	2	6	18	1	3
Pacific aster	ASCH2	2	6	18	1	3
Small leaf pussytoes	ANMI3	2	6	18	1	3
Roundspike catseye	CRHU2	2	6	18	1	3
Thickstem wild cabbage	CACR11	2	6	18	1	3
Desert rockcress	ARPU2	2	6	18	1	3
Quill catseye	CRAF	2	6	18	1	3
Other perennial forbs	PPFF	2	30	60	5	10
Other annual forbs	AAFF	2	30	60	5	10

Shrubs/Vines, %

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Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Black sagebrush	ARNO4		120	150	20	25
Winterfat	KRLA2		30	60	5	10
Nevada jointfir	EPNE		18	30	3	5
Low rabbitbrush	CHVI8		18	30	3	5
Broom snakeweed	GUSA2	3	6	18	1	3
Bud sagebrush	ARSP5	3	6	18	1	3
Mexican cliffrose	PUME	3	6	18	1	3
Central pricklypear	OPPO	3	6	18	1	3
Shadscale	ATCO	3	6	18	1	3
Pygmy sagebrush	ARPY2	3	6	18	1	3
Other shrubs	SSSS	3	30	60	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	600	700
Average Year	500	600
Unfavorable Year	200	300

4. Ground Cover and Structure

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft)	Percent Basal Area Cover
Grasses & Grass-like (perennial)			
Forbs (perennial)			
Shrubs			
Trees			
Cryptogams			

b. Other

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Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As ecological condition deteriorates due to overgrazing, Indian ricegrass, bluebunch wheatgrass, Nevada bluegrass, and winterfat decrease, while black sagebrush, shadscale, low rabbitbrush and some undesirable forbs increase.

When the potential natural plant community is burned, black sagebrush, shadscale, winterfat, and some perennial grasses such as Nevada bluegrass decrease while Indian ricegrass, bluebunch wheatgrass, bottlebrush squirreltail and low rabbitbrush increase.

Cheatgrass and annual forbs are most likely to invade this site.

Plant Communities & Transitional Pathways

(Show a steady state diagram with influences to move from one steady state to another)

6. Plant Growth Curves

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Percent Growth	0	0	5	15	40	30	5	5	0	0	0	0
Name	UT2301											
ID Number	PNC											
Description	Excellent Condition											

7. Aspect Differences Near MLRA Boundaries

(Give related range sites in MLRA's above and below)

8. Associated Sites Within MLRA

028AY220UT
 Semidesert Loam (Wyoming big sagebrush)

028AY234UT
 Semidesert Shallow Loam (Utah juniper-Salina wildrye)

9. Correlated Sites in Other States

(Give site name and number)

D. MAJOR USES OF THIS SITE

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1. Livestock

a. Site Factors Influencing Management

This site provides grazing for cattle and sheep in the fall, winter, and spring.

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 limited cover for wildlife.

b. List of Potential Species Present

Wildlife using this site include rabbit, coyote, fox, badger, pronghorn antelope, mule deer, and dove.

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

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

Wildflowers provide natural beauty. Hunting and hiking are recreation uses.

4. Wood Products

None

5. Other Uses

E. THREATENED AND ENDANGERED SPECIES

1. Plants

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2. Animals

F. MODAL LOCATION AND DOCUMENTATION

State: Utah County:
 Latitude: Longitude:

Modal Soil: Plegomir GR-L – loamy, mixed, mesic, shallow Xerollic Durorthids

Type Location: NE ¼, NE ¼, Section 3, Township 11N, Range 15W

General Legal Description: West Box Elder SCD Area Immediately West of E Ray Morris
 Headquarters West of Rosette. Photo F133 H-3 S-105

Field Office Site Location

Logan
 Provo
 Cedar City
 Murray
 Richfield

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