

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: Upland Shallow Loam (Mountain big sagebrush)

SITE NUMBER: 047BY322UT

MLRA: 047B

Original Site Description: Author:

Date:

Revised Site Description: Author: TS

Date: 06/09/1993

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

Date:

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: Loamy Sand to Very Gravelly or Very Cobbly

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

Subsurface Textures: Gravelly Sandy Loam to Cobbly Clay Loam

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

Geologic Parent Materials: Residuum and Alluvium from Sandstone, Limestone, Shale, and Basic and Intermediate Igneous Rock

Moisture Regime:

Temperature Regime:

Runoff: Slow to Medium

Permeability(min-max): Moderate to Moderately Rapid

Drainage Class(min-max): Well to Excessively Drained

Water Erosion Hazard: Slight to Moderate

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): 1-2

Major Soils Associated With This Site:

Soil Survey Area: 636

Podo LS 1-12%

Tolman CBV SiL 8-35%

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

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2. PHYSIOGRAPHIC FEATURES

Landform and Position: Mountainsides, Ridges, and Benches

Aspect: All

	<u>Minimum</u>	<u>Maximum</u>
Slope:	5	15
Elevation:	6500	8000
Flooding:		
Frequency:		
Duration:		
Ponding:		
Depth (inches):		
Frequency:		
Duration:		
Water Table Depth:		

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 14-16

Mean Annual Air Temperature: 40-44

Mean Annual Soil Temperature: 42-47

Frost Free Period (days): 0-0

Freeze Free Period (days): 70-100

Temperature and Moisture Distribution:

Temp	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High	36	39	43	52	63	74	80	77	71	60	45	37
Mean	20	24	29	37	46	55	62	60	53	43	30	22
Low	5	9	14	22	30	36	44	43	35	26	15	7

ppt	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High	1.76	4.08	2.85	2.63	2.08	4.17	2.32	4.43	5.30	4.47	2.03	2.90
Mean	0.74	0.75	0.90	0.69	0.76	0.71	1.10	1.75	1.28	1.09	0.75	1.14
Low	0.09	0.00	0.04	0.03	0.00	0.00	0.06	0.10	0.00	0.00	0.03	0.00

Climate Stations: St. ID.:

Location:

Period:

From: To:

(Includes factors such as storm intensity, precipitation dependability, origin and pattern of storms, driest and wettest months, orographic effects, etc.)

Influencing Water Features (if any):

Wetland Description (Cowardin System) System Subsystem Class

Stream Types (Rosgen System) System

C. PLANT COMMUNITY CHARACTERISTICS

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1. Potential Plant Community Description and Ecological Factors

The aspect of this site is that of a shrub/grass community. The shrub component is dominated by mountain big sagebrush and black sagebrush. The grasses are dominated by Indian ricegrass with Nevada bluegrass and bluebunch wheatgrass evident. Forbs are numerous, but make up a minor portion of the plant community.

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	160	10	20
Nevada bluegrass	PONE3		40	80	5	10
Bluebunch wheatgrass	PSSP6		40	80	5	10
Bottlebrush squirreltail	ELEL5	1	8	24	1	3
Blue grama	BOGR2	1	8	24	1	3
Muttongrass	POFE	1	8	24	1	3
Needleandthread	HECO26	1	8	24	1	3
Other perennial grasses	PPGG	1	24	40	3	5
Other annual grasses	AAGG	1	24	40	3	5

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Redroot wild buckwheat	ERRA4	2	8	24	1	3
Grassy rockgoldenrod	PEPU7	2	8	24	1	3
Pacific aster	ASCH2	2	8	24	1	3
Small leaf pussytoes	ANMI3	2	8	24	1	3
Freckled milkvetch	ASLE8	2	8	24	1	3
Northwestern Indian paintbrush	CAAN7	2	8	24	1	3
Other perennial forbs	PPFF	2	40	80	5	10
Other annual forbs	AAFF	2	40	80	5	10

Shrubs, %

Common Name	National	Group	Pounds per Acre	% by Weight of
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	Symbol				Total Composition	
			Low	High	Low	High
Mountain big sagebrush	ARTRV		80	120	10	15
Black sagebrush	ARNO4		80	120	10	15
Bitterbrush	PUTR2		40	80	5	10
Mexican cliffrose	PUME		24	40	3	5
Low rabbitbrush	CHVI8		24	40	3	5
Broom snakeweed	GUSA2	3	8	24	1	3
Curlleaf mountainmahogany	CELE3	3	8	24	1	3
Squaw apple	PERA4	3	8	24	1	3
Other shrubs	SSSS	3	24	40	3	5

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	700	900
Average Year	600	800
Unfavorable Year	400	600

4. Ground Cover and Structure

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft.)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	20	2	10
Forbs (perennial)	5	1	2
Shrubs	30	4	15
Trees			
Cryptogams			

b. Other

Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As ecological condition deteriorates, Indian ricegrass, the bluegrasses, antelope bitterbrush and Mexican cliffrose decrease. Mountain big sagebrush, black sagebrush, and broom snakeweed increase. When the potential

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natural plant community is burned, the sagebrush, and snakeweed decrease and the grasses, bitterbrush, and cliffrose increase. Juniper and pinyon are most likely to invade this site and can completely dominate.

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	0	5	15	20	20	25	15	0	0	0
Name	PNC											
ID Number	UT3221											
Description	Excellent Condition											

7. Aspect Differences Near MLRA Boundaries

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

8. Associated Sites Within MLRA

047BY309UT

Upland Loam (Black sagebrush)

047BY326UT

Upland Shallow Loam (Pinyon-Utah juniper)

047BY336UT

Upland Stony Loam (Mountain big sagebrush)

047BY333UT

Upland Stony Loam (Pinyon-Utah juniper)

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 good to excellent summer grazing for cattle and sheep.

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

Low brush, good grass and forbs.

b. List of Potential Species Present

Excellent mule deer habitat.

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

This site has good aesthetic appearance and beauty.

4. Wood Products

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 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: Podo LS 1-12% — loamy, mixed (calcareous), frigid Lithic Ustorthents

Type Location: SE ¼ Section 30, Township 32S, Range 5W

General Legal Description:

Field Office Site Location

Richfield
 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