

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: Mountain Very Steep Shallow Loam (Mountain big sagebrush)

SITE NUMBER: 047AY469UT

MLRA: E47

Original Site Description: Author: DLT, DJS

Date: 12/17/1992

Revised Site Description: Author:

Date:

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: Silt Loam and Loam

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

Subsurface Textures: Cobbly Clay Loam and Cobbly Loam

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

Geologic Parent Materials:

Moisture Regime:

Temperature Regime:

Runoff: Very Rapid

Permeability(min-max):

Drainage Class(min-max): Well Drained

Water Erosion Hazard: Very Severe

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: 613

Agassiz CBV-L, 40-70%

Wallsburg CBV-L, 25-70%

Brad STV-LS, 60-80%

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

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2. PHYSIOGRAPHIC FEATURES

Landform and Position: Southeast and Southwest Facing Slopes

Aspect: SEW

	<u>Minimum</u>	<u>Maximum</u>
Slope:	40	80
Elevation:	5200	8200
Flooding:		
Frequency:		
Duration:		
Ponding:		
Depth (inches):		
Frequency:		
Duration:		
Water Table Depth:		

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 18-25

Mean Annual Air Temperature: 42-45

Mean Annual Soil Temperature: 44-47

Frost Free Period (days): 60-90

Freeze Free Period (days): 0-0

Temperature and Moisture Distribution:

Temp	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High	34	39	46	56	67	77	86	84	75	63	46	37
Mean												
Low	10	14	20	28	36	42	49	47	39	30	17	13

ppt	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High												
Mean	2.71	2.35	2.22	1.80	1.68	1.27	0.79	1.04	1.11	1.69	1.70	1.87
Low												

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

1. Potential Plant Community Description and Ecological Factors

The general aspect of this site is grass and sagebrush. The potential natural plant community is composed of 50 percent perennial grasses, 5 percent forbs, and 45 percent shrubs by air-dry weight.

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
Bluebunch wheatgrass	PSSP6		150	200	15	20
Muttongrass	POFE		50	100	5	10
Western wheatgrass	PASM		30	50	3	5
Bottlebrush squirreltail	ELEL5		30	50	3	5
Columbia needlegrass	ACNE9		30	50	3	5
Great basin wildrye	LECI4	1	10	30	1	3
Letterman needlegrass	ACLE9	1	10	30	1	3
Indian ricegrass	ACHY	1	10	30	1	3
Prairie junegrass	KOMA	1	10	30	1	3
Nevada bluegrass	PONE3	1	10	30	1	3
King fescue	LEKI2	1	10	30	1	3
Bulbous oniongrass	MEBU	1	10	30	1	3
Geyer sedge	CAGE2	1	10	30	1	3
Other perennial grasses	PPGG	1	50	100	5	10
Other annual grasses	AAGG	1	50	100	5	10

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Longleaf hawksbeard	CRAC2	2	10	10	1	1
Arrowleaf balsamroot	BASA3	2	10	10	1	1
Shortstem wild buckwheat	ERBR5	2	10	10	1	1
Wyoming Indian paintbrush	CALI4	2	10	10	1	1
Western mountain aster	ASOC	2	10	10	1	1
Blue flax	LIPE2	2	10	10	1	1
Common yarrow	ACMI2	2	10	10	1	1
Carpet phlox	PHHO	2	10	10	1	1
Silverleaf milkvetch	ASAR4	2	10	10	1	1
Sticky purple cranesbill	GEVI2	2	10	10	1	1
Spurred lupine	LUCAC3	2	10	10	1	1
Tolmie owlclover	ORTO	2	10	10	1	1
Other perennial forbs	PPFF	2	30	50	3	5
Other annual forbs	AAFF	2	30	50	3	5

Shrubs/Vines, %

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Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Mountain big sagebrush	ARTRV		200	250	20	25
Bitterbrush	PUTR2		50	100	5	10
Mountain snowberry	SYOR2		30	50	3	5
Stickyleaf low rabbitbrush	CHVIV4	3	10	20	1	2
Saskatoon serviceberry	AMAL2	3	10	20	1	2
Slender wild buckwheat	ERMI4	3	10	20	1	2
Spineless horsebrush	TECA2	3	10	20	1	2
Other shrubs	SSSS	3	30	50	3	5

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	1200	1800
Average Year	800	1000
Unfavorable Year	400	500

4. Ground Cover and Structure

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	40	2	10
Forbs (perennial)	5	1	5
Shrubs	40	4	15
Trees			
Cryptogams			

b. Other

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Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As this site deteriorates due to overgrazing perennial grasses decrease and big sagebrush and low rabbitbrush increase. Fire will reduce big sagebrush density but low rabbitbrush will increase.

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	20	50	5	10	5	5	0	0
Name	PNC											
ID Number	UT4691											
Description	Excellent Condition											

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Percent Growth	0	0	0	0	30	50	0	10	10	0	0	0
Name	Good Condition											
ID Number	UT4692											
Description	Bluegrass, Big Sagebrush											

7. Aspect Differences Near MLRA Boundaries

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

8. Associated Sites Within MLRA

047AY430UT

Mountain Loam (Mountain big sagebrush)

047AY446UT

Mountain Shallow Loam (Mountain big sagebrush)

9. Correlated Sites in Other States

(Give site name and number)

D. MAJOR USES OF THIS SITE

1. Livestock

a. Site Factors Influencing Management

Grazing on this site is limited because of steep slopes. The plant composition provides balanced nutrition during spring, summer and fall.

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 is good habitat for many species of wildlife.

b. List of Potential Species Present

This site produces excellent forage for deer and elk.

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 values for aesthetics and natural beauty. The degree of slope limits the use of the site for recreation.

4. Wood Products

No values exist for lumber. Some of the shrub species produce enough wood for campfires. Production of wood products for other uses are not of a quantity or quality to be of value.

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5. Other Uses

E. THREATENED AND ENDANGERED SPECIES

1. Plants

2. Animals

Both the American peregrine falcon and prairie falcon may occasionally seek their prey on this site.

F. MODAL LOCATION AND DOCUMENTATION

State: Utah

County:

Latitude:

Longitude:

Modal Soil: Agassiz CBV-L, 40-70% — loamy-skeletal, mixed, frigid Lithic Haploxerolls

Type Location: NW ¼, SW ¼, SW ¼, Section 11, Township 2, Range 4E

General Legal Description:

Field Office Site Location

Logan

Murray

Provo

Price

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	1				
UTAH - RANGE - 2					
Permanent Transect Location					

Other References