

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 Stony Loam (Bitterbrush)

SITE NUMBER: 047AY456UT

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: >60 inches

Surface Textures: Very Gravelly, Very Stony or Very Cobbly

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

Subsurface Textures: Sandy Loam to Clay

Subsurface Fragments(<=3" % vol, >3" % vol): >50%

Geologic Parent Materials: Alluvium and Colluvium Weathered from Sandstone, Shale, Limestone, Quartzite, Schist, Gneiss and Igneous Rock

Moisture Regime:

Temperature Regime:

Runoff: None to Slight

Permeability(min-max): Moderately Slow to Rapid

Drainage Class(min-max): Well Drained

Water Erosion Hazard: None to Slight

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): 3-5

Major Soils Associated With This Site:

Soil Survey Area: 609
Hoskin CB-L, 30-70%

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

Site Type: Rangeland
 Ecological Site Name: Mountain Stony Loam (Bitterbrush)
 Site Number: 047AY456UT

2. PHYSIOGRAPHIC FEATURES

Landform and Position: Stream and Fan Terraces, Outwash Plains, Ground Moraines, Mountainsides and Ridges

Aspect: All

	<u>Minimum</u>	<u>Maximum</u>
Slope:	15	70
Elevation:	5300	7000
Flooding:		
Frequency:		
Duration:		
Ponding:		
Depth (inches):		
Frequency:		
Duration:		
Water Table Depth:		

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 18-27

Mean Annual Air Temperature: 39-45

Mean Annual Soil Temperature: 41-47

Frost Free Period (days): 70-90

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

Site Type: Rangeland
 Ecological Site Name: Mountain Stony Loam (Bitterbrush)
 Site Number: 047AY456UT

1. Potential Plant Community Description and Ecological Factors

The general aspect of this site is grass and bitterbrush. The vegetation is composed of approximately 45 percent perennial grasses, 10 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		300	375	20	25
Slender wheatgrass	ELTR7		45	75	3	5
Letterman needlegrass	ACLE9		45	75	3	5
Nevada bluegrass	PONE3		45	75	3	5
Great basin wildrye	LECI4	1	15	45	1	3
Geyer sedge	CAGE2	1	15	45	1	3
Sheep fescue	FEOV	1	15	45	1	3
Muttongrass	POFE	1	15	45	1	3
Prairie junegrass	KOMA	1	15	45	1	3
Needleandthread	HECO26	1	15	45	1	3
King fescue	LEKI2	1	15	45	1	3
Bottlebrush squirreltail	ELEL5	1	15	45	1	3
Sandberg bluegrass	POSE	1	15	45	1	3
Bulbous oniongrass	MEBU	1	15	45	1	3
Other perennial grasses	PPGG	1	75	150	5	10
Other annual grasses	AAGG	1	75	150	5	10

Forbs, %

Site Type: Rangeland

Ecological Site Name: Mountain Stony Loam (Bitterbrush)

Site Number: 047AY456UT

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Common yarrow	ACMI2	2	15	45	1	3
Wyoming Indian paintbrush	CALI4	2	15	45	1	3
Tolmie owllover	ORTO	2	15	45	1	3
Tapertip onion	ALAC4	2	15	45	1	3
Western mountain aster	ASOC	2	15	45	1	3
Shortstem wild buckwheat	ERBR5	2	15	45	1	3
Low beardtongue	PEHU	2	15	45	1	3
Whitestem globemallow	SPMU2	2	15	45	1	3
Sticky purple cranesbill	GEVI2	2	15	45	1	3
Louisiana wormwood	ARLU	2	15	45	1	3
Bastard toadflax	COUM	2	15	45	1	3
Rocky mountain dwarfsunflower	HEUN	2	15	45	1	3
Showy false goldeneye	HEMU3	2	15	45	1	3
Hairy false goldenaster	HEVI4	2	15	45	1	3
Spurred lupine	LUCAC3	2	15	45	1	3
Arrowleaf balsamroot	BASA3	2	15	45	1	3
White stoneseed	LIRU4	2	15	45	1	3
Other perennial forbs	PPFF	2	75	225	5	15
Other annual forbs	AAFF	2	75	225	5	15

Shrubs/Vines, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Bitterbrush	PUTR2		150	375	10	25
Mountain big sagebrush	ARTRV		45	75	3	5
Birchleaf mountainmahogany	CEMO2		45	75	3	5
Saskatoon serviceberry	AMAL2	3	15	60	1	4
Mountain snowberry	SYOR2	3	15	60	1	4
Creeping Oregon grape	MARE11	3	15	60	1	4
Stickyleaf low rabbitbrush	CHVI4	3	15	60	1	4
Central pricklypear	OPPO	3	15	60	1	4
Other shrubs	SSSS	3	75	150	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

Site Type: Rangeland

Ecological Site Name: Mountain Stony Loam (Bitterbrush)

Site Number: 047AY456UT

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	1650	1750
Average Year	1400	1500
Unfavorable Year	750	850

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	20	3	10
Trees			
Cryptogams			

b. Other

Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

Plant species likely to invade this site upon deterioration are cheatgrass, annual forbs, knotweed, Utah juniper, pinyon pine, rubber rabbitbrush, and snakeweed.

Plant Communities & Transitional Pathways

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

6. Plant Growth Curves

Site Type: Rangeland

Ecological Site Name: Mountain Stony Loam (Bitterbrush)

Site Number: 047AY456UT

	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	UT4561											
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	UT4562											
Description	needlegrass, bluegrass, bitterbrush											

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)

047AY402UT

Mountain Clay (Mulesears)

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 available for use by cattle, sheep, and horses in spring, summer, and fall. It has a good variety of grasses forbs, and shrubs to give good balanced animal nutrition.

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

Site Type: Rangeland
 Ecological Site Name: Mountain Stony Loam (Bitterbrush)
 Site Number: 047AY456UT

a. Site Factors Influencing Management

The potential is poor to fair for openland habitat, fair to good for woodland habitat, very poor for wetland habitat, and fair to good for rangeland habitat.

b. List of Potential Species Present

This site is good habitat for chukars, quail, sage grouse, mule deer, antelope, elk, squirrels, snowshoe hare, songbirds, coyotes, wildcats, cougars, golden eagles, and bear.

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 natural beauty. It has a variety of grasses, forbs, and shrubs which, add diversity and color to the landscape. Hunting for upland game birds, deer and elk is good to excellent.

4. Wood Products

None

5. Other Uses

E. THREATENED AND ENDANGERED SPECIES

1. Plants
2. Animals

F. MODAL LOCATION AND DOCUMENTATION

State: Utah County:

Site Type: Rangeland

Ecological Site Name: Mountain Stony Loam (Bitterbrush)

Site Number: 047AY456UT

Latitude: Longitude:

Modal Soil: Hoskin CB-L, 30-70% — loamy-skeletal, mixed, frigid Typic Argixerolls

Type Location:

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					
UTAH - RANGE - 2					
Permanent Transect Location					

Other References