

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 Hardpan (Black sagebrush-Bluegrass)

SITE NUMBER: 047BY316UT

MLRA: 047B

Original Site Description: Author:

Date:

Revised Site Description: Author:

Date: 04/08/1992

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: 15-20 inches

Surface Textures:

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

Subsurface Textures:

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

Geologic Parent Materials: Residuum and Colluvium from Intermediate Igneous Materials

Moisture Regime:

Temperature Regime:

Runoff:

Permeability(min-max):

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):

Major Soils Associated With This Site:

Soil Survey Area:

Venture CB-L

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 and Ridges

Aspect: All

	<u>Minimum</u>	<u>Maximum</u>
Slope:	0	25
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: 32-47

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

1. Potential Plant Community Description and Ecological Factors

The dominant aspect of the plant community is black sagebrush. The composition by air-dry weight is approximately 30 percent perennial grasses and grasslike plants, 10 percent forbs, and 60 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
Nevada bluegrass	PONE3		85	170	10	20
Prairie junegrass	KOMA		25.5	42.5	3	5
Sandberg bluegrass	POSE		25.5	42.5	3	5
Bluebunch wheatgrass	PSSP6	1	0	25.5	0	3
Blue grama	BOGR2	1	0	25.5	0	3
Western wheatgrass	PASM	1	0	25.5	0	3
Bottlebrush squirreltail	ELEL5	1	0	25.5	0	3
Other perennial grasses	PPGG	1	8.5	42.5	1	5
Other annual grasses	AAGG	1	8.5	42.5	1	5

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Slender wild buckwheat	ERM16		8.5	25.5	1	3
King's bird's beak	COKI		8.5	25.5	1	3
Pingue	HYRI		8.5	25.5	1	3
Dusty beardtongue	PECO5		8.5	25.5	1	3
Carpet phlox	PHHO	2	0	8.5	0	1
Scarlet skyrocket	IPAGA3	2	0	8.5	0	1
Santa Fe bladderpod	LEIN3	2	0	8.5	0	1
Other perennial forbs	PPFF	2	8.5	17	1	2
Other annual forbs	AAFF	2	8.5	17	1	2

Shrubs, %

Common Name	National	Group	Pounds per Acre	% by Weight of
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	Symbol				Total Composition	
			Low	High	Low	High
Black sagebrush	ARNO4		170	255	20	30
Bitterbrush	PUTR2		42.5	85	5	10
Low rabbitbrush	CHVI8		42.5	85	5	10
Wyoming big sagebrush	ARTRW8		25.5	42.5	3	5
Broom snakeweed	GUSA2	3	0	25.5	0	3
Rubber rabbitbrush	ERNA10	3	0	25.5	0	3
Other shrubs	SSSS	3	8.5	42.5	1	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	900	1000
Average Year	750	850
Unfavorable Year	550	650

4. Ground Cover and Structure

a. Vegetative

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

b. Other

Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

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As ecological condition deteriorates due to overgrazing, bluegrass and bluebunch wheatgrass decrease, while black sagebrush and Douglas rabbitbrush increase. When the potential natural plant community is burned, black sagebrush decreases while bluebunch wheatgrass and bluegrass increase. Pinyon and Utah juniper 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	0	5	15	20	20	25	15	0	0	0
Name	PNC											
ID Number	UT3261											
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

047BY332UT
Upland Stony Loam

047BY318
Upland Shallow Hardpan (Pinyon-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

Good 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

No cover. Good forage.

b. List of Potential Species Present

Mule deer.

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 appearances.

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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: Venture CB-L — loamy-skeletal, mixed, shallow Typic Argiboroll

Type Location: NE Section 34, Township 31S, Range 5W

General Legal Description:

Field Office Site Location

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