

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 (Pinyon-Utah juniper)

SITE NUMBER: 047BY318UT

MLRA: 047B

Original Site Description: Author: TS

Date: 05/01/1981

Revised Site Description: Author: TS

Date: 01/22/1993

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: 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 CaCl<sub>2</sub>):

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: NE/SW

	<u>Minimum</u>	<u>Maximum</u>
Slope:	8	30
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 pinyon-juniper. The composition by air-dry weight is approximately 30 percent perennial grasses and grasslike plants, 10 percent forbs, 35 percent shrubs, and 20 percent trees.

## 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		112.5	187.5	15	25
Sandberg bluegrass	POSE		37.5	75	5	10
Bottlebrush squirreltail	ELEL5		37.5	75	5	10
Needleandthread	HECO26		37.5	75	5	10
Muttongrass	POFE	1	0	22.5	0	3
Bluebunch wheatgrass	PSSP6	1	0	22.5	0	3
Letterman needlegrass	ACLE9	1	0	22.5	0	3
Indian ricegrass	ACHY	1	0	22.5	0	3
Other perennial grasses	PPGG	1	7.5	37.5	1	5
Other annual grasses	AAGG	1	7.5	37.5	1	5

### Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Pacific aster	ASCH2		15	22.5	2	3
Slender wild buckwheat	ERMI4		15	22.5	2	3
Carpet phlox	PHHO		15	22.5	2	3
Freckled milkvetch	ASLE8		15	22.5	2	3
Spreading fleabane	CRCI3	2	0	7.5	0	1
Spreading fleabane	ERDI4	2	0	7.5	0	1
Other perennial forbs	PPFF	2	7.5	22.5	1	3
Other annual forbs	AAFF	2	7.5	22.5	1	3

### Shrubs, %

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Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Black sagebrush	ARNO4		187.5	225	25	30
Low rabbitbrush	CHVI8	4	37.5	75	5	10
Wyoming big sagebrush	ARTRW8	4	37.5	75	5	10
Bitterbrush	PUTR2	4	37.5	75	5	10
Broom snakeweed	GUSA2	3	0	22.5	0	3
Rubber rabbitbrush	ERNA10	3	0	22.5	0	3
Mexican cliffrose	PUME	3	0	22.5	0	3
Other shrubs	SSSS	3	22.5	37.5	3	5

Trees, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Pinyon	PIED		90	112.5	12	15
Utah juniper	JUOS		22.5	37.5	3	5
Rocky Mountain juniper	JUSC2		0	0	0	0

### **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	750	850
Average Year	650	750
Unfavorable Year	350	450

### **4. Ground Cover and Structure**

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft.)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	5	1	1
Forbs (perennial)	5	1	1
Shrubs	10	2	5
Trees	20	12	2
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, bluegrass decreases while pinyon-juniper increase. When the potential natural plant community is burned, pinyon-juniper decrease while grasses 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	15	20	20	25	15	0	0	0
Name	PNC											
ID Number	UT3181											
Description	Excellent Condition											

## **7. Aspect Differences Near MLRA Boundaries**

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

## **8. Associated Sites Within MLRA**

047BY326UT

Upland Shallow Loam (Pinyon-Utah juniper)

047BY309UT

Upland Loam (Black sagebrush)

047BY333UT

Upland Stony Loam (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

Fair 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

Tree cover. Fair forage. Moderate slopes.

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**

This site produces wood products suitable for fence posts and fuel wood.

#### **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**