

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: Semidesert Shallow Hardpan (Utah juniper)

SITE NUMBER: 028AY232UT

MLRA: 028A

Original Site Description: Author: DJS

Date: 06/01/1987

Revised Site Description: Author: DJS

Date: 06/24/1993

Approved by: Title: State Range Cons.

Signed: Pat Shaver

Date: 08/30/1993

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: Medium or Moderately Coarse

Surface Fragments(<=3" % cover, >3" % cover): 15-60%

Subsurface Textures:

Subsurface Fragments(<=3" % vol, >3" % vol): 15-60%

Geologic Parent Materials: Alluvium & Colluvium from Mixed Material

Moisture Regime:

Temperature Regime:

Runoff:

Permeability(min-max): Moderate to Moderately Rapid

Drainage Class(min-max):

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): 0.5-2.0

Major Soils Associated With This Site:

Soil Survey Area: 611

Plegomir, Very Shallow

Ursine Family

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

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## **2. PHYSIOGRAPHIC FEATURES**

Landform and Position: Fans and Terraces

Aspect: All

	<u>Minimum</u>	<u>Maximum</u>
Slope:	3	15
Elevation:	5500	6500
Flooding:		
Frequency:		
Duration:		
Ponding:		
Depth (inches):		
Frequency:		
Duration:		
Water Table Depth:		

## **B. CLIMATIC FEATURES**

Mean Annual Precipitation (inches): 8-12

Mean Annual Air Temperature: 45-53

Mean Annual Soil Temperature: 48-55

Frost Free Period (days): 0-0

Freeze Free Period (days): 100-150

Temperature and Moisture Distribution:

Temp	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High	39	44	52	61	72	82	90	88	79	67	51	41
Mean												
Low	13	19	24	30	38	45	53	52	42	32	23	15

ppt	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High												
Mean	0.85	0.80	0.90	0.96	0.99	0.71	0.79	0.92	0.75	0.78	0.79	0.75
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 dominant aspect of this plant community is Utah juniper. The understory composition by air-dry weight is approximately 50 percent perennial grasses, 5 percent forbs, and 40 percent shrubs, and 10 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
Indian ricegrass	ACHY		67.5	90	15	20
Bluebunch wheatgrass	PSSP6		67.5	90	15	20
Needleandthread	HECO26		22.5	45	5	10
Bottlebrush squirreltail	ELEL5		13.5	22.5	3	5
Galleta	HIJA	1	4.5	13.5	1	3
Purple threeawn	ARPU9	1	4.5	13.5	1	3
Sandberg bluegrass	POSE	1	4.5	13.5	1	3
Sand dropseed	SPCR	1	4.5	13.5	1	3
Other perennial grasses	PPGG	1	13.5	22.5	3	5
Other annual grasses	AAGG	1	13.5	22.5	3	5

### Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Thickstem wild cabbage	CACR11	2	22.5	45	5	10
Ballhead skyrocket	IPCOC3	2	22.5	45	5	10
Hairy balsamroot	BAHO	2	22.5	45	5	10
Small leaf pussytoes	ANMI3	2	22.5	45	5	10
Freckled milkvetch	ASLE8	2	22.5	45	5	10
Longleaf phlox	PHLO2	2	22.5	45	5	10
Cushion wild buckwheat	EROV	2	22.5	45	5	10
Roundspike catseye	CRHU2	2	22.5	45	5	10
Gooseberryleaf globemallow	SPGR2	2	22.5	45	5	10
Mountain desert parsley	LOGR	2	22.5	45	5	10
Pacific aster	ASCH2	2	22.5	45	5	10
Other perennial forbs	PPFF	2	22.5	45	5	10
Other annual forbs	AAFF	2	22.5	45	5	10

### Shrubs/Vines, %

Common Name	National	Group	Pounds per Acre	% by Weight of
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	Symbol				Total Composition	
			Low	High	Low	High
Black sagebrush	ARNO4		90	135	20	30
Winterfat	KRLA2		22.5	45	5	10
Nevada jointfir	EPNE		13.5	22.5	3	5
Low rabbitbrush	CHVI8		13.5	22.5	3	5
Broom snakeweed	GUSA2	3	4.5	9	1	2
Bud sagebrush	ARSP5	3	4.5	9	1	2
Mexican cliffrose	PUME	3	4.5	9	1	2
Central pricklypear	OPPO	3	4.5	9	1	2
Shadscale	ATCO	3	4.5	9	1	2
Wyoming big sagebrush	ARTRW	3	4.5	9	1	2
Slender wild buckwheat	ERMI4	3	4.5	9	1	2
Pygmy sagebrush	ARPY2	3	4.5	9	1	2
Other shrubs	SSSS	3	4.5	9	1	2

Trees, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Utah juniper	JUOS		45	67.5	10	15

### **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	550	650
Average Year	350	450
Unfavorable Year	250	350

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

#### a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	30	2	15
Forbs (perennial)	5	2	2
Shrubs	25	2	10
Trees	10	10	5
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, Indian ricegrass, needleandthread, and bluebunch wheatgrass decrease, while low rabbitbrush, black sagebrush, snakeweed, and juniper increase.

When the potential natural plant community is burned, juniper, Indian ricegrass, needleandthread, and bluebunch wheatgrass decrease while low rabbitbrush, Sandberg bluegrass, and cheatgrass increase.

Annual grasses and annual forbs 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	5	15	40	30	5	5	0	0	0	0
Name	UT2321											
ID Number	PNC											
Description	Excellent Condition											

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

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

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

028AY230UT

Semidesert Shallow Hardpan (10-14 PPT)

028AY226UT

Semidesert Sandy Loam (Wyoming big sagebrush)

## **9. Correlated Sites in Other States**

(Give site name and number)

## **D. MAJOR USES OF THIS SITE**

### **1. Livestock**

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a. Site Factors Influencing Management

This site is suited for cattle and sheep grazing during spring, fall, and winter.

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 provides food and cover for wildlife.

b. List of Potential Species Present

Wildlife using this site include rabbit, coyote, fox, badger, pronghorn antelope, mule deer, and dove.

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

Resources that have special aesthetic and landscape values are wildflowers. Some recreation uses of this site are hiking, picnicking, and hunting.

## 4. Wood Products

Potential wood products are fuel, and posts.

## 5. Other Uses

## E. THREATENED AND ENDANGERED SPECIES

### 1. Plants

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 2. Animals

**F. MODAL LOCATION AND DOCUMENTATION**

State: Utah                      County: Box Elder  
 Latitude:                      Longitude:

Modal Soil: Plegomir, Very Shallow – loamy, mixed, mesic, shallow Xerollic Durorthids

Type Location: SW ¼, SE ¼, Section 33, Township 12N, Range 15W. Fifteen Miles Southwest of Park valley

General Legal Description:

**Field Office Site Location**

Logan  
 Murray  
 Provo  
 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	18				
Permanent Transect Location					

**Other References**