

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: Desert Alkali Sand (Fourwing saltbush)

SITE NUMBER: 034XY102UT

MLRA: 034

Original Site Description: Author: JLB GWL

Date: 05/14/1981

Revised Site Description: Author: JLB GWL

Date: 11/30/1993

Approved by: Title: State Range Cons. Signed: Pat Shaver

Date: 07/25/1994

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: 20-40 inches

Surface Textures: Loamy Sand

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

Subsurface Textures: Course-Loamy

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

Geologic Parent Materials: Alluvium and Residuum from Sedimentary

Moisture Regime:

Temperature Regime: Mesic

Runoff: Slow to Medium

Permeability(min-max): Moderately Rapid to Rapid

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: 047

Muff, SL, Hummocky, 2-5%

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



### 1. Potential Plant Community Description and Ecological Factors

The dominant aspect of this plant community is fourwing saltbush and Indian ricegrass. The composition by air-dry weight is approximately 30 percent perennial grasses, 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
Indian ricegrass	ACHY		40	60	10	15
Sand dropseed	SPCR		20	40	5	10
Needleandthread	HECO26		20	40	5	10
Galleta	HIJA	1	4	12	1	3
Alkali sacaton	SPAI	1	4	12	1	3
Bottlebrush squirreltail	ELEL5	1	4	12	1	3
Purple threeawn	ARPU9	1	4	12	1	3
Blue grama	BOGR2	1	4	12	1	3
Other perennial grasses	PPGG	1	12	20	3	5
Other annual grasses	AAGG	1	12	20	3	5

#### Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Pale evening-primrose	OEPA	2	4	8	1	2
Ballhead ipomopsis	IPCOC3	2	4	8	1	2
Scarlet globemallow	SPCO	2	4	8	1	2
Flatspine stickweed	LAOC3	2	4	8	1	2
Western blazingstar	MEAL6	2	4	8	1	2
Mountain pepperweed	LEMO2	2	4	8	1	2
Hoary tansyaster	MACA2	2	4	8	1	2
Notchleaf scorpionweed	PHCRC	2	4	8	1	2
Woolly plantain	PLPA2	2	4	8	1	2
Torrey desertdandelion	MATO2	2	4	8	1	2
Hedge mustard	SIOF	2	4	8	1	2
Prairie sunflower	HEPE	2	4	8	1	2
Other perennial forbs	PPFF	2	40	20	10	15
Other annual forbs	AAFF	2	40	20	10	15

#### Shrubs/Vines, %

Common Name	National	Group	Pounds per Acre	% by Weight of
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	Symbol				Total Composition	
			Low	High	Low	High
Fourwing saltbush	ATCA2		60	80	15	20
Shadscale	ATCO		20	40	5	10
Spiny hopsage	GRSP		20	40	5	10
Bud sagebrush	ARSP5		4	20	1	5
Low rabbitbrush	CHVI8		4	20	1	5
Greasewood	SAVE4		8	20	2	5
Shortspine horsebrush	TESP2		4	20	1	5
Rubber rabbitbrush	CHNA2		4	12	1	3
Greenmolly	KOAM		4	8	1	2
Other shrubs	SSSS	3	4	20	1	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	550	600
Average Year	350	400
Unfavorable Year	140	200

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

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	20	2	10
Forbs (perennial)	5	1	2
Shrubs	40	3	10
Trees			
Cryptogams			

b. Other

Litter	
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Coarse Fragments	
Bare Ground	

### **5. Ecological Dynamics of the Site**

As ecological condition deteriorates due to over grazing, Indian ricegrass and fourwing saltbush decrease while galleta, low rabbitbrush, shadscale, and rubber rabbitbrush increase. Fire is not an important factor in this ecosystem. Cheatgrass and halogeton 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	25	65	5	0	0	0	0	0	0
Name	UT1021											
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**

034XY112UT  
 Desert Sand (Fourwing saltbush)

034XY115UT  
 Desert Sandy Loam (Indian ricegrass)

034XY110UT  
 Desert Alkali Bench (Castlevally Saltbush)

### **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 provides proper grazing for cattle and sheep in the winter and early spring.

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 lizard, snake, mice, hawk, sparrow, jackrabbit, and coyote.

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 may have scenic vistas and limited hunting opportunities.

**4. Wood Products**

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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: Muff SL, Hummocky, 2-5% – fine-loamy, mixed, mesic Typic Natrargids

Type Location: NE ¼; SW ¼; SE ¼; Section 10, Township 9S, Range 18E SLBM

General Legal Description:

#### **Field Office Site Location**

Roosevelt  
 Price

#### **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**