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 (8-10 PPT)
SITE NUMBER: 028AY231UT
MLRA: 028A
Original Site Description: Author: DJS Date: 01/01/1988
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: Loam
Surface Fragments(<=3" % cover, >3" % cover): 20%
Subsurface Textures:
Subsurface Fragments(<=3" % vol, >3" % vol): 0-35%
Geologic Parent Materials: Alluvium from Tuffaceous Sandstone and Limestone
Moisture Regime:
Temperature Regime:
Runoff: Slow to Medium
Permeability(min-max): Moderately Slow
Drainage Class(min-max): Well Drained
Water Erosion Hazard: 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): 1-4

Major Soils Associated With This Site:

Soil Survey Area: 601
Acana GR-L Jericho GR-FSL, Dry

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

2. PHYSIOGRAPHIC FEATURES

Landform and Position: Fans and Fan Terraces
Aspect: All

	Minimum	Maximum
Slope:	1	10
Elevation:	4800	5500

Flooding:
- Frequency:
- Duration:

Ponding:
- Depth (inches):
- Frequency:
- Duration:
- Water Table Depth:

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 8-12
Mean Annual Air Temperature: 45-50
Mean Annual Soil Temperature: 48-52
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 black sagebrush, Indian ricegrass, and needleandthread. The composition by air-dry weight is approximately 45 percent perennial grasses, 5 percent forbs, and 50 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		60	100	15	25
Needleandthread	HECO26		20	60	5	15
Sandberg bluegrass	POSE		8	20	2	5
Bottlebrush squirreltail	ELEL5		8	20	2	5
Bluebunch wheatgrass	PSSP6	1	4	12	1	3
Western wheatgrass	PASM	1	4	12	1	3
Other perennial grasses	PPGG	1	4	20	1	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
Gooseberryleaf globemallow	SPGR2	2	4	12	1	3
Carpet phlox	PHHO	2	4	8	1	2
Utah milkvetch	ASUT	2	4	8	1	2
Cushion pussytoes	ANDI2	2	4	8	1	2
Golden princeplum	STPI	2	4	8	1	2
Other perennial forbs	PPFF	2	20	40	5	10
Other annual forbs	AAFF	2	20	40	5	10

Shrubs/Vines, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Black sagebrush	ARNO4		80	120	20	30
Low rabbitbrush	CHVI8		8	20	2	5
Winterfat	KRLA2	3	12	20	3	5
Shadscale	ATCO	3	12	20	3	5
Nevada jointfir	EPNE	3	12	20	3	5
Spiny hopsage	GRSP	3	12	20	3	5
Other shrubs	SSSS	3	40	60	10	15

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	200	250

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	10
Forbs (perennial)	5	2	2
Shrubs	35	2	10
Trees			
Cryptogams			

b. Other

Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As ecological condition deteriorates due to overgrazing, Indian ricegrass, needleandthread, and globemallow decrease, while low rabbitbrush and shadscale increase.

When the potential natural plant community is burned, Indian ricegrass, needleandthread, and black sagebrush decrease while low rabbitbrush and shadscale 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	UT2301											
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)

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 suited for cattle and sheep grazing during 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 limited 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 and horseback riding.

4. Wood Products

None

5. Other Uses

E. THREATENED AND ENDANGERED SPECIES

1. Plants

2. Animals

F. MODAL LOCATION AND DOCUMENTATION

State: Utah County: Box Elder
Latitude: Longitude:

Modal Soil: Anaca GR-L – loamy, mixed, mesic, shallow Xerollic Durorthids

Type Location: Southwest of Kunzler's Ranch 3.8 Miles Western Box Elder County, Utah, 1100 Ft. N, 100 Ft. East of SW Corner, Section 35, Township 12N, Range, 15W.

General Legal Description:

Field Office Site Location
Logan
Provo
Cedar City

Data Collected and References

Sampling Source	Number of Records	Range Similarity Index			
		> 76%	51-75%	26-50%	0-25%
NRCS - ECS - 417	2				
UTAH - RANGE - 2	7				
Permanent Transect Location					

Other References