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 Gravelly Loam (Shadscale)
SITE NUMBER: 028AY120UT
MLRA: 028A
Original Site Description: Author: DJS Date: 02/01/1988
Revised Site Description: Author: DJS Date: 05/17/1993
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: 60 inches
Surface Textures: Coarse
Surface Fragments(<=3" % cover, >3" % cover): 50%
Subsurface Textures:
Subsurface Fragments(<=3" % vol, >3" % vol): 35-70%
Geologic Parent Materials: Alluvium Underlain by Coarser Sediments Deposited by Waves of the Ancient Lake from Limestone and Calcareous Sandstone
Moisture Regime:
Temperature Regime:
Runoff:
Permeability(min-max): Moderately Rapid
Drainage Class(min-max): Well to Excessively 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): 3-5

Major Soils Associated With This Site:

Soil Survey Area:
Cliffdown GRV-L Dera GR-L

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

2. PHYSIOGRAPHIC FEATURES

Landform and Position: Broad, Nearly Level Hilltops and Lake Terraces.
Aspect: All

	Minimum	Maximum
Slope:	1	5
Elevation:	4900	5100

Flooding:
- Frequency:
- Duration:

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

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 5-8
Mean Annual Air Temperature: 46-53
Mean Annual Soil Temperature: 50-56
Frost Free Period (days): 0-0
Freeze Free Period (days): 100-160

Temperature and Moisture Distribution:

Temp	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High	40	46	54	63	73	84	93	90	81	68	52	41
Mean												
Low	15	20	25	33	41	50	58	56	45	34	24	16

ppt	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High												
Mean	0.42	0.45	0.60	0.65	0.77	0.53	0.52	0.56	0.49	0.57	0.49	0.43
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 the plant community is galleta grass. The composition by air dry weight is approximately 40 percent perennial grasses, 10 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
Galleta	HIJA		80	100	20	25
Indian ricegrass	ACHY		40	60	10	15
Bottlebrush squirreltail	ELEL5		12	20	3	5
Needleandthread	HECO26	1	4	12	1	3
Sandberg bluegrass	POSE	1	4	12	1	3
Sand dropseed	SPCR	1	4	12	1	3
Salina wildrye	LESAS	1	4	12	1	3
Purple threeawn	ARPU9	1	4	12	1	3
Alkali sacaton	SPAI	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
Scarlet globemallow	SPCO	2	12	20	3	5
Torrey milkvetch	ASCA9	2	12	20	3	5
Shaggy fleabane	ERPU2	2	12	20	3	5
Low penstemon	PEHU	2	12	20	3	5
Pacific aster	ASCH2	2	12	20	3	5
Carpet phlox	PHHO	2	12	20	3	5
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
Shadscale	ATCO		60	80	15	20
Bud Sagebrush	ARSP5		20	40	5	10
Nuttall horsebrush	TENU2		20	40	5	10
Nevada jointfir	EPNE		12	20	3	5
Low rabbitbrush	CHVI8		12	20	3	5
Winterfat	KRLA2		12	20	3	5
Fourwing saltbush	ATCA2	3	4	12	1	3
Broom snakeweed	GUSA2	3	4	12	1	3
Rubber rabbitbrush	CHNA2	3	4	12	1	3
Thorny milkwort	POAC2	3	4	12	1	3
Pigmy sagebrush	ARPY2	3	4	12	1	3
Other shrubs	SSSS	3	12	20	3	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	450	500
Average Year	350	400
Unfavorable Year	250	300

4. Ground Cover and Structure

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	20	1.5	10
Forbs (perennial)	5	1	2
Shrubs	30	1.5	10
Trees			
Cryptogams			

b. Other

Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As ecological condition deteriorates due to overgrazing, galleta, Indian ricegrass, and winterfat decrease while shadscale, rabbitbrush, horsebrush and snakeweed increase.

When the potential natural plant community is burned, galleta, Indian ricegrass, winterfat, and shadscale decrease while rabbitbrush and native annual forbs increase.

Halogeton and cheatgrass are most likely to invade this site.

Plant Communities & Transitional Pathways

6. Plant Growth Curves

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Percent Growth	0	0	5	25	50	10	0	0	5	5	0	0
Name	PNC											
ID Number	UT1201											
Description	Excellent Condition											

7. Aspect Differences Near MLRA Boundaries
(Give related range sites in MLRA's above and below)

8. Associated Sites Within MLRA

028AY234UT
Semidesert Shallow Loam (Utah juniper)

028AY215UT
Semidesert Gravelly Loam (Wyoming big sagebrush) North

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 sheep and cattle 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 limited cover for wildlife.

b. List of Potential Species Present

Wildlife using this site include rabbit, coyote, fox, pronghorn antelope, and mule deer (seasonal).

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 value are wildflowers. Some recreation uses of this site are hiking.

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 Soils: Cliffdown GRV-L – loamy-skeletal, mixed, mesic Typic Torriorthents

Type Location: Western part of Box Elder County at Red Dome NW ¼, NW ¼ Section 34, Township 10N, Range 14W. South of Fish Springs Juab County, Utah. Tooele Army Depot, South Rush Valley, Utah.

General Legal Description:

Field Office Site Location
Logan
Provo
Cedar City
Murray
Richfield

Data Collected and References

Sampling Source	Number of Records	Range Similarity Index			
		> 76%	51-75%	26-50%	0-25%
NRCS - ECS - 417	4				
UTAH - RANGE - 2	8				
Permanent Transect Location					

Other References