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 Shallow Loam (Shadscale)
SITE NUMBER: 028AY138UT
MLRA: 028A
Original Site Description: Author: DJS Date: 09/01/1987
Revised Site Description: Author: DJS Date: 06/03/1993
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: 8-20 inches
Surface Textures:
Surface Fragments(<=3" % cover, >3" % cover): 60%
Subsurface Textures:
Subsurface Fragments(<=3" % vol, >3" % vol): 15-35%
Geologic Parent Materials: Colluvium and Residuum from Basalt Materials
Moisture Regime:
Temperature Regime:
Runoff: Medium to Rapid
Permeability(min-max): Moderate
Drainage Class(min-max): Well Drained
Water Erosion Hazard: Slight to Severe Depending on Slope
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): 1.5-4.0

Major Soils Associated With This Site:

Soil Survey Area: 617
Petaca Family

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

2. PHYSIOGRAPHIC FEATURES

Landform and Position: Bench, Mesas, and Broad Desert Expanses over Bedrock; also on Small Hills and Ridges
Aspect: All

	Minimum	Maximum
Slope:	1	50
Elevation:	5000	6000

Flooding:
- Frequency:
- Duration:

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

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 5-8
Mean Annual Air Temperature: 45-50
Mean Annual Soil Temperature: 50-53
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 shadscale. 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
Galleta	HIJA		20	30	10	15
Indian ricegrass	ACHY		10	20	5	10
Bottlebrush squirreltail	ELEL5		4	10	2	5
Needleandthread	HECO26	1	2	6	1	3
Purple threeawn	ARPU9	1	2	6	1	3
Sandberg bluegrass	POSE	1	2	6	1	3
Blue grama	BOGR2	1	2	6	1	3
Nevada bluegrass	PONE3	1	2	6	1	3
Other perennial grasses	PPGG	1	10	20	5	10
Other annual grasses	AAGG	1	10	20	5	10

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Carpet phlox	PHHO	2	2	6	1	3
Utah milkvetch	ASUT	2	2	6	1	3
Gooseberryleaf globemallow	SPGR2	2	2	6	1	3
Golden princeplume	STPI	2	2	6	1	3
Roundspike catseye	CRHU2	2	2	6	1	3
Other perennial forbs	PPFF	2	10	20	5	10
Other annual forbs	AAFF	2	10	20	5	10

Shrubs/Vines, %

Common Name	National Symbol	Group	Pounds per Acre	% by Weight of Total Composition

			Low	High	Low	High
Shadscale	ATCO		50	70	25	35
Bud sagebrush	ARSP5		10	20	5	10
Low rabbitbrush	CHVI8		6	10	3	5
Winterfat	KRLA2		6	10	3	5
Broom snakeweed	GUSA2	3	2	6	1	3
Black sagebrush	ARNO4	3	2	6	1	3
Shortspine horsebrush	TESP2	3	2	6	1	3
Nevada jointfir	EPNE	3	2	6	1	3
Fourwing saltbush	ATCA2	3	2	6	1	3
Central pricklypear	OPPO	3	2	6	1	3
Spiny hopsage	GRSP	3	2	6	1	3
Other shrubs	SSSS	3	10	20	5	10

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	200	300
Average Year	100	200
Unfavorable Year	50	100

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	2	20
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, squirreltail, and needleandthread decrease while rabbitbrush, shadscale, and annuals increase.

When the potential natural plant community is burned, Indian ricegrass and needleandthread decrease while rabbitbrush and annuals 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	25	50	10	0	0	5	5	0	0
Name	PNC											
ID Number	UT1381											
Description	Excellent Condition											

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

8. Associated Sites Within MLRA

028AY124UT
Desert Loam (Shadscale)

028AY119UT
Desert Flat (Shadscale)

028AY120UT
Desert Gravelly Loam (Shadscale)

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 fall, winter, and 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 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

Hunting and 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: Millard County
Latitude: Longitude:

Modal Soils: Petaca – loamy, mixed, mesic Lithic Calciorthids

Type Location: Warm Springs Soil Survey West of Pruess Lake, South of Garrison, Utah

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					
UTAH - RANGE - 2	5				
Permanent Transect Location					

Other References