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 Bench (Castlevalley saltbush)
SITE NUMBER: 034BY101UT
MLRA: 034
Original Site Description: Author: JLB GWL Date: 05/13/1981
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: 40-80 inches
Surface Textures: Silty Clay Loam (desert pavement on surface is common)
Surface Fragments(<=3" % cover, >3" % cover):
Subsurface Textures: Clay Loam
Subsurface Fragments(<=3" % vol, >3" % vol):
Geologic Parent Materials: Mixed Alluvium from Shale
Moisture Regime:
Temperature Regime: Mesic
Runoff:
Permeability(min-max):
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 CaCl2):
pH Range:
Available Water Capacity (inches):

Major Soils Associated With This Site:

Soil Survey Area: 047

Leebench L, 0-2%
Leeko L, 0-4%
Turzo L, Sodic, 2-4%
Uffens L, 1-3%
Uffens GRV-L 4-15%
Leebench GRV-SL, 1-4%
Muff GR-SL, 2-8%
Uffens L, 3-8%
Leeko L, Loamy Substratum 0-3%

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

2. PHYSIOGRAPHIC FEATURES

Landform and Position: Benches, Old Alluvial Fan Terraces, and Side Slopes of Benches and Mesas
Aspect: All

	Minimum	Maximum
Slope:	0	5
Elevation:	4700	5500

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

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 5-8
Mean Annual Air Temperature: 44-47
Mean Annual Soil Temperature: 47-50
Frost Free Period (days): 110-140
Freeze Free Period (days): 0-0

Temperature and Moisture Distribution:

Temp	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High	29	38	52	64	74	84	91	89	79	66	48	33
Mean	16	24	37	48	57	66	73	71	61	49	35	20
Low	3	10	23	32	40	48	55	53	43	33	21	8

ppt	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High												
Mean	0.54	0.44	0.56	0.55	0.78	0.66	0.49	0.57	0.63	0.88	0.47	0.52
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 shadscale and castlevalley saltbush. The composition by air-dry weight is approximately 25 percent perennial grasses, 10 percent forbs, and 65 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		20	40	5	10
Galleta	HIJA		40	60	10	15
Bottlebrush squirreltail	ELEL5		4	20	1	5
Alkali sacaton	SPAI	1	4	8	1	2
Purple threeawn	ARPU9	1	4	8	1	2
Sand dropseed	SPCR	1	4	8	1	2
Sixweeks fescue	VUOC	1	4	8	1	2
Little barley	HOPU	1	4	8	1	2
Other perennial grasses	PPGG	1	12	20	3	5
Other annual grasses	AAGG	1	12	20	3	5

Forbs, %

Common Name	National	Group	Pounds per Acre	% by Weight of

	Symbol				Total Composition	
			Low	High	Low	High
Scarlet globemallow	SPCO		4	12	1	3
Woolly plantain	PLPA2		4	12	1	3
Indian pipeweed	ERIN4		4	12	1	3
Torrey desertdandelion	MATO2	2	4	8	1	2
Pale evening-primrose	OEPA	2	4	8	1	2
Ballhead ipomopsis	IPCOC3	2	4	8	1	2
Bulbous springparsley	CYBU	2	4	8	1	2
Pink funnel lily	ANBR4	2	4	8	1	2
Flatspine stickseed	LAOC3	2	4	8	1	2
Whitestem blazingstar	MEAL6	2	4	8	1	2
Pacific aster	ASCH2	2	4	8	1	2
Fremont goosefoot	CHFR3	2	4	8	1	2
Rocky mountain beeplant	CLSE	2	4	8	1	2
Basin daisy	PLIN7	2	4	8	1	2
Mountain pepperweed	LEMO2	2	4	8	1	2
Other perennial forbs	PPFF	2	12	20	3	5
Other annual forbs	AAFF	2	12	20	3	5

Shrubs/Vines, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Castlevalley saltbush	ATCU		60	80	15	20
Shadscale	ATCO		80	100	20	25
Bud sagebrush	ARSP5		40	60	10	15
Green molly	KOAM		20	40	5	10
Winterfat	KRLA2	3	4	12	1	3
Broom snakeweed	GUSA2	3	4	12	1	3
Central pricklypear	OPPO	3	4	12	1	3
Greasewood	SAVE4	3	4	12	1	3
Shortspine horsebrush	TESP2	3	4	12	1	3
Low rabbitbrush	CHVI8	3	4	12	1	3
Whipple fishhook cactus	SCWH	3	4	12	1	3
Other shrubs	SSSS	3	20	40	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	435	535
Average Year	300	400
Unfavorable Year	80	180

4. Ground Cover and Structure

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	15	2	5
Forbs (perennial)	5	1	2
Shrubs	30	2	15
Trees			
Cryptogams			

b. Other

Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As ecological condition deteriorates due to over grazing, Indian ricegrass and bud sagebrush decrease while galleta and shadscale increase. Fire is not an important part of this ecosystem. Halogeton, Russian thistle, and tansy mustard 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	UT1011											
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

034XY117UT
Desert Shallow Clay (Mat saltbush)

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 provides proper grazing for sheep and some cattle in the 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 jackrabbit, coyote, lizard, snake, hawk, mice, and sparrow.

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 aesthetic values but limited recreational opportunities.

4. Wood Products

Possibly firewood from invasion juniper; otherwise 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: Leebench L, 0-2% – fine-loamy, mixed, mesic Typic Natrargids

Type Location: NE ¼; SW ¼; SE ¼; Section 32, Township 3S, Range 2E USBM

General Legal Description:

Field Office Site Location
Roosevelt
Price

Data Collected and References

Sampling	Number	Range Similarity Index

Source	of Records	> 76%	51-75%	26-50%	0-25%
NRCS - ECS - 417					
UTAH - RANGE - 2					
Permanent Transect Location					

Other References