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 Bouldery Loam (Wyoming big sagebrush)
SITE NUMBER: 028AY208UT
MLRA: 028A
Original Site Description: Author: DJS Date: 01/01/1988
Revised Site Description: Author: DJS Date: 06/17/1993
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: 10-20 inches
Surface Textures: Extremely Bouldery Silt Loam
Surface Fragments(<=3" % cover, >3" % cover): 60%
Subsurface Textures:
Subsurface Fragments(<=3" % vol, >3" % vol): 35-80%
Geologic Parent Materials: Colluvium & Residuum from Igneous Materials
Moisture Regime:
Temperature Regime:
Runoff:
Permeability(min-max): Moderate
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 $CaCl_2$):
pH Range:
Available Water Capacity (inches): 1-2

Major Soils Associated With This Site:

Soil Survey Area: Box Elder W
Saxby BYX-SiL

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

2. PHYSIOGRAPHIC FEATURES

Landform and Position: Hillsides and Ridges of Ancient Basalt Flows
Aspect: All

	Minimum	Maximum
Slope:	10	50
Elevation:	4500	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	43	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 the plant community is Wyoming big sagebrush. The composition by air-dry weight is approximately 30 percent perennial grasses, 5 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		65	97.5	10	15
Bottlebrush squirreltail	ELEL5		32.5	65	5	10
Nevada bluegrass	PONE3	1	19.5	32.5	3	5
Western wheatgrass	PASM	1	19.5	32.5	3	5
Sandberg bluegrass	POSE	1	19.5	32.5	3	5
Eightflower sixweeks grass	VUOC	1	19.5	32.5	3	5
Other perennial grasses	PPGG	1	19.5	32.5	3	5
Other annual grasses	AAGG	1	32.5	65	5	10

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Cushion wild buckwheat	EROV	2	6.5	19.5	1	3
Utah milkvetch	ASUT	2	6.5	19.5	1	3
Western tansymustard	DEPI	2	6.5	19.5	1	3
Common cryptantha	CRAF	2	6.5	19.5	1	3
Other perennial forbs	PPFF	2	19.5	32.5	3	5
Other annual forbs	AAFF	2	19.5	32.5	3	5

Shrubs/Vines, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Wyoming big sagebrush	ARTRW		227.5	292.5	35	45
Spiny hopsage	GRSP		65	97.5	10	15
Shortspine horsebrush	TESP2		19.5	32.5	3	5
Low rabbitbrush	CHVI8		19.5	32.5	3	5
Other shrubs	SSSS	3	19.5	32.5	3	5

Trees, %

Common Name	National	Group	Pounds per Acre	% by Weight of

	Symbol				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	750	800
Average Year	600	650
Unfavorable Year	300	350

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)	3	2	1
Shrubs	40	3	20
Trees			
Cryptogams			

b. Other

Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As ecological condition deteriorates due to overgrazing, Indian ricegrass and squirreltail decrease while Wyoming big sagebrush increases.

When the potential natural plant community is burned, Wyoming big sagebrush decreases while low rabbitbrush 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	PNC											
ID Number	UT2081											
Description	Excellent Condition											

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

8. Associated Sites Within MLRA

028AY220UT
Semidesert Loam (Wyoming big sagebrush)

028AY124UT
Desert 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 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 value are wildflowers. Some recreation uses of this site are hiking and hunting.

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:

Site Type: Rangeland
Ecological Site Name: Semidesert Bouldery Loam (Wyoming big sagebrush)
Site Number: 028AY208UT
Modal Soils: Saxby BYX-SiL – loamy-skeletal, mixed, mesic Lithic Xerollic Calciorthids

Type Location: Southwest of Kelton, UT. NE ¼ Section 36, Township 12N, Range 12W. Center of Section 6, Township 11N, Range 11W.

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	8				
Permanent Transect Location					

Other References