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: Mountain Gravelly Loam (Mountain big sagebrush)
SITE NUMBER: 025XY412UT
MLRA: 025
Original Site Description: Author: GBB Date: 01/15/1985
Revised Site Description: Author: GBB Date: 02/07/1994
Approved by: Title: State Range Cons. Signed: Pat Shaver Date: 04/25/1994

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: 40-60 inches
Surface Textures:
Surface Fragments(<=3" % cover, >3" % cover):
Subsurface Textures: Medium to Fine with Accumulation of Clay
Subsurface Fragments(<=3" % vol, >3" % vol): 35-60%
Geologic Parent Materials: Alluvium & Colluvium from Mixed Materials
Moisture Regime:
Temperature Regime:
Runoff:
Permeability(min-max): Slow to Moderate
Drainage Class(min-max):
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): 5-8

Major Soils Associated With This Site:

Soil Survey Area: 601
Bickmore Family Parkay Family GR-L

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

2. PHYSIOGRAPHIC FEATURES

Landform and Position: Mountain Slopes
Aspect: All

	Minimum	Maximum
Slope:	30	60
Elevation:	6200	8600

Flooding:
- Frequency:
- Duration:

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

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 16-22
Mean Annual Air Temperature: 40-44
Mean Annual Soil Temperature: 42-47
Frost Free Period (days): 0-0
Freeze Free Period (days): 60-80

Temperature and Moisture Distribution:

Temp	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High	34	39	46	56	67	77	86	84	75	63	46	37
Mean												
Low	10	14	20	28	36	42	49	47	39	30	17	13

ppt	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High												
Mean	2.71	2.35	2.22	1.80	1.68	1.27	0.79	1.04	1.11	1.69	1.70	1.87
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 general view of this site is mountain big sagebrush and Great Basin wildrye. The composition by air-dry weight is approximately 65 percent perennial grasses, 15 percent forbs, and 25 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
Idaho fescue	FEID		185	277.5	10	15
Great basin wildrye	LECI4		185	277.5	10	15
Slender wheatgrass	ELTR7		92.5	185	5	10
Bluebunch wheatgrass	PSSP6		92.5	185	5	10
Mountain brome	BRCA5		92.5	185	5	10
Columbia needlegrass	ACNE9	1	55.5	92.5	3	5
Western wheatgrass	PASM	1	55.5	92.5	3	5
King fescue	LEKI2	1	55.5	92.5	3	5
Nevada bluegrass	PONE3	1	55.5	92.5	3	5
Bulbous oniongrass	MEBU	1	55.5	92.5	3	5
Prairie junegrass	KOMA	1	55.5	92.5	3	5
Other perennial grasses	PPGG	1	92.5	185	5	10
Other Annual grasses	AAGG	1	92.5	185	5	10

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Arrowleaf balsamroot	BASA3		55.5	92.5	3	5
Spurred lupine	LUCAC3	2	18.5	55.5	1	3
Lobeleaf groundsel	SEMU3	2	18.5	55.5	1	3
Sticky purple geranium	GEVI2	2	18.5	55.5	1	3
Common yarrow	ACMI2	2	18.5	55.5	1	3
Nettleleaf giant hyssop	AGUR	2	18.5	55.5	1	3
Cats breeches	HYCA4	2	18.5	55.5	1	3
Longleaf hawksbeard	CRAC2	2	18.5	55.5	1	3
Pale agoseris	AGGL	2	18.5	55.5	1	3
Northern mulesears	WYAM	2	18.5	55.5	1	3
Monument plant	FRSP	2	18.5	55.5	1	3
Other perennial forbs	PPFF	2	185	277.5	10	15
Other annual forbs	AAFF	2	185	277.5	10	15

Shrubs/Vines, %

Common Name	National	Group	Pounds per Acre	% by Weight of

	Symbol				Total Composition	
			Low	High	Low	High
Mountain big sagebrush	ARTRV		185	277.5	10	15
Mountain snowberry	SYOR		92.5	185	5	10
Mountain low rabbitbrush	CHVIL4	3	55.5	92.5	3	5
Saskatoon serviceberry	AMAL2	3	55.5	92.5	3	5
Slender wild buckwheat	ERMI4	3	55.5	92.5	3	5
Bitterbrush	PUTR2	3	55.5	92.5	3	5
Common chokecherry	PRVI	3	55.5	92.5	3	5
Other Shrubs	SSSS	3	92.5	185	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	2150	2250
Average Year	1750	1850
Unfavorable Year	825	925

4. Ground Cover and Structure

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	40	2	20
Forbs (perennial)	10	1	5
Shrubs	15	4	10
Trees			
Cryptogams			

b. Other

Litter	

Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As this site deteriorates due to grazing pressure Idaho fescue, Great Basin wildrye, and slender wheatgrass decrease while mountain big sagebrush and low rabbitbrush increase. When the potential natural plant community is burned, Idaho fescue, and mountain big sagebrush decrease while low rabbitbrush, and mountain snowberry increase. Kentucky bluegrass and annual plants 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	0	5	20	50	5	10	5	5	0	0
Name	PNC											
ID Number	UT4121											
Description	Excellent condition											

7. Aspect Differences Near MLRA Boundaries

(Give related range sites in MLRA's above and below)

8. Associated Sites Within MLRA

025XY418UT
Mountain Windswept Ridge (Low sagebrush)

025XY510UT
High Mountain Loam (Subalpine fir)

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 cattle and sheep during spring, summer, and fall.

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 blacktail jackrabbit, coyote, sage grouse, mule deer, and elk.

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-Sept

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: Box Elder
Latitude: Longitude:

Modal Soil: Bickmore Family – loamy-skeletal, mixed, argic Pachic Cryoborolls

Type Location: NW ¼ NE ¼ Section 36, Township 15N, Range 18W – Granite Pass

General Legal Description:

Field Office Site Location
Logan
Box Elder County

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	23				
Permanent Transect Location					

Other References