

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: High Mountain Loam (Mountain big sagebrush)

SITE NUMBER: 025XY505UT

MLRA: 025

Original Site Description: Author: GBB

Date: 01/15/1989

Revised Site Description: Author: GBB

Date: 02/09/1994

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: Loam

Surface Fragments(<=3" % cover, >3" % cover): 5%

Subsurface Textures:

Subsurface Fragments(<=3" % vol, >3" % vol): 20-40%

Geologic Parent Materials: Residuum from Quartzite

Moisture Regime:

Temperature Regime:

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: 601

Bickmore Family

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

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2. PHYSIOGRAPHIC FEATURES

Landform and Position: Mountain Slopes Just Below Mountain Tops
 Aspect: All / N

	<u>Minimum</u>	<u>Maximum</u>
Slope:	10	40
Elevation:	8600	9000
Flooding:		
Frequency:		
Duration:		
Ponding:		
Depth (inches):		
Frequency:		
Duration:		
Water Table Depth:		

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 16-20
 Mean Annual Air Temperature: 44-45
 Mean Annual Soil Temperature: 46-47
 Frost Free Period (days): 0-0
 Freeze Free Period (days): 30-40

Temperature and Moisture Distribution:

Temp	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High												
Mean	27	29	36	43	50	59	67	66	66	45	36	26
Low												

ppt	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High												
Mean	1.10	1.60	1.30	1.30	1.90	1.60	1.20	1.00	1.20	1.40	1.10	0.70
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):

<u>Wetland Description</u> (Cowardin System)	<u>System</u>	<u>Subsystem</u>	<u>Class</u>
<u>Stream Types</u> (Rosgen System)	<u>System</u>		

C. PLANT COMMUNITY CHARACTERISTICS

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1. Potential Plant Community Description and Ecological Factors

The general view of this site is big sagebrush and grass. The composition by air-dry weight is approximately 50 percent perennial grasses, 20 percent forbs, and 30 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		250	375	10	15
Slender wheatgrass	ELTR7		250	375	10	15
Muttongrass	POFE		125	250	5	10
Western wheatgrass	PASM		75	125	3	5
King fescue	LEKI2	1	25	75	1	3
Ross sedge	CARO5	1	25	75	1	3
Sandberg bluegrass	POSE	1	25	75	1	3
Spike trisetum	TRSP2	1	25	75	1	3
Thickspike wheatgrass	ELSC4	1	25	75	1	3
Other perennial grasses	PPGG	1	125	250	5	10
Other annual grasses	AAGG	1	125	250	5	10

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Common yarrow	ACMI2		75	125	3	5
Louisiana wormwood	ARLU		75	125	3	5
Ibex wild buckwheat	ERAM6	2	25	75	1	3
Orange sneezeweed	DUHO	2	25	75	1	3
Western tansymustard	DEPI	2	25	75	1	3
Longleaf hawksbeard	CRAC2	2	25	75	1	3
Common dandelion	TAOF	2	25	75	1	3
Other perennial forbs	PPFF	2	125	250	5	10
Other annual forbs	AAFF	2	125	250	5	10

Shrubs/Vines, %

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Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Mountain big sagebrush	ARTRV		375	500	15	20
Mountain snowberry	SYOR2		125	250	5	10
Low rabbitbrush	CHVI8		75	125	3	5
Other shrubs	SSSS	3	0	75	0	3

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	2900	3000
Average Year	2400	2500
Unfavorable Year	1900	2000

4. Ground Cover and Structure

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	30	2	15
Forbs (perennial)	15	1	10
Shrubs	20	3	15
Trees			
Cryptogams			

b. Other

Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

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As this site deteriorates due to grazing pressure slender wheatgrass and Idaho fescue decrease while big sagebrush and low rabbitbrush increase. When the potential natural plant community is burned big sagebrush decrease while low rabbitbrush and forbs increase.

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	0	20	35	30	10	5	0	0	0
Name	PNC											
ID Number	UT5051											
Description	Excellent Condition											

7. Aspect Differences Near MLRA Boundaries

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

8. Associated Sites Within MLRA

025XY610UT

Subalpine Loam (Subalpine big sagebrush)

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 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

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This site provides food and cover for wildlife.

b. List of Potential Species Present

Wildlife using this site include sage grouse, coyote, rabbit, fox, badger, weasel, squirrel, red-tailed hawk, 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-Sep)

3. Recreational Uses

Hunting and Hiking

4. Wood Products

None

5. Watershed Values

6. Other Uses

E. THREATENED AND ENDANGERED SPECIES

1. Plants
2. Animals

F. MODAL LOCATION AND DOCUMENTATION

State: Utah
 Latitude:

County: Box Elder
 Longitude:

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

Type Location: North and West facing slopes just off top of Raft River Mountains

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	2				
Permanent Transect Location					

Other References