

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: Upland Shallow Gravelly Loam (Thurber needlegrass)

SITE NUMBER: 025XY315UT

MLRA: 025

Original Site Description: Author: GBB

Date: 01/15/1985

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: 10-20 inches

Surface Textures:

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

Subsurface Textures:

Subsurface Fragments(<=3" % vol, >3" % vol): 35-60%

Geologic Parent Materials: Residuum from Rhyolite

Moisture Regime:

Temperature Regime:

Runoff: Medium

Permeability(min-max): Moderately Slow

Drainage Class(min-max): Well Drained

Water Erosion Hazard: Slight

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): 0.5-1.0

Major Soils Associated With This Site:

Soil Survey Area: 601

Shalper

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

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1. Potential Plant Community Description and Ecological Factors

The general view of this site is Wyoming big sagebrush and grass. The composition by air-dry weight is approximately 55 percent perennial grasses, 25 percent forbs, and 20 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
Bluebunch wheatgrass	PSSP6		80	100	20	25
Thurber needlegrass	ACTH7		80	100	20	25
Great basin wildrye	LECI4	1	12	20	3	5
Sandberg bluegrass	POSE	1	12	20	3	5
Bottlebrush squirreltail	ELEL5	1	12	20	3	5
Nevada Bluegrass	PONE3	1	12	20	3	5
Pine bluegrass	POSC	1	12	20	3	5
Other perennial grasses	PPGG	1	40	60	10	15
Other annual grasses	AAGG	1	40	60	10	15

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Longleaf hawksbeard	CRAC2	2	12	20	3	5
Arrowleaf balsamroot	BASA3	2	12	20	3	5
Carpet phlox	PHHO	2	12	20	3	5
Spurred lupine	LUCAC3	2	12	20	3	5
Torrey milkvetch	ASCA9	2	12	20	3	5
Shortstem wild buckwheat	ERBR5	2	12	20	3	5
Pacific aster	ASCH2	2	12	20	3	5
Other perennial forbs	PPFF	2	80	100	20	25
Other annual forbs	AAFF	2	80	100	20	25

Shrubs/Vines, %

Common Name	National	Group	Pounds per Acre	% by Weight of
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	Symbol				Total Composition	
			Low	High	Low	High
Mountain big sagebrush	ARTRV		20	40	5	10
Bitterbrush	PUTR2		12	20	3	5
Low rabbitbrush	CHVI8	3	4	12	1	3
Rubber rabbitbrush	ERNA10	3	4	12	1	3
Littleleaf horsebrush	TEGL	3	4	12	1	3
Other shrubs	SSSS	3	12	20	3	5

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	400	500
Average Year	300	400
Unfavorable Year	150	250

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	10
Forbs (perennial)	15	1	5
Shrubs	10	3	5
Trees			
Cryptogams			

b. Other

Litter	
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Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As this site deteriorates due to grazing pressure bluebunch wheatgrass, Thurber needlegrass, and bitterbrush decrease while big sagebrush, rabbitbrush, Sandberg bluegrass, phlox, and balsamroot increase. When the potential natural plant community is burned, big sagebrush, bitterbrush, and Thurber needlegrass decrease while rabbitbrush, Sandberg bluegrass, and milkvetch 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	5	15	40	20	10	5	5	0	0	0
Name	PNC											
ID Number	UT3151											
Description	Excellent Condition											

7. Aspect Differences Near MLRA Boundaries

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

8. Associated Sites Within MLRA

025XY326UT

Upland Shallow Stony Loam (Utah juniper)

025XY320UT

Upland Stony Clay (Low 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 spring, summer, and fall.

b. Guide to Forage Quality(Plant preference by season)

Species	Oct-Nov	Dec-Feb	Mar-May	Jun-Sep

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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, and mule deer.

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

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 2. Animals

F. MODAL LOCATION AND DOCUMENTATION

State: Utah County: Box Elder
 Latitude: Longitude:

Modal Soil: Shalper – loamy-skeletal, mixed, frigid Lithic Agrixerolls

Type Location: 100 ft N 2400 ft E of SW Corner Section 3, Township 10N, Range 19W
 Two miles SW of Bill Thomas ranch house at Etna, Utah

General Legal Description:

Field Office Site Location

Logan
 Box Elder County

Legal Description: 100 ft N 2400 ft E of SW ¼ Section 3, Township 10N , Range 19W

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					
Permanent Transect Location					

Other References