

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 Loamy Shale (Low sagebrush)

SITE NUMBER: 047AY325UT

MLRA: E47

Original Site Description: Author: JHB

Date: 02/11/1992

Revised Site Description: Author:

Date:

Approved by: Title: State Range Cons. Signed: Pat Shaver

Date:

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: <20 inches

Surface Textures: Silt Loams

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

Subsurface Textures:

Subsurface Fragments(<=3" % vol, >3" % vol): 5-55% Soft Shale

Geologic Parent Materials:

Moisture Regime:

Temperature Regime:

Runoff: Medium to Rapid

Permeability(min-max): Moderately Slow

Drainage Class(min-max): Well Drained

Water Erosion Hazard: High

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): 1-3

Major Soils Associated With This Site:

Soil Survey Area: 604

Ellett SiL

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

2. PHYSIOGRAPHIC FEATURES

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C. PLANT COMMUNITY CHARACTERISTICS

1. Potential Plant Community Description and Ecological Factors

The general view of this site is low sagebrush and grass. The natural plant community is composed of approximately 40 percent perennial grasses, 15 percent forbs, and 45 percent shrubs by air-dry weight.

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		120	160	15	20
Indian ricegrass	ACHY		80	120	10	15
Western wheatgrass	PASM		24	37	3	5
Nevada bluegrass	PONE3		16	37	2	5
Bottlebrush squirreltail	ELEL5		8	37	1	5
Sandberg bluegrass	POSE		8	37	1	5
Muttongrass	POFE		8	37	1	5
Letterman needlegrass	ACLE9		8	37	1	5
Other perennial grasses	PPGG		37	110	5	15
Other annual grasses	AAGG		24	37	3	5

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Carpet phlox	PHHO		24	40	3	5
Blue flax	LIPE2		16	37	2	5
Western mountain aster	ASOC		8	37	1	5
Prairie bluebells	MELAN4	2	0	37	0	5
Spiny milkvetch	ASKEC	2	0	37	0	5
Yellow owlclover	ORLU2	2	0	37	0	5
Tufted catseye	CRCA7	2	0	37	0	5
Lobeleaf groundsel	SEMU3	2	0	37	0	5
Dustymaiden	CHDO	2	0	37	0	5
Bastard toadflax	COUM	2	0	37	0	5
Sticky starwort	PSJA2	2	0	37	0	5
Alpine mousetail	IVGO	2	0	37	0	5
Low beardtongue	PEHU	2	0	37	0	5
Wyoming Indian paintbrush	CALI4	2	0	37	0	5
Common yarrow	ACMI2	2	0	37	0	5
Other perennial forbs	PPFF	2	37	110	5	15
Other annual forbs	AAFF	2	0	8	0	1

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Shrubs/Vines, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Low sagebrush	ARARA		120	160	15	20
Stickyleaf low rabbitbrush	CHVIV4		24	40	3	5
Spineless horsebrush	TECA2		24	40	3	5
Slender wild buckwheat	ERMI4		24	40	3	5
Watson prickly gilia	LEWA		16	37	2	5
Stemless mock goldenweed	STACA		16	37	2	5
Saskatoon serviceberry	AMAL2	3	8	37	1	5
Bitterbrush	PUTR2	3	8	37	1	5
Black sagebrush	ARNO4	3	8	37	1	5
Wyoming big sagebrush	ARTRW8	3	8	37	1	5
Other shrubs	SSSS	3	37	110	5	15

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	900	1100
Average Year	700	800
Unfavorable Year	500	600

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	10
Forbs (perennial)	5	1	5
Shrubs	40	2	15
Trees			
Cryptogams			

b. Other

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Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As this site deteriorates due to grazing pressure, bluebunch wheatgrass, Indian ricegrass, Nevada bluegrass, and muttongrass decrease while Sandberg bluegrass and low rabbitbrush increase. Fire will kill low sagebrush but low rabbitbrush will increase in density. Plants most likely to invade this site are Russian thistle, cheatgrass, and yellow salsify.

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	UT3251											
Description	Excellent Condition											

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Percent Growth	0	0	0	10	40	35	5	5	5	0	0	0
Name	Good Condition No.1											
ID Number	UT3252											
Description	Needlegrass, Bluebunch, Low sagebrush											

7. Aspect Differences Near MLRA Boundaries

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

8. Associated Sites Within MLRA

047AY308UT
 Upland Loam (Basin 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 is not high yielding and a large percentage of the production does not provide forage for livestock. Up to 40 percent of the annual production may be attributed to non-forage plants. This site is used by cattle and sheep in 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 rates high for rangeland and openland, but low for woodland and wetland.

b. List of Potential Species Present

Wild animals and birds using this site are cottontail, rabbit, coyote, mule deer, elk, sage grouse, and hawk.

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)

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3. Recreational Uses

This site has high values for aesthetics and natural beauty. Several species of forbs and shrubs provide varied colored blossoms in the spring. Recreation activities engaged in are hiking, hunting, and motorbiking.

4. Wood Products

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: Ellett SIL – loamy, mixed (calc.), frigid shallow, Xeric Torriorthents

Type Location: North Eden Canyon, South Eden Canyon, Little Creek
 SE ¼; Section 15, Township 14N, Range 6E

General Legal Description:

Field Office Site Location

Logan

Data Collected and References

Sampling Source	Number of Records	Range Similarity Index			
		> 76%	51-75%	26-50%	0-25%
NRCS - ECS - 417	2				
UTAH - RANGE - 2	4				
Permanent Transect Location					

Other References