

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 Loam (Browse)

SITE NUMBER: 025XY312UT

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: 40-60 inches

Surface Textures:

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

Subsurface Textures:

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

Geologic Parent Materials: Alluvium 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

Bullump L

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

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2. PHYSIOGRAPHIC FEATURES

Landform and Position: Upland terraces, Inset Mountain Valleys, and Concave
 Hillsides

Aspect: S/N

| | <u>Minimum</u> | <u>Maximum</u> |
|--------------------|----------------|----------------|
| Slope: | 15 | 30 |
| Elevation: | 5500 | 7000 |
| Flooding: | | |
| Frequency: | | |
| Duration: | | |
| Ponding: | | |
| Depth (inches): | | |
| Frequency: | | |
| Duration: | | |
| Water Table Depth: | | |

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 12-16

Mean Annual Air Temperature: 43-45

Mean Annual Soil Temperature: 45-47

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 | 37 | 42 | 41 | 58 | 68 | 78 | 86 | 83 | 75 | 63 | 78 | 38 |
| Mean | | | | | | | | | | | | |
| Low | 16 | 20 | 25 | 32 | 39 | 47 | 55 | 53 | 44 | 34 | 24 | 18 |

| PPT | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| High | | | | | | | | | | | | |
| Mean | 1.3 | 1.2 | 1.4 | 1.6 | 1.3 | 0.8 | 0.6 | 0.8 | 0.9 | 1.1 | 1.1 | 1.2 |
| 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 bitterbrush and grass. The composition by air-dry weight is approximately 45 percent perennial grasses, 10 percent forbs, and 45 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 | 0 | 187.5 | 250 | 15 | 20 |
| Bluebunch wheatgrass | PSSP6 | 0 | 187.5 | 250 | 15 | 20 |
| Great basin wildrye | LECI4 | 1 | 37.5 | 62.5 | 3 | 5 |
| Bottlebrush squirreltail | ELEL5 | 1 | 37.5 | 62.5 | 3 | 5 |
| Bulbous oniongrass | MEBU | 1 | 37.5 | 62.5 | 3 | 5 |
| Columbia needlegrass | ACNE9 | 1 | 37.5 | 62.5 | 3 | 5 |
| Indian ricegrass | ACHY | 1 | 37.5 | 62.5 | 3 | 5 |
| Letterman needlegrass | ACLE9 | 1 | 37.5 | 62.5 | 3 | 5 |
| Mountain brome | BRCA5 | 1 | 37.5 | 62.5 | 3 | 5 |
| Nevada bluegrass | PONE3 | 1 | 37.5 | 62.5 | 3 | 5 |
| Pine bluegrass | POSC | 1 | 37.5 | 62.5 | 3 | 5 |
| Sandberg bluegrass | POSE | 1 | 37.5 | 62.5 | 3 | 5 |
| Geyer sedge | CAGE2 | 1 | 37.5 | 62.5 | 3 | 5 |
| Slender wheatgrass | ELTR7 | 1 | 37.5 | 62.5 | 3 | 5 |
| Thurber's needlegrass | ACTH7 | 1 | 37.5 | 62.5 | 3 | 5 |
| Western wheatgrass | PASM | 1 | 37.5 | 62.5 | 3 | 5 |
| Other perennial grasses | PPGG | 1 | 125 | 187.5 | 10 | 15 |
| Other annual grasses | AAGG | 1 | 125 | 187.5 | 10 | 15 |

Forbs, %

| Common Name | National Symbol | Group | Pounds per Acre | | % by Weight of Total Composition | |
|--------------------------|-----------------|-------|-----------------|-------|----------------------------------|------|
| | | | Low | High | Low | High |
| Arrowleaf balsamroot | BASA3 | 2 | 37.5 | 62.5 | 3 | 5 |
| Cushion wild buckwheat | EROV | 2 | 37.5 | 62.5 | 3 | 5 |
| Sticky purple cranesbill | GEVI2 | 2 | 37.5 | 62.5 | 3 | 5 |
| Nettleleaf giant hyssop | AGUR | 2 | 37.5 | 62.5 | 3 | 5 |
| Spurred lupine | LUCAC3 | 2 | 37.5 | 62.5 | 3 | 5 |
| Longleaf phlox | PHLO2 | 2 | 37.5 | 62.5 | 3 | 5 |
| Lobeleaf groundsel | SEMU3 | 2 | 37.5 | 62.5 | 3 | 5 |
| White stoneseed | LIRU4 | 2 | 37.5 | 62.5 | 3 | 5 |
| Longleaf hawksbeard | CRAC2 | 2 | 37.5 | 62.5 | 3 | 5 |
| Other perennial forbs | PPFF | 2 | 125 | 187.5 | 10 | 15 |
| Other annual forbs | AAFF | 2 | 125 | 187.5 | 10 | 15 |

Shrubs/Vines, %

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| Common Name | National Symbol | Group | Pounds per Acre | | % by Weight of Total Composition | |
|------------------------|-----------------|-------|-----------------|-------|----------------------------------|------|
| | | | Low | High | Low | High |
| Bitterbrush | PUTR2 | 0 | 375 | 437.5 | 30 | 35 |
| Mountain big sagebrush | ATTRV | 0 | 62.5 | 125 | 5 | 10 |
| Mountain snowberry | SYOR2 | 3 | 12.5 | 37.5 | 1 | 3 |
| Wax current | RICE | 3 | 12.5 | 37.5 | 1 | 3 |
| Whitestem gooseberry | RIIN2 | 3 | 12.5 | 37.5 | 1 | 3 |
| Rubber Rabbitbrush | ERNA10 | 3 | 12.5 | 37.5 | 1 | 3 |
| Low Rabbitbrush | CHVI8 | 3 | 12.5 | 37.5 | 1 | 3 |
| Saskatoon serviceberry | AMAL2 | 3 | 12.5 | 37.5 | 1 | 3 |
| Wyoming big sagebrush | ARTRW | 3 | 12.5 | 37.5 | 1 | 3 |
| Other shrubs | SSSS | 3 | 37.5 | 62.5 | 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 | 1400 | 1500 |
| Average Year | 1150 | 1250 |
| Unfavorable Year | 800 | 900 |

4. Ground Cover and Structure

a. Vegetative

| Vegetation Type | Percent Canopy Cover | Height Range (ft) | Percent Basal Area Cover |
|----------------------------------|----------------------|-------------------|--------------------------|
| Grasses & Grass-like (perennial) | 25 | 2 | 10 |
| Forbs (perennial) | 10 | 1 | 5 |
| Shrubs | 35 | 5 | 20 |
| Trees | | | |
| Cryptogams | | | |

b. Other

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| | |
|------------------|--|
| Litter | |
| Coarse Fragments | |
| Bare Ground | |

5. Ecological Dynamics of the Site

As ecological conditions deteriorates due to grazing pressure Idaho fescue, bluebunch wheatgrass, and bitterbrush decreases while big sagebrush, rabbitbrush, and Sandberg bluegrass increase. When the potential natural community is burned, big sagebrush, and bitterbrush decrease while bluebunch wheatgrass and rabbitbrush 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 | UT3121 | | | | | | | | | | | |
| Description | Excellent condition | | | | | | | | | | | |

7. Aspect Differences Near MLRA Boundaries

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

8. Associated Sites Within MLRA

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 produces 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-Sep)

3. Recreational Uses

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

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 Latitude: Longitude:

Modal Soil: Bullump L – loamy-skeletal, mixed, frigid Pachic Argixerolls

Type Location: NE ¼ Section 4, Township 12N, Range 17W

General Legal Description:

Field Office Site Location

Logan
 Box Elder County

Legal Description:

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