

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: Subalpine Stony Loam (Subalpine big sagebrush)

SITE NUMBER: 047AY630UT

MLRA: 047A

Original Site Description: Author: DLT, TW

Date: 02/18/1992

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: >60 inches

Surface Textures: Dark Brown Loam or Gravelly Loam

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

Subsurface Textures: Dark Brown Gravelly Loam or Very Cobbly Clay Loam

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

Geologic Parent Materials: Colluvium and Residuum from Sandstone, Quartzite and Limestone

Moisture Regime:

Temperature Regime:

Runoff: Very Rapid

Permeability(min-max): Moderately Slow to Moderate

Drainage Class(min-max): Well Drained

Water Erosion Hazard: Very Severe

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): 5-8

Major Soils Associated With This Site:

Soil Survey Area: 613

Spearhead GR-L, 15 to 17%

Toone Family L, 3 to 65%

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

1. Potential Plant Community Description and Ecological Factors

The general view of this site is big sagebrush-grass-forb. 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 |
| Slender wheatgrass | ELTR7 | | 225 | 300 | 15 | 20 |
| King fescue | LEKI2 | | 75 | 150 | 5 | 10 |
| Columbia needlegrass | ACNE9 | | 75 | 150 | 5 | 10 |
| Nevada bluegrass | PONE3 | | 45 | 75 | 3 | 5 |
| Nodding brome | BRAN | 1 | 15 | 45 | 1 | 3 |
| Nodding bluegrass | PORE | 1 | 15 | 45 | 1 | 3 |
| Bulbous oniongrass | MEBU | 1 | 15 | 45 | 1 | 3 |
| Geyer sedge | CAGE2 | 1 | 15 | 45 | 1 | 3 |
| Other perennial grasses | PPGG | 1 | 75 | 150 | 5 | 10 |
| Other annual grasses | AAGG | 1 | 75 | 150 | 5 | 10 |

Forbs, %

| Common Name | National Symbol | Group | Pounds per Acre | | % by Weight of Total Composition | |
|------------------------------|-----------------|-------|-----------------|------|----------------------------------|------|
| | | | Low | High | Low | High |
| Sticky purple cranesbill | GEVI2 | | 45 | 75 | 3 | 5 |
| Fendler meadowrue | THFE | 2 | 15 | 45 | 1 | 3 |
| Thickleaf peavine | LALA3 | 2 | 15 | 45 | 1 | 3 |
| Fall sneezeweed | HEAU | 2 | 15 | 45 | 1 | 3 |
| Common yarrow | ACMI2 | 2 | 15 | 45 | 1 | 3 |
| Aspen fleabane | ERSP4 | 2 | 15 | 45 | 1 | 3 |
| Sulphurflower wild buckwheat | ERUMU2 | 2 | 15 | 45 | 1 | 3 |
| Common stonecrop | SELA | 2 | 15 | 45 | 1 | 3 |
| Other perennial forbs | PPFF | 2 | 150 | 225 | 10 | 15 |
| Other annual forbs | AAFF | 2 | 150 | 225 | 10 | 15 |

Shrubs

| Common Name | National Symbol | Group | Pounds per Acre | | % by Weight of Total Composition | |
|-------------------------|-----------------|-------|-----------------|------|----------------------------------|------|
| | | | Low | High | Low | High |
| Subalpine big sagebrush | ARTRS2 | | 375 | 450 | 25 | 30 |
| Other shrubs | SSSS | 3 | 45 | 75 | 3 | 5 |

3. Plant Community Annual Production

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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 | 1800 | 1900 |
| Average Year | 1400 | 1500 |
| Unfavorable Year | 900 | 1000 |

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) | 10 | 2 | 5 |
| Shrubs | 20 | 3 | 10 |
| Trees | | | |
| Cryptogams | | | |

b. Other

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

5. Ecological Dynamics of the Site

As this site deteriorates due to grazing pressure, perennial grasses and some forbs will decrease while big sagebrush will increase. Fire will kill big sagebrush and a few forbs and grasses, but grasses will generally increase. Exotic and native forbs will invade the site as soil space is available.

Plant Communities & Transitional Pathways

(Show a steady state diagram with influences to move from one steady state to another)

6. Plant Growth Curves

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| | 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 | UT6301 | | | | | | | | | | | |
| Description | Excellent Condition | | | | | | | | | | | |

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|----------------|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Percent Growth | 0 | 0 | 0 | 0 | 10 | 40 | 45 | 5 | 0 | 0 | 0 | 0 |
| Name | Good Condition No. 1 | | | | | | | | | | | |
| ID Number | UT6302 | | | | | | | | | | | |
| Description | needlegrass, bluegrass, big sagebrush | | | | | | | | | | | |

7. Aspect Differences Near MLRA Boundaries

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

8. Associated Sites Within MLRA

047AY614UT

Subalpine Loam (Cranesbill)

047AY610UT

Subalpine Gravelly 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 is grazed by cattle and sheep during the 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 for many species of wildlife. It rates high for rangeland and openland, but low for wetland and woodland.

b. List of Potential Species Present

This site is used by coyote, badger, mule deer, elk, and blue grouse.

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

This site has high values for aesthetics and natural beauty. The diversity of forbs blooming gives it a high value.

4. Wood Products

None

5. Other Uses

E. THREATENED AND ENDANGERED SPECIES

- 1. Plants
- 2. Animals

F. MODAL LOCATION AND DOCUMENTATION

State: Utah
 Latitude:

County:
 Longitude:

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Modal Soil: Spearhead Family GR-L, 15 to 17% — loamy-skeletal, mixed Pachic Cryoborolls

Type Location: NW ¼; SW ¼; SW ¼; Section 24, Township 2S, Range 3E

General Legal Description:

Field Office Site Location

Logan

Provo

Richfield

Cedar City

Murray

Price

Data Collected and References

| Sampling Source | Number of Records | Range Similarity Index | | | |
|-----------------------------|-------------------|------------------------|--------|--------|-------|
| | | > 76% | 51-75% | 26-50% | 0-25% |
| NRCS - ECS - 417 | 5 | | | | |
| UTAH - RANGE - 2 | 2 | | | | |
| | | | | | |
| | | | | | |
| Permanent Transect Location | | | | | |

Other References