

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: Wet Fresh Meadow (Sedge)

SITE NUMBER: 047AY008UT

MLRA: E47

Original Site Description: Author: DLT, TW

Date: 02/05/1992

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: Moderately Coarse to Fine

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

Subsurface Textures:

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

Geologic Parent Materials: Wide Range of Parent Rock

Moisture Regime:

Temperature Regime:

Runoff:

Permeability(min-max):

Drainage Class(min-max): Imperfectly to Poor

Water Erosion Hazard: Not a Serious 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: 622

Crooked Creek CL, 1-10%

Kovich L, 1-3%

Canburn SiL, 0-2%

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

2. PHYSIOGRAPHIC FEATURES

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1. Potential Plant Community Description and Ecological Factors

This site is dominated by sedges, grasses and rushes. The potential plant community is approximately 90 percent grasses and grasslike plants, 5 percent forbs and 5 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 |
| Nebraska sedge | CANE2 | | 1000 | 1250 | 20 | 25 |
| Leafy tussock sedge | CAAQ | | 1000 | 1250 | 20 | 25 |
| Tufted hairgrass | DECE | | 750 | 1000 | 15 | 20 |
| Smallwing sedge | CAMI7 | | 250 | 500 | 5 | 10 |
| Baltic rush | JUBAM | | 250 | 500 | 5 | 10 |
| Alpine timothy | PHAL2 | 1 | 250 | 500 | 5 | 10 |
| Field meadow foxtail | ALPR3 | 1 | 150 | 250 | 3 | 5 |
| Bog bluegrass | POLE2 | 1 | 150 | 250 | 3 | 5 |
| Redtop | AGST2 | 1 | 150 | 250 | 3 | 5 |
| Slender wheatgrass | ELTR7 | 1 | 150 | 250 | 3 | 5 |
| Fewflower spikerush | ELQU2 | 1 | 150 | 250 | 3 | 5 |
| Hardstem bulrush | SCAC | 1 | 150 | 250 | 3 | 5 |
| Other perennial grasses | PPGG | 1 | 750 | 1000 | 15 | 20 |
| Other annual grasses | AAGG | 1 | 750 | 1000 | 15 | 20 |

Forbs, %

| Common Name | National Symbol | Group | Pounds per Acre | | % by Weight of Total Composition | |
|----------------------------|-----------------|-------|-----------------|------|----------------------------------|------|
| | | | Low | High | Low | High |
| White marsh marigold | CALE4 | 2 | 50 | 100 | 1 | 2 |
| Elephanthead lousewort | PEGR2 | 2 | 50 | 100 | 1 | 2 |
| Large mountain bittercress | CACO6 | 2 | 50 | 100 | 1 | 2 |
| Field mint | MEAR4 | 2 | 50 | 100 | 1 | 2 |
| Longstalk clover | TRLO | 2 | 50 | 100 | 1 | 2 |
| Seaside arrowgrass | TRMA4 | 2 | 50 | 100 | 1 | 2 |
| Meadow plantain | PLTW | 2 | 50 | 100 | 1 | 2 |
| Alpine leafyhead aster | ASFOP | 2 | 50 | 100 | 1 | 2 |
| Graceful buttercup | RAIN | 2 | 50 | 100 | 1 | 2 |
| Alkalimarsh groundsel | SEHY2 | 2 | 50 | 100 | 1 | 2 |
| Hookspur violet | VIAD | 2 | 50 | 100 | 1 | 2 |
| Other perennial forbs | PPFF | 2 | 150 | 250 | 3 | 5 |
| Other annual forbs | AAFF | 2 | 150 | 250 | 3 | 5 |

Shrubs/Vines, %

| Common Name | National | Group | Pounds per Acre | % by Weight of |
|-------------|----------|-------|-----------------|----------------|
|-------------|----------|-------|-----------------|----------------|

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| | Symbol | | | | Total Composition | |
|-----------------|--------|---|-----|------|-------------------|------|
| | | | Low | High | Low | High |
| Golden hardhack | PEFL15 | 3 | 50 | 150 | 1 | 3 |
| Geyer willow | SAGE2 | 3 | 50 | 150 | 1 | 3 |
| Woods rose | ROWO | 3 | 50 | 150 | 1 | 3 |
| Other shrubs | SSSS | 3 | 150 | 250 | 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 | 6400 | 6500 |
| Average Year | 4900 | 5000 |
| Unfavorable Year | 3400 | 3500 |

4. Ground Cover and Structure

a. Vegetative

| Vegetation Type | Percent Canopy Cover | Height Range (ft) | Percent Basal Area Cover |
|----------------------------------|----------------------|-------------------|--------------------------|
| Grasses & Grass-like (perennial) | 90 | 2 | 80 |
| Forbs (perennial) | 5 | 1 | 1 |
| Shrubs | 1 | 2 | 1 |
| Trees | | | |
| Cryptogams | | | |

b. Other

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

5. Ecological Dynamics of the Site

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Plant species not a part of the climax plant community that are most likely to invade the site if plant cover deteriorates are: cheatgrass, foxtail barley, annual weeds, cocklebur, curlycup gumweed, povertyweed, teasel, and rubber rabbitbrush. With heavy grazing use, baltic rush, sedges and arrowgrass will increase and may become the dominant plants.

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 | UT0081 | | | | | | | | | | | |
| 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 | UT0082 | | | | | | | | | | | |
| Description | Sedge, Grass | | | | | | | | | | | |

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)

047AY430UT

Mountain Loam (Mountain big sagebrush)

047AY010UT

Wet Fresh Streambank (Willow)

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 is one of Utah's highest yielding range sites. The plants are predominantly grasses and grasslike plants with a few forbs and practically no shrubs. To control soil erosion and degradation of the plant community this site may be properly grazed early with animals being removed early to allow key plants to go ungrazed during the last part of the growing season. A stubble height of 4 to 6 inches should be adhered to.

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

The potential is poor to fair for openland habitat, good to fair for woodland habitat, good to fair for wetland habitat dependent on slope, and poor to fair for rangeland wildlife habitat.

b. List of Potential Species Present

It is good all around habitat for waterfowl and shorebirds, muskrats and beaver wherever it is adjacent to streams and ponds. It is fair for upland game birds and songbirds. It provides some feed for moose, elk and deer and brood rearing areas for sage 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 presents a view of lush, high producing vegetation primarily grasses and grass-like plants. It presents a pleasing view especially when livestock or big game are grazing it – one of a pleasant pastoral panorama. Fishing is opportune in adjacent lakes and streams.

4. Wood Products

None

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5. Other Uses

E. THREATENED AND ENDANGERED SPECIES

1. Plants
2. Animals

F. MODAL LOCATION AND DOCUMENTATION

State: Utah County:
 Latitude: Longitude:

Modal Soil: Crooked Creek CL, 1-10% – fine montmorillonitic, frigid Cumulic Hapaquolls

Type Location: SW ¼; SW ¼; NE ¼; Section 31, Township 3S, Range 5E

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 | 11 | | | | |
| UTAH - RANGE - 2 | | | | | |
| | | | | | |
| | | | | | |
| Permanent Transect Location | | | | | |

Other References

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Attachment 1

| |
|--------------------------------|
| Ecological Reference Worksheet |
|--------------------------------|

Author(s)/participant(s): V. Keith Wadman
 Contact for lead author: _____ Reference site used? Yes/No
 Date: 6/23/04 MLRA: 047A Ecological Site: Wet Fresh Meadow (047XY008T) Nebraska sedge, Leafy tussock sedge, Tufted hairgrass This must be verified based on soils and climate (see Ecological Site Description). Current plant community cannot be used to identify the ecological site.

Indicators For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above- and below-average years for each community within the reference state, when appropriate & (3) cite data. Continue descriptions on separate sheet.

- | | |
|-----|---|
| 1. | Number and extent of rills: <u>None.</u> |
| 2. | Presence of water flow patterns: <u>Flow patterns wind through perennial vegetation and show no evidence of erosion.</u> |
| 3. | Number and height of erosional pedestals or terracettes: <u>None.</u> |
| 4. | Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bareground): <u>5 - 10%.</u> |
| 5. | Number of gullies and erosion associated with gullies: <u>None to few. Gullies associated with adjacent stream channels should show little sign of erosion and should be stabilized with vegetation.</u> |
| 6. | Extent of wind scoured, blowouts and/or depositional areas: <u>None.</u> |
| 7. | Amount of litter movement (describe size and distance expected to travel): <u>Most litter resides in place with minor redistribution caused by water movement.</u> |
| 8. | Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values for both plant canopy and interspaces, if different): <u>90 to 100% of this site should have an erosion rating of 5 or 6. Up to 10% may have a rating of 4. The average should be a 6.</u> |
| 9. | Soil surface structure and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different): <u>Soil surface varies from 2 to 3". Structure is weak platy to subangular blocky. Color ranges from grayish brown (10YR5/2) to black (10YR5/1). Mollic epipedon extends from 24 to 33 inches deep.</u> |
| 10. | Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: <u>Perennial sedges & grasses slow runoff and maximize infiltration. A reduction in vegetative structure can reduce snow capture.</u> |
| 11. | Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): <u>None.</u> |

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12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: », >, = to indicate much greater than, greater than, and equal to): Assumed fire cycle of 40-70 years. Deep rooted perennial sedges and grasses > Shallow rooted grasses and forbs > sprouting shrubs, rushes, annual forbs > invaders such as Cheatgrass & Foxtail barley. Dominants: Nebraska sedge, Leafy tussock sedge, Tufted hairgrass; Sub-dominants: Smallwing sedge, Baltic rush. The deep rooted perennial sedge-grass functioning group is expected on this site.

13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Perennial sedges & grasses show little mortality. There could be slight decadence on individual plants because of competition for space.

14. Average percent litter cover (80-90%) and depth (2-3 inches).

15. Expected annual production (this is TOTAL above-ground production, not just forage production): 4900 - 5000 #/acre on an average year.

16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do, continue to increase regardless of the management of the site and may eventually dominate the site": Cheatgrass, Foxtail barley, Baltic rush, Rubber rabbitbrush, & Annual forbs.

17. Perennial plant reproductive capability: All perennial plants should have the ability to reproduce in all years.