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: Semimoist Stream Terrace (Ponderosa pine)
SITE NUMBER: 047CY007UT
MLRA: E47C
Original Site Description: Author: JLB RHF Date: 07/22/1992
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:
Surface Fragments(<=3" % cover, >3" % cover):
Subsurface Textures:
Subsurface Fragments(<=3" % vol, >3" % vol):
Geologic Parent Materials: Alluvium from Sedimentary and Quartzite
Moisture Regime:
Temperature Regime: Mesic
Runoff:
Permeability(min-max):
Drainage Class(min-max): Moderately 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: 013, 047
Uver SL 1-3%

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

2. PHYSIOGRAPHIC FEATURES

Landform and Position: Flood Plains
Aspect: All

	Minimum	Maximum
Slope:	1	3
Elevation:	5900	6400

Flooding:
Frequency: Occasionally
Duration: During Part of Growing Season
Ponding:
Depth (inches):
Frequency:
Duration:
Water Table Depth:

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 8-12
Mean Annual Air Temperature: 44-47
Mean Annual Soil Temperature: 47-59
Frost Free Period (days): 110-120
Freeze Free Period (days): 0-0

Temperature and Moisture Distribution:

Temp	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High												
Mean	15	24	34	44	53	61	68	65	57	46	33	20
Low												

ppt	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High												
Mean	0.40	0.50	0.50	0.70	0.90	0.50	0.90	1.10	0.90	0.80	0.50	0.50
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 area is scattered ponderosa pine and narrowleaf cottonwood protruding above sagebrush and squawbush shrub canopy. There is abundant grasses and grass-like plants in the open areas and understory. The composition by air-dry weight is approximately 40 percent grasses and grasslike plants, 15 percent forbs, 45 percent shrubs, and 5-10 percent trees.

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
Baltic rush	JUBAM		115	172.5	10	15
Needleandthread	HECO26		57.5	115	5	10
Indian ricegrass	ACHY		34.5	57.5	3	5
Western wheatgrass	PASM		34.5	57.5	3	5
Tall scouringrush	EQHY	1	11.5	34.5	1	3
Slender wheatgrass	ELTR7	1	11.5	34.5	1	3
Sand dropseed	SPCR	1	11.5	34.5	1	3
Other perennial grasses	PPGG	1	34.5	57.5	3	5
Other annual grasses	AAGG	1	34.5	57.5	3	5

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Missouri goldenrod	SOMI2		34.5	57.5	3	5
Louisiana wormwood	ARLU		34.5	57.5	3	5
Hairy false goldenaster	HEVI4	2	11.5	34.5	1	3
Smallleaf pussytoes	ANMI3	2	11.5	34.5	1	3
Common yarrow	ACMI2	2	11.5	34.5	1	3
Northern bedstraw	GABO2	2	11.5	34.5	1	3
Feathery false solomonsseal	MARAR	2	11.5	34.5	1	3
Spreading dogbane	APAN2	2	11.5	34.5	1	3
Other perennial forbs	PPFF	2	34.5	57.5	3	5
Other annual forbs	AAFF	2	34.5	57.5	3	5

Shrubs/Vines, %

Common Name	National Symbol	Group	Pounds per Acre	% by Weight of Total Composition

			Low	High	Low	High
Basin big sagebrush	ARTRT		115	172.5	10	15
Ill scented sumac	RHTR		57.5	115	5	10
Silver buffaloberry	SHAR		34.5	57.5	3	5
Woods rose	ROWO	3	11.5	34.5	1	3
Saskatoon serviceberry	AMAL2	3	11.5	34.5	1	3
Water birch	BEOC2	3	11.5	34.5	1	3
Western poisonivy	TORY	3	11.5	34.5	1	3
Yellow willow	SALU2	3	11.5	34.5	1	3
Other shrubs	SSSS	3	34.5	57.5	3	5

Trees, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Ponderosa pine	PIPO		11.5	34.5	1	3
Narrowleaf cottonwood	POAN3		57.5	115	5	10

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	1200	1500
Average Year	1000	1150
Unfavorable Year	700	900

4. Ground Cover and Structure

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	20	1	10
Forbs (perennial)	5	1	5
Shrubs	45	6	20
Trees	10	55	5
Cryptogams			

b. Other

Litter	
Coarse Fragments	

Bare Ground	

5. Ecological Dynamics of the Site

As this site deteriorates due to livestock grazing pressure perennial grasses decrease, rushes show little change, annual grasses, forbs, and sagebrush increase. Wildlife use the shrubs extensively in the fall and winter and may kill the serviceberry and other plants with over use.

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	UT0071											
Description	Excellent Condition											

7. Aspect Differences Near MLRA Boundaries

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

8. Associated Sites Within MLRA

047CY003UT
Semiwet Streambank (Birch-Alder)

047CY021UT
Wet Fresh Streambank (Willow)

047CY005UT
Semiwet Streambank (Lodgepole pine)

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 could provide summer and fall grazing for cattle.

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 site provides food and cover for wildlife.

b. List of Potential Species Present

Wildlife using this site include rabbit, coyote, birds, raptors, small rodents, moose, elk, and 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

This site offers aesthetic appeal in all seasons of the year. Recreational activities include hiking, picnicking, and hunting.

4. Wood Products

Ponderosa pine 28 trees per acre, tree height 54 feet, diameter at breast height 28 inches.

5. Other Uses

E. THREATENED AND ENDANGERED SPECIES

1. Plants

2. Animals

F. MODAL LOCATION AND DOCUMENTATION

State: Utah County:
Latitude: Longitude:

Modal Soil: Uver SL 1-3% — sandy-skeletal, siliceous, mesic Mollic Ustifluvents

Type Location: NW ¼, SW ¼, SW ¼; Section 24, Township 1N, Range 1W USBM

General Legal Description:

Field Office Site Location
Roosevelt

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	2				
Permanent Transect Location					

Other References

Attachment 1

Ecological Reference Worksheet

Author(s)/participant(s): V. Keith Wadman
Contact for lead author: _____ **Reference site used?** Yes/No
Date: 6/27/04 **MLRA:** 047C **Ecological Site:** Semimoist Stream Terrace (047CY007UT) Ponderosa pine, Basin big sagebrush, Baltic rush, Needleandthread) **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: Minor rill development in exposed areas. Rills present should be short (2 to 4 feet). They should be widely spaced (4 to 8 feet), and follow the surface micro-features. Old rills should be weathered and muted in appearance.

2. Presence of water flow patterns: Flow patterns wind around perennial plant bases and show minor evidence of erosion. They are somewhat short and stable and there is only minor evidence of deposition. Evidence of flow will increase somewhat with slope.

3. Number and height of erosional pedestals or terracettes: None.

4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bareground): 20 – 30%.

5. Number of gullies and erosion associated with gullies: Few. Gullies should show only minor signs of active erosion and should be mostly stabilized with vegetation. Gullies transecting site may show slightly more indication of erosion depending of condition of higher elevation sites.

6. Extent of wind scoured, blowouts and/or depositional areas: Little evidence of wind generated soil movement. Wind caused blowouts and deposition are not present.

7. Amount of litter movement (describe size and distance expected to travel): Some down channel redistribution caused by water. Some litter removal may occur in flow channels with deposition occurring at points of obstruction.

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): 80 to 90% of this site should have an erosion rating of 5 or 6. 10 to 20% may have a rating of 3 to 4. The average should be a 5. Litter accumulation and cryptogamic crusts reduce erosion.

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): Soil surface varies from 0 to 6 inches. Structure is typically medium subangular blocky. Color is brown (7.5YR5/4). There is an ochric epipedon to 6 inches deep.

10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: When perennial grasses decrease, reducing ground cover and increasing bare ground, runoff will increase and infiltration will be reduced.

11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): None.

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 50-70 years. Forest overstory > Perennial rushes & grasses, non-sprouting shrubs > sprouting shrubs, perennial forbs > invaders such as Cheatgrass & Annual forbs. Dominants: Baltic rush, Basin big sagebrush; Sub-dominants: Sumac, Needleandthread, Indian ricegrass. The perennial rush-grass/non-sprouting shrub 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): All age classes of perennial grasses should be present. Slight decadence in the principle shrubs could occur near the end of the fire cycle.

14. Average percent litter cover (40-50%) and depth (.75-1.75 inch).

15. Expected annual production (this is TOTAL above-ground production, not just forage production): 1000 - 1150 #/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": Baltic rush, Poison ivy, Bottlebrush squirreltail & Annual forbs.

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