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 (Black sagebrush)
SITE NUMBER: 047BY309UT
MLRA: 047B
Original Site Description: Author: Date:
Revised Site Description: Author: TS Date: 06/09/1993
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: 40-60 inches
Surface Textures: Loams
Surface Fragments(<=3" % cover, >3" % cover):
Subsurface Textures: Loams and Sandy Loams
Subsurface Fragments(<=3" % vol, >3" % vol):
Geologic Parent Materials: Alluvium form Sandstone, Shale, and Intermediate Igneous Rocks
Moisture Regime:
Temperature Regime:
Runoff: Medium
Permeability(min-max): Moderately Slow to Moderate
Drainage Class(min-max): Well Drained
Water Erosion Hazard: Moderate
Wind Erosion Hazard:
Electrical Conductivity (EC in mmhos/cm):
Sodium Adsorption Ration (SAR):
Soil Reaction (1:1 water):
Soil Reaction (0.1 M $CaCl_2$):
pH Range:
Available Water Capacity (inches): 8-10

Major Soils Associated With This Site:

Soil Survey Area: 636
Zinzer L 3-15% Evanston L 2-8%
Luhon L 2-5%

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

2. PHYSIOGRAPHIC FEATURES

Landform and Position: Valley Plains and Dissected Alluvial Fans
Aspect: All

	Minimum	Maximum
Slope:	0	20
Elevation:	6500	8000

Flooding:
Frequency:
Duration:
Ponding:
Depth (inches):
Frequency:
Duration:
Water Table Depth:

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 14-16
Mean Annual Air Temperature: 40-46
Mean Annual Soil Temperature: 42-47
Frost Free Period (days): 0-0
Freeze Free Period (days): 70-100

Temperature and Moisture Distribution:

Temp	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High	36	39	43	52	63	74	80	77	71	60	45	37
Mean	20	24	29	37	46	55	62	60	53	43	30	22
Low	5	9	14	22	30	36	44	43	35	26	115	7

ppt	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High	1.76	4.08	2.85	2.63	2.08	4.17	2.23	4.43	5.30	4.47	2.03	2.90
Mean	0.74	0.75	0.90	0.69	0.76	0.71	1.10	1.75	1.28	1.09	0.75	1.14
Low	0.09	0.00	0.04	0.03	0.00	0.00	0.06	0.10	0.00	0.00	0.03	0.00

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 aspect of this site is a grass/shrub mixture. The grasses are dominated by Indian ricegrass. Blue grama and needleandthread are apparent. The shrub component is dominated by black sagebrush. Forbs make up a minor component of this plant community.

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
Indian ricegrass	ACHY		200	300	20	30
Blue grama	BOGR2		50	100	5	10
Needleandthread	HECO26		50	100	5	10
Bottlebrush squirreltail	ELEL5	1	10	30	1	3
Bluebunch wheatgrass	PSSP6	1	10	30	1	3
Western wheatgrass	PASM	1	10	30	1	3
Prairie junegrass	KOMA	1	10	30	1	3
Muttongrass	POFE	1	10	30	1	3
Other perennial grasses	PPGG	1	50	100	5	10
Other annual grasses	AAGG	1	50	100	5	10

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Gooseberryleaf globemallow	SPGR2	2	20	30	2	3
King's bird's beak	COKI	2	20	30	2	3
Redroot wild buckwheat	ERRA3	2	20	30	2	3
Longleaf phlox	PHLO2	3	10	20	1	2
Freckled milkvetch	ASLE8	3	10	20	1	2
Pacific aster	ASCH2	3	10	20	1	2
Other perennial forbs	PPFF	3	10	20	1	2
Other annual forbs	AAFF	3	10	20	1	2

Shrubs, %

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

			Low	High	Low	High
Black sagebrush	ARNO4		200	300	20	30
Low rabbitbrush	CHVI8	4	30	50	3	5
Ballhead skyrocket	IPCOC3	4	30	50	3	5
Big sagebrush	ARTR2	5	10	30	1	3
Broom snakeweed	GUSA2	5	10	30	1	3
Rubber rabbitbrush	ERNA10	5	10	30	1	3
Winterfat	KRLA2	5	10	30	1	3
Bitterbrush	PUTR2	5	10	30	1	3
Other shrubs	SSSS	5	10	30	1	3

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	1100	1300
Average Year	800	1000
Unfavorable Year	500	700

4. Ground Cover and Structure

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft.)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	20	2	10
Forbs (perennial)	5	1	2
Shrubs	30	2	10
Trees			
Cryptogams			

b. Other

Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As ecological condition deteriorates, Indian ricegrass, blue grama, and needleandthread decrease while black sagebrush increases. When the potential natural plant community is burned, black sagebrush decreases and the grasses increase. Pinyon and Utah juniper readily invade this site and can become complete dominants.

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	0	5	15	20	20	25	15	0	0	0
Name	PNC											
ID Number	UT3091											
Description	Excellent Condition											

7. Aspect Differences Near MLRA Boundaries

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

8. Associated Sites Within MLRA

047BY304UT
Upland Gravelly Loam (Pinyon-Utah juniper)

047BY326UT
Upland Shallow Loam (Pinyon-Utah juniper)

9. Correlated Sites in Other States

(Give site name and number)

D. MAJOR USES OF THIS SITE

1. Livestock

a. Site Factors Influencing Management

Good summer grazing for cattle and sheep.

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

Good forage production – Poor cover.

b. List of Potential Species Present

Mule deer, antelope.

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 good aesthetic appearances and beauty.

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: Zinzer Loam 3-15% — fine-loamy, mixed Aridic Calciborolls

Type Location: NE ¼ Section 31, Township 34S, Range 5W

General Legal Description:

Field Office Site Location
Richfield
Cedar City

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