

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: Desert Loam (Shadscale)

SITE NUMBER: 035XY109UT

MLRA: D-35

Original Site Description: Author: GSC

Date: 04/08/1983

Revised Site Description: Author: GSC

Date: 09/10/1993

Revised Site Description: Author: SM

Date: 06/14/2004

Approved by: Title: Signed:

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

### 1. SOILS

Depth: moderately deep to very deep (at least 20" to greater than 60")

Surface Textures: fine sandy loam, loamy fine sand, and loam

Surface Fragments (<=3" % cover, >3" % cover): 0 to 10%

Subsurface Textures: sandy loam, fine sandy loam, very fine sandy loam, sandy clay loam, gravelly sandy clay loam, loam, clay loam and silt loam

Subsurface Fragments (<=3" % vol. >3" % vol.): 0 to 30%

Geologic Parent Materials: alluvium derived mainly from sandstone and shale

Moisture Regime: Typic Aridic

Temperature Regime: Mesic

Runoff: very low to low

Permeability (min-max): moderate (0.6 to 2.0 in/hr)

Drainage Class (min-max): well drained

Water Erosion Hazard: moderate

Wind Erosion Hazard: moderate

Electrical Conductivity (EC in mmhos/cm): 0 to 2 mmhos/cm (nonsaline)

Sodium Adsorption Ration (SAR): 0 (nonsodic)

Calcium Carbonate Equivalent (%): 1 to 30%

pH Range (1:1 water): 8.2 to 9.0

Available Water Capacity (inches): 7.3 to 10 inches

Average annual soil loss in potential is approximately 0.5 tons/acre. Pariette Family and Cerrillos variant are moderately deep soils; the rest of the soils correlated with this site are very deep. Available water capacity for moderately deep soils is 5 to 7.5 inches.

Major Soils Associated With This Site (*Soil Survey Area + Series Name*):

Capitol Reef NP (685): **Ruinpoint Family** in mapunit 220

Henry Mountains (631): **Cerrillos variant** in mapunit 22

Glen Canyon NRA: **Redhouse** in mapunit 137

San Juan County – Central (638): **Redhouse** in mapunit 32 & 44

Grand Staircase Escalante NM (686): **Minchey** in mapunit 5116 & **Pariette Family** in mapunit 5137

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



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Approximately 65–70% occurs as rain from March through October. On the average, April, May, and June are the driest months and August, September, and October are the wettest months. Precipitation is extremely variable from month to month and from year to year. Much of the precipitation occurs as convection thunderstorms.

Influencing Water Features (if any):

Wetland Description (Cowardin System)      System      Subsystem      Class  
 None

Stream Types (Rosgen System)      System  
 None

### **C. PLANT COMMUNITY CHARACTERISTICS**

#### **1. Potential Plant Community Description and Ecological Factors**

(Includes dominant vegetative aspect, cool-season and warm-season components, typical plant spacing, etc.)

The dominant aspect of the plant community is shadscale. The composition by air-dry weight is approximately 35% perennial grasses, 10% forbs, and 55% shrubs. In average years, plants begin growth around February 20 and end growth around October 30.

#### **2. Plant Community Composition by Weight and Percentage**

Grasses and Grasslike, 30-40%

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Galleta	PLJA	0	60	90	15	20
Indian Ricegrass	ACHY	0	40	68	10	15
Sand Dropseed	SPCR	1	4	14	1	3
Bottlebrush Squirreltail	ELEL5	1	4	14	1	3
Purple Threeawn	ARPU9	1	4	14	1	3
Other Perennial Grasses	PPGG	1	12	23	3	5
Other Annual Grasses	AAGG	1	12	23	3	5

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Forbs, 5-15%

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Gooseberryleaf Globemallow	SPGR2	0	12	23	3	5
Fineleaf Hymenopappus	HYFI	2	4	14	1	3
Redroot Buckwheat	ERRA3	2	4	14	1	3
Crescent Milkvetch	ASAM5	2	4	14	1	3
Pacific Aster	ASCH2	2	4	14	1	3
Utah Fleabane	ERUT	2	4	14	1	3
Rocky Mountain Beeplant	CLSE	2	4	14	1	3
Other Perennial Forbs	PPFF	2	20	45	5	10
Other Annual Forbs	AAFF	2	20	45	5	10

Shrubs, 50-60%

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Shadscale	ATCO	0	100	158	25	35
Winterfat	KRLA2	0	12	23	3	5
Bud Sagebrush	ARSP5	0	12	23	3	5
Nevada Mormontea	EPNE	0	12	23	3	5
Broom Snakeweed	GUSA2	0	12	23	3	5
Yellow Rabbitbrush	CHVI8	3	4	14	1	3
Plains Pricklypear	OPPO	3	4	14	1	3
Fourwing Saltbush	ATCA2	3	4	14	1	3
Other Shrubs	SSSS	3	12	23	3	5

**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	500	550
Average Year	400	450
Unfavorable Year	200	250

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**4. Ground Cover and Structure**

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range	Percent Basal Area Cover
Grasses & Grass-like (perennial)	20	0.5 -1 ft.	10
Forbs (perennial)	5	0.5 -1 ft.	2
Shrubs	25	1-2 ft.	10
Trees	-	-	-
Cryptogams	0-5	0.1-1 cm	0-5

b. Other

Litter	0-5%
Coarse Fragments	0-10%
Bare Ground	45-65%

**5. Ecological Dynamics of the Site**

(Includes a discussion of seral stages; fire influence and effects; effects of prolonged wet or dry periods; resistance to change; the influence of such things as grazing, rodent concentrations, insects, diseases, introduced species, and soil erosion or deposition; other stable vegetative states associated with this site as a result of extreme disturbance)

As ecological condition deteriorates due to overgrazing, Indian ricegrass, winterfat, and bud sagebrush decrease while galleta, broom snakeweed, pricklypear, and yellow rabbitbrush increase. Fire does not appear to be an important ecological factor. Cheatgrass, Halogeton, and Russian thistle are most likely to invade this site.

**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	25	65	5	0	0	0	0	0	0
Name	PNC											
ID Number	UT1091											
Description	Excellent Condition											

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### **7. Similar Sites**

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

Desert Loam (Shadscale) 034XY106UT

### **8. Associated Sites Within MLRA**

(Give site name and number)

Semidesert Loam (Wyoming Big Sagebrush)	035XY209UT
Semidesert Sandy Loam (Fourwing Saltbush)	035XY215UT
Desert Sandy Loam (Fourwing Saltbush)	035XY118UT
Desert Stony Loam (Shadscale-Bud Sagebrush)	035XY136UT
Desert Shallow Loam (Shadscale)	035XY122UT
Desert Sandy Loam (Blackbrush)	035XY121UT
Loamy Bottom (Basin Big Sagebrush)	035XY011UT
Desert Shallow Sandy Loam (Blackbrush)	035XY133UT

### **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 all seasons of the year.

#### b. Guide to Forage Quality (Plant preference by season)

Species - Cattle	Oct-Nov	Dec-Feb	Mar-May	Jun-Sep
Galleta	VG	F, G	VG	VG
Indian Ricegrass	F, G	VG	VG	VG
Gooseberryleaf Globemallow	F, G	P	F, G	F, G
Shadscale	F, G	F, G	F, G	F, G
Winterfat	VG	VG	F, G	F, G
Bud Sagebrush	F, G	F, G	F, G	F, G
Nevada Mormontea	F, G	VG	P	F, G
Broom Snakeweed	P	P	P	P

Species - Sheep	Oct-Nov	Dec-Feb	Mar-May	Jun-Sep
Galleta	F, G	F, G	VF	F, G
Indian Ricegrass	F, G	VG	VG	VG
Gooseberryleaf Globemallow	F, G	P	VG	F, G
Shadscale	VG	VG	VG	F, G
Winterfat	VG	VG	VG	VG
Bud Sagebrush	F, G	VG	VG	F, G
Nevada Mormontea	F, G	VG	P	P
Broom Snakeweed	P	P	P	P

VG = Very Good    G = Good    F = Fair    P = Poor

## 2. Wildlife

### a. Site Factors Influencing Management

This site provides food and limited cover for wildlife.

### b. List of Potential Species Present

Wildlife using this site includes jackrabbit, coyote, bobcat, hawk, kangaroo rat, mice, and snake.

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 →	Mule deer		Elk	
	Use	Season	Use	Season
Plant Species ↓				
Galleta	B	F, W, Sp, Su	B	F, W, Sp, Su
Indian Ricegrass	A	F, W, Sp, Su	A	F, W, Sp, Su
Gooseberryleaf Globemallow	B	F, W, Sp, Su	B	F, W, Sp, Su
Shadscale	B	F, W, Sp, Su	C	F, W, Sp, Su
Winterfat	A	F, W, Sp, Su	A	F, W, Sp, Su
Bud Sagebrush	B	F, W, Sp, Su	B	F, W, Sp, Su
Nevada Mormontea	B	F, W, Sp, Su	C	F, W, Sp, Su
Broom Snakeweed	C	F, W, Sp, Su	C	F, W, Sp, Su

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

Recreation activities are hiking and hunting.

#### **4. Wood Products**

None.

#### **5. Other Uses**

The soils in this site are in hydrologic group B. The runoff curve numbers are 61 through 79 depending on watershed condition.

### **E. THREATENED AND ENDANGERED SPECIES**

1. Plants – This section will be added as information is available.
2. Animals – This section will be added as information is available.

### **F. MODAL LOCATION AND DOCUMENTATION**

State: County:  
Latitude: Longitude:  
Section: Township: Range:  
General Legal Description:

Capitol Reef: **Ruinpoint Family** – Upper Halls Creek, 3.5 miles S of the Bitter Creek Divide; 200 ft. E & 1,200 ft. S of the NW corner of Sec. 28, T. 33S., R. 8E. (unsurveyed area. Location of description is approximate.)

Grand Staircase: **Minchey** – E of Big Water, S of Smoky Mountain at the base of the Kelly Grade on the Smoky Mountain Road and W of Big Water, along the Paria River near Highway 89. **Pariette Family** – W of Church Wells at the south end of the Cottonwood Road. Also located NE of Church Wells above Croton Canyon to the east.

Glen Canyon: **Redhouse** – Comb Wash, 100 ft. N and 500 ft. E of the SW corner of sec. 31. T. 39 S., R. 21 E.

San Juan – Central: **Redhouse** – Comb Wash; 100 ft. N and 500 ft. E of the SW corner of sec. 31. T. 39 S., R. 21 E.

Henry Mountains: **Cerrillos Variant** – 12 miles SW of Hanksville; 2,000 ft S and 500 ft. W of the NE corner of sec. 29, T. 29 S. R. 10 E.

Comb Wash, along highway 95 between White Canyon and Hite.

#### **Field Office Site Location**

Richfield Field Office, Panguitch Field Office, Monticello Field Office

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**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					

**4. Other References**