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: Semidesert Alkali Sandy Loam (Alkali sacaton)
SITE NUMBER: 028AY205UT
MLRA: 028A
Original Site Description: Author: DJS Date: 01/01/1987
Revised Site Description: Author: DJS Date: 06/17/1993
Approved by: Title: State Range Cons. Signed: Pat Shaver Date: 08/30/1993

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: Light Brown Sandy Loam
Surface Fragments(<=3" % cover, >3" % cover): None
Subsurface Textures: Loamy Sands to Silty Clay Loams
Subsurface Fragments(<=3" % vol, >3" % vol): None
Geologic Parent Materials: Alluvium from Mixed Sedimentary & Igneous Materials
Moisture Regime:
Temperature Regime:
Runoff:
Permeability(min-max):
Drainage Class(min-max): 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: Iron-Wash.
Medburn SL Moderately Alkali Wales SL Saline-Alk Low PPT

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

## 2. PHYSIOGRAPHIC FEATURES

Landform and Position: Valley Floodplains & Low Alluvial Fans
Aspect: All

| | Minimum | Maximum |
|---|---|---|
| Slope: | 0 | 2 |
| Elevation: | 5300 | 5600 |

Flooding:
- Frequency:
- Duration:

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

## B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 8-12
Mean Annual Air Temperature: 45-50
Mean Annual Soil Temperature: 48-53
Frost Free Period (days): 0-0
Freeze Free Period (days): 100-150

Temperature and Moisture Distribution:

| Temp | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High | 39 | 44 | 52 | 61 | 72 | 82 | 90 | 88 | 79 | 67 | 51 | 41 |
| Mean | | | | | | | | | | | | |
| Low | 13 | 19 | 24 | 30 | 38 | 45 | 53 | 52 | 43 | 32 | 23 | 15 |

| ppt | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High | | | | | | | | | | | | |
| Mean | 0.85 | 0.80 | 0.90 | 0.96 | 0.99 | 0.71 | 0.79 | 0.92 | 0.75 | 0.78 | 0.79 | 0.75 |
| 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 dominant aspect of the plant community is alkali sacaton. The composition by air-dry weight is approximately 75 percent perennial grasses, 5 percent forbs, and 20 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 |
| Alkali sacaton | SPAI | | 240 | 270 | 40 | 45 |
| Indian ricegrass | ACHY | | 30 | 60 | 5 | 10 |
| Galleta | HIJA | | 18 | 30 | 3 | 5 |
| Western wheatgrass | PASM | | 18 | 30 | 3 | 5 |
| Bottlebrush squirreltail | ELEL5 | | 18 | 30 | 3 | 5 |
| Purple threeawn | ARPU9 | 1 | 6 | 18 | 1 | 3 |
| Sand dropseed | SPCR | 1 | 6 | 18 | 1 | 3 |
| Coastal saltgrass | DISP | 1 | 6 | 18 | 1 | 3 |
| | | | | | | |
| Other perennial grasses | PPGG | 1 | 18 | 30 | 3 | 5 |
| Other annual grasses | AAGG | 1 | 18 | 30 | 3 | 5 |

Forbs, %

| Common Name | National Symbol | Group | Pounds per Acre | | % by Weight of Total Composition | |
|---|---|---|---|---|---|---|
| | | | Low | High | Low | High |
| Clasping pepperweed | LEPE2 | 2 | 6 | 18 | 1 | 3 |
| Western tansymustard | DEPI | 2 | 6 | 18 | 1 | 3 |
| Scarlet globemallow | SPCO | 2 | 6 | 18 | 1 | 3 |
| | | | | | | |
| Other perennial forbs | PPFF | 2 | 18 | 30 | 3 | 5 |
| Other annual forbs | AAFF | 2 | 18 | 30 | 3 | 5 |

Shrubs/Vines, %

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

| | Symbol | | | | Total Composition | |
|---|---|---|---|---|---|---|
| | | | Low | High | Low | High |
| Black greasewood | SAVE4 | | 30 | 60 | 5 | 10 |
| Rubber rabbitbrush | CHNA2 | | 18 | 30 | 3 | 5 |
| Basin big sagebrush | ATTRT | | 18 | 30 | 3 | 5 |
| Broom snakeweed | GUSA2 | 3 | 6 | 18 | 1 | 3 |
| Bud sagebrush | ATSP5 | 3 | 6 | 18 | 1 | 3 |
| Nevada jointfir | EPNE | 3 | 6 | 18 | 1 | 3 |
| Shortspine horsebrush | TESP2 | 3 | 6 | 18 | 1 | 3 |
| Winterfat | KRLA2 | 3 | 6 | 18 | 1 | 3 |
| Fourwing saltbush | ATCA2 | 3 | 6 | 18 | 1 | 3 |
| Shadscale | ATCO | 3 | 6 | 18 | 1 | 3 |
| | | | | | | |
| Other shrubs | SSSS | 3 | 18 | 30 | 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 | 750 | 800 |
| Average Year | 550 | 600 |
| Unfavorable Year | 300 | 350 |

**4. Ground Cover and Structure**

a. Vegetative

| Vegetation Type | Percent Canopy Cover | Height Range (ft) | Percent Basal Area Cover |
|---|---|---|---|
| Grasses & Grass-like (perennial) | 50 | 3 | 30 |
| Forbs (perennial) | 5 | 3 | 2 |
| Shrubs | 10 | 4.5 | 5 |
| Trees | | | |
| Cryptogams | | | |

b. Other

| | |
|---|---|
| Litter | |

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

## 5. Ecological Dynamics of the Site

As ecological condition deteriorates due to overgrazing, alkali sacaton and Indian ricegrass decrease while greasewood and basin big sagebrush increase.

When the potential natural plant community is burned, basin big sagebrush and greasewood decrease while Indian ricegrass and alkali sacaton increase.

Halogeton, Russian thistle and poverty weed 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 | 15 | 40 | 30 | 5 | 5 | 0 | 0 | 0 | 0 |
| Name | PNC | | | | | | | | | | | |
| ID Number | UT2051 | | | | | | | | | | | |
| Description | Excellent Condition | | | | | | | | | | | |

## 7. Aspect Differences Near MLRA Boundaries
(Give related range sites in MLRA's above and below)

## 8. Associated Sites Within MLRA

028AY004UT
Alkali flat (Greasewood)

028AY220UT
Semidesert Loam (Basin big sagebrush)

## 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 suited for cattle grazing during fall, winter, and spring.

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

This site provides food and cover for wildlife.

b. List of Potential Species Present

Wildlife using this site include rabbit, coyote, fox, badger, pronghorn antelope, mule deer, and dove.

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

Resources that have special aesthetic and landscape value are wildflowers. Some recreation uses of this site are hiking, hunting, and horseback riding.

## 4. Wood Products

None

## 5. Other Uses

# E. THREATENED AND ENDANGERED SPECIES

1. Plants

## F. MODAL LOCATION AND DOCUMENTATION

State: Utah County:
Latitude: Longitude:

Modal Soils: Medburn SL Moderately Alkali – coarse-loamy, mixed (calcareous), mesic Xeric Torriorthents

Type Location: North of Cedar City, Utah, 8 Miles. West of Enoch 5 miles on Clark Bros. Ranch

General Legal Description:

**Field Office Site Location**
Logan
Murray
Provo
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 | 6 | | | | |
| | | | | | |
| | | | | | |
| Permanent Transect Location | | | | | |

**Other References**