

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: Mountainmahogany Thicket (Curleaf mountainmahogany)

SITE NUMBER: 025XY414UT

MLRA: 025

Original Site Description: Author: GBB

Date: 01/15/1985

Revised Site Description: Author: GBB

Date: 02/07/1994

Approved by: Title: State Range Cons. Signed: Pat Shaver Date: 04/25/1994

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: 10-20 (variable)

Surface Textures:

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

Subsurface Textures:

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

Geologic Parent Materials: Colluvium from Quartzite and Rhyolite

Moisture Regime:

Temperature Regime:

Runoff: Slight to Medium

Permeability(min-max): Moderate to Moderately Rapid

Drainage Class(min-max): Well Drained

Water Erosion Hazard: Slight to Moderate

Wind Erosion Hazard: Slight to Moderate

Electrical Conductivity (EC in mmhos/cm):

Sodium Adsorption Ration (SAR):

Soil Reaction (1:1 water):

Soil Reaction (0.1 M CaCl₂):

pH Range: Neutral to Slightly Acidic

Available Water Capacity (inches): 1-5

Major Soils Associated With This Site:

Soil Survey Area: 601

Eyre Family GRV-SL

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

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2. PHYSIOGRAPHIC FEATURES

Landform and Position: Mountain Sideslopes on the Leeward Side

Aspect: Northeast

	<u>Minimum</u>	<u>Maximum</u>
Slope:	8	50
Elevation:	6500	9500
Flooding:		
Frequency:		
Duration:		
Ponding:		
Depth (inches):		
Frequency:		
Duration:		
Water Table Depth:		

B. CLIMATIC FEATURES

Mean Annual Precipitation (inches): 16-22

Mean Annual Air Temperature: 39-44

Mean Annual Soil Temperature: 41-47

Frost Free Period (days): 0-0

Freeze Free Period (days): 60-80

Temperature and Moisture Distribution:

Temp	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High	34	39	46	56	67	77	86	84	75	63	46	37
Mean												
Low	10	14	20	28	36	42	49	47	39	30	17	13

ppt	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
High												
Mean	2.71	2.35	2.22	1.80	1.68	1.27	0.79	1.04	1.11	1.69	1.70	1.87
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 site is curlleaf mountainmahogany. The composition by air-dry weight is approximately 15 percent perennial grasses, 10 percent forbs, and 75 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
Bluebunch wheatgrass	PSSP6		36	60	3	5
Idaho fescue	FEID		36	60	3	5
Great basin wildrye	LECI4		36	60	3	5
Bottlebrush squirreltail	ELEL5	1	12	36	1	3
Thurber needlegrass	ACTH7	1	12	36	1	3
Nevada bluegrass	PONE3	1	12	36	1	3
Sandberg bluegrass	POSE	1	12	36	1	3
Pine bluegrass	POSC	1	12	36	1	3
Mountain brome	BRCA5	1	12	36	1	3
Rock oniongrass	MEST	1	12	36	1	3
Indian ricegrass	ACHY	1	12	36	1	3
Other perennial grasses	PPGG	1	60	120	5	10
Other annual grasses	AAGG	1	60	120	5	10

Forbs, %

Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Hairy balsamroot	BAHO	2	12	36	1	3
Arrowleaf balsamroot	BASA3	2	12	36	1	3
Cushion wild buckwheat	EROV	2	12	36	1	3
White stoneseed	LIRU4	2	12	36	1	3
Carpet phlox	PHHO	2	12	36	1	3
Lobeleaf groundsel	SEMU3	2	12	36	1	3
Longleaf hawksbeard	CRAC2	2	12	36	1	3
Rocky mtn dwarfsunflower	HEUN	2	12	36	1	3
Freckled milkvetch	ASLE8	2	12	36	1	3
Pacific aster	ASCH2	2	12	36	1	3
Common yarrow	ACMI2	2	12	36	1	3
Low beardtongue	PEHU	2	12	36	1	3
Watson pricklygilia	LEWA	2	12	36	1	3
Other perennial forbs	PPFF	2	120	180	10	15
Other annual forbs	AAFF	2	120	180	10	15

Shrubs/Vines, %

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Common Name	National Symbol	Group	Pounds per Acre		% by Weight of Total Composition	
			Low	High	Low	High
Curlleaf mountainmahogany	CELE3		660	720	55	60
Mountain big sagebrush	ARTRV		36	60	3	5
Mountain snowberry	SYOR2		36	60	3	5
Mountain low rabbitbrush	CHVIL4	3	12	36	1	3
Rubber rabbitbrush	ERNA10	3	12	36	1	3
Bitterbrush	PUTR2	3	12	36	1	3
Saskatoon serviceberry	AMAL2	3	12	36	1	3
Sticky current	RIVI3	3	12	36	1	3
Blue elder	SACE3	3	12	36	1	3
Mormon tea	EPVI	3	12	36	1	3
Nuttall horsebrush	TENU2	3	12	36	1	3
Tobacco brush	CEVE	3	12	36	1	3
Creeping Oregon grape	MARE11	3	12	36	1	3
Black sagebrush	ARNI4	3	12	36	1	3
Other shrubs	SSSS	3	12	36	1	3

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	1500	1600
Average Year	1100	1200
Unfavorable Year	700	800

4. Ground Cover and Structure

a. Vegetative

Vegetation Type	Percent Canopy Cover	Height Range (ft)	Percent Basal Area Cover
Grasses & Grass-like (perennial)	10	2	5
Forbs (perennial)	5	1	2
Shrubs	75	12	20
Trees			
Cryptogams			

b. Other

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Litter	
Coarse Fragments	
Bare Ground	

5. Ecological Dynamics of the Site

As this site deteriorates due to grazing pressure bluebunch wheatgrass, Idaho fescue, and balsamroot decrease while, low rabbitbrush, curlleaf mountainmahogany, and mountain big sagebrush increase. When the potential natural plant community is burned, curlleaf mountainmahogany, and mountain big sagebrush decrease while low rabbitbrush, and tobaccobrush increase.

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	20	50	5	10	5	5	0	0
Name	PNC											
ID Number	UT4141											
Description	Excellent Condition											

7. Aspect Differences Near MLRA Boundaries

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

8. Associated Sites Within MLRA

(Give site name and number)

025XY412UT

Mountain Gravelly Loam (Mountain big sagebrush)

025XY416UT

Mountain Shallow Loam (Low sagebrush)

025XY316UT

Upland Shallow Loam (Black 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 provides proper grazing for cattle and sheep during spring, summer, and fall.

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 blacktail jackrabbit, coyote, sage grouse, mule deer, and elk.

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

Hunting and Hiking

4. Wood Products

Curleaf mountainmahogany furnishes some fence posts and stays. Firewood for fireplaces and campfires can be harvested, but the wood is difficult to cut with an axe after it is dry. Knick-knacks and other novelties as lamp stands, etc. can be made from this wood.

5. Other Uses

E. THREATENED AND ENDANGERED SPECIES

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1. Plants
2. Animals

F. MODAL LOCATION AND DOCUMENTATION

State: Utah County: Box Elder
 Latitude: Longitude:

Modal soil: Eyre Family GRV-SL – loamy-skeletal, mixed Lithic Cryoborolls

Type location: NW ¼ SE ¼ Section 24, Township 11N, Range 17W

General Legal Description:

Field Office Site Location

Logan
 Box Elder County

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	5				
Permanent Transect Location					

Other References