

WILD HORSE BENCH - TREND STUDY NO. 10-28-10

Vegetation Type: Black Sagebrush

Range Type: Bison Year-Long

NRCS Ecological Site Description: Semidesert Gravelly Sandy Loam (Wyoming Big Sagebrush), R034XY206UT

Land Ownership: BLM

Elevation: 5600 ft. (1707 m)

Aspect: North

Slope: 4%-5%

Transect bearing: 315° magnetic

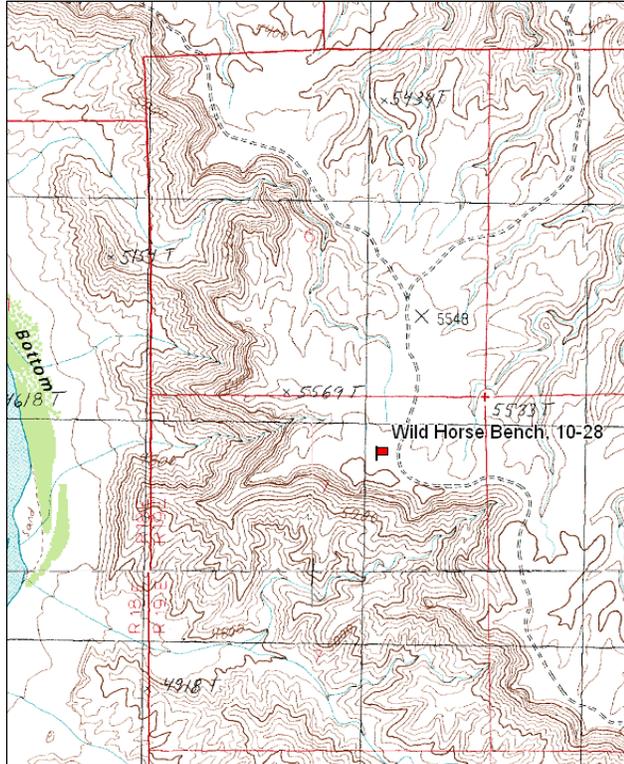
Belt placement: line 1 (11ft), line 2 (34ft), line 3 (59ft), line 4 (71ft), line 5 (95 ft)

Note: Soil sample needs to be collected.

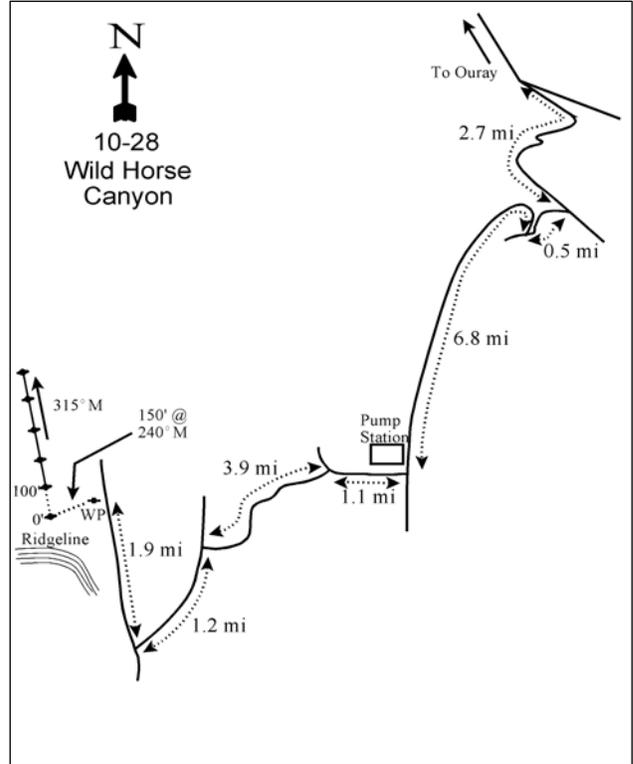
Directions:

From Ouray, travel south towards the Bookcliffs for 9 miles until a major fork. Bear right and travel 2.7 miles to an intersection. Turn right and travel 0.5 miles to an intersection. Turn right going towards the top of the ridge and travel 6.8 miles to an intersection just past a pump station. Turn right and travel 1.1 miles to an intersection. Turn left and travel 3.9 miles to an intersection. Turn left and travel 1.2 miles to an intersection. Turn right and travel 1.9 miles to a witness post on the left (west) side of the road. The 0-foot stake is 150 feet from the witness post at 240°M, and is marked by browse tag #9175.

Map Name: Moon Bottom



Diagrammatic Sketch:



Township: 11S Range: 19E Section: 7

GPS: NAD 83, UTM 12S 600026 E 4414976 N

WILD HORSE BENCH - TREND STUDY NO. 10-28

Site Information

Site Description: The study is located in a desert shrub community on a bench overlooking the Green River. The study was established in 2010 to monitor bison habitat in the area. The steep cliffs of the bench make access to the Green River difficult and water is limited on the bench. There is a large amount of energy development in the area with oil wells and pipelines being common. Grazing in the area is managed by the Bureau of Land Management (BLM) as part of the Lower Showalter cattle allotment and as part of the Hill Creek wild horse and burro herd area. Due to the difficulty in distinguishing the difference between species, cattle and bison pats were counted together. Pellet group transect data has estimated minimal animal use with light use by horses and bison/cattle (Table - Pellet Group Data).

Browse: Black sagebrush (*Artemisia nova*) is the dominant browse species on the site and provides the majority of the cover on the site (Table - Canopy Cover). The sagebrush population is mostly mature with low decadence, good recruitment of young plants and light use. Fourwing saltbush (*Atriplex canescens*) is found in low density, but showed heavy use and it was noted that plants showed signs of heavy use prior to the establishment of the study. Shadscale (*A. confertifolia*) is more common than fourwing saltbush, but shows much lighter use. Green molly (*Kochia americana*) was also sampled at low density, but showed little use. The weedy species broom snakeweed (*Gutierrezia sarothrae*) is prevalent on the site and is the second most common shrub species (Table - Browse Characteristics).

Herbaceous Understory: Grasses are not abundant on the site and diversity is low. The perennial species galleta (*Hilaria jamesii*) is the dominant grass on the site. Forbs are relatively diverse and fairly abundant for a desert shrub community, though weedy annual species such as halogeton (*Halogeton glomeratus*) are somewhat common. The perennial species gooseberryleaf globemallow (*Sphaeralcea grossulariifolia*) is the dominant forb species in cover on the site (Table - Herbaceous Trends).

Soil: No soil analysis data was collected for the site in 2010. Bare ground cover is low with good protective ground cover provided by a large amount of rock and pavement cover (Table - Basic Cover). The soil erosion condition was classified as stable in 2010.

Trend Summary

HERBACEOUS TRENDS--
Management unit 10, Study no: 28

Type	Species	Nested Frequency '10	Average Cover % '10
G	Bromus tectorum (a)	5	.04
G	Hilaria jamesii	57	1.39
G	Oryzopsis hymenoides	2	.15
G	Sitanion hystrix	58	.91
G	Stipa comata	23	.46
Total for Annual Grasses		5	0.03
Total for Perennial Grasses		140	2.92
Total for Grasses		145	2.96
F	Astragalus sp.	2	.00
F	Astragalus sp.	23	.06
F	Chaenactis stevioides	51	.18
F	Cryptantha sp.	112	.43

Type	Species	Nested	Average
		Frequency	Cover %
		'10	'10
F	Eriogonum cernuum (a)	8	.02
F	Gilia sp. (a)	1	.00
F	Halogeton glomeratus (a)	56	.74
F	Lappula occidentalis (a)	53	.12
F	Lepidium sp. (a)	12	.47
F	Platyschkuhria integrifolia	4	.03
F	Schoenrambe linifolia	11	.20
F	Sphaeralcea grossulariifolia	45	1.58
F	Townsendia sp.	1	.03
Total for Annual Forbs		130	1.37
Total for Perennial Forbs		249	2.53
Total for Forbs		379	3.90

Values with different subscript letters are significantly different at alpha = 0.10

BROWSE TRENDS--

Management unit 10, Study no: 28

Type	Species	Strip	Average
		Frequency	Cover %
		'10	'10
B	Artemisia nova	52	5.01
B	Atriplex canescens	3	.18
B	Atriplex confertifolia	28	.70
B	Chrysothamnus viscidiflorus stenophyllus	1	-
B	Gutierrezia sarothrae	89	3.42
B	Kochia americana	3	.04
Total for Browse		176	9.36

CANOPY COVER, LINE INTERCEPT--

Management unit 10, Study no: 28

Species	Percent
	Cover
	'10
Artemisia nova	6.30
Atriplex canescens	.01
Atriplex confertifolia	.85
Gutierrezia sarothrae	3.03
Kochia americana	.08

KEY BROWSE ANNUAL LEADER GROWTH--

Management unit 10, Study no: 28

Species	Average leader
	growth (in)
	'10
Artemisia nova	1.7
Atriplex confertifolia	4.1

BASIC COVER--

Management unit 10, Study no: 28

Cover Type	Average Cover % '10
Vegetation	15.70
Rock	19.45
Pavement	38.69
Litter	19.38
Cryptogams	.01
Bare Ground	13.26

PELLET GROUP DATA--

Management unit 10, Study no: 28

Type	Quadrat Frequency '10	Days use per acre (ha) '10
Rabbit	1	-
Bison/attle	-	1 (2)
Horse	4	4 (10)

BROWSE CHARACTERISTICS--

Management unit 10, Study no: 28

Year	Plants per Acre (excluding seedlings)	Age class distribution			Seedling (plants/acre)	Utilization		% poor vigor	Average Height Crown (in)
		% Young	% Mature	% Decadent		% moderate	% heavy		
<i>Artemisia nova</i>									
10	3180	23	67	9	-	3	3	4	9/21
<i>Atriplex canescens</i>									
10	60	0	100	-	-	0	67	0	8/19
<i>Atriplex confertifolia</i>									
10	740	5	84	11	-	0	0	5	10/20
<i>Chrysothamnus viscidiflorus stenophyllus</i>									
10	20	0	100	-	-	0	0	0	10/14
<i>Grayia spinosa</i>									
10	0	0	0	-	-	0	0	0	15/24
<i>Gutierrezia sarothrae</i>									
10	9880	15	83	2	180	0	0	1	7/9
<i>Kochia americana</i>									
10	80	25	75	-	-	0	0	0	5/10
<i>Opuntia sp.</i>									
10	0	0	0	-	-	0	0	0	6/12
<i>Sarcobatus vermiculatus</i>									
10	0	0	0	-	-	0	0	0	11/20