

DRY MESA - TREND STUDY NO. 14-36-09

Vegetation Type: Mountain Big Sagebrush

Range Type: Crucial Deer Summer, Crucial Elk Winter

NRCS Ecological Site Description: Not Available

Land Ownership: USFS

Elevation: 8,160 ft (2,487 m)

Aspect: South

Slope: 5%

Transect bearing: 305 degrees magnetic

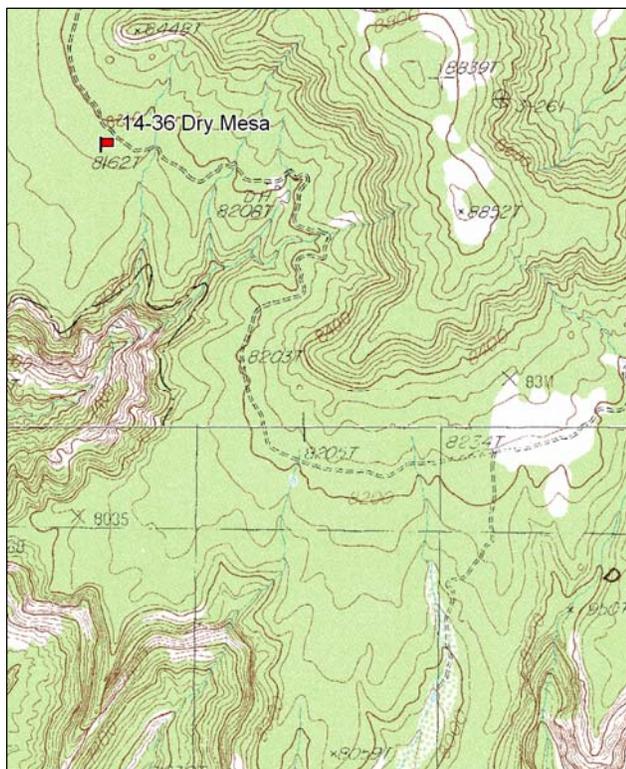
Belt placement: line 1(11 ft), line 2(34 ft), line 3(59 ft), line 4(71 ft), line 5(95 ft)

Notes: Soil sample needed.

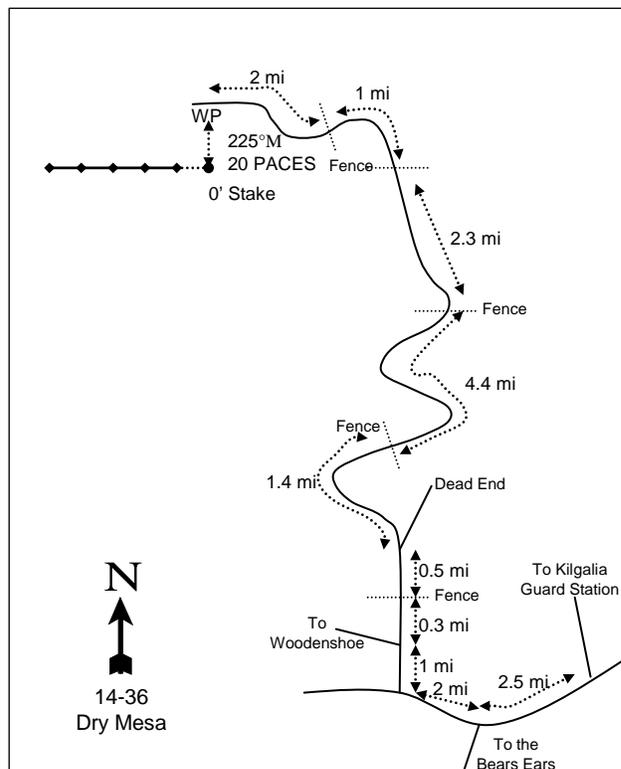
Directions:

From the Kigalia Guard Station turnoff, go 2.5 miles southwest towards the Bears Ears. Turn right at the fork with the road to the Bears Ears and proceed 2 miles to a fork located just west of a cattleguard and opposite a corral. Turn right, and go north 1 mile to a fork with the road to Woodenshoe. Turn right (north) for 0.3 miles to a fence and continue another 0.5 miles to another fork. Go left and proceed 9.1 miles, passing through four more fences. After the fourth fence, continue another 2 miles to the witness post on the left (south) side of the road. The 0 foot stake is 20 paces from the witness post at a bearing of 225°M and marked with browse tag #269.

Map name: Warren Canyon



Diagrammatic Sketch:



Township: 35S, Range: 18E, Section: Unsurveyed

GPS: NAD 83, UTM 12S 594600 E 4179760 N

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Site Information

Site Description: The study is located in a mixed mountain brush community on the west side of Dry Mesa before it drops into Woodenshoe Canyon. There are scattered pinyon pine (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*) on the site with denser stands on the hillsides surrounding the site. Pellet group data indicated light use by deer, elk, and cattle in 2009 (Table - Pellet Group Data).

Browse: The primary browse species on the site is mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*). The sagebrush population is mostly mature, but is healthy with low decadence, good vigor, and good recruitment of young sagebrush plants. Utilization of sagebrush was mostly moderate with some heavy use in 2009. There are some dense clones of Gambel oak (*Quercus gambelii*) that provide a large amount of cover on the site, but receive little use from wildlife. Other important browse that occur at low density, but receive moderate to heavy use are Utah serviceberry (*Amelanchier utahensis*), antelope bitterbrush (*Purshia tridentata*), and true mountain mahogany (*Cercocarpus montanus*) (Table - Browse Characteristics).

Herbaceous Understory: Grasses are abundant on the site, but are dominated by the introduced grass smooth brome (*Bromus inermis*). Smooth brome provided over 80% of the grass cover in 2009. The only other common grass on the site is mutton bluegrass (*Poa fendleriana*), which provided most of the remaining grass cover. The forbs are fairly diverse and quite abundant. The dominant forbs are arrowleaf balsamroot (*Balsamorhiza sagittata*) and rock goldenrod (*Petradoria pumila*), which together provided over 70% of the forb cover in 2009.

Soil: The soil is a silt loam with a neutral pH. Phosphorus has limited availability for plant growth and development at only 1.45 ppm (Tiedemann and Lopez 2004) (Table - Soil Analysis Data). Bare ground cover is moderately low with good protective cover provided by litter and vegetation cover (Table - Basic Cover). The soil erosion condition was classified as stable in 2009.

Trend Assessments

DEER DESIRABLE COMPONENTS INDEX - MID-LEVEL POTENTIAL SCALE --
Management unit 14, study no: 36

Year	Preferred Browse Cover	Preferred Browse Decadence	Preferred Browse Young	Perennial Grass Cover	Annual Grass Cover	Perennial Forb Cover	Noxious Weeds	Total Score	Ranking
09	16.0	13.9	11.8	30.0	0.0	10.0	0.0	81.6	Good-Excellent

Trend Summary

HERBACEOUS TRENDS--
Management unit 14, Study no: 36

Type	Species	Nested Frequency '09	Average Cover % '09
G	Agropyron cristatum	13	.37
G	Agropyron intermedium	21	.14
G	Bromus inermis	376	21.22
G	Poa fendleriana	134	4.50
G	Sitanion hystrix	3	.00
Total for Annual Grasses		0	0

Type	Species	Nested	Average
		Frequency	Cover %
		'09	'09
	Total for Perennial Grasses	547	26.23
	Total for Grasses	547	26.23
F	Aster sp.	7	.07
F	Balsamorhiza sagittata	90	6.28
F	Cordylanthus sp. (a)	3	.00
F	Crepis acuminata	4	.03
F	Cymopterus sp.	4	.06
F	Erigeron sp.	1	.00
F	Eriogonum alatum	16	.08
F	Hymenoxys acaulis	18	.40
F	Lesquerella sp.	4	.00
F	Lupinus sp.	11	.62
F	Penstemon comarrhenus	20	.29
F	Penstemon sp.	1	.03
F	Petradoria pumila	41	1.16
F	Phlox hoodii	19	.30
F	Phlox longifolia	28	.06
F	Swertia radiata	4	.33
	Total for Annual Forbs	3	0.00
	Total for Perennial Forbs	268	9.77
	Total for Forbs	271	9.78

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

BROWSE TRENDS--

Management unit 14, Study no: 36

Type	Species	Strip	Average
		Frequency	Cover %
		'09	'09
B	Amelanchier utahensis	2	.00
B	Arctostaphylos sp.	6	2.13
B	Artemisia tridentata vaseyana	62	8.34
B	Cercocarpus montanus	1	.03
B	Chrysothamnus depressus	21	.30
B	Pinus edulis	3	1.36
B	Purshia tridentata	2	.03
B	Quercus gambelii	14	5.06
B	Symphoricarpos oreophilus	27	1.35
B	Tetradymia canescens	2	.00
B	Yucca sp.	6	.06
	Total for Browse	146	18.69

CANOPY COVER, LINE INTERCEPT--
 Management unit 14, Study no: 36

Species	Percent Cover '09
Amelanchier utahensis	.03
Arctostaphylos sp.	1.89
Artemisia tridentata vaseyana	8.63
Cercocarpus montanus	.05
Chrysothamnus depressus	.46
Pinus edulis	1.63
Purshia tridentata	.06
Quercus gambelii	8.13
Symphoricarpos oreophilus	2.59
Tetradymia canescens	.08
Yucca sp.	.30

KEY BROWSE ANNUAL LEADER GROWTH--
 Management unit 14, Study no: 36

Species	Average leader growth (in) '09
Artemisia tridentata vaseyana	2.6
Cercocarpus montanus	3.2
Purshia tridentata	2.3

POINT-QUARTER TREE DATA--
 Management unit 14, Study no: 36

Species	Trees per Acre '09	Average diameter (in) '09
Pinus edulis	49	2.2

BASIC COVER--
 Management unit 14, Study no: 36

Cover Type	Average Cover % '09
Vegetation	53.16
Rock	.15
Pavement	.12
Litter	43.48
Cryptogams	.22
Bare Ground	28.41

PELLET GROUP DATA--

Management unit 14, Study no: 36

Type	Quadrat Frequency '09	Days use per acre (ha) '09
Rabbit	9	-
Elk	2	19 (46)
Deer	2	14 (35)
Cattle	2	15 (38)

BROWSE CHARACTERISTICS--

Management unit 14, Study no: 36

		Age class distribution					Utilization			
Year	Plants per Acre (excluding seedlings)	% Young	% Mature	% Decadent	Seedling (plants/acre)	% moderate	% heavy	% poor vigor	Average Height Crown (in)	
Amelanchier utahensis										
09	60	0	100	-	-	100	0	0	28/29	
Arctostaphylos sp.										
09	220	9	82	9	-	0	0	0	18/44	
Artemisia tridentata vaseyana										
09	2680	14	81	5	200	40	16	2	16/26	
Cercocarpus montanus										
09	20	0	100	-	-	0	100	0	33/34	
Chrysothamnus depressus										
09	1160	10	90	-	40	0	0	0	4/8	
Pinus edulis										
09	60	0	100	-	-	0	0	0	-/-	
Purshia tridentata										
09	40	50	50	-	-	50	0	0	16/36	
Quercus gambelii										
09	2920	40	58	2	80	0	0	0	30/20	
Symphoricarpos oreophilus										
09	1300	25	75	-	40	0	0	0	18/19	
Tetradymia canescens										
09	40	0	100	-	-	0	0	0	12/8	
Yucca sp.										
09	240	0	100	-	20	0	0	0	10/14	