

WOODRUFF LONGHILL - TREND STUDY NO. 2-43-11

Vegetation Type: Wyoming Big Sagebrush

Range Type: Crucial Deer Winter, Substantial Elk Winter

NRCS Ecological Site Description: [Upland Stony Loam \(Wyoming Big Sagebrush\), R047XA338UT](#)

Land Ownership: BLM

Elevation: 6,794 ft (2,071 m)

Aspect: Northeast

Slope: 11%

Transect bearing: 44° magnetic

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

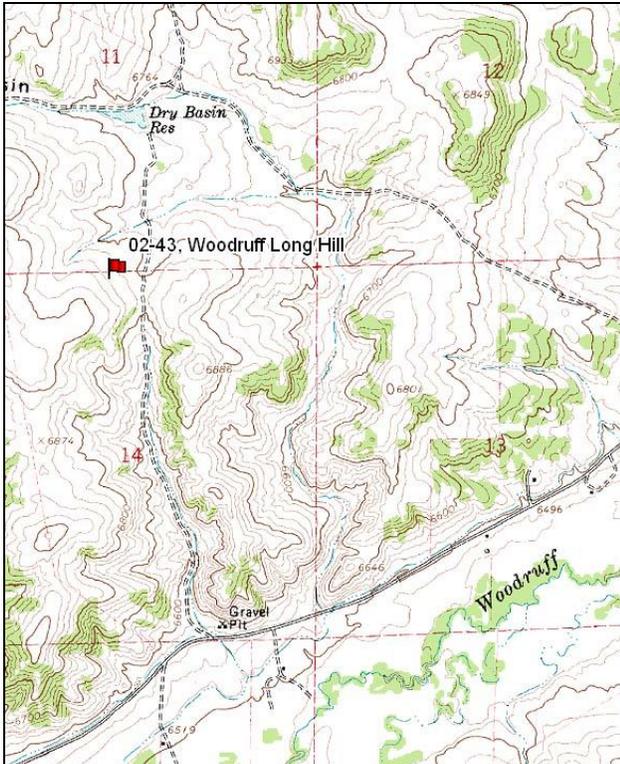
Directions:

From SR-16 (Woodruff Main street) turn left onto SR-39 (towards Monte Cristo) and follow for 3.8 miles.

Turn right (north) onto a dirt road and continue for 1.15 miles to an intersecting dirt road just north of a saddle.

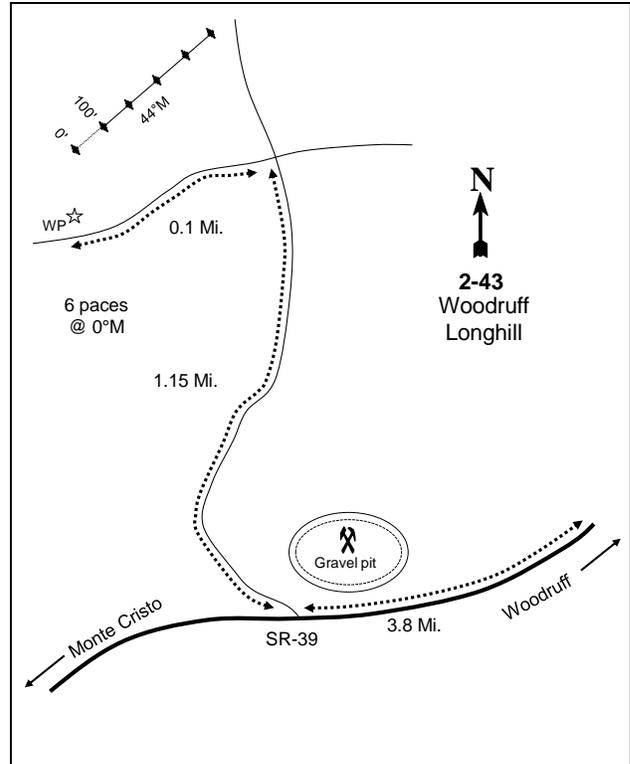
Turn left (west) for 0.1 miles. Witness post is on the right. 0' stake is 6 paces at 0°.

Map Name: Woodruff



Township: 9N Range: 6E Section: 11

Diagrammatic Sketch:



GPS: NAD 83, UTM 12S 480154 E 4596846 N

WOODDRUFF LONGHILL - TREND STUDY NO. 2-43

Site Information

Site Description: This study is located approximately four miles west of Woodruff on the north side of SR 32. The area is on land administered by the Bureau of Land Management (BLM) as part of the Woodruff Pastures allotment. The study monitors a Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) community within crucial winter range for deer. This site was established in 2009 prior to a proposed Spike (tebuthiuron) treatment designed to thin sagebrush ([Project #1477](#)). However, due to the presence of pygmy rabbits inhabiting the area, the study site was not treated by Spike. The project was altered and a lop and scatter treatment of 3,069 acres that occurred in the fall of 2009 to remove Utah juniper (*Juniperus osteosperma*) trees. The trees around and within the study site were treated, though there were very few trees present on the site (WRI Database 2012). Due to differences in methodology, plant data for 2009 was not included in this report, but pellet group methods were similar in 2009 and 2011. Deer pellet groups were sampled in high abundance in 2009 and 2011. Elk pellet groups were sampled in low abundance in 2009 and 2011. Sampled cattle sign was minimal in 2009 and 2011. Grouse pellet groups were sampled in 2011 (Table - Pellet Group Data).

Browse: The key browse species found on the site is Wyoming big sagebrush. The sagebrush population is a fairly dense, mature population and is centered within the mature demographic. Decadence within the sagebrush population is moderately low. Utilization of sagebrush was moderately heavy. Recruitment of young Wyoming big sagebrush was poor. Other browse species sampled on the site include stickyleaf low rabbitbrush (*Chrysothamnus viscidiflorus* ssp. *viscidiflorus*), prickly phlox (*Leptodactylon pungens*), mountain snowberry (*Symphoricarpos oreophilus*), and Gray horsebrush (*Tetradymia canescens*) (Table - Browse Characteristics).

Herbaceous Understory: The perennial grass species crested wheatgrass (*Agropyron cristatum*) and Sandberg bluegrass (*Poa secunda*) dominate the herbaceous understory. A few other perennial grass species are present, but are limited in number. Forbs occur rarely and are primarily found under the cover of Wyoming big sagebrush. Common perennial forbs include longleaf phlox (*Phlox longifolia*), Hoods phlox (*P. hoodii*), low penstemon (*Penstemon humilis*), and wild onion (*Allium sp.*). The annual species bush birdbeak (*Cordylanthus ramosus*) occurs most frequently, and provides the most cover of all forbs within the community (Table - Herbaceous Trends).

Soil: The soil is part of the Cutoff component, which is found on hillslopes. The parent material consists of colluvium and/or slope alluvium over residuum weathered from sandstone. The natural drainage class is well drained (Soil Survey Staff 2011). Exposed bare ground cover is high, and occurs frequently between the interspaces of browse species. Protective ground cover is moderately abundant and is provided by high amounts of vegetation and litter (Table - Basic Cover). Due to surface litter movement and the presence of flow patterns, the soil erosion condition was classified as slight in 2009, but stable in 2011.

DEER DESIRABLE COMPONENTS INDEX - LOW POTENTIAL SCALE --
Management unit 2, study no: 43

Year	Preferred Browse Cover	Preferred Browse Decadence	Preferred Browse Young	Perennial Grass Cover	Annual Grass Cover	Perennial Forb Cover	Noxious Weeds	Total Score	Ranking
11	30.0	4.2	0.5	27.0	0.0	3.0	0.0	64.8	Good-Excellent

HERBACEOUS TRENDS--

Management unit 02, Study no: 43

T y p e	Species	Nested Frequency	Average Cover %
		'11	'11
G	Agropyron cristatum	259	10.06
G	Agropyron spicatum	9	.02
G	Carex sp.	8	.06
G	Elymus junceus	3	.00
G	Poa secunda	213	3.37
Total for Annual Grasses		0	0
Total for Perennial Grasses		492	13.52
Total for Grasses		492	13.52
F	Allium sp.	20	.04
F	Alyssum alyssoides (a)	21	.04
F	Antennaria rosea	6	.18
F	Arabis sp.	2	.01
F	Astragalus sp.	8	.04
F	Chaenactis douglasii	3	.00
F	Collinsia parviflora (a)	73	.17
F	Comandra pallida	11	.12
F	Cordylanthus ramosus (a)	209	6.76
F	Crepis acuminata	-	.00
F	Cryptantha sp.	1	.00
F	Erigeron pumilus	2	.03
F	Gayophytum ramosissimum(a)	1	.00
F	Penstemon humilis	24	.30
F	Penstemon sp.	3	.03
F	Phlox hoodii	28	.52
F	Phlox longifolia	55	.21
F	Polygonum douglasii (a)	7	.02
F	Ranunculus testiculatus (a)	72	1.16
Total for Annual Forbs		383	8.17
Total for Perennial Forbs		163	1.51
Total for Forbs		546	9.68

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

BROWSE TRENDS--

Management unit 02, Study no: 43

Type	Species	Strip Frequency '11	Average Cover % '11
B	Artemisia tridentata wyomingensis	96	15.36
B	Chrysothamnus viscidiflorus viscidiflorus	76	5.36
B	Symphoricarpos oreophilus	2	
B	Tetradymia canescens	1	
Total for Browse		175	20.72

CANOPY COVER, LINE INTERCEPT--

Management unit 02, Study no: 43

Species	Percent Cover '11
Artemisia tridentata wyomingensis	25.18
Chrysothamnus viscidiflorus viscidiflorus	7.05

KEY BROWSE ANNUAL LEADER GROWTH--

Management unit 02, Study no: 43

Species	Average leader growth (in) '11
Artemisia tridentata wyomingensis	1.8

BASIC COVER--

Management unit 02, Study no: 43

Cover Type	Average Cover % '11
Vegetation	35.77
Rock	.37
Pavement	.91
Litter	35.94
Cryptogams	3.77
Bare Ground	37.11

PELLET GROUP DATA--

Management unit 02, Study no: 43

Type	Quadrat Frequency '11	Days use per acre (ha)	
		'09	'11
Rabbit	26	-	-
Grouse	2	-	-
Elk	-	1(2)	5 (13)
Deer	33	82(202)	40 (99)
Cattle	3	20(50)	5 (13)

BROWSE CHARACTERISTICS--

Management unit 02, Study no: 43

		Age class distribution			Utilization				
Year	Plants per Acre (excluding seedlings)	% Young	% Mature	% Decadent	Seedling (plants/acre)	% moderate	% heavy	% poor vigor	Average Height Crown (in)
<i>Artemisia tridentata wyomingensis</i>									
11	7200	2	63	36	-	28	38	30	18/28
<i>Chrysothamnus viscidiflorus viscidiflorus</i>									
11	5400	0	97	3	20	.74	0	3	10/16
<i>Leptodactylon pungens</i>									
11	0	0	0	-	-	0	0	0	7/13
<i>Symphoricarpos oreophilus</i>									
11	60	0	100	-	-	33	0	0	16/23
<i>Tetradymia canescens</i>									
11	20	0	100	-	-	0	0	0	8/11