

Trend Study 28-17-08

Study site name: Sidney Valley.

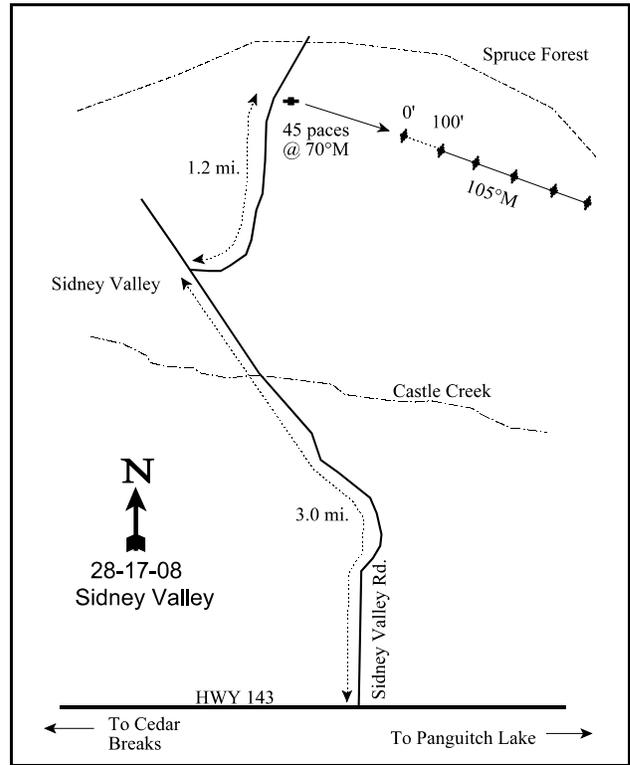
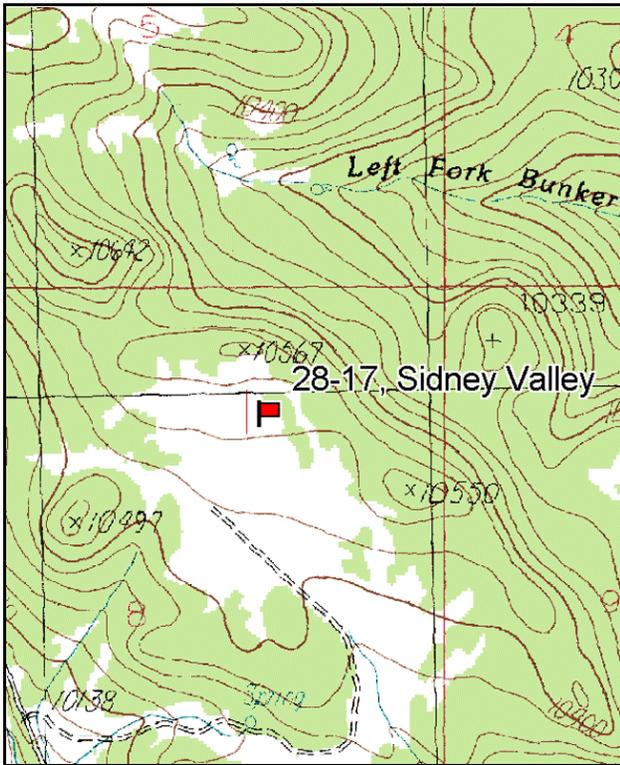
Vegetation type: Perennial Grass.

Compass bearing: frequency baseline 105 degrees magnetic.

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

LOCATION DESCRIPTION

Start at the junction of Highway 143 and the Sidney Valley Road. This junction is between Cedar Breaks and Panguitch Lake. Drive north on Sidney Valley Road for 3.0 miles to a fork on the right (east) side of the road (Castle Creek will be crossed). Take the right fork for 1.2 miles to the witness post on the right (east) side of the road. The 0-foot stake is 54 paces at 70 degrees magnetic from the witness post. The 0-foot stake is marked with browse tag #164.



Map Name: Brian Head

Diagrammatic Sketch

Township 36S, Range 8W, Section 8

GPS: NAD 83, UTM 12S 344406 E, 4174160 N

DISCUSSION

Sidney Valley - Trend Study No. 28-17

Study Information

This study was established in 2003 to monitor elk use in an dry alpine meadow, which had shown increases in use in years prior to the study establishment.[elevation: 10,500 feet (3,200 m), slope: 8%, aspect: south]. Pellet group transect data taken in 2003 estimated 97 elk and 27 deer days use/acre (240 edu/ha and 66 ddu/ha). Pellet group data from 2008 estimated 135 elk and 3 deer days use/acre (332 edu/ha and 7 ddu/ha). Elk were seen on site in 2008. This area is also apparently grazed by sheep in some years as a mineral lick was found near the site in 2003.

Soils

Soils on the site are loam in texture and moderately acidic in pH (5.6). These are deep mountain soils derived from igneous parent material. Effective rooting depth was measured at 18 inches. Relative combined average vegetation and litter cover was relatively high at 65%-78%, and relative combined average rock and pavement cover was 7%-18% since 2003. Relative average bare ground cover has been moderate at 15%-17% since 2003. An erosion condition class assessment rated soils as stable in both 2003 and 2008.

Browse

There were no browse species sampled on the site, but as this is high elevation summer range, browse is not of great importance.

Herbaceous Understory

The herbaceous understory is abundant, but dominated by only a few species. Subalpine needlegrass (*Stipa columbiana*), mountain muhly (*Muhlenbergia montana*), Letterman needlegrass (*Stipa lettermani*), and needle-and-thread grass (*Stipa comata*) are the predominant grass species. Dandelion (*Taraxacum officinale*) and yarrow (*Achillea millefolium*) dominate the forb component. These six species combined to provide an average of 94% of the total vegetation cover in both sample years.

2008 TREND ASSESSMENT

No browse is present on the site. Trend for grasses is slightly up. Sum of nested frequency of perennial grasses increased by 20% since 2003, with a significant increase in the nested frequency of slender wheatgrass (*Agropyron trachycaulum*), needle-and-thread grass, and Letterman needlegrass. Trend for forbs is up. There was nearly a two-fold increase in the sum of nested frequency of perennial forbs, and production of perennial forbs increased from 10% total cover in 2003 to just over 27% cover. There was a significant increase in the nested frequency of six perennial forbs including the two dominant species, yarrow and dandelion.

browse - (no trend)

grasses - slightly up (+1)

forbs - up (+2)

HERBACEOUS TRENDS --
Management unit 28 , Study no: 17

T y p e	Species	Nested Frequency		Average Cover %	
		'03	'08	'03	'08
G	Agropyron trachycaulum	_a 54	_b 91	.75	1.03
G	Carex sp.	13	21	.22	.32
G	Elymus cinereus	-	-	-	.03
G	Festuca ovina	11	9	.15	.26
G	Muhlenbergia montana	100	107	6.28	4.30
G	Poa glauca	_b 10	_a -	.36	-
G	Poa pratensis	-	2	-	.01
G	Sitanion hystrix	5	7	.10	.05
G	Stipa columbiana	272	224	15.90	9.80
G	Stipa comata	_a -	_b 76	-	2.30
G	Stipa lettermani	_a 167	_b 224	4.22	4.48
Total for Annual Grasses		0	0	0	0
Total for Perennial Grasses		632	761	28.01	22.63
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F	Achillea millefolium	_a 218	_b 317	3.67	9.07
F	Agoseris aurantiaca	_a 6	_b 26	.07	.16
F	Androsace septentrionalis (a)	_a 1	_b 153	.00	.86
F	Arabis sp.	_a 6	_b 160	.01	1.00
F	Aster chilensis	16	6	.19	.18
F	Chenopodium fremontii (a)	_a -	_b 11	-	.03
F	Erigeron sp.	_a 19	_b 96	.21	.85
F	Fritillaria atropurpurea	-	4	-	.06
F	Geum triflorum	-	2	-	.00
F	Lepidium densiflorum (a)	28	45	.16	.33
F	Polygonum douglasii (a)	_a -	_b 221	-	.71
F	Potentilla sp.	2	7	.00	.03
F	Senecio integerrimus	19	14	.10	.26
F	Taraxacum officinale	_a 245	_b 329	5.73	15.53
F	Tragopogon dubius	1	-	.03	-
F	Trifolium sp.	11	21	.07	.17
F	Unknown forb-perennial	_a -	_b 15	-	.14
Total for Annual Forbs		29	430	0.16	1.94
Total for Perennial Forbs		543	997	10.10	27.48
Total for Forbs		572	1427	10.27	29.43

BASIC COVER --

Management unit 28 , Study no: 17

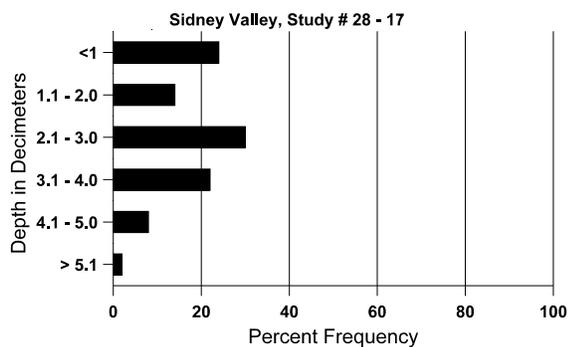
Cover Type	Average Cover %	
	'03	'08
Vegetation	41.18	59.90
Rock	6.98	2.32
Pavement	13.15	5.21
Litter	30.29	24.59
Cryptogams	0	.03
Bare Ground	18.93	15.89

SOIL ANALYSIS DATA --

Management unit 28, Study no: 17, Study Name: Sidney Valley

Effective rooting depth (in)	Temp °F (depth)	pH	loam			%OM	PPM P	PPM K	ds/m
			% sand	% silt	% clay				
17.9	54.8 (18.1)	5.6	44.6	37.2	18.2	3.3	25.4	752.0	0.5

Stoniness Index



PELLET GROUP DATA --

Management unit 28 , Study no: 17

Type	Quadrat Frequency		Days use per acre (ha)	
	'03	'08	'03	'08
Rabbit	5	-	-	-
Elk	28	47	97 (240)	135 (332)
Deer	10	8	27 (66)	3 (7)
Cattle	3	3	-	-