Trend Study 17-16-07

Study site name: Rainbow Bay . Vegetation type: Big Sagebrush-Grass .

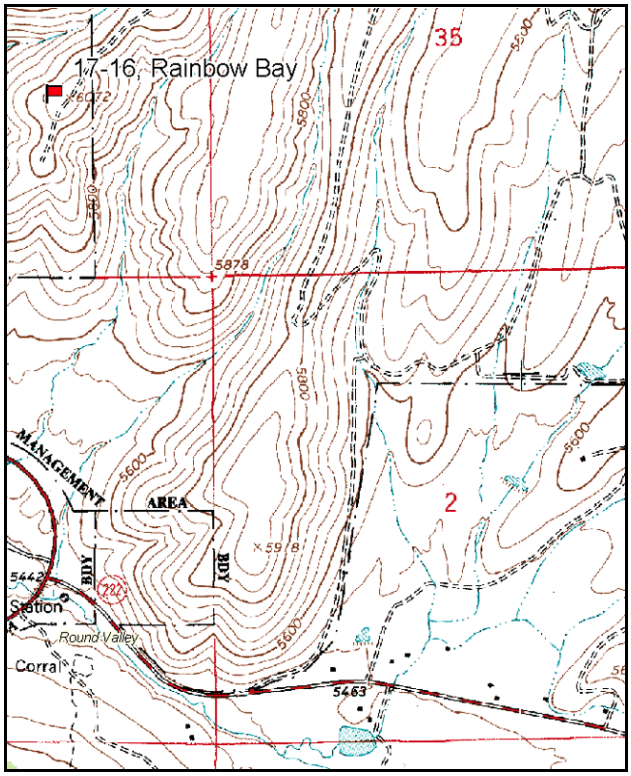
Compass bearing: frequency baseline 345 degrees magnetic.

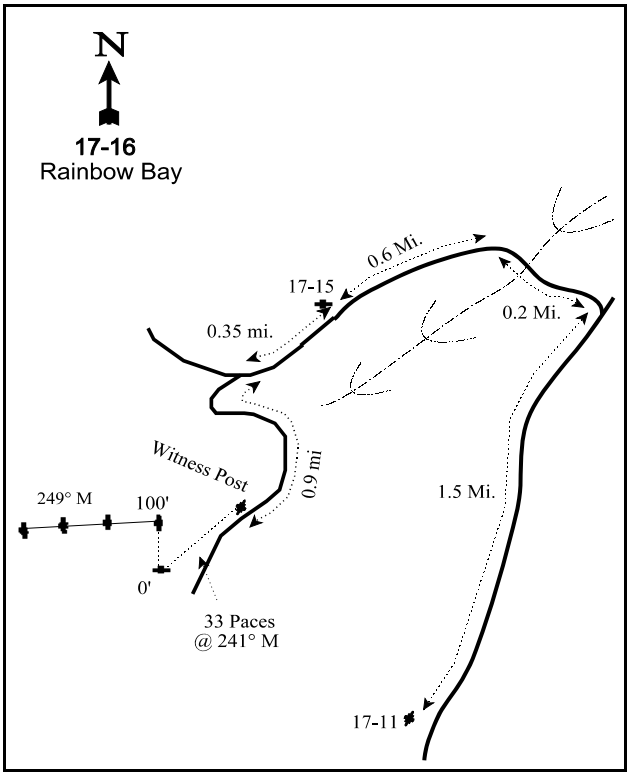
Frequency belt placement: line 1 (11 & 95ft), line 2 (59ft), line 3 (34ft), line 4 (71ft).

Rebar: No rebar on belts 4 or 5

LOCATION DESCRIPTION

Beginning at the intersection of U.S. 189 and the Wallsburg turnoff, proceed 0.50 miles towards Wallsburg to an intersection. Turn left at the intersection and proceed northerly for just over 1 mile passing through two DWR gates to another intersection, and turn right. Proceed 0.05 miles to a small rock pile on the left (east) side of the road which marks study #17-11, Wallsburg Turn. Continue down the road 1.5 miles from study 17-11 to a fork. Bear left and go 0.2 miles thru a drainage to another ridge top and bear left. Drive along the ridge 0.6 miles to a witness post on the north side of the road which marks study #17-15. Continue down this road 0.35 miles to an intersection with a short telephone post and a Mountain Bell wire warning sign. Turn left and stay left for 0.9 miles to a witness post on the north side of the road. From the witness post, the 0-foot stake is 33 paces away at an azimuth of 241 degrees magnetic, marked with browse tag #3947.





Map Name: Charleston

Diagrammatic Sketch

Township 4S , Range 4E , Section 34

GPS: NAD 83, UTM 12T 459422 E 4475040 N

DISCUSSION

Rainbow Bay - Trend Study No. 17-16

Study Information

This study is located on big sagebrush-grass rangeland near the top of the high knoll immediately east of Rainbow Bay on Deer Creek Reservoir [elevation: 6,000 feet (1,830 m), slope: 15-20%, aspect: west-southwest]. The nearest perennial source of water is Deer Creek Reservoir, 0.65 miles (1 km) to the west. This area, although within a short distance of the 1976 burn, was spared from the fire. However, the presence of numerous fire scarred sagebrush stumps provides evidence of a past fire on the site, before 1976. Although winter deer and elk use was reportedly heavy prior to 1989, data and observations from 1989 showed only light-moderate levels of hedging and pellet group densities. In 1996 and 2002, deer use was high while elk use was light-moderate. From the pellet group transect data, there were an estimated 100 deer days use/acre (248 ddu/ha) in 2002 and 111 deer days use/acre (274 ddu/ha) in 2007. Elk use was estimated at 26 days use/acre (64 edu/ha) in 2002 and 13 days use/ha (31 edu/ha) in 2007. Cattle were seen below the study in 1996, but livestock use has been minimal.

Soil

This study is located within the Whipstock soil series and consists of deep, well-drained soils that formed in alluvium and residuum from shale, sandstone and quartzite. The soil is classified as very-fine, smectitic, frigid Typic Palexerolls, and the mollic epipedon is 10-20 inches (25-51 cm) thick (USDA-NRCS 2007). Specifically at the study the soil has a clay loam texture and the reactivity is neutral (pH of 7.2). In 1983, it was reported that there was evidence of sheet erosion. Also, a large percentage of the ground surface was occupied either by pavement, bare ground, or a thin cover of fine litter. Vegetation has increased from 2% of the total ground cover in 1983, to approximately 50% in 2007. The soil erosion condition was classified as stable in 2002 and 2007.

Browse

Mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and antelope bitterbrush (*Purshia tridentata*) are the dominant preferred browse species. Sagebrush canopy cover was 6% in 2002 and 4% in 2007. The density of mountain big sagebrush has decreased each sample year. The density was 4,732 plants/acre (11,713 plants/ha) in 1983, and by 2007 it had reached 860 plants/acre (2,130 plants/ha). The seedling density has varied from 0 to 166 plants/acre (410 plants/ha). Young plants have accounted for between 1% and 17% of the population. Decadence was 16% in 1983, and has averaged 49% since 1989. Since 1996, the density of dead plants has increased from 500 plants/acre (1,240 plants/ha) to 860 plants/acre (2,130 plants/ha). The proportion of plants exhibiting poor vigor was low in 1983 and 1989, and increased to approximately 25% of the population in subsequent sample years. Additionally, since 1996, all of the plants with poor vigor were classified as dying. The average annual leader growth was 2.8 inches (7.1 cm) in 2002 and 1.9 inches (4.8 cm) in 2007. Browse use on sagebrush has been light to light-moderate.

The bitterbrush canopy cover decreased from 6% in 2002 to 4% in 2007. The estimated density increased from 299 plants/acre (740 plants/ha) in 1983 to 699 plants/acre (1,730 plants/ha) in 1989, then decreased to 340 plants/acre (842 plants/ha) by 2002. In 2007, there were an estimated 360 plants/acre (891 plants/ha). The population has largely consisted of mature, healthy plants. Seedling plants were only sampled in 1989, and though they were common from 1983 to 1996, young plants have not been sampled since. Decadence has ranged from 0% to 12% of the population. Vigor has been good in all sample years. The average annual leader growth was 3 inches (7.6 cm) in 2002 and 4.4 inches (11.1 cm) in 2007. Browse use has varied from light to heavy.

Broom snakeweed (*Gutierrezia sarothrae*) and stickyleaf low rabbitbrush *(Chrysothamnus viscidiflorus* ssp. *viscidiflorus*) are also present. The broom snakeweed density increased from 1983 to 1996, and then declined

in 2002 and 2007. The density has ranged from 1,700 plants/acre (4,210 plants/ha) to 14,580 plants/acre (36,090 plants/ha). Most of the broom snakeweed is located near the ridge top where open patches exist. The stickyleaf low rabbitbrush density has varied from 640 plants/acre (1,584 plants/ha) to 3,166 plants/acre (7,837 plants/ha). This species shows no use, good vigor, and virtually no decadency in all years.

Herbaceous Understory

The herbaceous understory is abundant and diverse. Perennial grass cover was 13% in 1996, 17% in 2002, and 16% in 2007. The dominant perennial grasses include crested wheatgrass (*Agropyron cristatum*), bluebunch wheatgrass (*Agropyron spicatum*), and Sandberg bluegrass (*Poa secunda*). Bluebunch wheatgrass has provided 11% cover since 1996, which is more than any other species. Since 1996, cheatgrass (*Bromus tectorum*) cover has increased from 3% to 9%, and quadrat frequency has increased from 84% to 96%. Bulbous bluegrass (*Poa bulbosa*), which has a phenology similar to cheatgrass (Stewart and Hull 1949), and Japanese brome (*Bromus japonicus*) are also present, but at low frequencies.

Perennial forb cover has decreased from 12% in 1996 to 7% in 2002 and 2007. Between 13 and 33 forb species have been sampled since 1983, and most were perennial species. The dominant perennial forb species have been silky milkvetch (*Astragalus cibarius*) and arrowleaf balsamroot (*Balsamorhiza sagittata*). Annual forb cover has averaged 5% since 1996. The dominant annual species are pale alyssum (*Alyssum alyssoides*), blue-eyed Mary (*Collinsia parviflora*), and holosteum (*Holosteum umbellatum*). Dalmatian toadflax (*Linaria dalmatica*), a noxious weed, is also present.

1989 TREND ASSESSMENT

The browse trend is slightly down. The density of mountain big sagebrush decreased 20%. Few seedlings were sampled, and there was a decrease in the density of young plants. Decadence increased from 16% to 45% of the population. The proportion of plants exhibiting poor vigor remained stable. Browse use shifted from light to light-moderate. The density of bitterbrush increased more than two-fold. There was an increase in both seedling and young plants, and decadence remained stable at 0% of the population. Browse use on bitterbrush shifted from light-moderate to light. The grass trend is up. Excluding bulbous bluegrass, the sum of nested frequency of perennial grasses increased more than two-fold, including a significant increases in bluebunch wheatgrass. The number of perennial grass species increased from three to seven. However, bulbous bluegrass was one of the species that was sampled for the first time. Quadrat frequency of bulbous bluegrass was 1%. The forb trend is up. The sum of nested frequency of perennial grasses increased more than five-fold, including significant increases in seven species. Additionally, the number of perennial species increased from 12 to 19.

browse - slightly down (-1) grass - up (+2) forb - up (+2)

1996 TREND ASSESSMENT

The browse trend is slightly down. The densities of sagebrush and bitterbrush decreased 60% and 31%, respectively. The changes in densities were attributed to the larger area sampled in 1996, and determination of trend was more dependant on other parameters. For example, there were large decreases in the densities of seedling and young sagebrush plants. Although the density of decadent plants decreased, the proportion of sagebrush in the decadent age class increased from 45% to 51%. Plants exhibiting poor vigor increased to 12% of the population, and all of these were classified as dying. Browse use on sagebrush remained moderate. There were fewer seedlings and young bitterbrush, but decadence and vigor remained stable. The grass trend is up. The sum of nested frequency of perennial grasses increased 51%, including a significant increase in bluebunch wheatgrass. Cheatgrass was sampled in 84% of the quadrats. The forb trend is up. The sum of nested frequency of perennial grasses increased 91%, including a significant increase in four species. There was a significant decrease in the nested frequency of segolily (*Calochortus nuttallii*). It was noted that longstalk springparsley (*Cymopterus longipes*) and arrowleaf balsamroot had been eaten. The Desirable Components Index (DCI) score was fair due to the moderate browse cover, high browse decadence, low

browse recruitment, and high perennial grass and forb cover.

winter range condition (DCI) - fair (58) Mid-level potential scale
browse - slightly down (-1) grass - up (+2) forb - up (+2)

2002 TREND ASSESSMENT

The trend for browse is down. The density of sagebrush decreased 30%. There were few seedlings or young plants sampled, and decadence remained stable. Plants exhibiting poor vigor increased to 25%, and all of those plants were classified as dying. The density of dead sagebrush increased from 500 plants/acre (1,238 plants/ha) to 800 plants/acre (1,980 plants/ha). Trend was also down because of changes in the bitterbrush population. The density of bitterbrush decreased 29%. No seedling or young plants were sampled, and decadence increased to 12% of the population. Bitterbrush plants showing heavy browse use increased from 58% of the population to 94%. The grass trend is slightly down. Excluding bulbous bluegrass, the sum of nested frequency of perennial grasses increased 5%, which would normally correspond to a stable trend. Although there was a significant increase in Sandberg bluegrass, bulbous bluegrass was sampled again, and Japanese brome was sampled for the first time. Cheatgrass frequency remained stable, but cover increased from 3% to 8%. The forb trend is down. The sum of nested frequency of perennial forbs decreased 57%, including the significant decrease in four species. Dalmatian toadflax was sampled for the first time, but only in 2% of the quadrats. The DCI score remained fair.

winter range condition (DCI) - fair (57) Mid-level potential scale
browse - down (-2) grass - slightly down (-1) forb - down (-2)

2007 TREND ASSESSMENT

The browse trend is slightly down. The density of sagebrush decreased 19%. Few seedling or young plants were sampled; young plants comprised 5% of the population. Decadence remained stable, and the density of dead plants increased to 860 plants/acre (2,130 plants/ha), which was the same as the density of live plants. The proportion of plants exhibiting poor vigor remained stable. The sagebrush defoliator moth (*Aroga websteri*) had infected 58% of the population. Browse use on sagebrush remained light-moderate. The density of bitterbrush increased 6% and browse use shifted to light-moderate. The grass trend is stable. Excluding bulbous bluegrass, the sum of nested frequency of perennial grasses increased 3%. There was a significant increase in the nested frequency of cheatgrass. The forb trend is down. The sum of nested frequency of perennial forbs decreased 34%, including a significant decrease in longstalk springparsley. Dalmatian toadflax was present on the study, though it was not sampled in any of the quadrats. Storksbill (*Erodium cicutarium*) was sampled for the first time in 16% of the quadrats. The DCI score decreased to poor-fair due to the decrease in browse cover.

winter range condition (DCI) - poor-fair (51) Mid-level potential scale
browse - slightly down (-1) grass - stable (0) forb - down (-2)

HERBACEOUS TRENDS --
Management unit 17 , Study no: 16

Type	Species	Nested Frequency					Average Cover %		
		'83	'89	'96	'02	'07	'96	'02	'07
G	Agropyron cristatum	$_{a}$6	$_{a}$13	$_{ab}$18	$_{b}$41	$_{ab}$26	1.39	3.54	2.08
G	Agropyron intermedium	-	$_{a}$2	$_{a}$12	$_{a}$8	-	.22	.02	-
G	Agropyron spicatum	$_{a}$70	$_{b}$150	$_{c}$222	$_{bc}$182	$_{bc}$197	10.96	10.41	11.19

Type	Species	Nested Frequency					Average Cover %		
		'83	'89	'96	'02	'07	'96	'02	'07
G	Bromus japonicus (a)	-	-	-	a43	a37	-	.18	.17
G	Bromus tectorum (a)	-	-	a270	a261	b310	3.04	7.90	8.92
G	Oryzopsis hymenoides	-	a11	a11	a4	a-	.19	.18	.00
G	Poa bulbosa	-	a3	-	b25	ab19	-	.58	.41
G	Poa fendleriana	-	-	6	-	-	.06	-	-
G	Poa secunda	a5	ab26	b42	c89	c111	.45	1.95	2.01
G	Sitanion hystrix	-	a1	-	a1	a2	-	.03	.03
Total for Annual Grasses		0	0	270	304	347	3.04	8.07	9.09
Total for Perennial Grasses		81	206	311	350	355	13.28	16.71	15.75
Total for Grasses		81	206	581	654	702	16.32	24.79	24.84
F	Agoseris glauca	-	a2	b91	a17	a12	.82	.10	.10
F	Allium acuminatum	-	-	a14	b41	-	.18	.17	-
F	Alyssum alyssoides (a)	-	-	c289	a83	b258	1.41	.28	1.83
F	Arabis sp.	-	a11	a3	a3	a1	.01	.00	.00
F	Artemisia ludoviciana	a3	a1	-	-	-	-	-	-
F	Astragalus cibarius	-	-	b123	a22	a17	4.16	.11	.30
F	Astragalus convallarius	-	-	2	-	-	.00	-	-
F	Astragalus utahensis	b19	b17	ab6	a1	-	.03	.00	-
F	Balsamorhiza sagittata	a7	b44	c76	bc67	c77	4.84	5.31	5.19
F	Castilleja linariaefolia	-	-	b40	a11	a3	.22	.36	.09
F	Calochortus nuttallii	a1	b41	a12	a13	a-	.03	.03	.00
F	Chaenactis douglasii	-	3	-	-	-	-	-	-
F	Cirsium sp.	a3	-	b8	-	a3	.05	-	.15
F	Collomia linearis (a)	-	-	b101	a3	a2	.28	.01	.01
F	Comandra pallida	a8	b22	-	-	a7	-	-	.19
F	Collinsia parviflora (a)	-	-	b252	c328	a209	2.10	5.61	.81
F	Crepis acuminata	a4	b20	ab12	ab12	a6	.08	.16	.30
F	Cymopterus longipes	-	ab22	c101	b27	a5	.80	.15	.04
F	Delphinium nuttallianum	-	-	a11	a5	-	.07	.01	-
F	Descurainia pinnata (a)	-	-	-	1	-	-	.00	-
F	Draba sp. (a)	-	-	a58	a34	b96	.16	.08	.39
F	Eriogonum brevicaule	-	-	-	a2	a1	-	.00	.00
F	Erodium cicutarium (a)	-	-	-	-	41	-	-	.18
F	Erigeron pumilus	-	-	a9	-	a1	.01	-	.03
F	Eriogonum racemosum	a12	a37	a22	a30	a18	.15	.26	.09
F	Eriogonum umbellatum	-	-	a4	-	a3	.01	-	.01

Type	Species	Nested Frequency					Average Cover %		
		'83	'89	'96	'02	'07	'96	'02	'07
F	Gayophytum ramosissimum(a)	-	-	3	-	-	.00	-	-
F	Hackelia patens	-	-	$_{a}$3	$_{a}$8	-	.03	.02	-
F	Helianthus annuus (a)	$_{a}$5	$_{b}$83	-	$_{a}$24	-	-	.07	-
F	Holosteum umbellatum (a)	-	-	$_{b}$179	$_{a}$89	$_{b}$160	1.15	.29	.44
F	Lactuca serriola	-	-	-	-	5	-	-	.01
F	Linaria dalmatica	-	-	-	4	-	-	.15	-
F	Lithospermum ruderale	-	$_{a}$3	$_{a}$8	$_{a}$8	$_{a}$3	.05	.06	.01
F	Lupinus argenteus	$_{a}$3	$_{a}$4	$_{a}$5	$_{a}$1	-	.27	.15	-
F	Machaeranthera canescens	-	$_{a}$3	$_{a}$2	-	-	.00	-	-
F	Medicago sativa	3	-	-	-	-	-	-	-
F	Microsteris gracilis (a)	-	-	-	$_{b}$43	$_{a}$18	-	.18	.06
F	Orthocarpus sp. (a)	-	-	3	-	-	.00	-	-
F	Penstemon sp.	$_{a}$1	$_{b}$66	-	-	-	-	-	-
F	Phlox longifolia	-	-	$_{a}$8	-	$_{a}$5	.02	-	.01
F	Polygonum douglasii (a)	-	-	$_{b}$103	-	$_{a}$7	.22	-	.02
F	Ranunculus testiculatus (a)	-	-	$_{a}$4	$_{a}$9	$_{a}$4	.00	.01	.01
F	Sisymbrium altissimum (a)	-	-	-	-	14	-	-	.34
F	Sphaeralcea coccinea	-	-	-	1	-	-	.03	-
F	Sphaeralcea grossulariifolia	-	-	-	$_{a}$2	$_{a}$1	-	.03	.03
F	Taraxacum officinale	-	-	3	-	-	.00	-	-
F	Tragopogon dubius	$_{a}$2	$_{b}$31	$_{c}$76	-	$_{a}$3	.45	-	.03
F	Unknown forb-perennial	-	7	-	-	-	-	-	-
F	Vicia americana	-	$_{a}$2	-	-	$_{a}$10	-	-	.04
F	Viguiera multiflora	-	$_{a}$1	$_{a}$6	-	$_{a}$2	.04	-	.00
Total for Annual Forbs		5	83	992	614	809	5.38	6.56	4.11
Total for Perennial Forbs		66	337	645	275	183	12.38	7.17	6.68
Total for Forbs		71	420	1637	889	992	17.76	13.73	10.79

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

BROWSE TRENDS --
Management unit 17 , Study no: 16

Type	Species	Strip Frequency			Average Cover %		
		'96	'02	'07	'96	'02	'07
B	Amelanchier alnifolia	3	3	3	-	.03	-
B	Artemisia tridentata vaseyana	57	41	34	9.22	6.10	3.50
B	Chrysothamnus viscidiflorus viscidiflorus	19	22	32	1.37	2.20	3.25
B	Gutierrezia sarothrae	91	58	29	3.22	2.12	.70
B	Opuntia sp.	14	14	19	.12	.36	.42
B	Purshia tridentata	20	16	17	3.81	6.55	3.99
B	Symphoricarpos oreophilus	0	1	0	-	.03	-
B	Tetradymia canescens	0	1	0	.15	.38	-
Total for Browse		204	156	134	17.91	17.79	11.86

CANOPY COVER, LINE INTERCEPT --
Management unit 17 , Study no: 16

Species	Percent Cover	
	'02	'07
Amelanchier alnifolia	.13	.25
Artemisia tridentata vaseyana	6.01	3.81
Chrysothamnus viscidiflorus viscidiflorus	1.76	2.03
Gutierrezia sarothrae	.86	.58
Opuntia sp.	.05	.03
Purshia tridentata	6.25	3.90
Tetradymia canescens	.46	.05

KEY BROWSE ANNUAL LEADER GROWTH --
Management unit 17 , Study no: 16

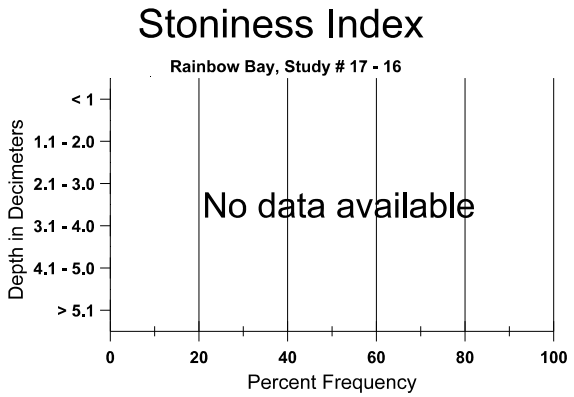
Species	Average leader growth (in)	
	'02	'07
Artemisia tridentata vaseyana	2.8	1.9
Purshia tridentata	3.0	4.4

BASIC COVER --
Management unit 17 , Study no: 16

Cover Type	Average Cover %				
	'83	'89	'96	'02	'07
Vegetation	1.50	6.25	49.61	48.02	53.79
Rock	2.75	3.50	6.05	3.92	2.34
Pavement	33.25	36.75	6.51	10.85	7.23
Litter	57.75	46.25	49.93	48.27	41.40
Cryptogams	.25	3.25	1.35	.76	.08
Bare Ground	4.50	4.00	7.23	11.08	6.58

SOIL ANALYSIS DATA --
Herd Unit 17, Study no: 16, Rainbow Bay

Effective rooting depth (in)	Temp °F (depth)	pH	Clay loam			%0M	ppm P	ppm K	dS/m
			%sand	%silt	%clay				
10.4	51.0 (10.9)	7.2	42.6	27.4	30.0	3.6	27.5	265.6	.7



PELLET GROUP DATA --
Management unit 17 , Study no: 16

Type	Quadrat Frequency		
	'96	'02	'07
Rabbit	-	4	1
Elk	21	9	9
Deer	40	53	45
Cattle	1	-	-

Days use per acre (ha)	
'02	'07
-	-
26 (64)	13 (31)
100 (248)	111 (274)
-	-

BROWSE CHARACTERISTICS --
Management unit 17 , Study no: 16

		Age class distribution (plants per acre)					Utilization					
Year	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% dying	% poor vigor	Average Height Crown (in)
Amelanchier alnifolia												
83	**0**	-	-	-	-	-	0	0	-	-	0	-/-
89	**33**	-	33	-	-	-	0	100	-	-	100	-/-
96	**60**	-	40	20	-	-	67	0	-	-	0	15/18
02	**60**	-	40	20	-	-	33	67	-	-	0	11/11
07	**60**	-	20	40	-	-	33	67	-	-	0	18/22
Artemisia tridentata vaseyana												
83	**4732**	-	800	3166	766	-	26	8	16	-	0	26/28
89	**3766**	166	466	1600	1700	-	49	4	45	-	3	26/31
96	**1520**	20	20	720	780	500	59	1	51	12	12	23/43
02	**1060**	-	60	480	520	800	38	11	49	25	25	27/42
07	**860**	60	40	380	440	860	28	5	51	23	23	28/40
Chrysothamnus nauseosus												
83	**0**	-	-	-	-	-	0	0	-	-	0	-/-
89	**0**	-	-	-	-	-	0	0	-	-	0	-/-
96	**0**	-	-	-	-	-	0	0	-	-	0	-/-
02	**0**	-	-	-	-	-	0	0	-	-	0	-/-
07	**0**	-	-	-	-	-	0	0	-	-	0	35/46
Chrysothamnus viscidiflorus viscidiflorus												
83	**1766**	-	-	1766	-	-	0	0	0	-	0	9/9
89	**3166**	33	800	2333	33	-	0	0	1	-	1	12/13
96	**640**	-	-	640	-	-	0	0	0	-	0	12/23
02	**820**	-	-	800	20	-	0	0	2	2	2	11/18
07	**1200**	-	40	1060	100	-	0	0	8	-	3	13/23
Gutierrezia sarothrae												
83	**1933**	-	-	1900	33	-	0	0	2	-	2	10/13
89	**4732**	100	566	3933	233	-	0	0	5	-	0	11/11
96	**14580**	17520	4500	9920	160	220	0	0	1	.13	.13	7/10
02	**3500**	-	-	2520	980	5020	0	0	28	14	14	7/8
07	**1700**	-	80	1620	-	-	0	0	0	-	0	9/8

		Age class distribution (plants per acre)					Utilization					
Year	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% dying	% poor vigor	Average Height Crown (in)
Opuntia sp.												
83	**0**	-	-	-	-	-	0	0	0	-	0	-/-
89	**33**	-	33	-	-	-	0	0	0	-	0	-/-
96	**280**	-	80	160	40	-	0	0	14	7	7	5/13
02	**300**	-	40	200	60	20	0	0	20	-	7	5/11
07	**400**	-	20	360	20	-	0	0	5	-	5	7/13
Purshia tridentata												
83	**299**	-	66	233	-	-	33	11	0	-	0	41/124
89	**699**	33	266	433	-	-	19	5	0	-	0	41/81
96	**480**	-	80	380	20	20	21	58	4	-	0	24/59
02	**340**	-	-	300	40	40	6	94	12	-	0	30/62
07	**360**	-	-	320	40	60	33	11	11	-	0	30/55
Symphoricarpos oreophilus												
83	**0**	-	-	-	-	-	0	0	-	-	0	-/-
89	**0**	-	-	-	-	-	0	0	-	-	0	-/-
96	**0**	-	-	-	-	-	0	0	-	-	0	-/-
02	**20**	-	20	-	-	-	0	0	-	-	0	-/-
07	**0**	-	-	-	-	-	0	0	-	-	0	-/-
Tetradymia canescens												
83	**0**	-	-	-	-	-	0	0	-	-	0	-/-
89	**0**	-	-	-	-	-	0	0	-	-	0	-/-
96	**0**	-	-	-	-	20	0	0	-	-	0	15/23
02	**20**	-	-	20	-	-	0	0	-	-	0	15/24
07	**0**	20	-	-	-	-	0	0	-	-	0	11/22