

Trend Study 16A-6-07

Study site name: Hop Creek Browse.

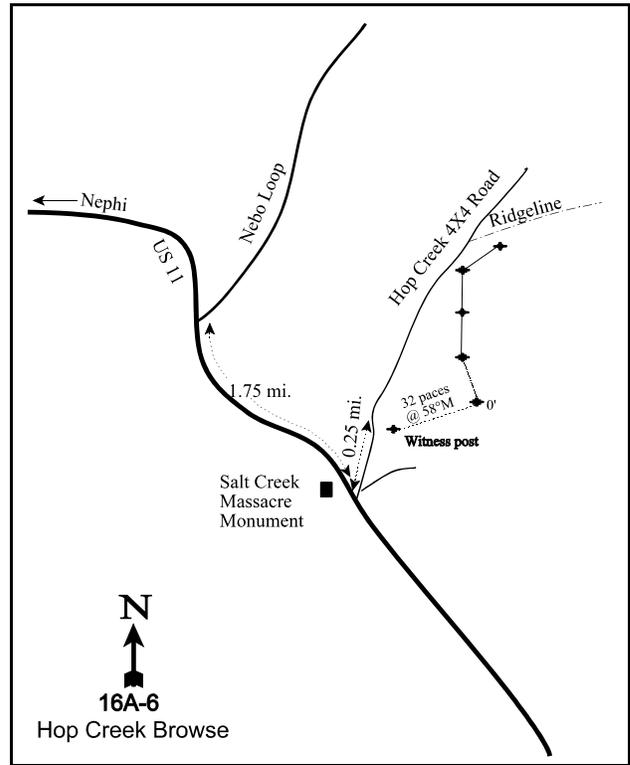
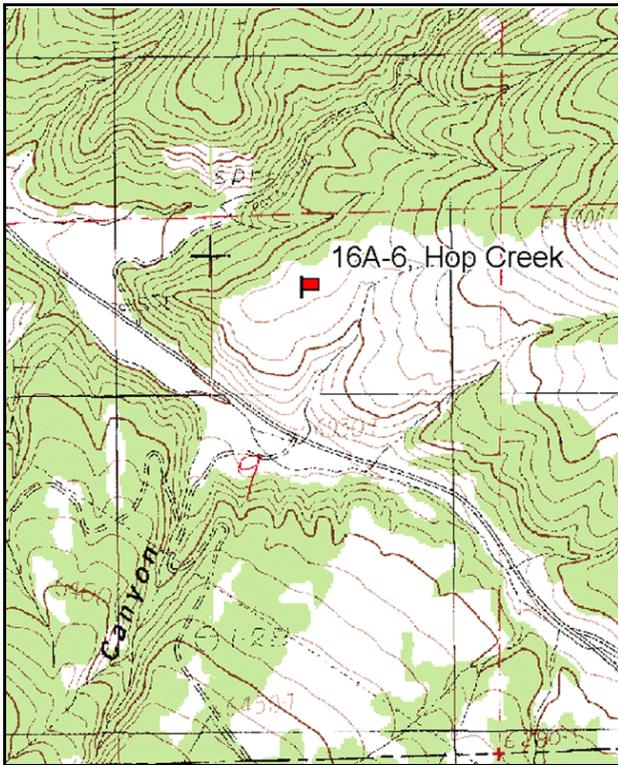
Vegetation type: Antelope Bitterbrush.

Compass bearing: frequency baseline 163 degrees magnetic (line 2-3 @ 1°M, line 4 @ 45°M).

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

LOCATION DESCRIPTION

From the intersection of Highway 132 and the Nebo Loop Road, proceed south on Highway 132 for 1.75 miles. Just past the Salt Creek Massacre Monument, stop at a turnoff on the north side of the road. Drive up the left fork of a four-wheel drive road 0.25 miles to a witness post. From the witness post walk 32 paces at 58°M to the 0-foot stake. The 0-foot baseline stake is located 2 paces to the east of an antelope bitterbrush plant with a browse tag, number E1318, attached. The study is marked by green steel "T" fenceposts approximately 12 to 18 inches in height.



Map Name: Fountain Green North

Diagrammatic Sketch

Township 13S, Range 2E, Section 9

GPS: NAD 83, UTM 12S 439487 E 4395492 N

DISCUSSION

Hop Creek - Trend Study No. 16A-6

Study Information

This study is located adjacent to the Hop Creek bitterbrush browse transect, and is found on a broad ridge just north of Salt Creek Canyon [elevation: 6,300 feet (1,920 m), slope: 5%, aspect: southeast]. The vegetative composition is dominated by a mixed stand of mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and antelope bitterbrush (*Purshia tridentata*) in association with a moderately diverse and vigorous herbaceous understory. This area is an important wintering area for deer and elk. Abundant evidence of big game use in the form of pellet groups and antler drops was found in 1983. Quadrat frequency from 1997 indicated moderate amounts of both deer and elk pellet groups at 34% and 24%, respectively. Pellet group transect data estimated high deer use at 146 deer days use/acre (360 ddu/ha) in 2002 and 147 deer days use (364 ddu/ha) in 2007. Elk use was estimated at 23 days use/acre (58 edu/ha) in 2002 and 2007. Most of the big game use appeared to be from the winter. Cattle use was estimated at 2 days use/acre (5 cdu/ha) in 2002 and 9 days use/acre (22 cdu/ha) in 2007.

Soil

The soil is classified within the Sheep Creek series (USDA-NRCS 2007). The soils in this series are moderately deep and well-drained. They are formed in residuum and colluvium derived from calcareous sandstone, limestone, and quartzite. The soil texture is a clay loam with a neutral pH (6.9). There is a caliche layer at a depth of approximately 10 to 12 inches (25 to 30 cm). The majority of the soil is covered by vegetation and litter. There are localized areas of bare ground that show signs of soil movement. However, the erosion condition was classified as stable in 2002 and 2007.

Browse

The majority of the browse is composed of mountain big sagebrush, which accounted for 63% to 71% of the total browse cover since 1997. Sagebrush density has fluctuated between an estimated 2,260 plants/acre (5,584 plants/ha) and 3,132 plants/acre (7,739 plants/ha) since the study began. Decadence increased from 12% of the population in 1997 to 34% in 2007. Recruitment was high each year the site was sampled until 2007, when it dropped from 33% of the population to 3%. Since 1983, plants showing poor vigor have steadily increased to 22% of the population in 2007. Use has been mostly low-moderate, with occasional heavy use. Annual leader growth averaged 2.1 inches (5.3 cm) in 2002 and 1.5 inches (3.8 cm) in 2007.

Bitterbrush has accounted for 16% to 22% of the total browse cover since 1997. Its density is lower than that of sagebrush, and has been estimated between 399 plants/acre (986 plants/ha) and 540 plants/acre (1,334 plants/ha) since 1983. The age structure of the population shifted from 89% mature and 7% decadent in 1997 to 50% mature and 42% decadent in 2007. Recruitment has been low throughout the study. The majority of the plants are large and vigorous, and use is mostly heavy. Annual leader growth averaged 1 inch (2.5 cm) in 2002 and 1.2 inches (3.1 cm) in 2007. A few moderate-heavily used serviceberry (*Amelanchier alnifolia*) plants have also been sampled since 1997.

Utah juniper (*Juniperus osteosperma*) trees are also scattered throughout the site. Juniper density was 24 trees/acre (59 trees/ha) in 2002 and increased to 38 trees/acre (94 trees/ha) in 2007. Average trunk diameter was 8.5 inches (21.6 cm) in 2002 and 7.8 inches (19.8 cm) in 2007.

Herbaceous Understory

The herbaceous understory is diverse and productive. Total grass cover has averaged between 18% and 32% since 1997. The large majority of the grass cover is composed of perennial species. Perennial grasses provided 20% cover in 1997, 17% in 2002, and 26% in 2007. The most abundant perennial grasses are bluebunch wheatgrass (*Agropyron spicatum*), Sandberg bluegrass (*Poa secunda*), western wheatgrass

(*Agropyron smithii*), and Kentucky bluegrass (*Poa pratensis*). Cheatgrass (*Bromus tectorum*) nested frequency was low in 1997 and 2002, but increased significantly in 2007. This species provided less than 1% cover in 1997 and 2002, but approximately 7% cover and 20% of the total grass cover in 2007.

Forb cover increased from 8% in 1997 to 15% in 2007, and is rich in diversity. The cover of annual species has increased from 31% of the total forb cover in 1997 to 51% in 2007. Common species include pale alyssum (*Alyssum alyssoides*), tapertip hawksbeard (*Crepis acuminata*), draba (*Draba* sp.), western aster (*Aster chilensis*), bastard toadflax (*Comandra pallida*), Lewis flax (*Linum lewisii*), blue-eyed Mary (*Collinsia parviflora*), and bur buttercup (*Ranunculus testiculatus*).

1989 TREND ASSESSMENT

The trend for browse is slightly down. Sagebrush density decreased from 3,132 plants/acre (7,739 plants/ha) to 2,598 plants/acre (6,420 plants/ha). Decadence increased from 13% to 33% of the population. Recruitment remained high, with 26% of the population composed of young plants. Plants displaying poor vigor increased from 0% to 8% of the population. Use also increased to light-moderate, with 5% of the plants showing heavy use. Bitterbrush density declined from 533 plants/acre (1,317 plants/ha) to 399 plants/acre (986 plants/ha). Decadence increased from 25% to 33% of the population, and no young plants were sampled. All of the sampled plants were vigorous, which is an improvement from 88% of the plants displaying poor vigor in 1983. Use was moderate-heavy. The trend for grass is stable. The sum of nested frequency for perennial grasses did not change. However, mutton bluegrass (*Poa fendleriana*) and oniongrass (*Melica bulbosa*) both increased significantly in nested frequency. The trend for forbs is slightly down. The sum of nested frequency for perennial forbs decreased by 22%. However, most of the decrease was attributed to significant decreases in sego lily (*Calochortus nuttallii*) and bastard toadflax, neither of which are important forage species.

browse - slightly down (-1)

grass - stable (0)

forb - slightly down (-1)

1997 TREND ASSESSMENT

The trend for browse is stable. Sagebrush density decreased 12% while bitterbrush density increased 35%, but these changes were partly caused by the lengthening of the baseline in 1997. Decadence decreased to 12% of the sagebrush population and 7% of the bitterbrush population, while the percentage of young plants sampled increased in both species. Eight percent of the sagebrush and 11% of the bitterbrush plants displayed poor vigor. Use remained light-moderate on sagebrush, and was mostly heavy on bitterbrush. Additionally, serviceberry was sampled for the first time at an estimated density of 100 plants/acre (247 plants/ha). These plants were mostly mature, with good recruitment and relatively low decadence. Eighty percent of the plants showed moderate use. The trend for grass is slightly up. The sum of nested frequency for perennial grasses increased 18%, with significant increases in bluebunch wheatgrass and Kentucky bluegrass. The trend for forbs is up. The sum of nested frequency for perennial forbs increased substantially, and several individual species increased significantly in nested frequency. The Desirable Components Index (DCI) was rated as good-excellent due to favorable browse cover with low decadence and high recruitment, and an understory dominated by perennial grasses and forbs.

winter range condition (DCI) - good-excellent (80) Mid-level potential scale

browse - stable (0)

grass - slightly up (+1)

forb - up (+2)

2002 TREND ASSESSMENT

The trend for browse is slightly up. Sagebrush density increased from 2,300 plants/acre (5,681 plants/ha) to 3,120 plants/acre (7,706 plants/ha), all of which was due to increases in young and decadent plants. Decadence increased from 12% to 31% of the population. Plants displaying poor vigor increased slightly from 8% to 13% of the population, and use remained light-moderate. Bitterbrush density decreased slightly from 540 plants/acre (1,334 plants/ha) to 480 plants/acre (1,186 plants/ha). Decadence increased from 7% to 29%

of the population, and vigor was good. Ninety-two percent of the plants showed heavy use. Serviceberry density declined from 100 plants/acre (247 plants/ha) to 60 plants/acre (148 plants/ha), and all of the plants were mature and vigorous. Use increased to mostly moderate-heavy. The trend for grass is stable. The sum of nested frequency for perennial grasses changed little. Kentucky bluegrass and mutton bluegrass decreased significantly in nested frequency while oniongrass increased significantly in nested frequency. However, perennial species continued to dominate the understory. Cheatgrass did not change significantly in nested frequency and continued to provide less than 1% cover. The trend for forbs is down. The sum of nested frequency for perennial forbs decreased 22%, while that for annual forbs increased 6%. Total forb cover remained relatively stable at 9%. The DCI rating declined to good due to increased decadence of preferred browse and a decrease in perennial forb cover.

winter range condition (DCI) - good (75) Mid-level potential scale
browse - slightly up (+1) grass - stable (0) forb - down (-2)

2007 TREND ASSESSMENT

The trend for browse is slightly down. Sagebrush density decreased 28%, and decadence slightly increased from 31% to 34% of the population. Recruitment decreased from young plants comprising 33% of the population to only 3%. The majority of the loss in population is due to the loss of young plants. Plants displaying poor vigor increased from 13% to 22% of the population, and use remained light-moderate. Bitterbrush density increased 8%, and recruitment remained stable at 8% of the population. Decadence increased from 29% of the population to 42%, and 23% of the plants displayed poor vigor. Use remained mostly heavy. Serviceberry density was unchanged, but one-third of the sampled plants was young. Vigor remained good, and use shifted from moderate-heavy to mostly heavy. The trend for grass is slightly down. The sum of nested frequency for perennial grasses remained stable, and Sandberg bluegrass increased significantly in nested frequency. However, cheatgrass also increased significantly in nested frequency, and its average cover increased from 1% to 7%. The trend for forbs is up. The sum of nested frequency for perennial forbs increased 42%, with significant increases in desirable species such as tapertip hawksbeard, Lewis flax, and longleaf phlox (*Phlox longifolia*). Total forb cover increased from 9% to 15%. The DCI rating declined to fair due to increased decadence and decreased recruitment of preferred browse, and an increase in annual grass cover.

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

HERBACEOUS TRENDS --
 Management unit 16A, Study no: 6

T y p e	Species	Nested Frequency					Average Cover %		
		'83	'89	'97	'02	'07	'97	'02	'07
G	Agropyron smithii	_b 194	_b 205	_a 123	_a 131	_a 140	1.57	3.15	2.44
G	Agropyron spicatum	_a 135	_a 92	_b 173	_b 171	_b 163	5.03	5.05	12.25
G	Bromus tectorum (a)	-	-	_a 65	_a 82	_b 218	.67	.84	6.56
G	Festuca ovina	-	-	_a 1	_a 3	-	.03	.03	-
G	Melica bulbosa	_{ab} 15	_c 36	_a 9	_{bc} 33	_a 3	.21	1.22	.06
G	Oryzopsis hymenoides	-	-	-	_a 3	_a 2	-	.15	.15
G	Poa bulbosa	-	-	-	-	3	-	-	.03
G	Poa fendleriana	_{ab} 50	_c 94	_{bc} 71	_a 27	_a 34	1.61	.88	.60

Type	Species	Nested Frequency					Average Cover %		
		'83	'89	'97	'02	'07	'97	'02	'07
		G	<i>Poa pratensis</i>	_a 74	_a 50	_b 172	_a 80	_a 57	7.65
G	<i>Poa secunda</i>	_a 35	_{ab} 39	_{bc} 84	_c 115	_d 181	2.47	2.80	7.68
G	<i>Stipa comata</i>	_b 59	_b 53	_{ab} 36	_{ab} 41	_a 18	1.04	1.17	.35
Total for Annual Grasses		0	0	65	82	218	0.67	0.83	6.56
Total for Perennial Grasses		562	569	669	604	601	19.64	16.70	25.81
Total for Grasses		562	569	734	686	819	20.32	17.54	32.38
F	<i>Achillea millefolium</i>	-	1	-	-	-	-	-	-
F	<i>Agoseris glauca</i>	-	-	_a 22	_a 33	_a 33	.11	.35	.18
F	<i>Alyssum alyssoides</i> (a)	-	-	_a 120	_b 162	_c 297	.51	.83	4.46
F	<i>Allium</i> sp.	-	_a 2	_a -	_a 1	-	.00	.00	-
F	<i>Antennaria rosea</i>	_a 1	_a 7	_a 5	_a 7	_a 7	.03	.04	.18
F	<i>Arabis</i> sp.	-	-	1	-	-	.00	-	-
F	<i>Aster chilensis</i>	_a 2	_{ab} 13	_{bc} 25	_{bc} 28	_c 35	1.18	.90	1.14
F	<i>Astragalus convallarius</i>	_{ab} 23	_c 55	_a 9	_a 7	_{bc} 34	.10	.02	.47
F	<i>Astragalus</i> sp.	-	-	_a 1	_a 2	-	.03	.00	-
F	<i>Castilleja linariaefolia</i>	_a 4	-	_b 31	_a 8	_a 9	.56	.08	.09
F	<i>Camelina microcarpa</i> (a)	-	-	_a 8	-	_a 6	.02	-	.01
F	<i>Calochortus nuttallii</i>	_c 35	_a 3	_a 10	_{bc} 36	_{ab} 16	.03	.11	.04
F	<i>Chenopodium album</i> (a)	-	-	-	3	-	-	.00	-
F	<i>Chaenactis douglasii</i>	-	-	2	-	-	.01	-	-
F	<i>Chorispora tenella</i> (a)	-	-	-	2	-	-	.15	-
F	<i>Cirsium undulatum</i>	_a 3	_a 3	_a 18	_a 16	_a 13	.23	.33	.30
F	<i>Collomia linearis</i> (a)	-	-	_b 45	_b 26	_a 7	.12	.06	.01
F	<i>Conringia orientalis</i> (a)	1	-	-	-	-	-	-	-
F	<i>Comandra pallida</i>	_d 123	_{ab} 51	_{cd} 91	_a 30	_{bc} 83	.91	.18	.73
F	<i>Collinsia parviflora</i> (a)	-	-	_b 171	_b 183	_a 119	1.26	2.20	.43
F	<i>Crepis acuminata</i>	_a 1	_a 5	_b 45	_b 69	_c 107	.48	1.25	1.58
F	<i>Cymopterus longipes</i>	-	_a 6	_b 50	_b 42	-	.35	.49	-
F	<i>Descurainia pinnata</i> (a)	-	-	_a 3	_a 6	_a 6	.00	.01	.01
F	<i>Draba</i> sp. (a)	-	-	_a 3	-	_b 72	.00	-	1.39
F	<i>Epilobium brachycarpum</i> (a)	-	-	_a 38	_a 24	_a 27	.07	.08	.11
F	<i>Eriogonum racemosum</i>	_a 5	_a 3	_a 1	_a 4	_a 1	.00	.06	.01
F	<i>Eriogonum umbellatum</i>	-	_a 3	_a 3	_a 3	_a 3	.06	.00	.15
F	<i>Erysimum</i> sp.	-	-	1	-	-	.00	-	-
F	<i>Galium</i> sp.	-	-	-	1	-	-	.00	-
F	<i>Lappula occidentalis</i> (a)	-	-	-	2	-	-	.00	-

Type	Species	Nested Frequency					Average Cover %		
		'83	'89	'97	'02	'07	'97	'02	'07
F	<i>Lactuca serriola</i>	-	_a 4	_a 3	-	_a 5	.00	-	.01
F	<i>Linum lewisii</i>	_a 25	_a 3	_b 91	_a 21	_b 61	.62	.11	.69
F	<i>Lomatium</i> sp.	-	-	-	-	46	-	-	.52
F	<i>Lupinus argenteus</i>	-	-	_a 2	_a 1	_a 2	.38	.00	.15
F	<i>Machaeranthera canescens</i>	-	-	-	1	-	-	.00	-
F	<i>Microsteris gracilis</i> (a)	-	-	_a 8	_b 39	_b 44	.01	.11	.15
F	<i>Phlox longifolia</i>	-	_a 11	_{bc} 38	_{ab} 27	_c 46	.07	.19	.32
F	<i>Polygonum douglasii</i> (a)	-	-	_a 3	_a 4	_a 4	.01	.01	.01
F	<i>Ranunculus testiculatus</i> (a)	-	-	_{ab} 74	_a 48	_b 91	.52	.48	.88
F	<i>Sphaeralcea coccinea</i>	-	_a 7	_a 3	_a 1	-	.00	.00	-
F	<i>Tragopogon dubius</i>	_a 13	_a 10	_a 16	_a 15	_a 13	.10	.13	.25
F	<i>Zigadenus paniculatus</i>	_a 5	-	_{ab} 24	_b 32	_b 33	.22	.26	.26
Total for Annual Forbs		1	0	473	499	673	2.55	3.96	7.48
Total for Perennial Forbs		240	187	492	385	547	5.57	4.57	7.13
Total for Forbs		241	187	965	884	1220	8.13	8.54	14.61

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

BROWSE TRENDS --

Management unit 16A, Study no: 6

Type	Species	Strip Frequency			Average Cover %		
		'97	'02	'07	'97	'02	'07
B	<i>Amelanchier alnifolia</i>	4	3	3	.15	.38	.53
B	<i>Artemisia tridentata vaseyana</i>	56	72	67	9.17	9.92	9.13
B	<i>Chrysothamnus viscidiflorus viscidiflorus</i>	10	16	14	.18	.34	.09
B	<i>Gutierrezia sarothrae</i>	14	23	13	.07	1.24	.06
B	<i>Juniperus osteosperma</i>	0	0	0	.85	.78	.78
B	<i>Purshia tridentata</i>	22	19	22	2.97	2.51	1.98
B	<i>Tetradymia canescens</i>	3	9	9	.03	.48	.18
Total for Browse		109	142	128	13.44	15.67	12.77

CANOPY COVER, LINE INTERCEPT --

Management unit 16A, Study no: 6

Species	Percent Cover	
	'02	'07
Amelanchier alnifolia	-	.16
Artemisia tridentata vaseyana	-	13.63
Chrysothamnus viscidiflorus viscidiflorus	-	.55
Gutierrezia sarothrae	-	.26
Juniperus osteosperma	.01	3.90
Purshia tridentata	-	2.29
Tetradymia canescens	-	.13

KEY BROWSE ANNUAL LEADER GROWTH --

Management unit 16A, Study no: 6

Species	Average leader growth (in)	
	'02	'07
Artemisia tridentata vaseyana	2.1	1.5
Purshia tridentata	1.0	1.2

POINT-QUARTER TREE DATA --

Management unit 16A, Study no: 6

Species	Trees per Acre		Average diameter (in)	
	'02	'07	'02	'07
Juniperus osteosperma	24	38	8.5	7.8

BASIC COVER --

Management unit 16A, Study no: 6

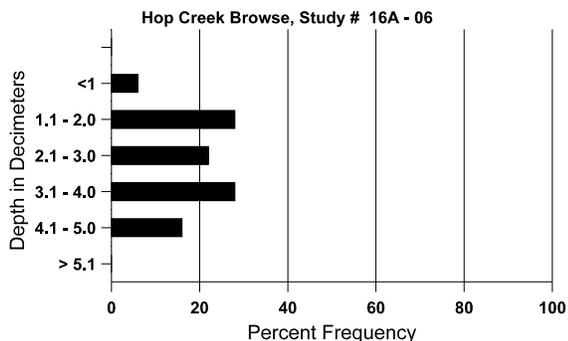
Cover Type	Average Cover %				
	'83	'89	'97	'02	'07
Vegetation	4.75	11.75	44.00	43.48	57.77
Rock	.25	.25	.19	.15	.05
Pavement	.50	0	1.93	1.25	1.25
Litter	71.25	69.75	51.30	51.80	41.67
Cryptogams	1.25	1.50	4.62	2.62	3.05
Bare Ground	22.00	16.75	17.71	17.85	14.58

SOIL ANALYSIS DATA --

Herd Unit 16A, Study no: 06, Hop Creek Browse

Effective rooting depth (in)	Temp °F (depth)	pH	Clay loam			%OM	ppm P	ppm K	dS/m
			%sand	%silt	%clay				
20.2	44.0 (17.6)	6.9	42.4	27.1	30.6	3.2	9.6	67.2	.6

Stoniness Index



PELLET GROUP DATA --

Management unit 16A, Study no: 6

Type	Quadrat Frequency		
	'97	'02	'07
Rabbit	4	18	44
Elk	24	17	19
Deer	34	43	64
Cattle	-	1	-

Days use per acre (ha)	
'02	'07
-	-
23 (56)	23 (58)
146 (360)	142 (364)
2 (5)	9 (22)

BROWSE CHARACTERISTICS --

Management unit 16A, Study no: 6

		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	-	0	-/-
89	0	-	-	-	-	-	0	0	0	-	0	-/-
97	100	-	20	60	20	20	80	0	20	20	20	30/31
02	60	-	-	60	-	-	33	33	0	-	0	31/32
07	60	-	20	40	-	-	0	67	0	-	0	41/41

		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)
<i>Artemisia tridentata vaseyana</i>												
83	3132	200	666	2066	400	-	11	0	13	-	0	31/36
89	2598	-	666	1066	866	-	23	5	33	-	8	29/33
97	2300	40	760	1260	280	620	29	4	12	8	8	33/45
02	3120	20	1020	1120	980	740	27	5	31	13	13	30/39
07	2260	200	60	1440	760	540	27	9	34	18	22	30/37
<i>Chrysothamnus nauseosus consimilis</i>												
83	66	-	66	-	-	-	0	0	-	-	0	-/-
89	0	-	-	-	-	-	0	0	-	-	0	-/-
97	0	-	-	-	-	-	0	0	-	-	0	-/-
02	0	-	-	-	-	-	0	0	-	-	0	-/-
07	0	-	-	-	-	-	0	0	-	-	0	-/-
<i>Chrysothamnus viscidiflorus viscidiflorus</i>												
83	66	-	-	66	-	-	0	0	0	-	0	8/10
89	66	-	-	66	-	-	0	0	0	-	0	10/14
97	300	-	-	300	-	-	0	0	0	-	0	13/22
02	740	-	100	560	80	-	0	3	11	8	8	11/18
07	640	-	160	420	60	20	13	9	9	6	6	14/19
<i>Gutierrezia sarothrae</i>												
83	66	-	-	66	-	-	0	0	0	-	0	11/19
89	866	-	200	600	66	-	0	0	8	-	0	8/6
97	840	20	300	500	40	-	0	0	5	5	5	7/7
02	1780	-	100	1440	240	60	0	0	13	1	1	6/11
07	480	-	60	380	40	-	4	0	8	4	33	9/12
<i>Juniperus osteosperma</i>												
83	0	-	-	-	-	-	0	0	-	-	0	-/-
89	0	-	-	-	-	-	0	0	-	-	0	-/-
97	0	-	-	-	-	-	0	0	-	-	0	-/-
02	0	-	-	-	-	-	0	0	-	-	0	-/-
07	0	20	-	-	-	-	0	0	-	-	0	-/-
<i>Purshia tridentata</i>												
83	533	-	-	400	133	-	0	100	25	-	88	44/38
89	399	-	-	266	133	-	50	50	33	-	0	38/44
97	540	40	20	480	40	80	15	70	7	7	11	38/54
02	480	-	40	300	140	140	4	92	29	4	4	41/48
07	520	20	40	260	220	80	15	85	42	23	23	45/52

		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)	
Symphoricarpos oreophilus													
83	0	-	-	-	-	-	0	0	-	-	0	-/-	
89	0	-	-	-	-	-	0	0	-	-	0	-/-	
97	0	-	-	-	-	-	0	0	-	-	0	-/-	
02	0	-	-	-	-	-	0	0	-	-	0	-/-	
07	0	-	-	-	-	-	0	0	-	-	0	16/24	
Tetradymia canescens													
83	0	-	-	-	-	-	0	0	0	-	0	-/-	
89	133	-	133	-	-	-	0	0	0	-	0	-/-	
97	80	-	-	80	-	-	0	0	0	-	0	14/11	
02	260	-	40	220	-	-	0	8	0	-	0	11/16	
07	220	-	-	200	20	-	27	9	9	-	9	10/17	