

Trend Study 5-1-01

Study site name: Geary Hollow .

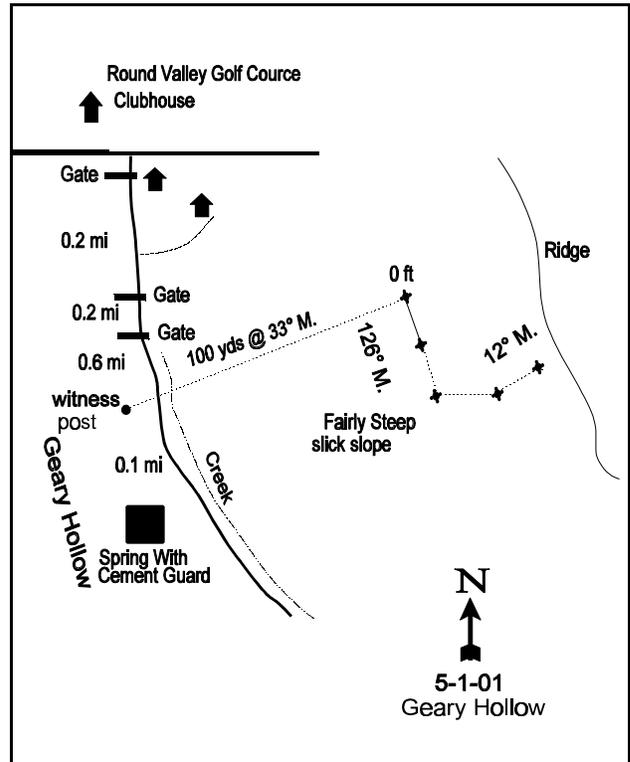
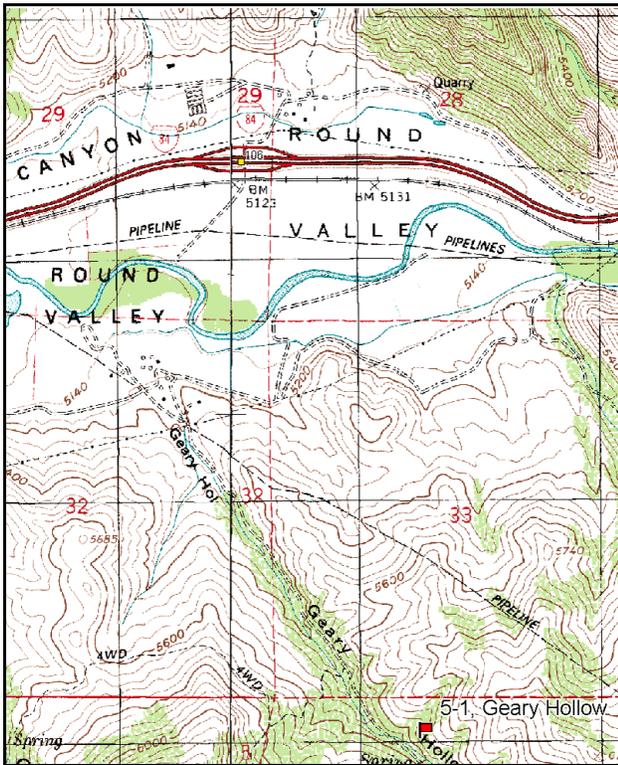
Vegetation type: Oak-Sagebrush .

Compass bearing: frequency baseline 126 degrees magnetic.

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

LOCATION DESCRIPTION

From Morgan, travel to Round Valley Golf Course, passing Como Springs. Take the first right past the clubhouse and go through a gate. Proceed up Geary Hollow 0.2 miles to another gate. Proceed through the gate, and travel 0.2 miles to another gate. Proceed 0.6 miles to 5-foot high green steel stake witness post on the right hand side of road. From the witness post walk 100 yards at 33 degrees magnetic to the 0-foot stake of the baseline marked by browse tag #7972. The baseline runs 126 degrees magnetic for 200 feet. At the 200-foot baseline stake line three of the baseline doglegs and runs in a direction of 43 degrees magnetic. Line four doglegs and runs in a direction of 12 degrees magnetic.



Map Name: Devil's Slide

Diagrammatic Sketch

Township 3N, Range 3E, Section 4

UTM 4542016 N 448244 E

DISCUSSION

Trend Study No. 5-1

The Geary Hollow study is located on a steep (50-55%) south, southwest facing slope at an elevation of 5,500 feet. Although purportedly a critical deer winter range, the study area seems most heavily impacted by domestic sheep which were reported on the site in 1984. Deer pellet groups were occasionally observed. A pellet group transect read on the site in 2001 estimated 17 deer days use/acre. Most of the pellet groups were found along game trails leading down slope to the creek. One elk pellet group and 1 cattle pat was also encountered.

The side of the canyon that the study is located has a southwest aspect. It is dry and supports mountain big sagebrush and Gambel oak. It is quite different than the opposite side which has a more easterly aspect. It supports a more dense mixed mountain brush community. Soil is classified as "Henhoit Gravelly Loam," a very deep and well-drained soil derived from a sandstone-quartzite conglomerate. This soil has a reddish brown color and textural analysis indicates a sandy clay loam with a slightly alkaline soil reaction (pH 7.6). Rock and pavement surface cover averages 23%, but increases to 60% or more in the subsoil. Henhoit soil, apart from rocks, becomes more clay-like with increasing depth. Permeability is moderately slow and available water capacity is moderate. The erosion hazard is high (Carley et al. 1980). Soil on the site is moderately deep and very rocky. Effective rooting depth is estimated at 11 inches. Due to the rocky nature of the soil surface and profile, average soil temperature is very high at 75° F at nearly 11 inches in depth. The study area is steep and rocky but has good vegetative and litter cover values. Erosion is most common on trails but is not presently a serious problem. The erosion condition class was determined to be stable to slight in 2001.

Browse composition includes several species typically found on mixed mountain brush sites. Most abundant and productive are Gambel oak and mountain big sagebrush. These are the key management species. Mountain big sagebrush currently forms a relatively limited population with an estimated density of 1,660 plants/acre in 1996 and 1,340 in 2001. This population has remained fairly constant over the years. Age structure reveals that the population is predominantly mature with no seedlings encountered in any year. This is not surprising considering the dominance of cheatgrass in the understory with no safe sites for seedlings to become established. In addition, the extremely high soil temperature causes drying of the soil profile early in the summer.

Gambel oak is a vigorous but a somewhat low-growing population that sustains moderate use in some years. Oak does not appear to be expanding with lower percent decadency and improved vigor noted since 1990. With the increased sample size used in 1996, line 4 did not sample any oak so the density between years will be somewhat lower. Density of mature oak remained stable between 1996 and 2001 at about 2,100 stems/acre. Broom snakeweed is fairly abundant but has declined in density since 1990. Other shrubs include Saskatoon serviceberry, mountain snowberry, stickyleaf low rabbitbrush, white rubber rabbitbrush, and an occasional antelope bitterbrush.

The herbaceous understory is abundant and diverse but dominated by annual grasses and forbs. Perennial grasses consist of a low density stand of bluebunch wheatgrass, Sandberg bluegrass, muttongrass, and Indian ricegrass. Sum of nested frequency for bluebunch wheatgrass has significantly increased since 1990. Cheatgrass and Japanese brome are very dense and completely covered the shrub interspaces in 1996. Average cover was estimated at 38% which accounted for 96% of the grass cover and 88% of the total herbaceous cover. Due to the drier conditions of 2001, cheatgrass and especially Japanese brome declined significantly in nested frequency with cover dropping from 38% to 7%.

Among perennial forbs, peavine, prickly lettuce, yellow salsify, and Louisiana sage are the most abundant species. Annual forbs are abundant and have increased dramatically since 1996. Pale alyssum, Collomia, autumn willow weed, storksbill, bedstraw, tumble mustard, and speedwell combined to produce 53% of the total forb cover.

1984 APPARENT TREND ASSESSMENT

Soil appears stable. Although the area is steep, rocky, and potentially erodible, the current rate of soil loss is within acceptable limits. Vegetative trend appears down slightly because of the apparent decline of mountain big sagebrush and a rather poor quality understory. Any loss of plant diversity should be considered a negative factor.

1990 TREND ASSESSMENT

This lightly used winter range displays a stable, moderately dense stand of mountain big sagebrush in association with a low-growing population of Gambel oak. The oak has decreased in density (40%) since 1984. Fewer, but larger oak of all age classes were counted in 1990. The oak were more lightly to moderately hedged in 1990, but half of the plants have reduced vigor due largely to insect infestation. Cheatgrass remains prominent, but the limited perennial herbaceous species have increased slightly. Soil erosion still occurs in limited areas.

TREND ASSESSMENT

soil - stable (3)

browse - stable, thinning of oak and increase in sagebrush (3)

herbaceous understory - stable (3)

1996 TREND ASSESSMENT

The soil trend is stable at this time with abundant vegetative and litter cover. Percent bare ground cover declined slightly and there is no erosion apparent. The mountain big sagebrush density has remained relatively constant over all years, although percent decadency has increased. Gambel oak does not appear to be expanding at this time. Broom snakeweed has increased in density since the initial reading in 1984, but now appears to be stabilized at 2,220 plants/acre. Browse trend is stable. With a significant increase in bluebunch wheatgrass the herbaceous trend is slightly upward. However, cheatgrass and Japanese brome still dominate the site by providing 96% of the grass cover. Forb cover is sparse and adds very little to the herbaceous understory.

TREND ASSESSMENT

soil - stable (3)

browse - stable (3)

herbaceous understory - slightly upward, but dominated by annuals (4)

2001 TREND ASSESSMENT

Trend for soil is down due to an increase in percent cover of bare ground and a decline in litter and vegetation cover. However, erosion is not currently a problem. The erosion condition class was determined as stable to slight. Trend for browse is stable for mountain big sagebrush and Gambel oak. Both show light use, good vigor and low decadence. Trend for the herbaceous understory is up slightly. Sum of nested frequency for perennial grasses declined slightly, but the dominant cheatgrass and Japanese brome declined significantly. Cover of these annual grasses dropped over fivefold from 38% to 7%. The most abundant perennial grass, bluebunch wheatgrass, remained stable in nested frequency. Cover and nested frequency of annual and perennial forbs increased, especially annuals. Unfortunately many of the annual and perennial forbs are low value weedy species.

TREND ASSESSMENT

soil - down (1)

browse - stable (3)

herbaceous understory - up slightly but composition is still poor (4)

HERBACEOUS TRENDS --

Herd unit 05 , Study no: 1

T y p e	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'84	'90	'96	'01	'84	'90	'96	'01	'96	'01
G	<i>Agropyron spicatum</i>	a12	a20	b74	b86	6	11	33	36	1.20	4.80
G	<i>Bromus brizaeformis</i> (a)	-	-	b17	a1	-	-	6	1	.08	.01
G	<i>Bromus japonicus</i> (a)	-	-	b265	a77	-	-	83	34	8.22	.42
G	<i>Bromus tectorum</i> (a)	-	-	b365	a236	-	-	98	78	29.79	6.64
G	<i>Oryzopsis hymenoides</i>	-	-	8	-	-	-	3	-	.39	-
G	<i>Poa bulbosa</i>	-	-	-	1	-	-	-	1	-	.03
G	<i>Poa fendleriana</i>	-	-	3	-	-	-	1	-	.00	-
G	<i>Poa secunda</i>	a-	b11	b30	b10	-	5	11	7	.13	.11
Total for Annual Grasses		0	0	647	314	0	0	187	113	38.10	7.07
Total for Perennial Grasses		12	31	115	97	6	16	48	44	1.72	4.94
Total for Grasses		12	31	762	411	6	16	235	157	39.82	12.02
F	<i>Achillea millefolium</i>	1	1	-	1	1	1	-	1	-	.03
F	<i>Agoseris glauca</i>	-	3	8	5	-	1	3	3	.04	.02
F	<i>Alyssum alyssoides</i> (a)	-	-	96	109	-	-	36	47	.43	1.47
F	<i>Allium</i> spp.	a-	a-	a-	b97	-	-	-	40	-	.71
F	<i>Amsinckia menziesii</i>	a-	a-	a-	b39	-	-	-	15	-	.97
F	<i>Artemisia ludoviciana</i>	b90	a30	a19	a15	36	15	9	6	.48	.52
F	<i>Astragalus</i> spp.	8	-	1	-	3	-	1	-	.00	-
F	<i>Balsamorhiza sagittata</i>	-	3	-	-	-	1	-	-	-	-
F	<i>Camelina microcarpa</i> (a)	-	-	a2	b44	-	-	1	23	.01	.34
F	<i>Castilleja</i> spp.	-	-	4	1	-	-	2	1	.03	.03
F	<i>Cirsium undulatum</i>	a1	b12	a2	ab12	1	9	1	4	.01	.81
F	<i>Collomia grandiflora</i> (a)	-	-	a-	b14	-	-	-	6	-	.13
F	<i>Collomia linearis</i> (a)	-	-	a9	b43	-	-	4	20	.02	.54
F	<i>Collinsia parviflora</i> (a)	-	-	-	14	-	-	-	4	-	.07
F	<i>Crepis acuminata</i>	-	-	-	2	-	-	-	1	-	.03
F	<i>Cryptantha</i> spp.	2	-	-	7	1	-	-	3	-	.01
F	<i>Cymopterus</i> spp.	-	-	-	3	-	-	-	2	-	.06
F	<i>Descurainia pinnata</i> (a)	-	-	-	3	-	-	-	2	-	.01
F	<i>Draba</i> spp. (a)	-	-	a-	b17	-	-	-	7	-	.08

T y p e	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'84	'90	'96	'01	'84	'90	'96	'01	'96	'01
F	<i>Epilobium brachycarpum</i> (a)	-	-	a-	b93	-	-	-	37	-	1.11
F	<i>Erodium cicutarium</i> (a)	-	-	a7	b48	-	-	4	17	.04	1.79
F	<i>Galium aparine</i> (a)	-	-	a14	b101	-	-	6	35	.03	1.47
F	<i>Hackelia patens</i>	-	3	5	6	-	1	4	3	.19	.39
F	<i>Holosteum umbellatum</i> (a)	-	-	a39	b59	-	-	16	22	.08	.50
F	<i>Lathyrus brachycalyx</i>	a-	a1	a12	b52	-	1	7	24	.11	.80
F	<i>Lappula occidentalis</i> (a)	-	-	a1	b10	-	-	1	6	.00	.42
F	<i>Lactuca serriola</i>	a-	a3	b28	b33	-	1	14	17	.09	.36
F	<i>Machaeranthera canescens</i>	a-	a-	b13	a-	-	-	6	-	.03	-
F	<i>Microsteris gracilis</i> (a)	-	-	a-	b40	-	-	-	17	-	.33
F	<i>Polygonum douglasii</i> (a)	-	-	-	5	-	-	-	2	-	.03
F	<i>Ranunculus testiculatus</i> (a)	-	-	-	6	-	-	-	3	-	.06
F	<i>Scutellaria antirrhinoides</i>	-	-	-	6	-	-	-	2	-	.07
F	<i>Sisymbrium altissimum</i> (a)	-	-	a4	b21	-	-	2	9	.06	.73
F	<i>Thlaspi montanum</i>	a-	a-	a-	b12	-	-	-	5	-	.22
F	<i>Tragopogon dubius</i>	75	100	94	85	32	45	42	42	1.52	1.14
F	<i>Veronica biloba</i> (a)	-	-	a5	b62	-	-	2	25	.01	1.75
F	<i>Zigadenus paniculatus</i>	-	1	-	-	-	1	-	-	-	-
Total for Annual Forbs		0	0	177	689	0	0	72	282	0.68	10.89
Total for Perennial Forbs		177	157	186	376	74	76	89	169	2.54	6.21
Total for Forbs		177	157	363	1065	74	76	161	451	3.23	17.10

Values with different subscript letters are significantly different at alpha = 0.10 (annuals excluded)

BROWSE TRENDS --
Herd unit 05 , Study no: 1

T y p e	Species	Strip Frequency		Average Cover %	
		'96	'01	'96	'01
B	Amelanchier alnifolia	5	4	.96	.06
B	Artemisia tridentata vaseyana	50	46	10.23	7.46
B	Chrysothamnus nauseosus albicaulis	2	0	.38	.03
B	Chrysothamnus viscidiflorus viscidiflorus	4	3	.18	.38
B	Gutierrezia sarothrae	37	21	1.69	.49
B	Quercus gambelii	43	42	9.25	5.39
B	Symphoricarpos oreophilus	8	7	2.91	3.81
Total for Browse		149	123	25.60	17.64

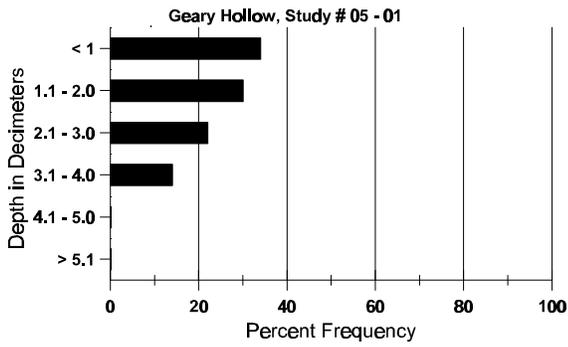
BASIC COVER --
Herd unit 05 , Study no: 1

Cover Type	Nested Frequency		Average Cover %			
	'96	'01	'84	'90	'96	'01
Vegetation	387	358	1.50	6.75	63.76	51.31
Rock	239	253	19.50	20.75	14.53	17.57
Pavement	71	200	4.75	7.75	1.61	6.43
Litter	398	353	65.75	58.25	60.35	34.94
Cryptogams	3	-	0	0	.00	0
Bare Ground	70	187	8.50	6.50	1.63	12.53

SOIL ANALYSIS DATA --
Herd Unit 05, Study no: 01, Geary Hollow

Effective rooting depth (in)	Temp °F (depth)	PH	%sand	%silt	%clay	%OM	PPM P	PPM K	dS/m
11.0	75.4 (10.9)	7.6	45.7	21.0	33.3	2.6	13.0	124.8	.6

Stoniness Index



PELLET GROUP FREQUENCY --

Herd unit 05 , Study no: 1

Type	Quadrat Frequency	
	'96	'01
Elk	-	1
Deer	5	4
Cattle	-	-

Pellet Transect	
Pellet Groups per Acre	Days Use per Acre (ha)
'01	'01
9	1 (2)
226	17 (43)
9	-

BROWSE CHARACTERISTICS --

Herd unit 05 , Study no: 1

A Y G R E	Form Class (No. of Plants)	Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total								
		1	2	3	4		1	2									
Amelanchier alnifolia																	
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	1	-	-	-	-	1	-	-	-	20		1	
	01	2	-	-	-	-	-	-	-	2	-	-	-	40		2	
M	84	-	-	2	-	-	-	-	-	2	-	-	-	133	10	7	2
	90	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	-	1	2	-	-	1	-	-	4	-	-	-	80	22	38	4
	01	-	-	3	-	-	1	-	-	4	-	-	-	80	20	27	4
D	84	-	-	4	-	-	-	-	-	-	-	4	-	266		4	
	90	-	1	2	-	-	1	-	-	-	-	-	4	266		4	
	96	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	01	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
X	84	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	20		1	
	01	-	-	-	-	-	-	-	-	-	-	-	-	20		1	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
'84		00%			100%			67%			-33%						
'90		25%			75%			100%			-62%						
'96		20%			60%			00%			+17%						
'01		00%			67%			00%									
Total Plants/Acre (excluding Dead & Seedlings)										'84	399	Dec:	67%				
										'90	266		100%				
										'96	100		0%				
										'01	120		0%				

A Y G R E	Form Class (No. of Plants)	Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total							
		1	2	3	4		1	2								
<i>Artemisia tridentata vaseyana</i>																
Y	84	-	7	-	-	-	-	-	-	7	-	-	466		7	
	90	4	-	-	-	-	-	-	-	4	-	-	266		4	
	96	9	2	-	-	-	-	-	-	11	-	-	220		11	
	01	4	-	-	-	-	-	-	-	4	-	-	80		4	
M	84	-	5	6	-	-	-	-	-	11	-	-	733	18	15	11
	90	14	5	-	-	-	-	-	-	19	-	-	1266	24	26	19
	96	29	19	7	2	-	-	-	-	57	-	-	1140	36	50	57
	01	49	1	-	-	-	-	2	-	52	-	-	1040	26	34	52
D	84	-	2	-	-	-	-	-	-	2	-	-	133		2	
	90	1	1	-	-	-	-	-	-	2	-	-	133		2	
	96	5	4	2	4	-	-	-	-	9	-	2	300		15	
	01	8	3	-	-	-	-	-	-	10	-	-	220		11	
X	84	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	560		28	
	01	-	-	-	-	-	-	-	-	-	-	-	220		11	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>					
'84		70%			30%			00%			+20%					
'90		24%			00%			00%			- 0%					
'96		30%			11%			07%			-19%					
'01		06%			00%			01%								
Total Plants/Acre (excluding Dead & Seedlings)										'84	1332	Dec:	10%			
										'90	1665		8%			
										'96	1660		18%			
										'01	1340		16%			
<i>Chrysothamnus nauseosus albicaulis</i>																
M	84	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	2	-	-	-	-	-	-	-	2	-	-	40	20	17	2
	01	-	-	-	-	-	-	-	-	-	-	-	0	27	53	0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>					
'84		00%			00%			00%								
'90		00%			00%			00%								
'96		00%			00%			00%								
'01		00%			00%			00%								
Total Plants/Acre (excluding Dead & Seedlings)										'84	0	Dec:	-			
										'90	0		-			
										'96	40		-			
										'01	0		-			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Chrysothamnus viscidiflorus viscidiflorus																		
M	'84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	'90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	'96	5	-	-	1	-	-	-	-	-	6	-	-	-	120	10	20	6
	'01	3	-	-	-	-	-	-	-	-	3	-	-	-	60	17	25	3
D	'84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	'90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	'96	1	-	-	-	-	-	-	-	-	-	-	-	1	20			1
	'01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			14%			-57%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	0%			
												'90	0		0%			
												'96	140		14%			
												'01	60		0%			

A Y G R E	Form Class (No. of Plants)	Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total		
		1	2	3	4		1	2			
Gutierrezia sarothrae											
S	84	-	-	-	-	-	-	-	0		0
	90	-	-	-	-	-	-	-	0		0
	96	2	-	-	-	-	-	-	40		2
	01	-	-	-	-	-	-	-	0		0
Y	84	2	2	-	-	-	-	-	266		4
	90	29	-	-	-	-	-	-	1933		29
	96	11	-	-	2	-	-	-	260		13
	01	7	-	-	-	-	-	-	140		7
M	84	6	-	-	-	-	-	-	400	15 12	6
	90	24	-	-	-	-	-	-	1600	9 10	24
	96	93	-	-	5	-	-	-	1960	12 11	98
	01	39	-	-	-	-	-	-	780	10 10	39
D	84	-	-	-	-	-	-	-	0		0
	90	2	-	-	-	-	-	-	133		2
	96	-	-	-	-	-	-	-	0		0
	01	4	-	-	-	-	-	-	80		4
X	84	-	-	-	-	-	-	-	0		0
	90	-	-	-	-	-	-	-	0		0
	96	-	-	-	-	-	-	-	20		1
	01	-	-	-	-	-	-	-	20		1
% Plants Showing		<u>Moderate Use</u>		<u>Heavy Use</u>		<u>Poor Vigor</u>		<u>%Change</u>			
'84		20%		00%		00%		+82%			
'90		00%		00%		02%		-39%			
'96		00%		00%		00%		-55%			
'01		00%		00%		04%					
Total Plants/Acre (excluding Dead & Seedlings)						'84	666	Dec:	0%		
						'90	3666		4%		
						'96	2220		0%		
						'01	1000		8%		
Purshia tridentata											
M	84	-	-	-	-	-	-	-	0	- -	0
	90	-	-	-	-	-	-	-	0	- -	0
	96	-	-	-	-	-	-	-	0	- -	0
	01	-	-	-	-	-	-	-	0	6 16	0
% Plants Showing		<u>Moderate Use</u>		<u>Heavy Use</u>		<u>Poor Vigor</u>		<u>%Change</u>			
'84		00%		00%		00%					
'90		00%		00%		00%					
'96		00%		00%		00%					
'01		00%		00%		00%					
Total Plants/Acre (excluding Dead & Seedlings)						'84	0	Dec:	-		
						'90	0		-		
						'96	0		-		
						'01	0		-		

A G R E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Quercus gambelii																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	4	-	-	-	-	-	-	-	-	4	-	-	-	80			4
	01	2	-	-	1	-	-	-	-	-	3	-	-	-	60			3
Y	84	-	34	-	-	-	-	-	-	-	34	-	-	-	2266			34
	90	33	25	2	8	-	-	-	-	-	44	19	4	1	4533			68
	96	28	2	3	-	-	-	-	-	-	33	-	-	-	660			33
	01	93	-	-	4	-	-	5	-	-	102	-	-	-	2040			102
M	84	4	84	35	1	-	-	-	-	-	124	-	-	-	8266	23	9	124
	90	4	3	-	-	-	-	-	-	-	1	6	-	-	466	32	23	7
	96	25	73	8	-	2	-	-	-	-	108	-	-	-	2160	26	50	108
	01	84	8	-	5	-	-	5	3	-	105	-	-	-	2100	25	17	105
D	84	-	1	12	-	-	-	-	-	-	13	-	-	-	866			13
	90	9	16	3	-	-	-	-	-	-	7	13	2	6	1866			28
	96	1	-	7	-	-	-	-	-	-	7	-	-	1	160			8
	01	5	-	-	-	-	-	-	-	-	5	-	-	-	100			5
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	60			3
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	240			12
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		70%			27%			00%			-40%							
'90		43%			05%			13%			-57%							
'96		52%			12%			.67%			+30%							
'01		04%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	11398	Dec:	8%			
												'90	6865		27%			
												'96	2980		5%			
												'01	4240		2%			

A G R E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Symphoricarpos oreophilus																		
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	3	-	-	2	-	-	-	-	-	5	-	-	-	100			5
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	1	-	-	-	-	-	-	-	-	-	1	66	22	23	1
	96	8	1	-	1	-	-	-	-	-	10	-	-	-	200	21	49	10
	01	8	-	-	-	-	-	5	-	-	13	-	-	-	260	30	37	13
D	84	-	-	2	-	-	-	-	-	-	-	-	2	-	133			2
	90	-	1	-	-	-	-	-	-	-	1	-	-	-	66			1
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			100%			100%			- 1%							
'90		50%			50%			50%			+56%							
'96		07%			00%			00%			-13%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	133	Dec:	100%			
												'90	132		50%			
												'96	300		0%			
												'01	260		0%			