

GARDEN CITY CANYON - TREND STUDY NO. 2-16-11

Vegetation Type: Curleaf Mountain Mahogany

Range Type: Crucial Deer Winter, Substantial Elk Winter

NRCS Ecological Site Description: [Mountain Shallow Loam \(Mountain Big Sagebrush\), R047XA446UT](#)

Land Ownership: USFS

Elevation: 6,580 ft (2,006 m)

Aspect: Southeast

Slope: 38%

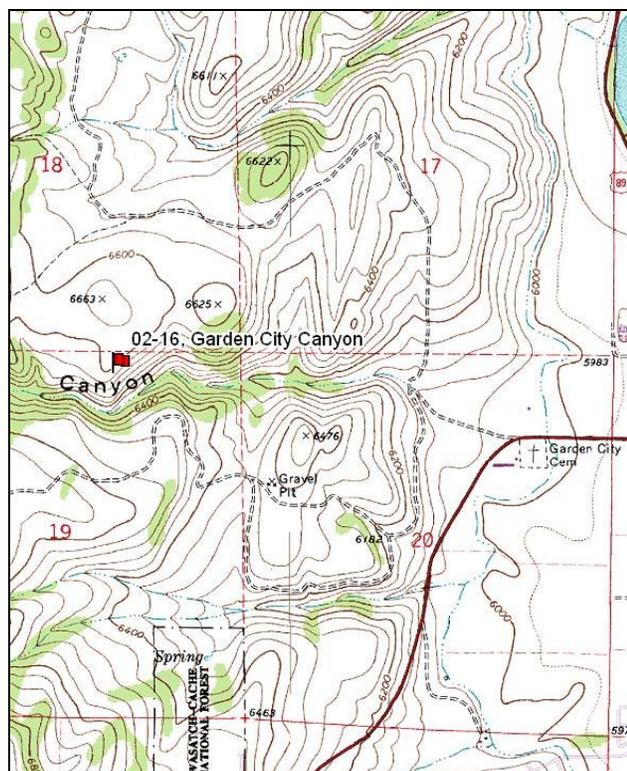
Transect bearing: 166° magnetic

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

Directions:

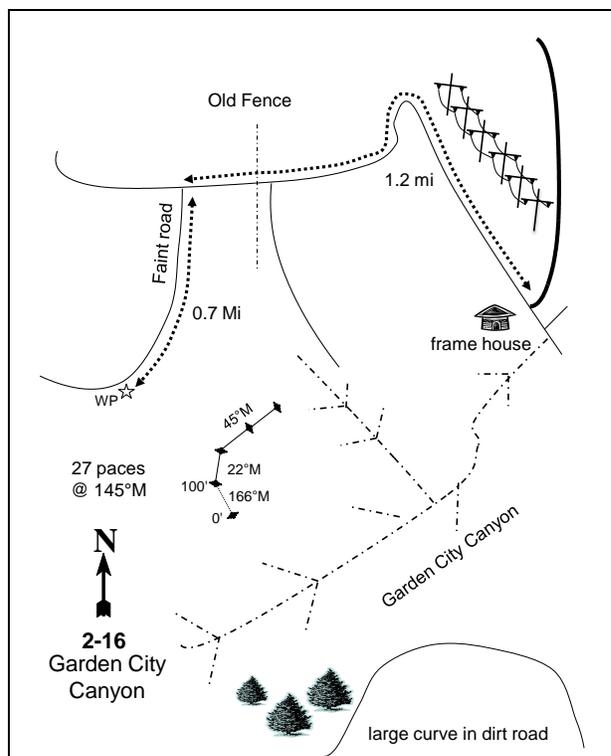
From Garden City, proceed west on US-89. Turn right at 525 W. Proceed 0.25 miles and turn right. While staying on the main road, continue for 1.2 miles to a fence. Turn onto a faint road immediately after the fence for 0.7 miles; stay right at the fork to the witness post on the left at the edge of the canyon. From the witness post, walk 27 paces at 145 degrees magnetic to the 0-foot stake of the baseline. The 0-foot stake is marked by browse tag #7936. Azimuth of the baseline is 166 degrees magnetic. Line 2 runs 22 degrees magnetic. Line 3 and 4 run 45 degrees magnetic.

Map Name: Garden City



Township: 14N Range: 5E Section: 19

Diagrammatic Sketch:



GPS: NAD 83, UTM 12S 464620 E 4644227 N

GARDEN CITY CANYON - TREND STUDY NO. 2-16

Site Information

Site Description: This study samples winter range on the north rim of Garden City Canyon in Rich County. The vegetation type is characterized by curlleaf mountain mahogany (*Cercocarpus ledifolius*) with an associated mixture of mountain brush. The knolls and hillsides of the area are dominated by curlleaf mountain mahogany, and the adjacent level areas are dominated by vigorous stands of mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and antelope bitterbrush (*Purshia tridentata*). The area is heavily occupied by deer and elk, and they seem to prefer the more exposed and less densely vegetated knolls and hillsides. Deer pellet groups were sampled in high abundance in 2001, but sampled in moderate abundance during the 2006 and 2011 sample years. A deer carcass was seen on site in 2011. Elk pellet groups were sampled in moderate abundance in all sample years except 2006 when pellet groups were sampled in high abundance. Moose pellet groups were reported as having low abundance in 2006 (Table - Pellet Group Data).

Browse: The browse composition includes 14 species of shrubs with seven species that are preferred by wildlife. The most conspicuous shrub, although not the most numerous, is curlleaf mountain mahogany. Many of the mahogany are tree-like in growth form and are unavailable to browsing. The majority of the mature plants are over 8 feet in height. Shrub density strips indicate a slight decrease in the population. Most of the tall mahogany has been highlined, but utilization of available plants is moderate to heavy. Smaller plants are heavily hedge and display a clubbed and armored growth form. The majority of the mahogany population consists of mature plants. Plants are vigorous and decadence is low within the population (Table - Browse Trends).

Other important browse species include a combination of low sagebrush (*Artemisia arbuscula*), mountain big sagebrush, bitterbrush, and serviceberry (*Amelanchier alnifolia*). Low sagebrush is much more abundant and widespread than the other shrubs. Utilization of low sagebrush was heavy in 1984, but use has been light to moderate in all other sample years. Low sagebrush is a vigorous, mature population, with moderate decadence. Low sagebrush has had minimal recruitment to the population over the course of the study years (Table - Browse Trends).

Herbaceous Understory: The herbaceous understory consists primarily of the perennial grasses bluebunch wheatgrass (*Agropyron spicatum*) and Sandberg bluegrass (*Poa secunda*). Other perennial grasses found on the site are prairie junegrass (*Koeleria cristata*), mutton bluegrass (*Poa fendleriana*), Kentucky bluegrass (*P. pratensis*), bottlebrush squirreltail (*Sitanion hystrix*), Letterman needlegrass (*Stipa lettermani*), and oniongrass (*Melica bulbosa*). The weedy annual grasses cheatgrass (*Bromus tectorum*) and Japanese brome (*B. japonicus*) are both found on the site and are very common. It was reported in 1996 that about half of the brome grasses were infected with smut, which may have contributed in the decline of nested frequency for cheatgrass. Forbs are a minor component of the herbaceous understory and few are perennial. Total cover for the perennial forb community has been near 1% and remained similar over the course of the study (Table - Herbaceous Trends).

Soil: The soil is part of the Foxol series, which are found on mountainsides and hillslopes. The parent material consists of colluviums and/or slope alluvium over residuum weathered from quartzite. The soil is well drained as the restrictive layer has moderately high permeability (Soil Survey Staff 2011). The soil texture is a clay loam with a soil reaction that is moderately acidic (pH of 5.8) (Table - Soil Analysis Data). Bare ground cover is moderately low. Adequate protective ground cover is provided by a moderate amount of vegetation and rock, and a high amount of vegetation litter (Table - Basic Cover). The soil erosion condition was classified as slight in 2006, but stable in 2001 and 2011.

Trend Assessments

Browse:

- **1984 to 1990 - stable (0):** The density for the preferred species curleaf mountain mahogany increased 31% from 432 plants/acre to 565 plants/acre. Decadence increased to 29% of the mahogany population. Poor vigor was not observed within the population. The majority of the mature age class is unavailable to big game due to height. Low sagebrush decreased in density 6% from 1,731 plants/acre to 1,631 plants/acre. Low sagebrush decadence decreased from 35% to 29%, and poor vigor decreased from 19% to 12% of the population.
- **1990 to 1996 - stable (0):** Differences in density may be related to the larger sample area used in 1996; therefore, trend was determined using other parameters. Decadence within the mahogany population decreased to 21%. Low sagebrush decreased to 11% decadence within the population. Low sagebrush was vigorous with 2% of the population displaying poor vigor.
- **1996 to 2001 - slightly down (-1):** The density for mountain mahogany decreased 21% from 280 plants/acre to 220 plants/acre. Decadence within the mahogany population increased to 36%, and poor vigor increased to 18% of the population. Low sagebrush density decreased 17% from 2,600 plants/acre to 2,160 plants/acre. Low sagebrush increased in decadence to 20%, and poor vigor increased within the population to 5%.
- **2001 to 2006 - slightly down (-1):** The density for mahogany decreased 36% to 140 plants/acre. Decadence and poor vigor decreased and were not observed within the population. Low sagebrush remained similar in density at 2,140 plants/acre. Decadence decreased to 19%. Poor vigor increased to 12%.
- **2006 to 2011 - slightly up (+1):** Mountain mahogany increased in density by 57% to 220 plants/acre. Decadence increased to 9% of the population, while poor vigor was not observed. The young age class comprised 27% of the population. Low sagebrush remained similar in density at 2,160 plants/acre. Low sagebrush decadence increased to 23%, while poor vigor within the low sagebrush population was maintained at 12%.

Grass:

- **1984 to 1990 - up (+2):** The sum of nested frequency for perennial grasses increased 26%. The perennial species bluebunch wheatgrass was the dominant species. Sandberg bluegrass increased significantly in nested frequency.
- **1990 to 1996 - stable (0):** The sum of nested frequency for perennial grasses remained similar. The population for bluebunch wheatgrass and Sandberg bluegrass remained stable, and provided 7% and 3% cover, respectively. Annual grasses were included in the sample for the first time in 1996. Cheatgrass was the most abundant grass species, and had a cover of 19%.
- **1996 to 2001 - up (+2):** The sum of nested frequency for perennial grasses increased 34%. Bluebunch wheatgrass maintained a stable population, with a cover of 8%. Sandberg bluegrass increased significantly in nested frequency, and cover increased to 8%. Cheatgrass decreased significantly in nested frequency, and decreased in cover to 2%.
- **2001 to 2006 - stable (0):** The sum of nested frequency for perennial grasses remained similar. Bluebunch wheatgrass and Sandberg bluegrass maintained stable populations, and cover remained similar at 7% and 8%, respectively. Oniongrass was sampled for the first time, and had a cover of less than 1%. Annual grasses did not change in composition.
- **2006 to 2011 - stable (0):** The sum of nested frequency of perennial grasses remained similar. Bluebunch wheatgrass increased significantly in nested frequency, and increased in cover to 11%; while Sandberg bluegrass decreased significantly in nested frequency, and decreased in cover to 6%. The weedy annual Japanese brome increased significantly in nested frequency and increased in cover from less than 1% to 2%.

Forb:

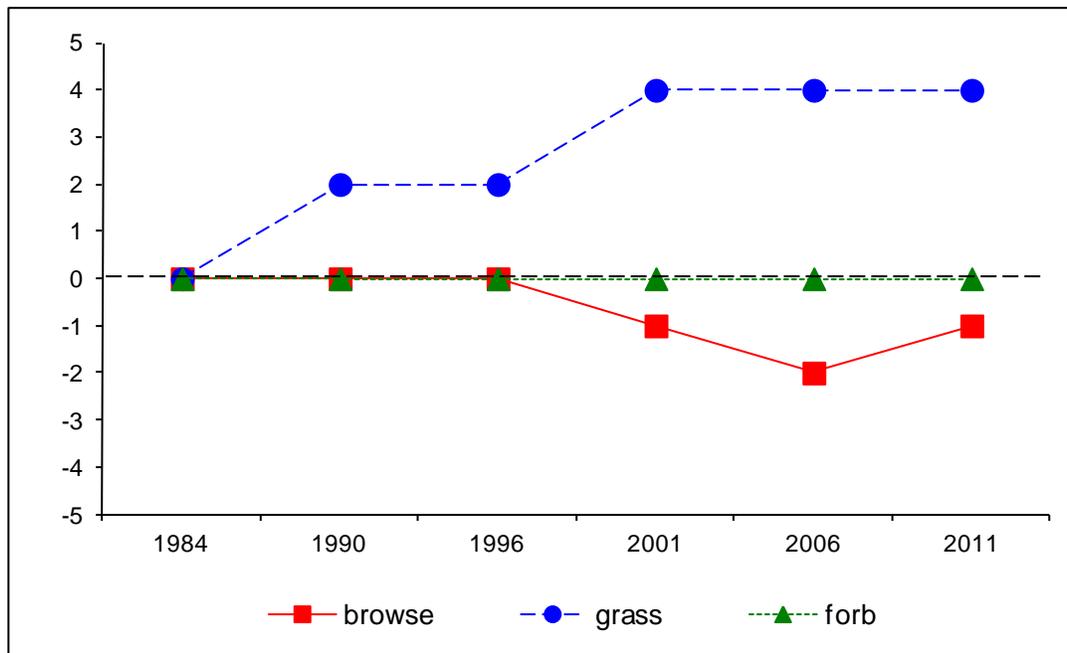
- **1984 to 1990 - stable (0):** Perennial forbs are rare on the site.
- **1990 to 1996 - stable (0):** Perennial forbs remained rare. Annual forb species were included in the sample for the first time in 1996 and were abundant.
- **1996 to 2001 - stable 0):** Perennial forbs remained rare on the site. Annual forbs increased substantially in sum of nested frequency.
- **2001 to 2006 - stable (0):** Perennial forbs remained rare on the site. Sum of nested frequency of annual forbs remained similar.
- **2006 to 2011 - stable (0):** Perennial forbs remained rare on the site. Sum of nested frequency and cover of annual forbs increased markedly.

DEER DESIRABLE COMPONENTS INDEX - MID-LEVEL POTENTIAL SCALE --
Management unit 2, study no: 16

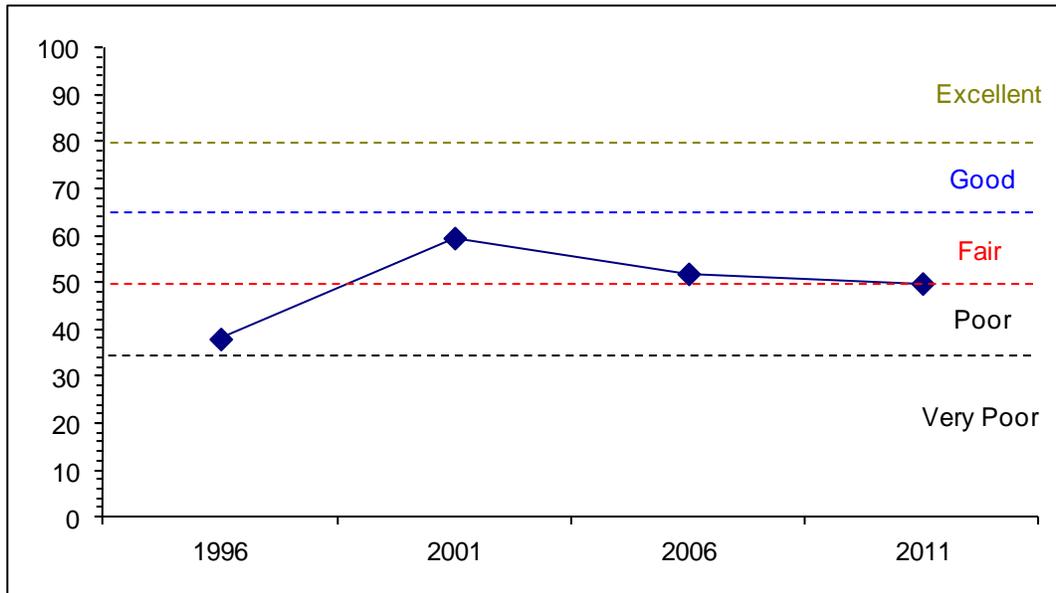
Year	Preferred Browse Cover	Preferred Browse Decadence	Preferred Browse Young	Perennial Grass Cover (-POBU)	Annual Grass Cover	Perennial Forb Cover	Noxious Weeds	Total Score	Ranking
96	17.0	10.6	2.9	21.1	-15.1	1.6	0.0	38.0	Poor
01	17.2	9.2	1.8	30.0	-1.8	3.2	0.0	59.5	Fair
06	14.2	7.8	0.0	29.8	-2.0	2.1	0.0	51.9	Poor-Fair
11	12.9	7.6	1.3	30.0	-4.3	2.3	0.0	49.8	Poor-Fair

Trend Summary

CUMULATIVE RANGE TREND ASSESSMENT--
Management unit 2 Study no: 16



DEER DESIRABLE COMPONENTS INDEX TREND, MID-LEVEL POTENTIAL--
 Management unit 2, Study no: 16



HERBACEOUS TRENDS--
 Management unit 02, Study no: 16

Type	Species	Nested Frequency						Average Cover %			
		'84	'90	'96	'01	'06	'11	'96	'01	'06	'11
G	<i>Agropyron spicatum</i>	a157	ab167	ab165	ab176	a157	b203	7.06	8.40	6.54	10.72
G	<i>Bromus brizaeformis</i> (a)	-	-	-	-	-	1	-	-	-	.00
G	<i>Bromus japonicus</i> (a)	-	-	a55	a24	a43	b167	1.23	.10	.13	2.15
G	<i>Bromus tectorum</i> (a)	-	-	b341	a142	a157	a149	18.94	2.33	2.54	3.59
G	<i>Koeleria cristata</i>	7	-	-	3	3	3	-	.03	.06	.04
G	<i>Melica bulbosa</i>	-	-	-	-	11	5	-	-	.07	.06
G	<i>Poa bulbosa</i>	-	-	-	-	-	3	-	-	-	.02
G	<i>Poa fendleriana</i>	a3	a-	a-	a-	a-	b19	-	-	.03	.16
G	<i>Poa pratensis</i>	b25	a-	a-	a-	a-	a2	-	-	-	.15
G	<i>Poa secunda</i>	a44	b131	b137	c226	c217	b147	3.46	7.52	8.17	5.83
G	<i>Sitanion hystrix</i>	-	-	1	-	-	-	.03	-	-	-
G	<i>Stipa lettermani</i>	-	-	-	1	-	-	-	.03	-	.00
Total for Annual Grasses		0	0	396	166	200	317	20.17	2.44	2.67	5.75
Total for Perennial Grasses		236	298	303	406	388	382	10.55	15.98	14.88	17.00
Total for Grasses		236	298	699	572	588	699	30.72	18.43	17.55	22.75
F	<i>Agoseris glauca</i>	4	1	4	13	12	2	.00	.07	.08	.01
F	<i>Alyssum alyssoides</i> (a)	-	-	b122	b150	a69	c218	.56	.67	.14	.81
F	<i>Arabis</i> sp.	-	3	4	4	4	12	.04	.01	.01	.07
F	<i>Artemisia ludoviciana</i>	1	-	-	-	-	-	-	-	-	-
F	<i>Balsamorhiza sagittata</i>	-	-	-	-	-	-	-	.03	.00	-
F	<i>Calochortus nuttallii</i>	-	6	-	-	-	-	-	-	-	-
F	<i>Camelina microcarpa</i> (a)	-	-	3	6	14	4	.00	.07	.03	.02
F	<i>Cirsium undulatum</i>	7	7	11	5	-	4	.28	.36	-	.09

Type	Species	Nested Frequency						Average Cover %			
		'84	'90	'96	'01	'06	'11	'96	'01	'06	'11
F	<i>Collinsia parviflora</i> (a)	-	-	a4	b135	b101	b117	.01	.42	.41	.68
F	<i>Collomia linearis</i> (a)	-	-	-	3	2	-	-	.03	.01	-
F	<i>Comandra pallida</i>	19	24	24	24	18	20	.15	.33	.31	.33
F	<i>Crepis acuminata</i>	a-	a1	ab7	bc18	abc19	c26	.24	.72	.58	.45
F	<i>Descurainia pinnata</i> (a)	-	-	-	3	-	2	-	.01	-	.01
F	<i>Draba verna</i> (a)	-	-	a-	a15	a36	b91	-	.07	.07	.66
F	<i>Epilobium brachycarpum</i> (a)	-	-	ab48	a29	b69	b73	.28	.14	.37	.67
F	<i>Erigeron divergens</i>	-	1	-	-	-	-	-	-	-	-
F	<i>Erigeron pumilus</i>	-	-	-	-	3	-	-	-	.00	-
F	<i>Eriogonum umbellatum</i>	-	-	-	-	3	3	-	.00	.03	.15
F	<i>Erodium cicutarium</i> (a)	-	-	-	8	3	3	-	.09	.15	.01
F	<i>Galium aparine</i> (a)	-	-	-	-	-	6	-	-	-	.04
F	<i>Gayophytum ramosissimum</i> (a)	-	-	a1	a-	b46	a7	.00	-	.23	.01
F	<i>Gilia</i> sp. (a)	-	-	-	-	-	7	-	-	-	.01
F	<i>Holosteum umbellatum</i> (a)	-	-	a-	a1	a6	b19	-	.00	.02	.07
F	<i>Lactuca serriola</i> (a)	-	-	-	-	-	6	-	-	-	.01
F	<i>Lappula occidentalis</i> (a)	-	-	a2	a1	a16	b51	.00	.00	.03	.28
F	<i>Microsteris gracilis</i> (a)	-	-	a-	c64	c67	b27	-	.22	.18	.07
F	<i>Pedicularis centranthera</i>	-	-	-	-	-	1	-	-	-	.00
F	<i>Pellaea breweri</i>	5	-	-	-	-	-	-	-	-	-
F	<i>Penstemon</i> sp.	-	1	-	-	-	-	-	-	-	-
F	<i>Petradoria pumila</i>	-	-	1	-	-	-	.03	.03	-	.03
F	<i>Phlox longifolia</i>	a-	a2	a-	a1	b16	a-	-	.00	.03	-
F	<i>Polygonum douglasii</i> (a)	-	-	a3	a2	a-	b20	.00	.01	-	.14
F	<i>Sisymbrium altissimum</i> (a)	-	-	3	-	-	7	.03	.03	-	.19
F	<i>Tragopogon dubius</i> (a)	b15	a4	a6	ab8	a3	a-	.01	.06	.01	.00
F	<i>Wyethia amplexicaulis</i>	1	3	3	-	-	-	.03	-	-	-
Total for Annual Forbs		15	4	192	425	432	658	0.90	1.87	1.67	3.71
Total for Perennial Forbs		37	49	54	65	75	68	0.77	1.59	1.06	1.16
Total for Forbs		52	53	246	490	507	726	1.68	3.46	2.73	4.87

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

BROWSE TRENDS--

Management unit 02, Study no: 16

Type	Species	Strip Frequency				Average Cover %			
		'96	'01	'06	'11	'96	'01	'06	'11
B	Amelanchier alnifolia	11	8	6	6	.41	.30	.30	.56
B	Artemisia arbuscula	56	54	51	55	7.85	8.18	6.48	7.54
B	Artemisia tridentata vaseyana	0	4	3	3	-	1.16	1.16	.38
B	Cercocarpus ledifolius	14	10	7	10	3.65	1.72	1.67	.39
B	Eriogonum heracleoides	2	2	2	3	-	-	-	-
B	Eriogonum microthecum	1	0	1	1	-	.15	.38	-
B	Juniperus scopulorum	0	0	0	0	.88	1.02	1.41	.38
B	Mahonia repens	7	10	9	7	.03	.48	.07	.45
B	Opuntia sp.	3	3	3	4	.18	.38	.63	.15
B	Pachistima myrsinites	3	4	2	1	.18	.18	-	.15
B	Purshia tridentata	6	6	6	7	.71	1.64	.81	1.08
B	Symphoricarpos oreophilus	16	16	14	12	1.72	3.23	1.98	2.16
Total for Browse		119	117	104	109	15.64	18.46	14.91	13.25

CANOPY COVER, LINE INTERCEPT--

Management unit 02, Study no: 16

Species	Percent Cover		
	'01	'06	'11
Amelanchier alnifolia	-	.45	.88
Artemisia arbuscula	-	8.81	10.96
Artemisia tridentata vaseyana	-	.51	.21
Cercocarpus ledifolius	15.60	17.06	17.28
Eriogonum heracleoides	-	.08	-
Eriogonum microthecum	-	.11	-
Juniperus scopulorum	.60	2.28	1.00
Mahonia repens	-	.28	.58
Opuntia sp.	-	.36	-
Pachistima myrsinites	-	-	.30
Purshia tridentata	-	1.56	1.66
Symphoricarpos oreophilus	-	3.23	3.53

KEY BROWSE ANNUAL LEADER GROWTH--

Management unit 02, Study no: 16

Species	Average leader growth (in)		
	'01	'06	'11
Cercocarpus ledifolius	3.3	3.0	2.1
Purshia tridentata	-	2.8	1.9

POINT-QUARTER TREE DATA--

Management unit 02, Study no: 16

Species	Trees per Acre			
	'96	'01	'06	'11
Cercocarpus ledifolius	67	-	70	68

Average diameter (in)			
'96	'01	'06	'11
6	-	6.3	6

BASIC COVER--

Management unit 02, Study no: 16

Cover Type	Average Cover %					
	'84	'90	'96	'01	'06	'11
Vegetation	2.25	10.25	50.30	37.32	33.77	38.97
Rock	33.75	28.00	20.68	22.32	27.85	25.17
Pavement	.50	.25	.58	3.29	1.12	2.01
Litter	58.75	55.00	56.87	44.82	54.39	43.19
Cryptogams	1.75	1.75	.48	.56	.31	.16
Bare Ground	3.00	4.75	2.30	8.35	6.93	7.25

SOIL ANALYSIS DATA --

Management unit 02, Study no: 16, Study Name: Garden City Canyon

Effective rooting depth (in)	pH	Clay Loam			%OM	PPM P	PPM K	ds/m
		%sand	%silt	%clay				
9.0	5.8	32.6	39.1	28.4	4.7	31.5	259.2	0.4

PELLET GROUP DATA--

Management unit 02, Study no: 16

Type	Quadrat Frequency				Days use per acre (ha)		
	'96	'01	'06	'11	'01	'06	'11
Rabbit	6	8	3	4	-	-	-
Elk	25	10	29	10	16 (40)	67 (165)	15 (38)
Deer	19	36	36	23	55 (136)	23 (56)	38 (94)

BROWSE CHARACTERISTICS--

Management unit 02, Study no: 16

Year	Plants per Acre (excluding seedlings)	Age class distribution			Seedling (plants/acre)	Utilization			Average Height Crown (in)
		% Young	% Mature	% Decadent		% moderate	% heavy	% poor vigor	
Amelanchier alnifolia									
84	665	35	50	15	-	30	35	0	31/33
90	498	20	13	67	33	33	40	20	35/25
96	220	18	55	27	-	64	0	36	27/26
01	200	50	40	10	-	60	20	0	26/28
06	140	0	86	14	-	14	57	0	25/29
11	140	0	100	0	-	43	57	0	31/42
Artemisia arbuscula									
84	1731	6	60	35	66	58	40	19	13/26
90	1631	10	61	29	-	16	2	12	17/16
96	2600	5	84	11	-	18	2	2	13/26
01	2160	2	78	20	-	8	0	5	13/29
06	2140	0	81	19	-	0	3	12	10/24
11	2160	2	75	23	320	41	2	12	11/29

		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 vaseyana</i>										
84	0	0	0	0	-	0	0	0	-/-	
90	0	0	0	0	-	0	0	0	-/-	
96	0	0	0	0	-	0	0	0	-/-	
01	100	0	80	20	-	0	0	0	20/29	
06	60	0	33	67	-	0	0	67	32/57	
11	80	0	25	75	80	75	25	25	30/61	
<i>Cercocarpus ledifolius</i>										
84	432	8	92	0	133	0	23	0	68/74	
90	565	29	41	29	33	12	29	0	183/83	
96	280	7	71	21	-	7	14	0	-/-	
01	220	9	55	36	-	9	27	18	46/46	
06	140	0	100	0	180	0	0	0	-/-	
11	220	27	64	9	420	0	0	0	31/45	
<i>Chrysothamnus viscidiflorus viscidiflorus</i>										
84	0	0	0	-	-	0	0	0	-/-	
90	0	0	0	-	-	0	0	0	-/-	
96	0	0	0	-	-	0	0	0	-/-	
01	0	0	0	-	-	0	0	0	-/-	
06	0	0	0	-	-	0	0	0	18/52	
11	0	0	0	-	-	0	0	0	-/-	
<i>Eriogonum heracleoides</i>										
84	0	0	0	-	-	0	0	0	-/-	
90	0	0	0	-	-	0	0	0	-/-	
96	40	0	100	-	-	0	0	0	-/-	
01	40	0	100	-	-	0	0	0	16/9	
06	60	0	100	-	-	0	0	0	5/11	
11	80	0	100	-	-	0	0	0	6/19	
<i>Eriogonum microthecum</i>										
84	0	0	0	-	-	0	0	0	-/-	
90	0	0	0	-	-	0	0	0	-/-	
96	20	0	100	-	-	0	0	0	10/26	
01	0	0	0	-	-	0	0	0	12/22	
06	20	0	100	-	-	0	0	0	-/-	
11	40	0	100	-	-	0	0	0	9/20	
<i>Juniperus scopulorum</i>										
84	66	50	50	-	-	50	0	0	67/83	
90	66	50	50	-	-	0	0	0	118/98	
96	0	0	0	-	-	0	0	0	-/-	
01	0	0	0	-	-	0	0	0	-/-	
06	0	0	0	-	-	0	0	0	-/-	
11	0	0	0	-	-	0	0	0	-/-	

Year	Plants per Acre (excluding seedlings)	Age class distribution			Seedling (plants/acre)	Utilization		% poor vigor	Average Height Crown (in)
		% Young	% Mature	% Decadent		% moderate	% heavy		
<i>Mahonia repens</i>									
84	2465	31	69	-	-	0	0	0	8/6
90	4265	12	88	-	199	3	0	0	7/4
96	800	0	100	-	-	0	0	0	4/6
01	2140	0	100	-	-	0	0	0	3/4
06	2260	0	100	-	-	0	0	0	5/5
11	820	0	100	-	-	0	0	0	4/40
<i>Opuntia sp.</i>									
84	0	0	0	0	-	0	0	0	-/-
90	0	0	0	0	-	0	0	0	-/-
96	100	0	100	0	-	0	0	0	6/29
01	160	13	88	0	-	0	0	0	5/15
06	120	0	83	17	-	0	0	0	5/20
11	140	0	71	29	-	0	0	57	7/17
<i>Pachistima myrsinites</i>									
84	33	0	100	-	-	0	0	0	6/7
90	0	0	0	-	-	0	0	0	-/-
96	180	33	67	-	-	0	0	0	7/12
01	140	43	57	-	-	0	0	0	5/7
06	40	0	100	-	-	0	0	0	9/14
11	140	0	100	-	-	0	0	0	18/23
<i>Purshia tridentata</i>									
84	0	0	0	0	-	0	0	0	-/-
90	132	50	25	25	-	0	25	0	24/33
96	140	0	86	14	-	43	57	0	16/36
01	120	0	100	0	-	50	17	0	18/40
06	120	0	33	67	-	33	50	50	14/39
11	160	0	63	38	-	50	50	25	19/47
<i>Ribes sp.</i>									
84	0	0	0	-	-	0	0	0	-/-
90	0	0	0	-	-	0	0	0	-/-
96	0	0	0	-	-	0	0	0	-/-
01	0	0	0	-	-	0	0	0	-/-
06	0	0	0	-	-	0	0	0	-/-
11	0	0	0	-	-	0	0	0	14/78
<i>Symphoricarpos oreophilus</i>									
84	99	33	67	0	-	0	0	0	18/26
90	199	17	83	0	-	0	0	0	15/28
96	460	22	70	9	-	4	0	4	19/37
01	400	0	95	5	-	0	0	5	27/52
06	600	7	87	7	-	0	0	13	21/34
11	260	15	85	0	-	15	0	0	21/39