

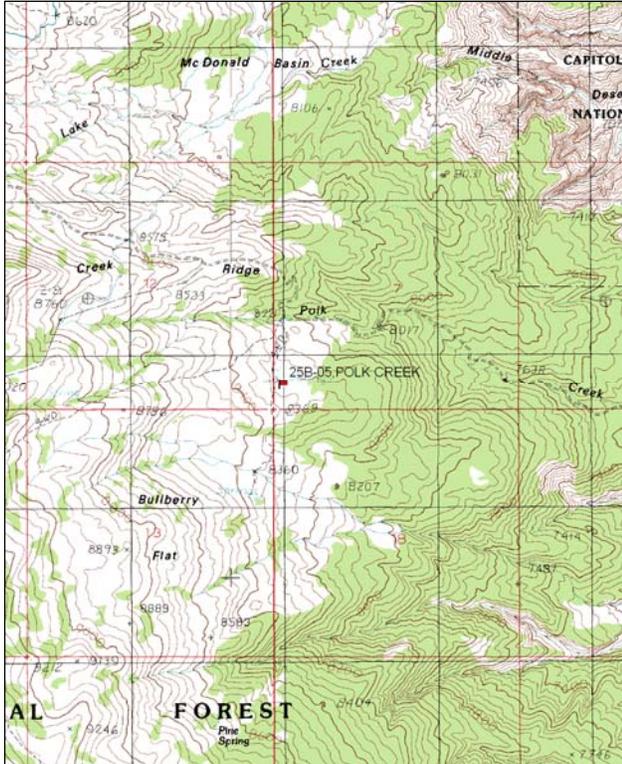
POLK CREEK - TREND STUDY NO. 25B-5-09

Vegetation Type: Mixed Mountain Brush
Range Type: Crucial Deer Winter, Crucial Elk Winter
NRCS Ecological Site Description: Not Available
Land Ownership: USFS
Elevation: 8,400 ft (2,560 m)
Aspect: Northeast
Slope: 0%-10%
Transect bearing: 165 degrees magnetic
Belt placement: line 1 (11& 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft)

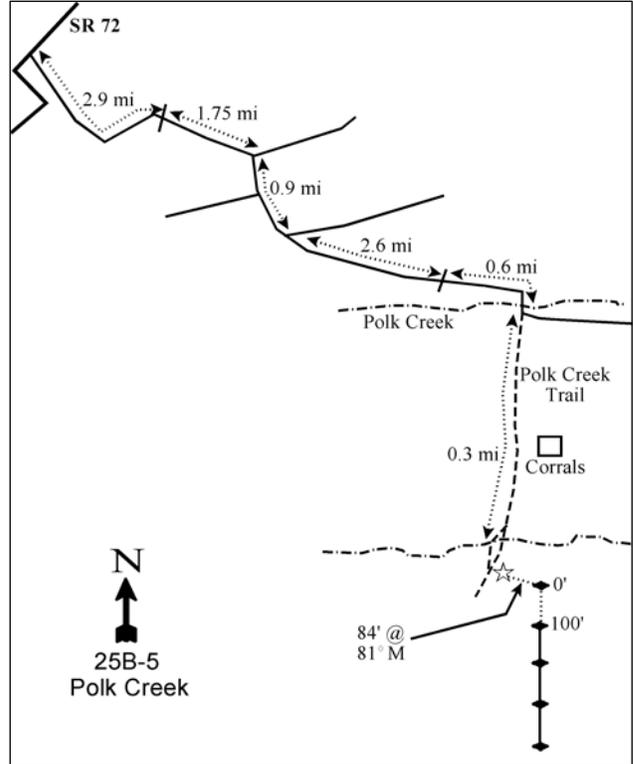
Directions:

Travel north from Fremont on SR 72 for 7.3 miles to the Elkhorn-Torrey Road. Turn right and go 2.9 miles to a cattleguard. From the cattleguard go 1.75 miles to an intersection by Heart Lake. Take the right fork (#206) and go 0.4 miles toward Cathedral Valley. At the intersection, turn left (#22) toward Cathedral Valley. Proceed 0.5 miles to another fork (Round Lake turnoff). Stay right and go 2.6 miles to a cattleguard. From the cattleguard, proceed 0.6 miles down to Polk Creek. Immediately after crossing the creek, turn right on the Polk Creek Trail. Go 0.3 miles past a camp and some corrals on your left to another creek. Cross the creek, then look 110 feet beyond the creek (along the left fork of the road) for a steel rebar witness post on the left side of the road. The frequency baseline of the study starts 84 feet east (81°M) of the witness post. The 0-foot baseline stake has a red browse tag #7060 attached.

Map Name: Flat Top, Utah



Diagrammatic Sketch:



Township: 27S, Range: 5E, Section: 7

GPS: NAD 83, UTM 12S 463910 E 4257980 N

POLK CREEK - TREND STUDY NO. 25B-5

Site Information

Site Description: This study is located on the east side of Thousand Lake Mountain on a flat and gentle slope. This part of a three pasture, rest-rotation grazing allotment. Black sagebrush (*Artemisia nova*) and antelope bitterbrush (*Purshia tridentata*) are the most common browse species. Pellet group data estimates cattle use has been low in each sample year while deer use has increased from moderate use in 1999 to very heavy use in 2009. Estimated elk use has been consistently low in all readings (Table - Pellet Group Data).

Browse: A variety of browse species are present with black sagebrush and bitterbrush being the key species. Bitterbrush densities have increased overall since 1985, even with a change in density estimation methods in 1994. Black sagebrush density has remained fairly constant, averaging 7,822 plants/acre from 1985 to 2009. Mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) has a small, but increasing density from 265 plants/acre in 1991 to 680 plants/acre in 2009 (Table - Browse Characteristics). Pinyon pine (*Pinus edulis*) densities, as estimated by the point centered quarter method, have increased from 199 trees/acre in 1999 to 244 trees/acre in 2009. Utah juniper (*Juniperus osteosperma*) density has also increased, albeit more slowly, from 46 trees/acre in 1999 to 57 trees/acre in 2009 (Table - Point-Quarter Tree Data). Canopy cover as of 2009 was a combined 9% for pinyon and juniper, up from 7% in 2004 (Table - Canopy Cover).

Herbaceous Understory: Grass species are varied, but have only fair production. The most common species have been blue grama (*Bouteloua gracilis*), a sedge (*Carex* sp.), bottlebrush squirreltail (*Sitanion hystrix*), and needle and thread (*Stipa comata*). As of 2009, blue grama has become the dominant grass species, providing 49% of grass cover, whereas the sedge and bottlebrush squirreltail had been the dominant species. Perennial grass cover has fluctuated between 5% and 9% since 1994. The forb community is diverse though not abundant. Since 1994, only two forb species have provided more than 1% cover. Perennial forb cover has generally been between 1% and 2% with a spike of 5% in 1999.

Soil: The soil was classified as a sandy clay loam with a neutral pH (6.8) (Table - Soil Analysis Data). The soil erosion condition was classified as stable in 2004, with some erosion occurring. The erosion condition was slight in 2009 due to flow patterns and soil rock movement.

Trend Assessments

Browse:

- **1985 to 1991 – slightly up (+1):** Bitterbrush density increased 64% from 1,865 plants/acre to 3,065 plants/acre, but decadence increased from 4% to 37%. Recruitment of young bitterbrush plants decreased from 36% to only 9% of the population. The black sagebrush density increased 10%, and recruitment of young plants increased from 9% to 21%. Mountain big sagebrush was sampled for the first time at a density of 265 plants/acre.
- **1991 to 1994 - stable (0):** Differences in density may be related to the larger sample area used in 1994; therefore trend was determined using other parameters. Bitterbrush decadence decreased to 3%, but no young plants were sampled. Black sagebrush decadence was still high at 34% and recruitment of young plants decreased to only 5% of the population.
- **1994 to 1999 – slightly down (-1):** Bitterbrush density decreased 27% to 1,840 plants/acre, but decadence remained low and recruitment of young plants increased to 10%. Black sagebrush density was unchanged as was the amount of decadence, meanwhile recruitment had improved to 16%. Mountain big sagebrush increased three-fold to 300 plants/acre with low decadence at 7%, and good recruitment of young plants at 33%.
- **1999 to 2004 – slightly up (+1):** Bitterbrush density increased 61% to 2,980 plants/acre and decadence was fair at 15%. No young bitterbrush plants were recruited. Black sagebrush density decreased 22% to 7,120 plants/acre while decadence was similar to past years at 31% and recruitment

was fair at 11%. Mountain big sagebrush density increased 20% to 360 plants/acre. Decadence was moderate at 22%.

- **2004 to 2009 - slightly up (+1):** Bitterbrush density increased 16% to 3,460 plants/acre, though decadence was high at 39% and recruitment low at 1%. Black sagebrush density remained similar to the last reading while decadence is moderate at 17% and recruitment of young plants was good at 23%. Despite the increase in density of bitterbrush and black sagebrush, both species decreased in cover. Mountain big sagebrush density increased 88% to 680 plants/acre, decadence was low at 9% and recruitment was good at 35%.

Grass:

- **1985 to 1991 - stable (0):** The sum of nested frequency for perennial grasses remained similar. Sedge and bottlebrush squirreltail were the most frequent species.
- **1991 to 1994 – down (-2):** The sum of nested frequency for perennial grasses decreased 31%. Bottlebrush squirreltail, sedge and blue grama were the most common species, providing 86% of grass cover.
- **1994 to 1999 - stable (0):** The sum of nested frequency for perennial grasses was similar to the past reading although cover has nearly doubled from 5% to 9%. Sedge and bottlebrush squirreltail were the most common species again, accounting for 66% of grass cover.
- **1999 to 2004 – slightly down (-1):** The nested frequency of perennial grasses had decreased 13% while cover was still at 9%. Sedge and squirreltail bottlebrush were the most common species and provide 62% of grass cover.
- **2004 to 2009 - down (-2):** The nested frequency of perennial grasses decreased 10% and cover decreased to 6%. The more productive grasses have decreased and blue grama was the most common species and provides 49% of grass cover.

Forb:

- **1985 to 1991 – slightly down (-1):** The sum of nested frequency for perennial forbs decreased 11%. The forbs were diverse, but no one species was dominant.
- **1991 to 1994 – slightly down (-1):** The sum of nested frequency for perennial forbs decreased 11%. Forb cover was low at 2%.
- **1994 to 1999 - up (+2):** The sum of nested frequency for perennial forbs increased 35% and cover increased to 5%. Lobeleaf groundsel (*Senecio multilobatus*) and thorn skeletonplant (*Lygodesmia spinosa*) provided 55% of forb cover.
- **1999 to 2004 - down (-2):** The sum of nested frequency for perennial forbs decreased 53% and cover dropped to 2%. No one species provided 1% or more cover.
- **2004 to 2009 - down (-2):** The sum of nested frequency for perennial forbs decreased 26% and cover fell below 1%.

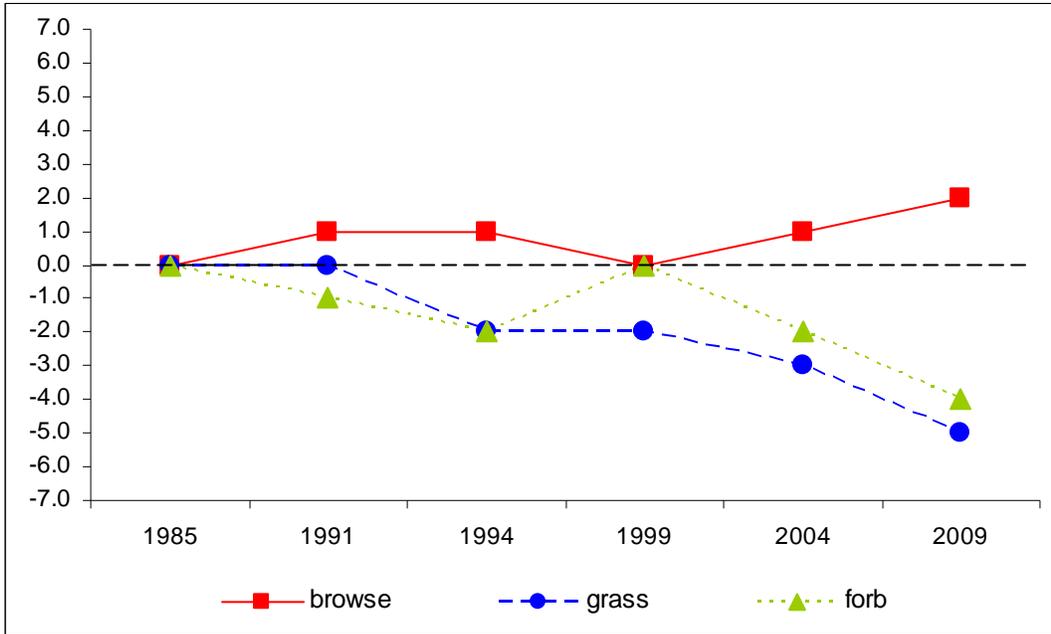
DEER DESIRABLE COMPONENTS INDEX - MID-LEVEL POTENTIAL SCALE --

Management unit 25B, study no: 5

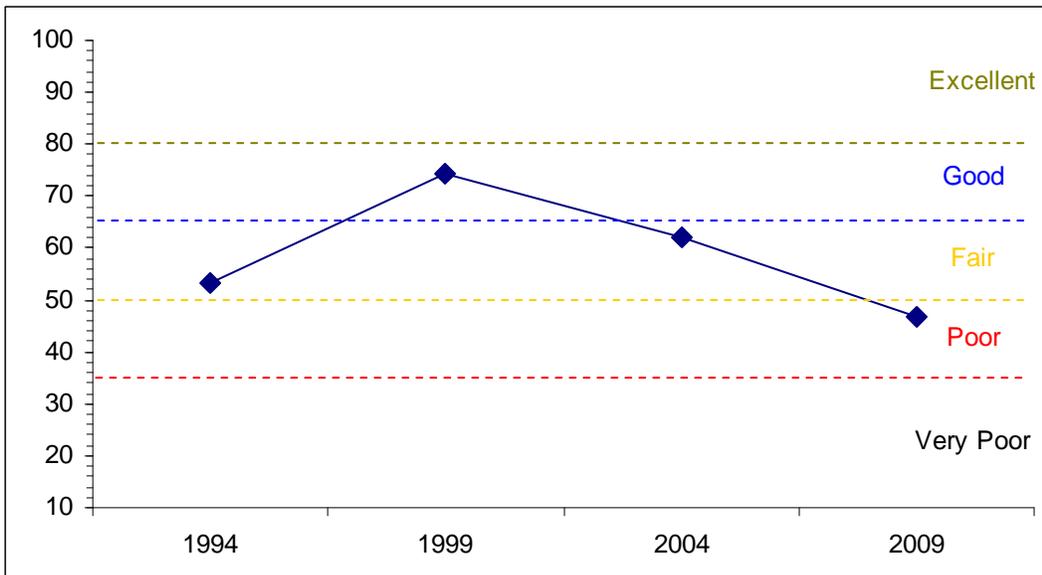
Year	Preferred Browse Cover	Preferred Browse Decadence	Preferred Browse Young	Perennial Grass Cover	Annual Grass Cover	Perennial Forb Cover	Noxious Weeds	Total Score	Ranking
94	30.0	8.6	1.5	9.5	0.0	3.9	0.0	53.4	Fair
99	30.0	8.8	6.7	18.7	0.0	10.0	0.0	74.2	Good
04	30.0	8.6	2.6	17.4	0.0	3.4	0.0	62.0	Fair
09	24.4	5.5	4.0	11.1	0.0	1.7	0.0	46.8	Poor

Trend Summary

CUMULATIVE RANGE TREND ASSESSMENT--
 Management unit 25B Study no: 5



DEER DESIRABLE COMPONENTS INDEX TREND, MID-LEVEL POTENTIAL
 Management unit 25B, Study no: 5



HERBACEOUS TRENDS--
Management unit 25B, Study no: 5

Type	Species	Nested Frequency						Average Cover %			
		'85	'91	'94	'99	'04	'09	'94	'99	'04	'09
G	Agropyron smithii	a-	a-	a ³	b ¹⁶	ab ⁴	ab ⁹	.03	.13	.07	.08
G	Bouteloua gracilis	abc ¹⁰⁶	bc ¹⁰⁵	c ¹⁰⁶	ab ⁷²	a ⁶¹	abc ⁸⁹	1.81	1.50	1.33	2.70
G	Carex sp.	c ¹⁷⁶	c ¹⁸⁶	ab ⁸⁶	b ¹⁰²	ab ⁹¹	a ⁵⁷	1.01	3.33	2.84	1.00
G	Festuca ovina	-	-	-	9	5	-	-	.21	.02	-
G	Oryzopsis hymenoides	-	-	-	-	-	2	-	-	.00	.15
G	Poa fendleriana	b ³²	ab ²⁰	b ³⁵	ab ⁷	a ⁶	ab ²⁰	.51	.10	.07	.19
G	Sitanion hystrix	cd ¹⁵²	d ¹⁸⁰	bc ¹¹³	ab ⁹⁹	b ¹⁰²	a ⁵⁸	1.26	2.81	2.57	.83
G	Sporobolus cryptandrus	-	-	7	-	-	-	.04	-	-	-
G	Stipa comata	abc ⁷	a ⁵	ab ⁷	bc ³²	abc ³⁰	c ³⁵	.04	.94	1.77	.58
G	Stipa lettermani	-	-	-	5	-	-	-	.30	-	-
G	Stipa sp.	a-	b ¹⁸	a-	a-	a-	a-	-	-	-	-
Total for Annual Grasses		0	0	0	0	0	0	0	0	0	0
Total for Perennial Grasses		473	514	357	342	299	270	4.73	9.34	8.71	5.55
Total for Grasses		473	514	357	342	299	270	4.73	9.34	8.71	5.55
F	Alyssum alyssoides (a)	-	-	-	-	2	-	-	-	.00	-
F	Androsace septentrionalis (a)	-	-	-	1	1	-	-	.00	.03	-
F	Antennaria parvifolia	b ⁶	a ¹	a-	a-	a-	a-	-	-	-	-
F	Antennaria rosea	-	-	3	-	1	1	.01	-	.03	.00
F	Arabis demissa	12	11	2	15	3	-	.00	.17	.04	-
F	Artemisia dracunculul	-	-	-	-	1	-	-	-	.00	-
F	Artemisia ludoviciana	4	6	-	1	-	-	-	.00	-	-
F	Aster sp.	-	8	-	3	7	10	-	.00	.07	.02
F	Astragalus convallarius	3	-	-	-	-	-	-	-	-	-
F	Astragalus sp.	4	-	7	-	2	-	.01	-	.03	-
F	Castilleja chromosa	-	5	1	-	-	-	.00	-	-	-
F	Chaenactis douglasii	6	5	1	-	2	-	.00	-	.00	-
F	Chenopodium album (a)	-	-	-	2	-	-	-	.00	-	-
F	Comandra pallida	ab ¹³	ab ⁷	b ¹⁶	ab ¹⁴	a-	a ³	.18	.42	-	.00
F	Cryptantha sp.	a ¹⁵	a ¹⁴	b ⁴⁰	a ¹⁴	a ⁶	a ²	.32	.07	.04	.01
F	Cymopterus sp.	-	4	-	-	-	-	-	-	-	-
F	Descurainia pinnata (a)	-	-	-	9	-	-	-	.02	-	-
F	Erigeron pumilus	b ³⁷	ab ¹⁵	ab ²¹	ab ¹⁶	a ⁷	a ⁸	.10	.11	.02	.01
F	Eriogonum alatum	-	3	-	7	8	-	-	.12	.12	-
F	Eriogonum cernuum (a)	-	-	1	-	-	-	.00	-	-	-
F	Eriogonum racemosum	24	22	17	28	18	19	.04	.53	.27	.13
F	Gayophytum ramosissimum(a)	-	-	1	7	2	-	.00	.06	.01	-
F	Hymenoxys richardsonii	ab ⁹	a ⁵	b ²⁴	ab ¹⁴	a ³	a ⁶	.41	.45	.03	.10
F	Lepidium sp. (a)	-	-	-	8	2	-	-	.02	.00	-
F	Lithospermum incisum	-	-	-	-	-	-	.00	-	-	-
F	Lupinus argenteus	1	-	-	-	-	-	-	-	-	-
F	Lygodesmia spinosa	b ⁵⁵	b ⁵⁸	ab ³²	a ²⁴	a ²⁴	a ²⁶	.70	1.16	.71	.49
F	Machaeranthera canescens	a ³	ab ⁸	a ⁵	b ²⁵	a ²	a ⁵	.04	.20	.03	.01
F	Microsteris gracilis (a)	-	-	-	-	12	-	-	-	.04	-

Type	Species	Nested Frequency						Average Cover %			
		'85	'91	'94	'99	'04	'09	'94	'99	'04	'09
F	Oenothera sp.	-	-	1	-	-	-	.00	-	-	-
F	Penstemon humilis	-	1	3	3	4	6	.03	.03	.03	.04
F	Phlox longifolia	9	24	10	14	4	-	.03	.06	.01	-
F	Polygonum douglasii (a)	-	-	3	1	3	3	.01	.00	.00	.00
F	Potentilla sp.	-	1	-	-	-	-	-	-	-	-
F	Senecio multilobatus	_b 25	_a 1	_a 1	_c 62	_b 19	_a 1	.00	1.71	.19	.03
F	Sphaeralcea coccinea	3	-	1	3	2	-	.03	.03	.03	-
F	Taraxacum officinale	-	5	-	3	-	-	-	.00	-	-
F	Tragopogon dubius	-	3	-	3	4	-	-	.00	.01	-
F	Unknown forb-perennial	2	-	-	-	-	-	-	-	-	-
F	Zigadenus paniculatus	1	-	-	-	-	-	-	-	-	-
Total for Annual Forbs		0	0	5	28	22	3	0.01	0.12	0.10	0.00
Total for Perennial Forbs		232	207	185	249	117	87	1.94	5.10	1.70	0.87
Total for Forbs		232	207	190	277	139	90	1.96	5.23	1.80	0.87

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

BROWSE TRENDS--

Management unit 25B, Study no: 5

Type	Species	Strip Frequency				Average Cover %			
		'94	'99	'04	'09	'94	'99	'04	'09
B	Artemisia nova	98	95	91	85	15.72	14.35	9.55	5.26
B	Artemisia tridentata vaseyana	3	10	14	18	.53	.84	.93	.16
B	Ceratoides lanata	2	2	2	2	.00	.00	.00	.00
B	Chrysothamnus depressus	15	15	24	13	.12	.15	.40	.19
B	Chrysothamnus nauseosus	9	10	16	8	.72	.09	.71	.07
B	Chrysothamnus viscidiflorus lanceolatus	54	46	46	37	1.80	1.43	1.33	1.31
B	Coryphantha vivipara arizonica	0	0	1	0	-	-	.00	-
B	Gutierrezia sarothrae	23	16	41	27	.10	.16	1.71	.70
B	Juniperus osteosperma	0	2	3	2	-	.63	.15	.38
B	Opuntia sp.	4	4	4	6	.18	.15	.15	.18
B	Pediocactus simpsonii	0	3	8	3	-	.00	.00	.01
B	Pinus edulis	0	13	19	16	4.33	5.49	7.28	8.61
B	Purshia tridentata	47	47	48	51	10.00	15.23	13.23	11.61
B	Symphoricarpos oreophilus	5	7	5	6	.00	.41	.38	.16
B	Tetradymia canescens	20	28	25	24	.44	.79	.85	.22
B	Yucca sp.	0	0	1	0	-	-	.03	-
Total for Browse		280	298	348	298	33.96	39.76	36.74	28.90

CANOPY COVER, LINE INTERCEPT--

Management unit 25B, Study no: 5

Species	Percent Cover		
	'99	'04	'09
Artemisia nova	-	9.26	7.05
Artemisia tridentata vaseyana	-	.63	1.23
Chrysothamnus depressus	-	.70	.31
Chrysothamnus nauseosus	-	1.41	.76
Chrysothamnus viscidiflorus lanceolatus	-	2.75	2.36
Gutierrezia sarothrae	-	1.25	.46
Juniperus osteosperma	-	1.46	.66
Opuntia sp.	-	.48	.03
Pinus edulis	5.00	12.68	14.73
Purshia tridentata	-	18.33	16.70
Symphoricarpos oreophilus	-	.75	.76
Tetradymia canescens	-	.61	.38
Yucca sp.	-	.03	-

KEY BROWSE ANNUAL LEADER GROWTH--

Management unit 25B, Study no: 5

Species	Average leader growth (in)	
	'04	'09
Artemisia nova	1.3	0.8
Artemisia tridentata vaseyana	3.7	1.3
Purshia tridentata	5.3	1.1

POINT-QUARTER TREE DATA--

Management unit 25B, Study no: 5

Species	Trees per Acre			Average diameter (in)		
	'99	'04	'09	'99	'04	'09
Juniperus osteosperma	46	51	57	2.0	2.1	2.6
Pinus edulis	199	236	244	2.5	2.8	3.2
Pinus ponderosa	19	<18	<18	5.9	-	-

BASIC COVER--

Management unit 25B, Study no: 5

Cover Type	Average Cover %					
	'85	'91	'94	'99	'04	'09
Vegetation	8.75	11.00	38.57	48.68	42.66	39.00
Rock	4.75	6.25	17.39	18.85	18.57	17.08
Pavement	17.25	7.75	9.53	8.58	10.69	9.17
Litter	54.25	53.50	30.89	43.84	38.29	44.44
Cryptogams	0	.75	.05	.15	.11	.07
Bare Ground	15.00	20.75	13.78	8.48	9.40	11.02

SOIL ANALYSIS DATA --

Management unit 25B, Study no: 5, Study Name: Polk Creek

Effective rooting depth (in)	pH	sandy clay loam			%OM	PPM P	PPM K	ds/m
		%sand	%silt	%clay				
11.2	6.8	53.8	22.5	23.6	2.2	12.7	198.4	0.5

PELLET GROUP DATA--

Management unit 25B, Study no: 5

Type	Quadrat Frequency				Days use per acre (ha)		
	'94	'99	'04	'09	'99	'04	'09
Rabbit	23	32	15	23	-	-	-
Elk	7	2	3	7	1 (2)	5 (12)	8 (17)
Deer	23	9	23	24	20 (49)	66 (162)	70 (174)
Cattle	4	7	-	1	7 (18)	6 (14)	2 (5)
Moose	-	-	-	-	-	1 (2)	-

BROWSE CHARACTERISTICS--

Management unit 25B, Study no: 5

Year	Plants per Acre (excluding seedlings)	Age class distribution			Seedling (plants/acre)	Utilization		% poor vigor	Average Height Crown (in)
		% Young	% Mature	% Decadent		% moderate	% heavy		
Artemisia nova									
85	6731	9	54	37	933	46	22	14	7/9
91	7465	21	45	34	133	29	2	13	8/14
94	9120	5	61	34	5120	7	0	9	10/21
99	9160	16	50	33	800	20	2	11	11/19
04	7120	11	58	31	2620	8	0	19	9/16
09	7340	23	60	17	60	2	.81	11	8/14
Artemisia tridentata vaseyana									
85	0	0	0	0	-	0	0	0	-/-
91	265	0	25	75	-	0	0	0	11/7
94	100	0	100	0	-	0	0	0	21/30
99	300	33	60	7	40	7	0	0	20/27
04	360	22	56	22	620	22	0	11	15/20
09	680	35	56	9	-	9	0	0	12/16
Ceratoides lanata									
85	0	0	0	0	-	0	0	0	-/-
91	0	0	0	0	-	0	0	0	-/-
94	60	0	100	0	-	0	0	0	6/4
99	100	0	80	20	-	20	80	0	5/6
04	80	50	25	25	-	0	50	25	5/5
09	60	0	100	0	-	0	0	0	3/1

		Age class distribution					Utilization			
Year	Plants per Acre (excluding seedlings)	% Young	% Mature	% Decadent	Seedling (plants/acre)	% moderate	% heavy	% poor vigor	Average Height Crown (in)	
Chrysothamnus depressus										
85	1464	5	68	27	-	5	0	5	3/6	
91	2531	13	24	63	-	32	42	11	3/6	
94	420	0	100	0	-	0	0	0	5/10	
99	480	4	96	0	-	21	25	0	4/7	
04	720	0	92	8	-	17	42	8	7/11	
09	400	5	80	15	-	0	15	10	3/7	
Chrysothamnus nauseosus										
85	0	0	0	0	-	0	0	0	-/-	
91	0	0	0	0	-	0	0	0	-/-	
94	240	0	50	50	-	0	0	8	15/19	
99	220	18	55	27	-	9	9	0	22/28	
04	500	20	52	28	-	16	0	20	17/18	
09	180	0	78	22	20	11	0	11	14/13	
Chrysothamnus viscidiflorus lanceolatus										
85	865	8	92	0	66	0	0	0	7/5	
91	66	0	100	0	-	0	0	0	4/13	
94	2120	5	92	3	60	0	0	0	18/27	
99	1740	5	92	3	120	1	0	1	10/15	
04	2060	14	82	5	60	8	0	3	11/15	
09	1640	4	88	9	-	2	2	10	9/12	
Coryphantha vivipara arizonica										
85	0	0	0	-	-	0	0	0	-/-	
91	0	0	0	-	-	0	0	0	-/-	
94	0	0	0	-	-	0	0	0	-/-	
99	0	0	0	-	-	0	0	0	-/-	
04	20	0	100	-	-	0	0	0	2/2	
09	0	0	0	-	-	0	0	0	-/-	
Echinocereus sp.										
85	0	0	0	-	-	0	0	0	-/-	
91	0	0	0	-	-	0	0	0	-/-	
94	0	0	0	-	-	0	0	0	-/-	
99	0	0	0	-	-	0	0	0	-/-	
04	0	0	0	-	-	0	0	0	5/19	
09	0	0	0	-	-	0	0	0	-/-	
Gutierrezia sarothrae										
85	4931	8	78	14	-	1	0	1	6/4	
91	1398	43	52	5	-	19	0	0	4/5	
94	920	52	48	0	100	0	0	0	5/5	
99	580	7	93	0	360	0	0	0	7/8	
04	2820	7	93	0	20	0	0	0	8/9	
09	1820	31	69	0	-	0	0	0	7/7	

		Age class distribution					Utilization			
Year	Plants per Acre (excluding seedlings)	% Young	% Mature	% Decadent	Seedling (plants/acre)	% moderate	% heavy	% poor vigor	Average Height Crown (in)	
Juniperus osteosperma										
85	0	0	0	-	-	0	0	0	-/-	
91	0	0	0	-	-	0	0	0	-/-	
94	0	0	0	-	-	0	0	0	-/-	
99	40	100	0	-	-	0	0	0	-/-	
04	60	67	33	-	-	0	0	0	-/-	
09	40	0	100	-	-	0	0	0	-/-	
Opuntia sp.										
85	399	83	17	-	-	0	0	0	1/5	
91	333	0	100	-	-	0	0	0	4/5	
94	120	50	50	-	-	0	17	0	3/6	
99	80	0	100	-	-	0	0	0	5/16	
04	200	20	80	-	-	0	0	0	5/18	
09	440	5	95	-	-	0	0	91	3/7	
Pediocactus simpsonii										
85	0	0	0	-	-	0	0	0	-/-	
91	0	0	0	-	-	0	0	0	-/-	
94	0	0	0	-	-	0	0	0	2/3	
99	60	67	33	-	-	0	0	0	-/-	
04	220	27	73	-	-	0	0	0	3/3	
09	60	0	100	-	-	0	0	0	2/4	
Pinus edulis										
85	332	80	20	-	266	0	0	0	69/128	
91	332	60	40	-	333	0	0	0	81/87	
94	0	0	0	-	-	0	0	0	-/-	
99	260	69	31	-	200	0	0	0	-/-	
04	460	70	30	-	20	0	0	13	-/-	
09	340	53	47	-	40	0	0	0	-/-	
Purshia tridentata										
85	1865	36	61	4	999	36	46	4	13/41	
91	3065	9	54	37	333	33	22	0	7/21	
94	2520	0	97	3	40	2	2	0	12/36	
99	1840	10	80	10	20	30	38	7	15/43	
04	2980	0	85	15	-	43	52	11	16/38	
09	3460	1	60	39	20	17	67	35	13/37	
Rhus trilobata										
85	66	0	100	-	-	100	0	0	12/20	
91	66	0	100	-	-	100	0	0	18/23	
94	0	0	0	-	-	0	0	0	-/-	
99	0	0	0	-	-	0	0	0	-/-	
04	0	0	0	-	-	0	0	0	-/-	
09	0	0	0	-	-	0	0	0	-/-	

		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>Symphoricarpos oreophilus</i>										
85	0	0	0	-	-	0	0	0	-/-	
91	0	0	0	-	-	0	0	0	-/-	
94	120	17	83	-	-	0	0	0	13/23	
99	140	0	100	-	-	29	0	0	19/26	
04	140	14	86	-	-	0	0	0	11/21	
09	220	0	100	-	-	27	0	18	14/24	
<i>Tetradymia canescens</i>										
85	864	23	54	23	-	0	0	0	5/4	
91	998	7	67	27	-	27	0	0	7/4	
94	480	8	83	8	-	0	0	4	9/11	
99	700	20	66	14	-	14	3	3	9/10	
04	600	17	73	10	20	23	0	3	10/13	
09	540	7	70	22	-	30	15	15	8/9	
<i>Yucca sp.</i>										
85	0	0	0	-	-	0	0	0	-/-	
91	0	0	0	-	-	0	0	0	-/-	
94	0	0	0	-	-	0	0	0	-/-	
99	0	0	0	-	-	0	0	0	-/-	
04	20	100	0	-	-	0	0	0	-/-	
09	0	0	0	-	-	0	0	0	3/4	