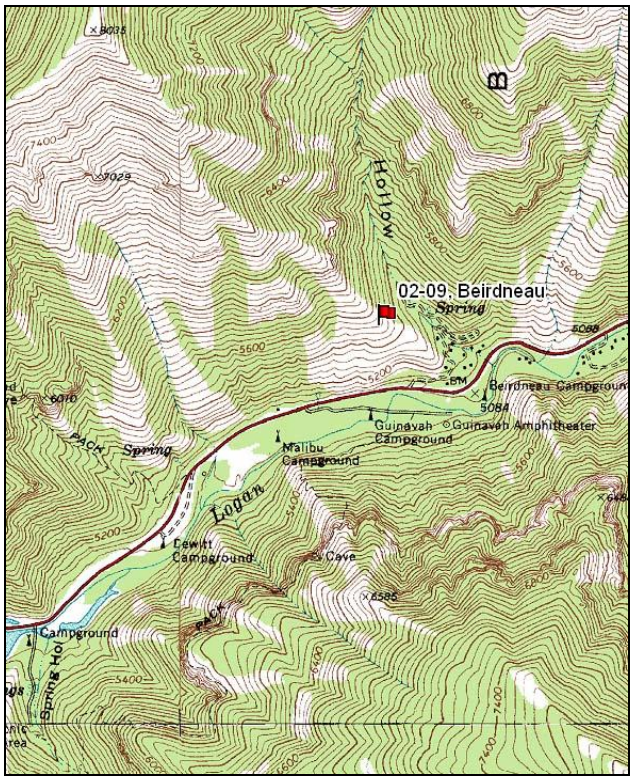
BEIRDNEAU - TREND STUDY NO. 2-9-11

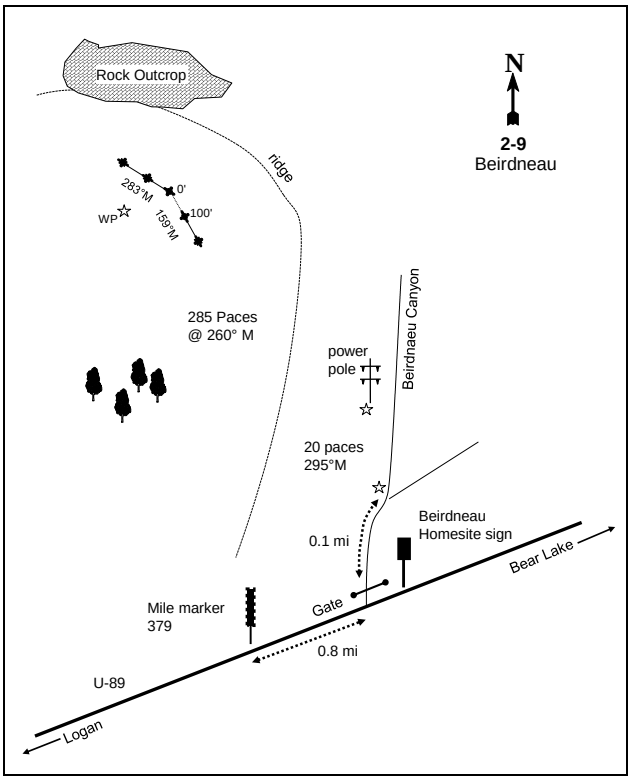
Vegetation Type: Bitterbrush
Range Type: Crucial Deer Winter, Crucial Elk Winter
NRCS Ecological Site Description: Not Available
Land Ownership: USFS
Elevation: 5,450 ft (1,661 m)
Aspect: South
Slope: 50%
Transect bearing: 159° magnetic
Belt placement: line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft)

Directions:
Proceed up Logan Canyon to mile marker 379 and begin to note mileage. Continue 0.8 miles to the Forest Service sign "Beirdneau Summer Home Sites." Turn left here at the home site, and proceed 0.1 miles to a fork and stop. Walk to the power pole on the left at a bearing of 295 degrees magnetic and about 20 paces. Take a bearing of 260 degrees magnetic from the pole and walk 285 paces to the 0-foot stake of the baseline marked by browse tag #7928. The baseline runs at 159 degrees magnetic. The second stake is placed 50 feet down the slope at the same bearing. The third and fourth stake are placed 100 feet apart above the 0-foot baseline stake at a bearing of 283 degrees magnetic.

Map Name: Mt. Elmer




Diagrammatic Sketch:




Township: 12N Range: 2E Section: 23

GPS: NAD 83, UTM 12S 441937 E 4623976 N

BEIRDNEAU - TREND STUDY NO. 2-9

**Site Information**

Site Description: This study is located slightly north of the Beirdneau cabin area in Logan Canyon. The area is considered crucial deer winter range that possesses a good mix of mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and antelope bitterbrush (*Purshia tridentata*), interspersed with Rocky Mountain juniper (*Juniperus scopulorum*). Wildlife occupancy was high in 1984, but has been low to moderate since 1984. Pellet groups for deer were sampled in low abundance in 2001 and 2011, but more moderate abundance in 2006. Elk pellet groups have been sampled in low abundance since 2001 (Table - Pellet Group Data).

Browse: Browse composition consists of a mixture of bitterbrush and mountain big sagebrush. Prior to 1984, a die-off of bitterbrush and sagebrush was reported to have affected a small portion of the population. Rodent activity in 1983-85 may have contributed to the die-off, as well as disease and insect infestation. The bitterbrush population is moderately dense, but density estimates have fluctuated over the sample years. The bitterbrush population is centered within the mature age class with very little recruitment of young bitterbrush plants. Bitterbrush has displayed moderate to heavy hedging since 1984. Decadence of bitterbrush was very high in 1984, and has been mostly moderate to high in the other sample years (Table - Browse Characteristics).

Mountain big sagebrush had a dense population in 1984, but has steadily declined to a population of insignificant density in 2011. Sagebrush decadence has been high since 1984 with the exception of the 2001 and 2011 sample years. Recruitment of young sagebrush plants have been a minor component of the population during each reading. Utilization has been light to moderate since 1990, but was heavy in 1984 (Table - Browse Characteristics).

Herbaceous Understory: Grasses and forbs are irregularly distributed, but provide good cover. Composition is poor due to the overabundance of weedy annual species. Cheatgrass (*Bromus tectorum*) and Japanese brome (*B. japonicus*) have historically been the dominant species, but have decreased over the duration of the study. Cheatgrass has diminished and has become a minor component; however, Japanese brome still maintains a dominant population. The preferred species bluebunch wheatgrass (*Agropyron spicatum*) and the weedy species bulbous bluegrass (*Poa bulbosa*) are the only moderately abundant perennial grasses. The forb component has fair diversity and quality. The most common forb species include prickly lettuce (*Lactuca serriola*), yellow salsify (*Tragopogon dubius*), twolobe speedwell (*Veronica biloba*), the noxious weed Dyer's woad (*Isatis tinctoria*), spring parsley (*Cymopterus* spp.), and alfalfa (*Medicago sativa*) (Table - Herbaceous Trends).

Soil: Natural Resources Conservation Service (NRCS) soil data was not available for this site. The soil texture is a clay loam and is moderately alkaline (pH of 7.9). Vegetation and litter cover appear to be high, while rock and pavement cover is moderate and provides adequate control for runoff. The soil erosion condition was classified as slight in 2001, but was determined to be stable in 2006 and 2011.

**Trend Assessments**

Browse:

- **1984 to 1990 - slightly down (-1):** The key browse species are antelope bitterbrush and mountain big sagebrush. The density for bitterbrush increased 11% from 599 plants per acre to 665 plants per acre. The percent of decadent plants decreased from 78% to 30%. Poor vigor increased to 10% of the population. Mountain big sagebrush decreased in density by 39% from 1,198 plants/acre to 732 plants/acre. Decadence in the population decreased from 67% to 55%. Poor vigor increased marginally from 17% to 18%.
- **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. No decadence or poor vigor was

reported in the bitterbrush population. Sagebrush had decreased in decadence to 44%, and poor vigor decreased to 6%.

- **1996 to 2001 - stable (0):** Bitterbrush increased in density by 47% from 380 plants/acre to 560 plants/acre. However, bitterbrush decadence increased to 21% within the population. The sagebrush population decreased in density by 17% from 360 plant/acre to 300 plants/acre. However, decadence decreased to 27% of the population, and poor vigor was not observed.
- **2001 to 2006 - down (-2):** Bitterbrush density decreased by 68% from 560 plant/acre to 180 plants/acre. Decadence in the population decreased to 11%. Sagebrush decreased in density by 27% from 300 plant/acre to 220 plants/acre. Decadence increased to 64%, and poor vigor affected 36% of the population.
- **2006 to 2011 - slightly down (-1):** The density for the bitterbrush population increased by 33% to 240 plants/acre. However, both decadence and poor vigor increased to 25% of the population. Sagebrush density decreased by another 27% to 160 plants/acre. Decadent plants made up 25% of the population, and poor vigor increased to 50%.

Grass:

- **1984 to 1990 - stable (0):** The sum of nested frequency for perennial grasses remained similar.
- **1990 to 1996 - stable (0):** The sum of nested frequency for perennial grasses, excluding bulbous bluegrass, remained similar. The weedy perennial grass bulbous bluegrass was recorded for the first time and was fairly prevalent on the site. Bluebunch bluegrass remained stable in nested frequency. Annual grasses were included in the sample for the first time. Cheatgrass and Japanese brome were both measured as having high abundance.
- **1996 to 2001 - stable (0):** The sum of nested frequency for perennial grasses remained similar. The composition for annual grasses shifted from Japanese brome being the dominant grass to cheatgrass.
- **2001 to 2006 - slightly up (+1):** The sum of nested frequency for perennial grasses, excluding bulbous bluegrass, increased 11%. Bluebunch wheatgrass increased significantly in nested frequency, but so did the weedy species bulbous bluegrass. The annual species cheatgrass decreased significantly in nested frequency.
- **2006 to 2011 - stable (0):** The sum of nested frequency for perennial grasses decreased remained similar. The annual grass Japanese brome had a significant increase in nested frequency.

Forb:

- **1984 to 1990 - down (-2):** The sum of nested frequency for perennial forbs increased by 29%. Although there was an increase in the sum of nested frequency, the increase was mainly from the weedy species Dyer's woad, houndstongue (*Cynoglossum officinale*), and prickly lettuce.
- **1990 to 1996 - slightly down (-1):** The sum of nested frequency for perennial forbs remained similar. Yellow sweet clover increased significantly in nested frequency and provided 5% cover. However, the species false dandelion (*Agoseris glauca*) and low penstemon (*Penstemon humilis*) decreased significantly in nested frequency. Prickly lettuce and the weedy annual houndstongue decreased significantly in nested frequency. However, Dyer's woad increased significantly, and had a cover just over 1%.
- **1996 to 2001 - stable (0):** The sum of nested frequency for perennial forbs remained similar. The desirable yellow sweet clover decreased significantly in nested frequency. The noxious weed Dyer's woad and the annual species yellow salsify both decreased significantly in nested frequency.
- **2001 to 2006 - slightly up (+1):** The sum of nested frequency for perennial forbs increased 15%. Yellow sweet clover and alfalfa both increased significantly in nested frequency. Yellow sweet clover increased in cover from less than 1% to 1%. Alfalfa was sampled for the first time in 2006 at 2% cover. Dyer's woad decreased in nested frequency and cover decreased to less than 1%.
- **2006 to 2011 - up (+2):** The sum of nested frequency for perennial forbs increased by 63%. This increase is linked to the significant increase in nested frequency for the preferred species alfalfa and

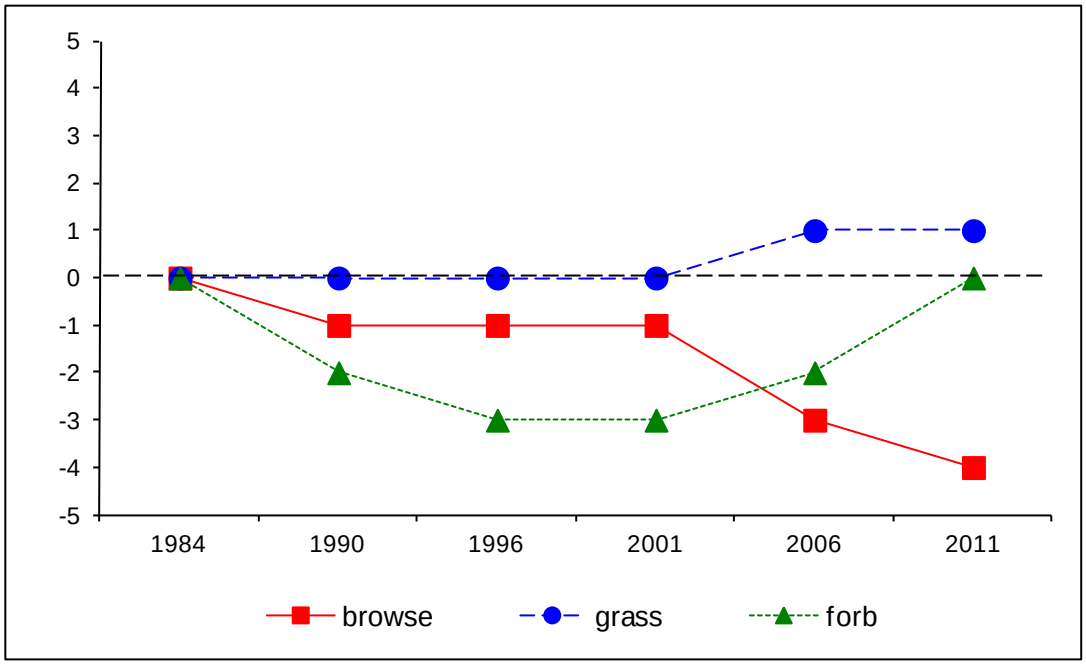
Lewis flax (*Linum lewisii*). Dyer's woad and pale alyssum (*Alyssum alyssoides*) also increased significantly in nested frequency. Dyer's woad increased in cover to 5%.

DEER DESIRABLE COMPONENTS INDEX - MID-LEVEL POTENTIAL SCALE --
Management unit 2, study no: 9

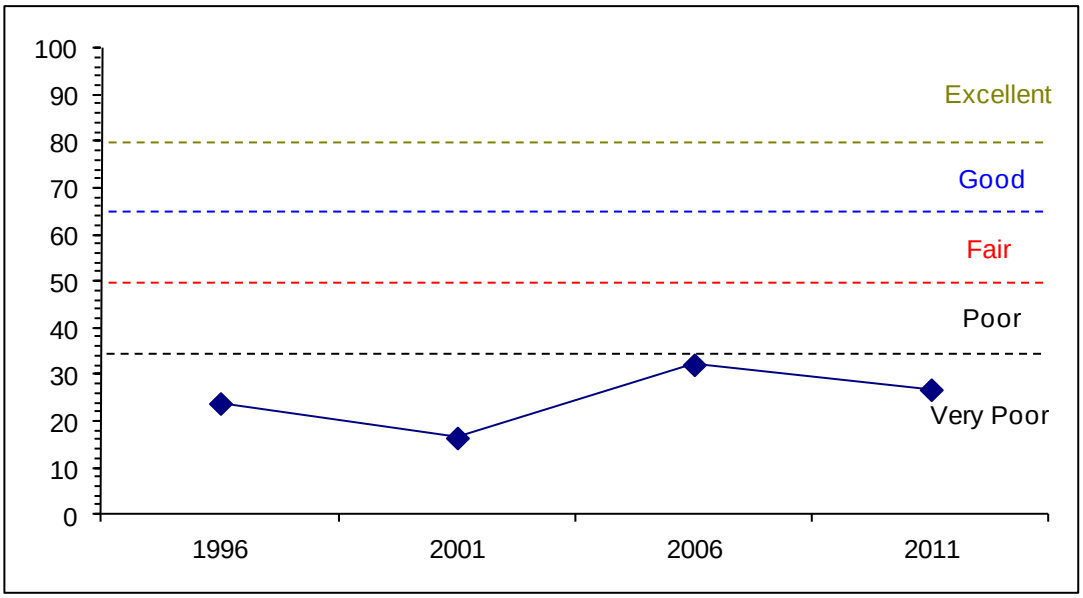
| Year | Preferred Browse Cover | Preferred Browse Decadence | Preferred Browse Young | Perennial Grass Cover (-POBU) | Annual Grass Cover | Perennial Forb Cover | Noxious Weeds | **Total Score** | Ranking |
|---|---|---|---|---|---|---|---|---|---|
| 96 | 16.1 | 12.6 | 0.6 | 6.2 | -19.6 | 10.0 | -2.0 | **23.8** | Very Poor |
| 01 | 11.6 | 8.3 | 1.6 | 6.9 | -20.0 | 10.0 | -2.0 | **16.4** | Very Poor |
| 06 | 10.8 | 8.2 | 0.0 | 7.7 | -2.6 | 10.0 | -2.0 | **32.1** | Very Poor |
| 11 | 8.3 | 7.5 | 0.0 | 4.9 | -1.9 | 10.0 | -2.0 | **26.8** | Very Poor |

**Trend Summary**

CUMULATIVE RANGE TREND ASSESSMENT--
Management unit 2 Study no: 9



DEER DESIRABLE COMPONENTS INDEX TREND, MID-LEVEL POTENTIAL--
Management unit 2, Study no: 9




HERBACEOUS TRENDS--
Management unit 02, Study no: 9

| Type | Species | Nested Frequency | | | | | | Average Cover % | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | '84 | '90 | '96 | '01 | '06 | '11 | '96 | '01 | '06 | '11 |
| G | Agropyron spicatum | 125 | 105 | 108 | 95 | 117 | 113 | 2.99 | 3.35 | 3.79 | 2.34 |
| G | Agropyron trachycaulum | - | - | 7 | - | - | - | .06 | - | - | - |
| G | Bromus brizaeformis (a) | - | - | a2 | b10 | a1 | a- | .00 | .05 | .00 | - |
| G | Bromus japonicus (a) | - | - | c343 | a152 | a148 | b208 | 17.68 | 2.40 | 1.63 | 1.70 |
| G | Bromus tectorum (a) | - | - | b204 | c302 | b177 | a70 | 8.41 | 24.20 | 1.76 | .84 |
| G | Carex sp. | - | - | - | - | - | 6 | - | - | - | .03 |
| G | Poa bulbosa | a- | a- | bc83 | b73 | c103 | bc98 | 2.65 | 2.36 | 2.41 | 1.75 |
| G | Poa pratensis | 4 | 10 | - | - | 4 | 3 | - | - | .00 | .00 |
| G | Poa secunda | - | 10 | 3 | 19 | 6 | 4 | .04 | .09 | .04 | .06 |
| Total for Annual Grasses | | 0 | 0 | 549 | 464 | 326 | 278 | 26.10 | 26.65 | 3.40 | 2.54 |
| Total for Perennial Grasses | | 129 | 125 | 201 | 187 | 230 | 224 | 5.74 | 5.82 | 6.26 | 4.20 |
| Total for Grasses | | 129 | 125 | 750 | 651 | 556 | 502 | 31.85 | 32.48 | 9.66 | 6.75 |
| F | Achillea millefolium | 14 | - | - | 8 | 5 | 4 | - | .21 | .06 | .18 |
| F | Agoseris glauca | ab14 | b26 | a1 | a1 | ab10 | a- | .00 | .03 | .10 | - |
| F | Allium acuminatum | b45 | ab29 | a6 | ab26 | a14 | c88 | .04 | .17 | .11 | .39 |
| F | Alyssum alyssoides (a) | - | - | b137 | b151 | a35 | c206 | .39 | .71 | .07 | 1.53 |
| F | Arctium minus | - | - | - | - | - | 3 | - | - | - | .15 |
| F | Artemisia ludoviciana | 4 | 3 | 10 | 6 | 14 | 8 | .26 | .30 | 1.54 | 1.08 |
| F | Aster chilensis | b49 | b40 | a2 | a4 | a4 | a1 | .00 | .01 | .09 | .03 |
| F | Astragalus beckwithii | a- | b13 | a- | a- | a2 | a1 | - | - | .03 | .03 |
| F | Astragalus sp. | - | - | - | - | - | - | - | - | .03 | - |
| F | Astragalus utahensis | 1 | 3 | 2 | 1 | 1 | - | .00 | .03 | .03 | - |
| F | Balsamorhiza sagittata | 5 | 5 | 3 | 5 | 2 | 3 | .53 | .22 | .60 | .03 |
| F | Camelina microcarpa (a) | - | - | - | 6 | 5 | 9 | - | .01 | .01 | .05 |

| Type | Species | Nested Frequency | | | | | | Average Cover % | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | '84 | '90 | '96 | '01 | '06 | '11 | '96 | '01 | '06 | '11 |
| F | Chaenactis douglasii | - | 1 | - | - | - | - | - | - | - | - |
| F | Cirsium undulatum | 2 | 5 | 5 | - | 7 | - | .33 | - | .21 | - |
| F | Collinsia parviflora (a) | - | - | - | - | 3 | - | - | - | .00 | - |
| F | Collomia linearis (a) | - | - | - | - | - | 2 | - | - | - | .00 |
| F | Comandra pallida | 8 | - | 2 | - | - | 8 | .03 | - | - | .01 |
| F | Crepis acuminata | - | - | - | 1 | 2 | 2 | - | .02 | .03 | .03 |
| F | Cymopterus sp. | 97 | 118 | 107 | 125 | 131 | 142 | 2.99 | 6.04 | 7.21 | 11.53 |
| F | Cynoglossum officinale | $_{a}$5 | $_{c}$27 | $_{a}$2 | $_{ab}$11 | $_{bc}$28 | $_{abc}$18 | .00 | .12 | 1.25 | .29 |
| F | Epilobium brachycarpum (a) | - | - | $_{b}$46 | $_{a}$24 | $_{ab}$38 | $_{ab}$41 | .22 | 1.66 | .24 | .61 |
| F | Erodium cicutarium (a) | - | - | - | - | - | - | - | - | .15 | - |
| F | Galium aparine (a) | - | - | $_{b}$36 | $_{a}$- | $_{bc}$59 | $_{c}$57 | .40 | - | .36 | .72 |
| F | Gilia aggregata | - | 4 | - | - | - | - | - | - | - | - |
| F | Hackelia patens | $_{a}$1 | $_{a}$10 | $_{a}$- | $_{b}$47 | $_{a}$13 | $_{a}$- | - | .79 | .13 | .00 |
| F | Holosteum umbellatum (a) | - | - | 5 | 6 | - | - | .01 | .03 | - | - |
| F | Isatis tinctoria | $_{a}$- | $_{a}$23 | $_{b}$65 | $_{a}$25 | $_{a}$5 | $_{b}$97 | 1.33 | 1.20 | .11 | 5.15 |
| F | Lactuca serriola (a) | $_{a}$- | $_{c}$67 | $_{b}$28 | $_{c}$99 | $_{c}$118 | $_{d}$172 | .15 | .93 | 2.84 | 3.36 |
| F | Lappula occidentalis (a) | - | - | - | 1 | - | - | - | .00 | - | - |
| F | Lepidium densiflorum (a) | - | - | - | - | 3 | - | - | - | .03 | - |
| F | Linum lewisii | $_{a}$20 | $_{a}$22 | $_{a}$29 | $_{a}$15 | $_{a}$21 | $_{b}$60 | .37 | .16 | .33 | .22 |
| F | Lithospermum ruderale | 10 | 8 | 9 | 11 | 7 | 16 | .54 | .58 | .45 | .93 |
| F | Medicago sativa | $_{a}$- | $_{a}$- | $_{a}$- | $_{a}$- | $_{a}$24 | $_{b}$95 | - | - | 2.07 | 3.85 |
| F | Melilotus officinalis | $_{a}$2 | $_{a}$15 | $_{c}$100 | $_{a}$4 | $_{b}$68 | $_{ab}$38 | 5.01 | .19 | 1.26 | .21 |
| F | Microsteris gracilis (a) | - | - | - | - | 8 | - | - | - | .02 | - |
| F | Penstemon humilis | $_{ab}$2 | $_{b}$10 | $_{a}$1 | $_{ab}$3 | $_{ab}$5 | $_{a}$1 | .03 | .06 | .12 | .03 |
| F | Phlox hoodii | 12 | 13 | - | - | 2 | - | - | - | .03 | - |
| F | Ranunculus testiculatus (a) | - | - | - | - | 1 | - | - | - | .00 | - |
| F | Tragopogon dubius (a) | $_{b}$159 | $_{b}$163 | $_{b}$156 | $_{a}$102 | $_{ab}$124 | $_{a}$88 | 2.96 | 1.90 | 1.79 | 1.15 |
| F | Trifolium sp. | $_{a}$- | $_{a}$- | $_{a}$- | $_{b}$32 | $_{b}$9 | $_{b}$23 | - | .45 | .02 | .19 |
| F | Unknown forb-perennial | - | - | 1 | - | - | - | .06 | - | - | - |
| F | Veronica biloba (a) | - | - | $_{a}$31 | $_{bc}$103 | $_{b}$76 | $_{c}$124 | .11 | .60 | .63 | 2.51 |
| F | Zigadenus paniculatus | - | - | - | - | 1 | 2 | - | - | .00 | .00 |
| Total for Annual Forbs | | 159 | 230 | 439 | 492 | 470 | 699 | 4.27 | 5.87 | 6.18 | 9.97 |
| Total for Perennial Forbs | | 291 | 375 | 345 | 325 | 375 | 610 | 11.58 | 10.61 | 15.86 | 24.39 |
| Total for Forbs | | 450 | 605 | 784 | 817 | 845 | 1309 | 15.85 | 16.49 | 22.05 | 34.36 |

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

BROWSE TRENDS--
Management unit 02, Study no: 9

| Type | Species | Strip Frequency | | | | Average Cover % | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | '96 | '01 | '06 | '11 | '96 | '01 | '06 | '11 |
| B | Artemisia tridentata vaseyana | 14 | 14 | 9 | 6 | 2.04 | 1.60 | 1.67 | .21 |
| B | Chrysothamnus viscidiflorus viscidiflorus | 4 | 5 | 2 | 3 | .30 | .15 | .15 | .15 |
| B | Gutierrezia sarothrae | 10 | 11 | 3 | 0 | .43 | .51 | .15 | - |
| B | Juniperus scopulorum | 1 | 0 | 0 | 1 | .85 | - | - | .63 |
| B | Purshia tridentata | 17 | 20 | 8 | 12 | 9.03 | 6.37 | 5.82 | 5.35 |
| B | Symphoricarpos oreophilus | 10 | 9 | 10 | 9 | 1.38 | 1.96 | 1.77 | 2.25 |
| Total for Browse | | 56 | 59 | 32 | 31 | 14.05 | 10.60 | 9.57 | 8.60 |

CANOPY COVER, LINE INTERCEPT--
Management unit 02, Study no: 9

| Species | Percent Cover | | |
|---|---|---|---|
| | '01 | '06 | '11 |
| Artemisia tridentata vaseyana | - | 1.61 | .61 |
| Chrysothamnus nauseosus albicaulis | - | - | .03 |
| Chrysothamnus viscidiflorus viscidiflorus | - | .20 | .61 |
| Gutierrezia sarothrae | - | .11 | - |
| Juniperus scopulorum | 1.00 | - | 1.73 |
| Purshia tridentata | - | 9.35 | 11.44 |
| Symphoricarpos oreophilus | - | 2.70 | 2.95 |

KEY BROWSE ANNUAL LEADER GROWTH--
Management unit 02, Study no: 9

| Species | Average leader growth (in) | | |
|---|---|---|---|
| | ‘01 | '06 | '11 |
| Artemisia tridentata vaseyana | - | 2.4 | 2.2 |
| Purshia tridentata | 3.0 | 3.7 | 2.9 |

BASIC COVER--
Management unit 02, Study no: 9

| Cover Type | Average Cover % | | | | | |
|---|---|---|---|---|---|---|
| | '84 | '90 | '96 | '01 | '06 | '11 |
| Vegetation | 1.25 | 14.50 | 54.68 | 54.55 | 41.26 | 49.97 |
| Rock | 20.25 | 9.00 | 12.78 | 11.34 | 10.78 | 16.55 |
| Pavement | 19.50 | 31.00 | 5.56 | 16.53 | 16.43 | 12.96 |
| Litter | 48.00 | 39.00 | 48.74 | 43.50 | 31.27 | 29.63 |
| Cryptogams | .25 | 0 | .20 | .07 | 0 | .00 |
| Bare Ground | 10.75 | 6.50 | 6.39 | 5.70 | 11.91 | 10.30 |

SOIL ANALYSIS DATA --

Management unit 02, Study no: 9, Study Name: Beirdneau

| Effective rooting depth (in) | pH | Clay Loam | | | %OM | PPM P | PPM K | ds/m |
|---|---|---|---|---|---|---|---|---|
| | | %sand | %silt | %clay | | | | |
| 13.8 | 7.9 | 26.7 | 38.0 | 35.3 | 3.2 | 8.7 | 211.2 | 0.5 |

PELLET GROUP DATA--

Management unit 02, Study no: 9

| Type | Quadrat Frequency | | | |
|---|---|---|---|---|
| | '96 | '01 | '06 | '11 |
| Elk | - | - | 6 | 2 |
| Deer | 1 | 6 | 8 | 2 |

| Days use per acre (ha) | | |
|---|---|---|
| '01 | '06 | '11 |
| 3 (8) | 14 (35) | 18 (45) |
| 17 (41) | 25 (61) | 11 (26) |

BROWSE CHARACTERISTICS--

Management unit 02, Study no: 9

| | | Age class distribution | | | | Utilization | | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | Plants per Acre (excluding seedlings) | % Young | % Mature | % Decadent | Seedling (plants/acre) | % moderate | % heavy | % poor vigor | Average Height Crown (in) |
| Amelanchier alnifolia | | | | | | | | | |
| 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 | 42/53 |
| 11 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | 35/48 |
| Artemisia tridentata vaseyana | | | | | | | | | |
| 84 | **1198** | 6 | 28 | 67 | - | 6 | 94 | 17 | 22/27 |
| 90 | **732** | 0 | 45 | 55 | - | 9 | 0 | 18 | 24/32 |
| 96 | **360** | 6 | 50 | 44 | - | 33 | 0 | 6 | 23/40 |
| 01 | **300** | 0 | 73 | 27 | - | 13 | 0 | 0 | 30/45 |
| 06 | **220** | 0 | 36 | 64 | - | 45 | 9 | 36 | 28/40 |
| 11 | **160** | 0 | 75 | 25 | - | 13 | 0 | 50 | 25/36 |
| Chrysothamnus nauseosus albicaulis | | | | | | | | | |
| 84 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | -/- |
| 90 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | -/- |
| 96 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | 45/61 |
| 01 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | -/- |
| 06 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | 54/72 |
| 11 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | 61/96 |
| Chrysothamnus viscidiflorus viscidiflorus | | | | | | | | | |
| 84 | **0** | 0 | 0 | 0 | - | 0 | 0 | 0 | -/- |
| 90 | **199** | 67 | 33 | 0 | 66 | 0 | 0 | 0 | 25/30 |
| 96 | **100** | 20 | 80 | 0 | - | 0 | 0 | 0 | 28/41 |
| 01 | **140** | 0 | 86 | 14 | - | 0 | 0 | 0 | 24/21 |
| 06 | **60** | 0 | 100 | 0 | - | 0 | 0 | 0 | 16/28 |
| 11 | **60** | 0 | 100 | 0 | - | 0 | 0 | 0 | 21/20 |

| | | Age class distribution | | | | Utilization | | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | Plants per Acre (excluding seedlings) | % Young | % Mature | % Decadent | Seedling (plants/acre) | % moderate | % heavy | % poor vigor | Average Height Crown (in) |
| Gutierrezia sarothrae | | | | | | | | | |
| 84 | **1865** | 25 | 75 | - | - | 0 | 0 | 0 | 15/19 |
| 90 | **66** | 0 | 100 | - | - | 0 | 0 | 0 | 9/14 |
| 96 | **400** | 0 | 100 | - | - | 0 | 0 | 0 | 14/17 |
| 01 | **580** | 0 | 100 | - | - | 0 | 0 | 0 | 13/17 |
| 06 | **60** | 0 | 100 | - | - | 0 | 0 | 0 | 14/23 |
| 11 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | 14/26 |
| Juniperus scopulorum | | | | | | | | | |
| 84 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | -/- |
| 90 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | -/- |
| 96 | **20** | 0 | 100 | - | - | 0 | 0 | 0 | -/- |
| 01 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | -/- |
| 06 | **0** | 0 | 0 | - | - | 0 | 0 | 0 | -/- |
| 11 | **20** | 0 | 100 | - | - | 0 | 0 | 0 | -/- |
| Purshia tridentata | | | | | | | | | |
| 84 | **599** | 0 | 22 | 78 | - | 0 | 100 | 0 | 45/53 |
| 90 | **665** | 0 | 70 | 30 | - | 50 | 0 | 10 | 63/92 |
| 96 | **380** | 0 | 100 | 0 | - | 74 | 5 | 0 | 52/88 |
| 01 | **560** | 4 | 75 | 21 | - | 75 | 11 | 0 | 58/93 |
| 06 | **180** | 0 | 89 | 11 | - | 33 | 44 | 0 | 53/81 |
| 11 | **240** | 0 | 75 | 25 | - | 25 | 17 | 25 | 50/75 |
| Symphoricarpos oreophilus | | | | | | | | | |
| 84 | **332** | 60 | 40 | 0 | - | 40 | 0 | 0 | 32/31 |
| 90 | **732** | 45 | 55 | 0 | - | 0 | 0 | 0 | 16/28 |
| 96 | **240** | 25 | 67 | 8 | - | 8 | 0 | 17 | 24/51 |
| 01 | **200** | 0 | 100 | 0 | 160 | 0 | 0 | 0 | 30/57 |
| 06 | **300** | 0 | 100 | 0 | - | 7 | 0 | 0 | 29/49 |
| 11 | **240** | 17 | 75 | 8 | - | 0 | 0 | 8 | 21/44 |