Allotment Assessment
Bruneau Hills

I. Name and Number of Allotment

Bruneau Hills Allotment #01057
Permittees: Dickshooter Cattle Co.

II. Livestock Use

1. Current Permitted Use: 4,200 AUMs
2. Historic Use Range: 2,762 to 6,512 AUMs
3. Suspended Preference: 0 AUMs
4. Season of Use: 03/01-04/15, 11/01-2/28
5. Kind and Class of Livestock: 767 Cattle
6. Percent Public Land: 99%

III. Allotment Profile

1. The Bruneau Hills Allotment is located in the central west part of the Jarbidge Field Office Area. Approximately 7% is located in MUA 5, 76% is located in MUA 6, and 17% is located in MUA 10. There are six pastures in this allotment; Winter Field, Bruneau Hill, Lookout, Big Draw, Echo, Rim. The current permit was issued on March 1, 1996 and is valid until February 28, 2006. Since 1994, temporary nonrenewable grazing use (TNR) was authorized from 1995 to 1999. It was authorized in 2001 and 2002, but was not used. The allotment authorizations are included in Table 1. That portion of the Allotment occurring in MUA 10 is within the Bruneau River-Sheep Creek Wilderness Study Area (WSA) (federal acreage: 6,842). BLM Handbook H-8550-1, Interim Management Policy for Lands Under Wilderness Review, describes the policies under which these lands will be managed until Congress either designates these lands as wilderness or releases them for other purposes. Most of the western edge of the allotment is also located within the Bruneau/Jarbidge River ACEC. This ACEC was designated to protect Bighorn sheep habitat and important geologic, scenic, natural and cultural values.
2. Federal Acreage: 40,062
3. Jarbidge RMP, 1987, MUA Objectives
   This increase in available vegetation production is to result from the availability of additional forage from water developments, brush control and seeding projects and improvement in native range condition (II-3).
   A. MUA 5 (Refer to pages II 24-27 in the RMP), Bruneau Hills occupies 6% of MUA 5
      1. Increase AUMs of forage issued for livestock by 2005 from 4482 to 5631 AUMs.
      2. Maintain acres existing vegetative improvements (5414 acres).
      3. Improve lands in poor (early seral) ecological condition (15,379 acres).
      4. Manage big game habitat to support 150 deer. Existing population (1987) is 50 mule deer.
      5. Maintain current condition of riparian habitat along the Snake River (12 miles) and C.J. Strike Complex (9 miles).
   B. MUA 6 (Refer to pages II 27-30 in the RMP), Bruneau Hills occupies 18% of MUA 6
      6. Increase AUMs of forage issued for livestock by 2005 from 12,136 to 47,772 AUMs.

7. Maintain acres existing vegetative improvements (75,107 acres).
8. Improve lands in poor (early seral) ecological condition (75,208 acres).
9. Manage big game habitat to support 40 mule deer. Existing mule deer is 25 (1987). Maintain present levels of upland game nesting and cover habitat.
10. Maintain current condition of riparian habitat.

C. MUA 10 (Refer to pages II 39-43 in the RMP), Bruneau Hills occupies 7% of MUA 10

11. Increase AUMs of forage issued for livestock by 2005 in from 6,238 to 7,021 AUMs.
12. Maintain acres existing vegetative improvements (1,866 acres).
13. Improve lands in poor (early seral) ecological condition (56,576 acres).
14. Manage big game habitat to support 2,160 winter mule deer and 260 mule deer the rest of the year, 191 antelope, and 208 bighorns and protect existing and potential bighorn habitat through special designation and management. Existing populations are 1320 winter mule deer, 200 mule deer rest of year.
15. Improve sage grouse nesting through seeding and rehabilitation. Maintain current upland game nesting and cover habitat.
16. Improve 4.7 miles of riparian habitat and 11.1 miles of fisheries habitat by 2005.

4. Key Forage Species:
   - Thurber's needlegrass
   - Crested wheatgrass
   - Bottlebrush squirreltail
   - Sandburg bluegrass
5. Grazing Management: Grazing use occurs in the allotment in the winter and early spring. There is no formal grazing management plan; however, the permittee grazes in a manner that a pasture is not used in the spring two consecutive years. Cattle are moved out of the allotment in the middle of April. This allows vegetation to complete growth prior to being grazed in the next winter.

IV. Management Evaluation

The purpose of this evaluation is to determine the allotment's status in meeting the Standards for Rangeland Health and Guidelines for Livestock Management and to renew the grazing permit with management guidelines to meet these Standards.

A. **Summary of Studies Data**

1. Actual Use

Table 1 shows the actual use since from 1994 to 2002.

Table 1 - Actual Use

Grazing Season	AUMs
1994	2,762
1995	4,215
1996	5,401
1997	6,512
1998	5,876
1999	6,014
2000	4,040
2001	4,173
2002	4,080

2. Climate

Long term average water year precipitation (September through June) for Bruneau NOAA Weather Station is 6.4 inches and the 10-year average annual water year precipitation for the BLM rain gauge stations at **Pothole Creek** is 11.7 inches. Table 2 shows the precipitation average for the year at the BLM's Pothole rain gauge which is representative of this allotment. Also shown is the Yield Index for the Bruneau Weather Station. The Yield Index is a precipitation-yield relation which provides reliable and effective information for use in comparing annual production yields to what is expected in a normal year. The Yield Index is used in forecasting and adjusting range forage estimates.

Table 2 - Water Year Precipitation
and Yield Year Index

Year	**Pothole Inches PPT**	**Yield Index At Bruneau**
1993	12.9*	1.08
1994	7.6	0.51
1995	15.8*	1.58
1996	14*	1.90
1997	15.5*	1.40
1998	16.7*	1.20
1999	18*	0.82
2000	8.9	0.61
2001	8.8	0..55
2002	8.4	0.77
2003	9	N/A

*Above Average Precipitation.

3. Utilization

Table 3 shows the actual data from sampling crested wheatgrass at transects in the Allotment during the 2002 grazing season.

Table 3 - Utilization Data

Year	Utilization Range	Utilization Average
2002	25% to 38%	31%

4. Production

Appendix 1 displays the production data that has been collected in the Bruneau Hills Allotment. It shows that 13,294,895 pounds of forage vegetation is produced on a near normal production year. Forage vegetation refers to grasses, and in seeded areas may include alfalfa and sainfoin. The production of forbs and shrubs is not included in this poundage. Considering precipitation data and its relationship to drought, as well as the needs of the watershed and wildlife, it is estimated that 4,587 AUMs of forage vegetation is available for livestock.

5. Condition and Trend

In May 1975, four long-term vegetation/soil cover monitoring study sites were established in the Bruneau Hill allotment mostly in response to fire rehabilitations. Two of these sites were setup in seedings, one was setup in a natural recovery area, and one was placed in a native plant community in poor condition. In accordance with basic monitoring techniques for BLM rangelands used back then, the study methods initiated included 3X3 plot index data consisting of vegetation cover, key species composition and litter cover, and site photographs. Of the six pastures in this large allotment, all four of these study sites were located in the second most northern pasture containing all the above types of plant communities. The four sites are situated in the following locations (site number), range sites, and elevations:

08S07E06; Artrw/Orhy, Sandy loam 8-12”, a burned native site @ 3,200 feet,
08S07E08; Artrw/Orhy, Sandy loam 8-12”, a seeding @ 3,500 feet,
08S07E09; Artrw/Orhy, Sandy loam 8-12”, a native site which has burned since 1979 @ 3,500 feet, and
08S07E15; Artrw/Orhy, Sandy loam 8-12”, a seeding @ 3,600 feet.

Since 1974, all four study sites have been revisited and data collected three times, in 1975, 1979 and finally in 1996. Trend is determined by comparing the frequency of key species and cover of the first year to subsequent years. The analysis and evaluation of these long-term studies are summarized in Table 4a and 4b.

Table 4a - Condition and Trend Evaluation of Native Vegetation Study Sites

1981-83 Inventory Site	Inventory Site Location	Trend Site	Vegetation Type 1981-83 (2002-03)**	Trend	1981-83 Ecological Rating*	2002-03 Production Studies Name/Rating
IN-21	06S07E29		Atco/Sihy		Early	
RA-10	07S06E25		Artrt/Brte/Chvi		Early	
SK-3 (Reclipped as LH-15)	08S07E07	08S07E06	Burned native	Static	Early	
IN-12	08S07E08	08S07E09	Burned native	Static	Early	
RA-14	08S07E22		Artrw/Brte		Early	BHP-3/Mid BHP-1/Mid

Table 4b – Condition and Trend Evaluation of Seeding Study Sites

1981-83 Inventory Site	Inventory Site Location	Trend Site	Vegetation Type 1981-83 (2002-03)**	1981-83 Condition Rating*	Trend
RA-5	07S07E28		Agcr/Brte (Agcr)	Good	
SK-3 (Reclipped as LH-15)	08S07E07	08S07E08	Agcr	Good (Excellent)	Static
N/A		08S07E15	Seeding	Good	Static
RA-2 (Reclipped as TH-13)	08S07E09		Agcr/Posa3	Fair (Good)	
RA-17	09S07E17		Artrw/Agcr	Good	
IN-5	09S07E21		Agcr/Posa3	Fair	

* Condition was determined from vegetation inventories in 1982 or best estimate for seedings based on relative densities of seeded species. Jarbidge RMP referred to Range Condition as: Excellent, Good, Fair, and Poor. Since that time these terms have been related to; Potential Natural Community, Late Seral, Mid-Seral, and Early Seral, respectively. Value terms of excellent, good, fair, poor are only used as a value rating for areas rehabilitated with *Agropyron cristatum* and *Agropyron intermedium.*

** "()" indicate the current vegetation if different from 1981-83 Inventory.

Trend site summaries have been completed for all of the study sites evaluated. These analyses are in the Allotment Study files of the field office and can be reviewed upon request.

The static trend would indicate that there is no progress made toward meeting the RMP objective to improve poor (early-seral) condition native plant communities one condition class better or providing an "upward trend" of poor condition rangelands. Recent production studies and in 2002 and 2003, however, measured composition at two native vegetation sites. Both sites were determined to be in mid-seral ecological condition. The Jarbidge RMP EIS indicated this entire area to be in poor (early seral) ecological condition. These newer studies indicate that "some" improvement in condition may have occurred since the 1987 RMP.

B. Rangeland Health Assessment

In 2002, rangeland health data was gathered on the Allotment at three ecological sites within native range, and four ranges site with seedings. Rangeland health data was collected per Technical Reference 1734-6, *Interpreting Indicators of Rangeland Health*. The rangeland health data is collected by an interdisciplinary team for the purposes of making a quantitative assessment of the soil/site stability, hydrologic function, and the integrity of the biotic community for the various ecological sites.

Seven transects were read at various ecological sites and are identified as BH-1 to BH-7. The "Preponderance of Evidence" based on the 7 transects, is shown in Table 5. The degree of departure or deviation from the potential ecological site description (None to Slight, Slight to Moderate, Moderate, Moderate to Extreme, or Extreme) is made based on an evaluation of the data.

Table 5 - Preponderance of Evidence

Attribute (The sites are considered meeting attributes if not mentioned)		Deviation From Potential				
		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil Site Stability Rationale: Bareground is slightly greater than expected for site (BH-2). BC is trampled out in some of the interspaces (BH-7). Soil surface resistance to erosion is slightly lower than potential for site. (BH-2, 6).	Native					BH-1, BH-3, BH-7
	Seedings				BH-2	BH-4, BH-5, BH-6,
Biotic Integrity Rationale: Low composition of perennial grasses, perennial forbs and annual forbs (BH-1, 3, 4). Nitrogen fixing legumes in low composition (BH-2, 3, 4). Big sagebrush slightly more decadent than expected (BH-5). The production is 0 to 25 percent at (BH-4); 25 to 50 percent at BH-7; and 50 to 75 percent at BH-5. Crested wheatgrass plants show decadence possibly from drought (BH-4, 5). Weak compaction layer (BH-4). Invasive weeds (i.e., cheatgrass, burr buttercup, Russian thistle) widespread but sparse (BH-7). Invasive plants sparse but are abundant in small scattered areas (BH-1, 2). Plants are drought stressed but capable of reproducing (BH-7). Cheatgrass dominates site (BH-4). Heavy cheatgrass litter hinders perennial seedlings to establish (BH-4). Biotic crust mitigates the low legume and litter amounts (BH-3).	Native				BH-1, BH-3, BH-7	
	Seedings			BH-4	BH-2, BH-6	BH-5
Hydrologic Function Rationale: Litter amount is low (BH-1, 3, 6, 7). Litter amount is too high (mostly cheatgrass) which is forming mats holding out moisture. Cheatgrass competing for moisture (BH-4). Vegetation is too short to catch snow (BH-4). Mid-sized bunchgrasses slightly low in composition (BH-5). The high amount of bareground allows for an increase in evaporation and runoff and reduces infiltration (BH-2)	Native					BH-1, BH-3, BH-5, BH-7
	Seeding				BH-2, BH-4	BH-6

1. Standard 1 – Watershed

The indicators for watershed are met at most of the sites. The site at BH-2 has bare ground slightly greater than expected and the soil surface resistance to erosion is slightly weaker than expected for the site.

2. Standard 2 - Riparian Zones and Wetlands and Standard 3 - Stream Channel/Floodplain

The Bruneau River is present along the western edge of the allotment. The Bruneau River is perennial and livestock trail into the Bruneau River Canyon down Roberson Trail. A second access route is down a pack trail southeast of Hot Creek. This route has been fenced, however, a

gate is present. A playa near Big Draw (T9S, R7E, Section 17 NE1/4) is present and has had a reservoir dug in a portion of it for livestock water.

The stream channel in the general area of Hot Creek on the east side of the river has been heavily impacted by past livestock grazing.

3. Standard 4 - Native Plant Communities

Site BH-7 was in a loamy 7-10 range site, whereas, sites BH-1, BH-2, and BH-5 are in a loamy 8-10 range site. Two sites (BH-4 and BH-6) were in a sandy loam 8-12 range site and BH-3 was in a loamy 8-12 range site. Sites 1, 2, 4, 5, and 6 had been seeded to crested wheatgrass at some point in the past. Of these, only site 2 is now dominated by crested wheatgrass. The remaining drill seeded sites have varying amounts of native plants. Only 1 site (BH-3) was located within the WSA and none were in the ACEC. Four range sites in the allotment were evaluated. The northern portion of the allotment lies in the Snake River Birds of Prey National Conservation Area.

Site BH-7 is an island of native vegetation in a larger crested wheatgrass seeding. Wyoming big sagebrush is the dominant shrub, with an estimated 20-25 percent shrub cover. Sandberg blue grass is the dominant native grass. Thurber needlegrass, which should be the dominant late seral grass, was absent. Bottlebrush squirreltail was present in very limited amounts. The native forb community was lacking with only phlox being observed. Bare ground appeared high for the site, however, there was a diverse biological soil crust community with late and early seral species present. Cheatgrass and bur buttercup were present and are a threat for expansion. Other exotic annual forbs present included Russian thistle, tumble mustard, and halogeton.

Site BH-1 had 23 intercepts (hits) on Wyoming big sagebrush with an average height of 16.4 inches. Sandberg bluegrass was the most abundant grass (50 percent cover) with only 3 percent cover of crested wheatgrass. Average grass height was 7.3 inches. Grass height will be reduced by livestock grazing in the winter. The few crested wheatgrass plants likely came from an adjacent seeding. No native forbs were hit on the transect. The most common forb was in the genus *Phlox* which was considered sparse to rare. Bare ground was 9 percent and biological soil crust cover was 17 percent. Cheatgrass (3 percent cover) was present as well as bur buttercup. Site BH-5 had 15 percent sagebrush cover with an average height of 22.2 inches. Sandberg bluegrass had 37 percent cover, and Indian ricegrass had 1 percent cover. Crested wheatgrass had 20 percent cover. Native forb cover was limited to 2 percent, all *Phlox*. Bare ground was 1 percent, whereas biological soil crust cover was14 percent. Exotic annuals, primarily cheatgrass, had 13 percent cover.

Both sites in the sandy loam 8-12 range site have been affected by past fires. Native plants provide a substantial amount of the cover. Sagebrush cover at BH-4 was 12 percent with an average height of 30.3 inches. Sandberg bluegrass had 11 percent cover, with crested wheatgrass having 9 percent. No native forbs were hit. Bare ground was 2 percent, whereas biological soil crust cover was 3 percent. Cheatgrass and other exotic annuals totaled 63 percent cover. The exotic species are inhibiting the establishment of more desirable vegetation.

Mule deer winter range is present along the Bruneau River Canyon in the uplands as well as the canyon. Antelope are present in the allotment all year. There are no data for big game populations specific to this allotment. Antelope numbers are generally down in hunt unit 46.

California bighorn sheep are present in the southern portion of the Allotment near the confluence with Clover Creek.

4. Standard 5 - Seedings

Site BH-2 had no hits on sagebrush. Sandberg bluegrass was at 38 percent cover, whereas, crested wheatgrass was at 40 percent. No native forbs were hit along the transect line. Bare ground was 6 percent, and biological soil crust cover was 18 percent. Cheatgrass had 7 percent cover. Other exotic annuals present included bur buttercup, Russian thistle, and tumblemustard.

Site BH-6 totaled 35 percent cover of crested wheatgrass, 34 percent of Sandberg bluegrass and 6 percent of phlox. Cheatgrass was only 4 percent cover. Sagebrush cover was absent. Bare ground was 6 percent, whereas, biological soil crust cover was 22 percent. The vast majority of the biological crusts were early seral species. Other exotic annuals were noted, including bur buttercup, halogeton, and Russian thistle.

Noxious weeds were noted in several locations. Rush skeletonweed was seen at several locations in the vicinity of Loveridge Draw and two other unnamed draws. Scotch thistle was also observed in several locations. Field bindweed is present along the Bruneau-Clover Road as it passes through the allotment. Russian knapweed has also been observed along the road near this allotment.

5. Standard 6 - Exotic Plant Communities, Other Than Seedings

Not applicable.

6. Standard 7 – Water Quality

Not applicable.

7. Standard 8 - Threatened and Endangered Plants and Animals

A number of species presently designated as Sensitive species are present in the allotment. For the most part, the Bruneau Hill Allotment has not been inventoried for sensitive species. Sensitive species occurrences are frequently noted from incidental observations. BLM has no information regarding whether or not pygmy rabbits are present or were historically present in this allotment. No bat inventory has been conducted in this allotment. Also a number of wildlife species presently designated as “watch” are also present. Watch species are **not** presently designated as Sensitive species, but may be added to the sensitive list in future years. Six plants presently on the BLM sensitive plant species list are known to occur in the Bruneau Hill Allotment. It is unknown whether the standard is being met for special status plant species. There is no information available to determine whether livestock grazing management is having a significant impact on sensitive plant species or not. All sensitive or watch species for the allotment are shown in Table 6.

Table 6 - Idaho BLM Sensitive and Watch species in the Bruneau Hill Allotment

Common Name	Scientific Name	Status	Presence
Bruneau hot springsnail	*Pyrgulopsis bruneauensis*	E	C
Bald eagle	*Haliaeetus leucocephalus*	T	C
Bull trout	*Salvelinus confluentus*	T	H
Greater sage grouse	*Centrocercus urophasianus*	S	C
Prairie falcon	*Falco mexicanus*	S	C
Ferrugnious hawk	*Buteo regalis*	S	C
Loggerhead shrike	*Lanius ludovicianus*	S	C
Brewer's sparrow	*Spizella breweri*	S	C
Sage sparrow	*Amphispiza belli*	S	C
Spotted bat	*Euderma maculatum*	S	C
California bighorn sheep	*Ovis Canadensis californiana*	S	C
Kit fox	*Vulpes macrotis*	S	H
Mojave black-collared lizard	*Crotaphytus bicinctorers*	S	C
Western ground snake	*Sonora semiannulata*	S	C
Northern leopard frog	*Rana pipiens*	S	H
Woodhouse toad	*Bufo woodhousii*	S	H
Redband trout	*Onchorhynchus mykiss gairdneri*	S	C
Spine-node milkvetch	*Peteria thompsonae*	S	C
Rigid threadbush	*Nemacladus rigidis*	S	C
Spreading gilia	*Ipomopsis polycladon*	S	C
Snake River milkvetch	*Astragalus purshii ophiogenes*	S	C
White-margin waxplant	*Glyptopleura marginata*	S	C
Greeley's wave-wing	*Cymopteris acaulis greeleyorum*	S	C
Swainson's hawk	*Buteo swainsoni*	W	C
Long-billed curlew	*Numenius americanus*	W	C
Grasshopper sparrow	*Ammodramus savannarum*	W	C
Black-throated sparrow	*Amphispiza bilineata*	W	C
Sage thrasher	*Oreoscoptes montanus*	W	C
Brewer's blackbird	*Euphagus cyanocephalus*	W	C
Short-eared owl	*Asio flammeus*	W	L
Western burrowing owl	*Speotyto cunicularia*	W	L
Slickspot peppergrass	*Lepidium papilliferum*	C	L

Status codes: E = listed as Endangered, T = listed as Threatened; C = FWS Candidate species; S = designated Sensitive species; W = Watch category
Presence codes: C = presence confirmed in allotment; L = presence likely in the allotment; H = present historically in the allotment

Bruneau Hot springsnail. Bruneau hot springsnails have been documented in a number of springs that border the Bruneau River in the general vicinity of Hot Creek and upstream about 4 miles.

Bald eagle. Bald eagles are known to use the backwaters of C.J. Strike and trees in the Bruneau Valley for roosting in the winter. Bald eagles forage in the lower portion of the Bruneau River Canyon. This species is not known to nest in the area.

Bull trout. Fluvial bull trout likely still use the Bruneau River as late fall through spring habitat. Bull trout are known to move over 50 miles in other areas during the fall through spring time period.

Greater sage grouse. Sage grouse numbers within the area are down. The downward counts coincided with a switch from summer to winter grazing in 1991 and an increase in AUM's issued as TNR. The decline occurred prior to some of the large fires in the later 1990's which removed sagebrush cover from several thousand acres of sagebrush steppe. Much of the remaining native habitat is dominated by Sandberg bluegrass which provides low residual cover and a general paucity of native forbs. The taller late seral grasses (Thurber needlegrass, bluebunch wheatgrass) are generally lacking. The seedings in the area do provide some residual cover for nesting, however, they generally lack sagebrush cover and an adequate amount of forbs. For plant communities where Sandberg bluegrass, bottlebrush squirreltail, or Thurber needlegrass are the dominant grasses, 40 percent use on native grasses will not leave adequate herbaceous cover for nesting sage grouse 0.5 or more miles from water.

Table 7. Numbers of male sage grouse at leks in or near the Bruneau Hill Allotment for which there is data.

Lek #	# Males	Year of Recent Count	Highest # Males	Year of Count
2O-007	0	2001	27	1986
2O-128	0	2002	15	1994
2O-129	5	2002	12	1991
2O-130	0	2002	12	1991
2O-166	0	2002	14	1992
Lek # in bold are in the allotment.				

Prairie falcon. Prairie falcons have been observed foraging in the allotment, however, no nest sites have been confirmed. A number of cliffs and rock outcrops are present primarily along portions of Three Creek, Ross Pasture Creek, and Higgins Draw and provide suitable nesting sites for this species.

Ferruginous hawk. A number of ferruginous hawk nests have been found in the Bruneau Hill Allotment. The majority of the nests are located on the bluffs that overlook the Bruneau Valley. BLM records indicate that for the most part only two nest sites have resulted in young ferruginous hawks reaching fledging age.

Loggerhead shrike. Loggerhead shrikes were noted perched along the fences in the area. There have been other observations of this species scattered in the general area.

Brewer's sparrow and sage sparrow. Both species are known to be present in Wyoming big sagebrush habitats in the allotment. They were observed in the early morning at all of the native sites surveyed.

Spotted bat. Spotted bats have been noted in several areas in the Bruneau Canyon. Cliff habitat provides roosting areas whereas, they can forage for insects within the canyon or in the adjacent uplands.

California bighorn sheep. There has been only one observation of California bighorn sheep in the vicinity of the Bruneau Hill Allotment in the past 13 years. A ram was observed in the canyon near the Clover Creek confluence with the Bruneau River in 1994. The Bruneau Hill Allotment contains about 7,270 acres of the Bruneau/Jarbidge ACEC. Seven water troughs in this allotment are located within the 1 mile buffer zone where water was not supposed to be developed to minimize potential impacts to bighorn habitat, two troughs were installed in the mid-1990's. Livestock grazing during the winter (December into March) is not compatible with wintering bighorn sheep. Livestock have access into bighorn sheep habitat along the Bruneau River Canyon as well as into the canyon via Roberson Trail. Livestock graze during the winter in or adjacent to bighorn winter range in the Blackrock Pocket, Diamond A, Bruneau Canyon, Poison Butte, 71 Desert, Winter Camp, Flat Top and Bruneau Hill Allotments, or essentially all the bighorn sheep winter habitat along the Bruneau/Jarbidge Canyons.

Kit fox. Kit fox were historically present in the Bruneau Valley area. There have been no recent observations of this species in decades.

Mojave-black collared lizard. Mojave black-collared lizards have been confirmed in two locations in the Bruneau Hill Allotment.

Western groundsnake. Groundsnakes have been documented in an area east of the Bruneau River generally east of Hot Creek in sandier soils. This species is likely present in other areas with suitable habitat.

Northern leopard frog and Woodhouse toad. There are records of both species being present historically in the area in the lower portion of the Bruneau River canyon. BLM has no recent information on either species.

Redband trout are known to be present in the Bruneau River. During times of low flows and warm water temperatures this species may move upstream to cooler water. Old BLM data show redband trout present in pools in the Bruneau River in the late fall.

Spine-node milkvetch. Twelve populations of this plant are known to occur in the Bruneau Hill Allotment. It is a perennial which occurs in disjunct populations on barren areas with thin cinder soils. Spine-node milkvetch is known from the salt desert shrub plant community at elevations in Idaho from 2600 to 3200 feet. Threats include off highway vehicle use and concentrated riparian grazing use of adjacent areas.

Rigid threadbush. Two populations of this plant are known to occur in the Bruneau Hill Allotment. It is an annual which occurs on loose, sandy, cindery or ashy outcrops, cracks in basalt, or in dried mud. Rigid threadbush is known from the shadscale-sagebrush zone at elevations from 3700 to 6500 feet. Threats include off-road vehicles and range improvement programs.

Spreading gilia. Six populations of this plant are known to occur in the Bruneau Hill Allotment. It is an annual which occurs in dry, open areas in the desert shrub communities of shadscale, horsebrush, and sagebrush on sandy to silty soils. Spreading gilia is known from elevations of 2400 to 4500 feet. No threats have been identified for this species.

Snake River milkvetch. Three populations of this plant are known to occur in the Bruneau Hill Allotment. It is a perennial which occupies a number of different soils including sands, gravel-sandy bluffs, talus, dunes, and volcanic ash beds. Snake River milkvetch often occurs on barren sites within big sagebrush, Indian ricegrass, needle-and-thread grass, and fourwing saltbush communities at elevations in Idaho from 2100 to 3250 feet. Threats include off highway vehicle use, range improvement projects, and livestock trailing.

White-margin waxplant. Two populations of this plant are known to occur in the Bruneau Hill Allotment. It is an annual which occurs on dry, sandy-gravelly or loose ash soils in shadscale, greasewood, rabbitbrush, spiny hopsage, winterfat, and sagebrush communities. White-margin waxplant is known from elevations of 2400 to 3600 feet. Threats include off-road vehicles and range improvement programs.

Greeley's wave-wing. Eight populations of this plant are known to occur in the Bruneau Hill Allotment. It is a low-growing perennial which occupies sites which undergo a lot of soil movement. The sand is loosely held together, while the deposits that have weathered clay shrink and swell greatly. Greeley's wave-wing is known to occur within Wyoming big sagebrush, desert shrub, and Indian ricegrass zones. Threats include off highway vehicle use.

Slickspot peppergrass. Slickspot peppergrass is not known to occur in this allotment, however, 7465 acres of suitable habitat does occur. Threats to this species include degradation of slickspots and surrounding area habitat, trampling from livestock, and weed invasion.

C. Guidelines for Grazing Management

There are no formal grazing management guidelines implemented for the allotment. The permittee is providing adequate growing season rest for key species. Not all water troughs have functional escape ramps for wildlife. The fence wire spacing is not to BLM specifications for mule deer and antelope. The top wire is generally too high per the *Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management* the following Guidelines need to be implemented to promote significant progress toward the Standards:

> Guideline 9 – Apply grazing management practices to maintain adequate plant vigor for seed production, seed dispersal, and seedling survival of desired species relative to soil type, climate, and landform.
>
> Guideline 20 – Design management fences to minimize adverse impacts, such as habitat fragmentation, to maintain habitat integrity and connectivity for native pants and animals. Based on the data presented here, there is additional forage vegetation to allocate to watershed, wildlife and livestock.

V. Conclusions

The indicators for Standard 1 (Watershed) of the applicable Standards for Rangeland Health are being met. The status for Standard 2 (Riparian and Wetland Areas) and Standard 3 (Stream

Channel/Floodplain) are currently unknown. The concern here is an access to the Bruneau River riparian area. This access needs further investigation. Not all the indicators for Standard 4 (Native Plant Communities), Standard 5 (Seedings), and Standard 8 (Special Status Species) are being met. Many of the native plant communities are lacking the late seral bunchgrasses like Thurber's needlegrass. Also the native forb component is low.

There is no data on number of deer or antelope utilizing the habitat in the Bruneau Hills Allotment. Land in this allotment is classified as mule deer winter range. The native habitat is used as fawning habitat and winter cover for antelope.

Changes in grazing on WSA lands may be allowed in number, kind, or season of use if following preparation of an EA, the effects are found to be negligible. Changes cannot cause declining conditions or trend of the vegetation or soil and cannot cause unnecessary or undue degradation of the lands.

VI. Consultation

Jim Klott, Wildlife Biologist
Arnold Pike, Range Conservationist
Sheri Hagwood, Botanist
Max Yingst, Recreation/Wilderness
Jeff Ross, Archeologist
Clare Josaitis, Natural Resource Specialist – Riparian
John Ash, NRS – Climate/Monitoring/WQ
Cedar Creek Cattle Co.-Chuck Jones

VII. Recommendations

Maintain up to 13,974 acres of existing vegetation improvements (325 acres, 13,519, and 130 in MUAs 5, 6, and 10, respectively). Restore or improve the remaining acres of non-native seedings to a more natural vegetation community.

Conduct Ecological Site Inventory of those acres previously determined to be in poor condition to quantify current status. Seed or plant native shrubs, grasses and forbs into poor condition range sites and rest as necessary to ensure establishment. This would result in improvement of poor condition range.

Maintain the current permitted grazing use allocation level of 4,200 AUMs. Production studies show that there may be additional vegetation production for allocation to livestock. Any increases in allocation levels need to be consistent with the Wilderness EIS and the Interim Management Plan (IMP) as they are not grandfathered in the WSA. In order to comply with the IMP for the WSA, additional utilization and trend monitoring is necessary. Prior to implementing additional use in the allotment the trend studies must be read at least two different years far enough apart to establish static or upward trend and utilization measurements must be taken with in the WSA to provide a base data to determine changes in use after the increase.

Manage for light utilization levels (up to 40%) in native pastures in order to maintain the existing native communities. Under the forage allocation proposed, a portion of the forage production would be allocated to watershed and wildlife, and would maintain the native plant communities and provide habitat for wildlife.

Manage for moderate utilization levels (up to 50 percent) in pastures predominately seeded to crested wheatgrass. In areas of seeded pastures where crested wheatgrass plants are becoming decadent or "wolfy" allow higher utilization (up to 70 percent) on an occasional basis (once in 5 years) to condition plants and remove standing dead material. This treatment will promote plant vigor, increase ground litter, overall palatability and maintain healthy stands of crested wheatgrass in accordance with the Jarbidge RMP. Increased palatability of seeded species will decrease grazing pressure on native species thus resulting in better plant vigor in the native herbaceous component. This level will be cumulative between livestock and wildlife. When 70 percent grazing use is authorized at key areas within a seeded pasture, use in the remaining seeded pastures would be at 50 percent or less; in the native pastures at 40 percent or less; and total grazing use would be limited to the permitted use in the allotment.

Monitor and manage as native seeded areas reverting to sagebrush to ensure re-establishment of big game habitat and upland game bird nesting and cover habitat. Allow no more than 50 percent frequency of browsing on current year leaders on key woody species*.

In mule deer winter range, plant four-wing saltbush, winterfat, and sagebrush in areas to replace browse lost in wild fires. Evaluate areas for treatment of exotic annuals to improve perennial vegetation sage grouse and other wildlife. Treatment areas should include the ACEC and, where practical, the WSA.

Ensure that all water troughs have correctly installed and properly functioning wildlife escape ramps and that water is in all troughs from May through October even when livestock are not present in the allotment. This was mitigation for the Echo Water system.

Ensure all fences conform to BLM standards for wire spacing to minimize impacts to wildlife. Allotment boundary fence should have no more than 4 strands. The top wire should not exceed 40 inches for 4 strand fence and a bottom height of 18 inches. Pasture fences should only be 3 strand with a top height of 38 inches and a bottom height of 18 inches. The bottom wire of all fences should be barbless in antelope habitat.

No salting should occur within the ACEC to protect Bighorn habitat and cultural resources.

Ensure that BLM's management policy for lands under wilderness review be conformed to and continue resource uses on these lands in a manner that maintains the area's suitability for preservation as wilderness.

Construct a fence at the top of the Roberson Trail to prevent livestock drift into the Bruneau Canyon.

*Note: 50 percent use on key woody species is not allocated to livestock. Use is expected to be low except for during the winter if snow covers herbaceous vegetation. Winter range was identified in this allotment.

Appendix 1 **Stocking Rate Based Climate and Production**

Allotment: **Bruneau Hill #1057** **Date:** **1/16/2004**

	(Inches)	75% of Avg. (Inches)	# of Years ≥75% of Avg.	# of Years of Data	% of Years ≥75% of Avg.
Bruneau	6.86	5.15	27.00	40.00	68%

Produtn Total lb	Bruneau 2002 Yield Index Adjustment 0.77	Decision Weighted Use Factor	% of Years ≥75% of Avg. PPT	% of Veg. Prodt'n Available	AUMs Available for Livestock
10,237,069	13,294,895	40%	68%	27%	4,487
			WSA Adjustment*		3,644

Pasture	Vegetation	Acres	lbs/ Acre	lb.of Forage	Utilization Factor	Weighted Forage
#1	Wy sage/bluegrass	142	103	14,626	40%	5,850
	Wy sage/bluegrass-**WSA**	2,103	103	216,609	40%	86,644
	Crested	1,887	1,091	2,058,717	40%	823,487
	Crested-**WSA**	62	1,091	67,642	40%	27,057
	Annual	143	0	0	40%	0
Subtotal		4,337				
#2	Crested	1,691	1,091	1,844,881	40%	737,952
	Crested - **WSA**	5	1,091	5,455	40%	2,182
	Wy sage/bluegrass	1,411	103	145,333	40%	58,133
	Wy sage/bluegrass-**WSA**	1,066	103	109,798	40%	43,919
	Annual	579	0	0	40%	0
Subtotal		4,752				
#3	Wy sage/bluegrass	299	103	30,797	40%	12,319
	Wy sage/bluegrass-**ML**	435	103	44,805	40%	17,922
	Wy sage/bluegrass-**WSA**	807	103	83,121	40%	33,248
	WY sage/bluegrass-**WSA-ML**	13	103	1,339	40%	536
	Wy sage/bluebunch-**ML**	22	76	1,672	40%	669
	Crested	666	389	259,074	40%	103,630
	Crested-ML	2,594	389	1,009,066	40%	403,626
	Crested-**WSA**	23	389	8,947	40%	3,579
	Annual-**ML**	188	N/A	N/A	40%	0
Subtotal		5,047				
#4	Wy sage/bluegrass	281	103	28,943	40%	11,577
	Wy sage/bluegrass-**ML**	492	103	50,676	40%	20,270
	Wy sage/bluegrass-**WSA**	783	103	80,649	40%	32,260
	Wy sage/bluegrass-**WSA-ML**	32	103	3,296	40%	1,318
	Crested	353	389	137,317	40%	54,927
	Crested-**ML**	1,880	389	731,320	40%	292,528
	Crested-**WSA**	13	389	5,057	40%	2,023
	Annual	11	0	0	40%	0
	Annual-**ML**	387	0	0	40%	0
Subtotal		4,232				
#5	Crested	667	474	316,158	40%	126,463
	Crested-**ML**	3,417	474	1,619,658	40%	647,863
	Crested-**WSA**	154	474	72,996	40%	29,198
	Wy sage/bluegrass	2	103	206	40%	82
	Wy sage/bluegrass-**ML**	960	103	98,880	40%	39,552
	Wy sage/bluegrass-**WSA**	628	103	64,684	40%	25,874
	Annual-**WSA**	1,129	0	0	40%	0
	Annual-**ML**	3,257	0	0	40%	0
	Annual	1,476	0	0	40%	0
Subtotal		11,690				
#6	Wy sage/bluebunch	17	76	1,292	40%	517
	Crested	344	474	163,056	40%	65,222
	Crested-**ML**	2,002	474	948,948	40%	379,579
	Wy sage/bluegrass	19	103	1,957	40%	783
	Wy sage/bluegrass-**ML**	98	103	10,094	40%	4,038
	Annual-**ML**	1,857	0	0	40%	0
	Annual	5,667	0	0	40%	0
Subtotal		10,004				
	Total Acres *	40,062		10,237,069		4,094,828

Adjustment Pending IMP Required Monitoring**	
WSA Pasture Acres	30,058
Current Permit	4,200
Current Stocking Level (Ac/AUM)	9.54
AUMs Allowed in WSA Pastures	3,151
Proposed AUMs in Non-WSA Pasture(s)	493
Adjusted Proposed AUMs	3,644

Weighted Use Factor	0.40

* The AUMs in the WSA cannot be adjusted in pastures containing WSA acreage until requirements in the Interim Management Plan for WSA's are met.