

Allotment Assessment Echo 4 Allotment

I. Name and Number of Allotment

Echo 4 Allotment #00296

Permittees: Winter Camp Livestock, Co; Simplot Co.

II. Livestock Use

1. Preference: 2309 AUMs
2. Historic Use Range: 730 to 5629 AUMs
3. Suspended Preference: 0 AUMs
4. Season of Use: March 1 to February 28
5. Kind and Class of Livestock: Cattle
6. Percent Public Land: 96%

III. Allotment Profile

1. The Echo 4 Allotment is located in the central part of the Jarbidge Field Office Area within MUA 7. There are five pastures in this allotment; Upper Notch, Lower Notch, Big Hill, Crow's Nest and Crow's Nest Butte. The current permit was issued on December 19, 2000 for 2309 AUMs. This permit is valid until February 28, 2010. Since 1990, the estimated¹ temporary nonrenewable (TNR) grazing use was authorized in 1990 through 1999 and 2001. The allotment TNR authorizations are included in Table 1.
2. Federal Acreage: 16,599
3. MUA Objectives (Jarbidge RMP, 1987):
 - Increase AUMs of forage issued for livestock by 2005 from 37,097 to 70,113 AUMs in MUA 7 (II-32). Echo 4 is 5% of MUA 7. This increase in use would result from the availability of additional forage from water developments, brush control and seeding projects and improvement in native range condition (II-3).
 - Maintain 155,612 acres existing vegetative improvements (II-31).
 - Improve 123,921 acres of lands in poor (early seral) ecological condition (II-31).
 - Manage big game habitat to support 100 mule deer and 30 antelope (100% increase for both) (II-31).
4. Key Forage Species:
 - Thurber's needlegrass
 - Crested wheatgrass

¹ The Echo 4 Allotment and Echo 5 Allotment were a part of the Echo Group Allotment until the fall of 2001 when they were separated as two separate allotments. These allotments were licensed as the Echo Group Allotment until that time. The actual use in each allotment is estimated base on information supplied by a range consultant for the permittee and the billing statement.

- Bottlebrush squirreltail;
 - Sandburg bluegrass.
5. **Grazing System:** This allotment has a formal deferred rotation grazing system in conjunction with the adjacent Echo 5 Allotment as described in Attachment B of the Environmental Assessment ID001-00-013 and implemented in the Area Manager’s Final Decision dated February 29, 2000. However, the allotment was transferred to the current permittee after that decision was issued. The current permittee grazes this allotment in the fall, winter and spring (October through May) while the preceding permittee grazed the allotment in the spring and summer. The current permittee, however, does not graze any pasture during the critical growth period in the spring between the boot stage and flowering of key species in two consecutive years.

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 1990 to 2002.

Table 1. Actual Use

Grazing Season	AUMs
1990	3805
1991	4872
1992	4184
1993	4659
1994	5629
1995	4181
1996	4645
1997	4635
1998	4414
1999	4299
2000	2812
2001	3170
2002	730

2. Climate.

Long term water year precipitation (September through June) for Castleford NOAA Weather Station is 9.4 inches and for the Hollister NOAA Weather Station is 9.62 inches.

The BLM Big Hill and Big Draw rain gauges, the 10 year annual average has been 8.3 and 10.9 inches, respectively. Table 2 shows the yearly precipitation accumulations for the water year for each of the past 10 years at the Big Hill and Big Draw rain gauges which is representative of this allotment. Also shown is the average yield index for the Castleford and Hollister 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 Index

Year	Big Hill	Big Hill Yield Index	Yield Index At Castleford	Yield Index at Hollister
1993	NA	NA	1.10	1.55
1994	NA	NA	0.54	.72
1995	7.3	NA	1.25	1.94
1996	11.4*	NA	1.16	1.28
1997	12.6*	NA	1.44	1.41
1998	11.3*	NA	0.71	1.72
1999	5.6	NA	0.72	1.05
2000	7.7	NA	0.51	0.49
2001	6.5	NA	0.38	0.52
2002	8.5	NA	0.57	0.88
2003	7.4	0.82	0.59	0.75

*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	Vegetation Type	Utilization Range	Average Use
2001	Native	19 to 24%	22%
2001	Crested Seeding	32 to 55 %	44%

4. Production

Appendix 1 displays the production data that has been collected in the Echo 4 Allotment. It shows that 8,820,640 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 3,740 AUMs of forage vegetation is available for livestock.

5. Condition and Trend

Only one short-term trend study site has been established in the Echo 4 allotment as recently as August 2002, to monitor fire rehabilitation treatments following the 2001 Big Knob Fire which burned about one third of this allotment. The site was located in an existing crested wheatgrass seeding. Follow up monitoring of the site in 2003 has only been useful for determining that the site and existing vegetation and soil conditions are recovering from the effects of the burn and does not really establish any long-term vegetative trends in the allotment. Since there have been no long-term trend studies established in the allotment, vegetative and soil cover trends are virtually unknown, except for the fact and knowledge that most of the allotment has been burned several times in the past (late 1970's through the 1990's) and again more recently in 2001 and '02 (Crimson Clover fire). Essentially, the entire allotment now consists of crested wheatgrass seedings of various ages. Table 4a and 4b summarize the ecological condition ratings.

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

1981-83 Inventory Site	Inventory Site Location	Vegetation Types 1981-83 (2002-03)**	1981-83 Ecological Rating*
IN-26	10S09E12	Artrw/Stth2 (Agcr)	Mid
RA-23	10S09E13	Artrt/Brte (Agcr)	Early
SK-27	10S10E02	Artrw/Stth2	Early

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

1981-83 Inventory Site	Inventory Site Location	Vegetation Type 1981-83 (2002-03)**	1981-83 Condition Rating*
SK-31	09S10E08	Agcr Seeding	Good
SK-29	09S10E13	Artrw/Brte (Agcr)	Fair

*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.

As for the vegetative conditions in the allotment, a vegetation inventory was conducted in 1981-82. According to that survey, approximately 65% of the allotment was delineated as seeded to crested wheatgrass, and the remaining 35% was in poor ecological condition. Production studies were done in the allotment in 2003. In using the composition data from this study the ecological condition at that site (refer to Table 4a) is in late seral condition. This recent study indicates that improvement in condition may have occurred in the remaining native vegetation areas.

Despite being burned in the past and the native vegetation being replaced predominantly with the introduced species of crested wheatgrass, the major ecological site of most of the allotment is a Artrw/Stth2, Loamy 8-10" type. As a result of the burns and seeding this introduced grass species, this ecological site is almost completely devoid of the potential eco-site vegetation species of Wyoming sagebrush and Thurber's needlegrass throughout most of the allotment. Although the sagebrush may return to the site in time, the recovery of needlegrass will be substantially slower because of the loss of the seed source and the competitive nature of the crested wheatgrass.

B. Standards for Rangeland Health and Guidelines for Livestock Management

In 1999, rangeland health data was gathered on the Allotment. An Allotment Assessment was completed and a determination was made on December 20, 1999. It stated that Standards 5 (Seedings) and 8 (Threatened and Endangered Plants and Animals) of the Standards for Rangeland Health are not being met. Grazing use, however, was found to conform with the Grazing Management Guidelines and it was not a significant factor in meeting the Standards. Rather, frequent wildfire was found to be the most significant factor in not meeting these Standards. The following is a summary of the assessment.

1. Standard 1 – Watershed

This Standard is being met in the Allotment.

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

Echo 4 Allotment contains no streams, riparian zones or wetlands. Therefore, Standards 2 and 3 are not applicable.

3. Standard 4 - Native Plant Communities

Pronghorn and mule deer are present in the allotment year round. There are no data on antelope or mule deer numbers for the area. Remaining native sagebrush habitat provide browse as winter forage as well as fawning habitat in the late spring.

4. Standard 5 – Seedings

The main reason that this standard was not met is because of the lack of shrub cover as a result of wildfires. The seeding had herbaceous diversity and was producing at 75 percent of potential for the site. These descriptions are still true at this time.

5. Standard 6 – Exotic Plant Communities, Other Than Seedings
Not Applicable.

6. Standard 7 – Water Quality

This standard is not applicable. There are no perennial streams or open water bodies of any significance present in the allotment that may effect or impact water quality concerns within or outside of the allotment.

7. Standard 8 - Threatened and Endangered Plants and Animals

A number of species presently designated as Sensitive are present in the allotment. For the most part, the Echo 4 Allotment has not been inventoried for sensitive species. Sensitive species occurrences are frequently 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 present. Watch species are **not** presently designated as Sensitive species, but may be added to the sensitive list in future years. No BLM sensitive plant species are known to occur in the Echo 4 Allotment. Only limited surveys for sensitive plants had been conducted in this allotment and more species may occur. It was unknown whether the standard was being met for special status plant species. There was no information available to determine whether livestock grazing management was having a significant impact on sensitive plant species or not. All sensitive or monitor species are shown in Table 6.

Table 6. Idaho BLM Sensitive and Watch species in the Echo 4 Butte Allotment

Common Name	Scientific Name	Status	Presence
Greater sage grouse	<i>Centrocercus urophasianus</i>	S	C
Prairie falcon	<i>Falco mexicanus</i>	S	C
Loggerhead shrike	<i>Lanius ludovicianus</i>	S	C
Brewer’s sparrow	<i>Spizella breweri</i>	S	C
Sage sparrow	<i>Amphispiza belli</i>	S	C
Ferruginous hawk	<i>Buteo regalis</i>	S	L
Pygmy rabbit	<i>Brachylagus idahoensis</i>	S	C
Swainson’s hawk	<i>Buteo swainsoni</i>	W	C
Sage thrasher	<i>Oreoscoptes montanus</i>	W	C
Long-billed curlew	<i>Numenius americanus</i>	W	C
Short-eared owl	<i>Asio flammeus</i>	W	L
Western burrowing owl	<i>Speotyto cunicularia</i>	W	L
Slickspot peppergrass	<i>Lepidium papilliferum</i>	C	L
Status codes: C = FWS Candidate species; S = designated Sensitive species; W = Watch category			
Presence codes: C = presence confirmed in allotment; L = presence likely in the allotment			

Greater sage grouse. There are records of two leks in Echo 4 Allotment (20-51 and 20-57). Neither lek has historical data and neither lek has been active in the past 30 years.

There are records of 5 historical leks within 2 miles of the Echo 4 Allotment. Lek 2O-59 was not active in 2003. The recent high count for this lek was 5 male sage grouse in 2000. The area adjacent to this lek burned in the Crimson Clover fire in 2000. Lek 2O-053 did not have any male sage grouse in 1995. The high count for this lek was 30 males in 1964. The area near this lek was burned in the large Browns Creek Fire in 1975. Sage grouse were formerly found in much of the allotment. Sage grouse nesting potentially occurs in areas with adequate shrub cover (10-30%). Plant communities where Sandberg bluegrass, bottlebrush squirreltail, and Thurber needlegrass are grazed to 40% use level will not provide adequate residual vegetation for nesting sage grouse when 0.5 miles or more from water. In plant communities dominated by bluebunch wheatgrass 40% use level will likely provide some areas where residual herbaceous cover will meet sage grouse nesting needs within 0.5 miles of water. Grazing to 50% use on crested wheatgrass will reduce residual herbaceous nesting cover for sage grouse when 0.5 miles or more from water.

Prairie falcon. Prairie falcons have been observed in the allotment. The rock outcrops along Crows Nest may provide nesting habitat for this species.

Ferruginous hawk. Ferruginous hawks have been observed flying over this allotment. The nearest known nest (F026) is about 1 mile south of the east side of the allotment. No nests are known to be present in the allotment, however, no inventory for this species has been conducted.

Loggerhead shrike. Loggerhead shrikes have been observed in this allotment at several locations. They likely nest in areas where the sagebrush is taller.

Brewer's sparrow and sage sparrow. Both species are present in areas with suitable sagebrush cover. Brewer's sparrows were noted at one of the native sites.

Pygmy rabbit. A petition has been sent to the Fish & Wildlife Service to list this species under the Endangered Species Act. This species was observed near the allotment boundary with the Echo – Luby Allotment in 2001. Prior to wild fires in the area in the 1970's and 1980's, this species is likely to have been more wide spread in the area. Historically, Crows Nest Flat had the deep soils that this species prefer.

Slickspot peppergrass. Slickspot peppergrass is not known to occur in this allotment, however, 12,820 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

The Determination made on December 20, 1999 stated that the grazing management is in conformance with the *Guidelines for Livestock Grazing Management*.

VI. Conclusions

A determination has been made that not all Standards for Rangeland Health are being met and livestock were found not to be a significant factor. An Environmental Assessment was prepared and a Final Grazing decision made to implement grazing management in this allotment. Livestock grazing management guidelines are being met.

Recent monitoring data indicates that there is additional vegetation forage available to be allocated to the watershed, wildlife and livestock.

VII. Consultation

Jim Klott, Wildlife Biologist
Arnold Pike, Range Conservationist
Sheri Hagwood, Botanist
Max Yingst, Recreation/Wilderness
Jeff Ross, Archeologist
Clare Josaitis, Natural Resource Specialist
John Ash, Natural Resource Specialist - Monitoring
Winter Camp Lvst, Co;
Simplot, Co

VIII. Recommendations

Increase the current allocation of forage at from 2,309 to 3,740 AUMs. This use has been based on monitoring and production studies. The proposed permitted AUMs would result in an expected utilization of less than 40% at native vegetation and crested wheatgrass areas with greater than 15 percent sagebrush cover at key areas, and 50 % at crested wheatgrass key areas.

Maintain up to 7,780 acres of existing vegetation improvements. Restore or improve the remaining acres of non-native seedings to a more natural vegetation community.

Improve up to 5,950 acres of poor condition range. Seed or plant native shrubs, grasses and forbs into poor condition ecological sites. Provide rest in treated areas to allow the plants to establish. This would result in improvement of poor condition range.

Manage big game habitat to support increased mule deer and antelope populations. The native habitat is used as fawning habitat and winter cover for antelope.

Manage for light utilization levels (up to 40%) in native pastures and pastures with greater than 50 percent seedings with greater than 15 percent sagebrush cover. Under the forage allocation proposed, a portion of the forage production would be allocated to watershed and wildlife and would 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 “woffy” 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 and seeded pastures with greater than 15 percent sagebrush cover at 40 percent or less; and total grazing use would be limited to the permitted use in the allotment.

Monitor and manage as native those 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% frequency of browsing on current year leaders on key woody species*.

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.

*Note: 50% 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. No winter range was identified in this allotment, however, antelope winter in the allotment.

Appendix 1

Stocking Rate Based Climate and Production

Allotment: Echo 4 #296

Date: 1/16/2004

Station	Avg. PPT (Inches)	75% of Avg. (Inches)	# of Years $\geq 75\%$ of Avg.	# of Years of Data	% of Years $\geq 75\%$ of Avg.			
Castleford	9.41	7.06	27	38	71%			
Hollister	9.62	7	38	53	72%			
	Big Hill, Castleford Hollister Average	Decision	Weighted Use	% of Years $\geq 75\%$ of Avg. PPT	% of Veg. Prod'n Available	AUMs Available for Livestock		
Production	Yield Index Adjustment	Factor						
Total lb	0.89							
11,629,378	13,066,717	48%	71%	34%	5,540			
7,850,370	8,820,640			Water Factor Level*	3,740			
Pasture	Vegetation	Acres	lbs/ Acre	lb. of Forage	Utilization Factor	Weighted Forage	Water Factor	Water Adjusted
Upper Notch	Wy sage/crested	225	184	41,400	50%	20,700	100%	41,400
	Crested	1,499	767	1,149,733	50%	574,867	100%	1,149,733
	Annual	62	0	0	0%	0	100%	0
Subtotal		1,786						
Lower Notch	Crested	653	767	500,851	40%	200,340	100%	500,851
	Wy sage/crested	598	184	110,032	40%	44,013	100%	110,032
	Annual	110	0	0	0%	0	100%	0
Subtotal		1,361						
Big Hill	Wy sage/crested	1,472	184	270,848	50%	135,424	50%	135,424
	Crested	1,665	767	1,277,055	50%	638,528	50%	638,528
Subtotal		3,137						
Crows Nest	Wy sage/crested	2,100	665	1,396,500	40%	558,600	100%	1,396,500
	Crested	1,138	767	872,846	40%	349,138	100%	872,846
	Annual	155	0	0	0%	0	100%	0
Subtotal		3,393						
Crow's Nest Butte	Crested	957	954	5,682,978	50%	2,841,489	50%	2,841,489
	Bluebunch	965	339	327,135	50%	163,568	50%	163,568
Subtotal		6,922						
Total Acres		16,599		11,629,378		5,526,666		7,850,370

Weighted Use Factor 0.48

* This factor is used to account for the limited water availability in the Big Hill and Crow's Nest Butte Pastures.