UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Winnemucca District Office
705 East Fourth Street
Winnemucca, Nevada 89445

In reply refer to:

4100 (NV 02.60)

January 30, 1989

Memorandum

To: District Manager, Winnemucca

From: Area Manager, Paradise-Denio R.A.

Subject: Management Analysis of Allotment Evaluations

BACKGROUND

With the completion in 1983 of the Rangeland Program Summary, the Resource Area started the implementation of the Grazing portion of it's Land Use Plan. The strategy used for this implementation was to work through the Coordinated Resource Management and Planning process to identify specific allotment issues, develop monitoring strategies, gather information, use the monitoring data to develop allotment evaluations and then use the evaluations to formulate livestock use agreements or issue decisions to adjust management as needed. This was a 5 year process which we intended to use for our "I" and "M" allotments. The Resource Area started this process, but found out in 1986 that the intent of the 5 years was not a process but was a requirement to have agreements or decisions for all "I" and "M" allotments done within 5 years after issuance of the Rangeland Program Summary.

MONITORING DATA

Needless to say, this left the Resource Area in a situation that we did not have current data on a large percentage of our allotments. We did the best we could to collect monitoring data on all "I" and "M" allotments during the 1987 and 1988 field seasons.

The Resource Area issued a letter to all permittees on February 3, 1988 informing them that the evaluation process was occurring and that we would like to include any data that they may have in this process.

In January of 1988, the District Manager met with the Regional Office Staff of NDOW and discussed the evaluation process. He asked that they provide any information or data that we could use in our evaluation process. He also indicated to them that they should let us know in the review process if

wildlife data was correctly represented or if information had been left out.

In April, 1988 the permittees were invited to meetings that Jeff Rawson and I held in Denio, Winnemucca, Orovada and Paradise Valley. The purpose of these meetings was to inform the permittees about the evaluation process, utilization levels, why we were doing the evaluations and the timeframes we were working with.

EVALUATION PROCESS

My biggest concern throughout the process was the quantification of Land Use Plan objectives to specific allotment objectives. The specific allotment objectives seem to be generic in nature for the Resource Area, but we do have similar forage conditions and similar conflicts throughout the Resource Area.

The evaluation document presents data that we have collected or that was presented to us. I have also allowed the specialists to include professional opinion based on observations they have made in the field. If these observations were not documented, they were not carried forward into the management evaluation section of the document and were not used as a basis for any conclusions or recommendations for livestock management in the livestock use agreements or future decisions. My staff and I also reviewed all documented data, and if there seemed to be a problem with the data, it was not carried forward into the management evaluation section.

I will use the undocumented observations and the questionable data as a basis for future monitoring schemes to collect more data to substantiate or dismiss problem areas or questionable data.

The documents were sent to the permittees and NDOW for review purposes. Copies of evaluations were also sent to USFWS if they contained information about the Lahontan Cutthroat trout or other threatened species.

I elected to send documents to the permittees and the USFWS without any recommendation section, so that they would not get sighted in on the recommendations and forget to formulate actions of their own to solve any identified problems. This worked well.

The evaluation documents are left in draft form as I feel that the Livestock Use Agreement or any future decision will be the finalization of the evaluation process. Permittee comments, NDOW comments or other written comments will be filed in the monitoring file for future review during the next evaluation and consideration in any adjustment of grazing management to be made at this time.

CONSULTATION

I am disappointed in the responses that we received from NDOW. Their comments did not address specific problems but were directed more toward our planning process and implementation of the 1978 range survey. This suggestion was disregarded as Bureau policy is not to base changes on one time surveys. On many allotments, new data was not conclusive enough to initiate changes in livestock numbers.

Our consultation process went well with all the permittees. They were willing to work with us by discussing the evaluation and advising us of information that was not correct.

The permittees were encouraged to formalize in writing their comments about the evaluation.

As we discussed the evaluations, there seemed to be three major topics of concern:

1) Utilization levels
2) Riparian habitat
3) Streams identified for fisheries management

The concern for utilization levels stems from the Forest Service action in the Austin area where utilization levels were set up as allowable use levels requiring permittees to remove livestock when the utilization in a certain area was reached. We explained to the permittees that the utilization levels in their evaluations are target levels and that we did not consider them to be allowable use levels dictating livestock removals on a seasonal basis.

The riparian habitat questions seemed to center on what is a riparian area and where are the areas located. My staff used information from the 1977 and 1978 Special Habitat Features Inventory to develop a general location map of riparian areas and other special habitat features. This map was sent to the permittee along with the allotment evaluation. The one problem with this approach is that I can not find any documentation that indicates how the term riparian was defined. The area Supervisory Range Conservationist and I took the time to visit a few of the allotments and visit areas identified in the inventory that had been labeled riparian. In several instances I had to agree with the permittee that a riparian area did not exist.

Streams identified for fisheries presented another problem for us. Alot of permittees were very willing to relate to us which streams had been fishable over the past years and which streams dried up almost every year early in the summer. Their concern was trying to manage fisheries habitat on a stream that goes dry. There was also concern with the stream survey data and the overall percent of optimum calculation that was derived from the survey. The permittees wanted to know why pool riffle ratios are averaged in the optimum rating. The livestock industry questions how livestock can have an effect on pool riffle ratios. It appears that the Bureau needs to develop some sort of process that measures stream potential for supporting a fisheries.

LIVESTOCK USE AGREEMENTS

After holding consultation sessions with 20-30 percent of the permittees we discussed possible solutions to address the concerns of the permittees.

To help resolve the concerns of utilization levels, we agreed that it would be best to include a statement in the Livestock Use Agreements that supported our discussion that the utilization level was a target level to be evaluated over a period of time and not on allowable use level for seasonal adjustment of livestock.

This statement has helped resolve some of the concern over utilization levels, but now we face the question of what is the proper utilization level. Proper utilization levels will be developed for individual allotments. Consideration will be given to the following:

1) type of forage
2) type of grazing system
3) time of year forage is used
4) type and amount of data that has been collected on the allotment

The riparian issue will be resolved by field examination with the permittee of the areas that we consider riparian. We will use the definition of riparian as stated by Director Burford in his riparian policy statement dated January 22, 1987. I may also have to drop the riparian acreage figure from the riparian objective, but do not feel it will hinder management of riparian areas.

To resolve the concern for the fishable streams, I revisited the P-D EIS and reviewed the information on fisheries. I have elected to include stream objectives for those streams that are listed as protectable for fisheries in Appendix F, Table F-1, page 6-24 of the EIS. As time goes on and we can determine that other steams have potential to support a fisheries habitat, we will develop objectives for them. I also elected to use a 50% streambank utilization level as a starting point for our objectives except on streams that contain the Lahontan Cutthroat trout. I will remain with 30% at this time to help ensure good to excellent habitat for this threatened species.

Once the Livestock Use Agreement was drafted using the above guidelines, it was sent to the permittee and further negotiations will be held.

At this time, most permittees have worked with us to establish and document livestock use operations. They have been willing to adjust grazing schedules, provide more livestock management and acknowledge where problem areas exist. As of this date, the main concern for signing the Livestock Use Agreement is that they feel their signature indicates full agreement with the specific allotment objectives. At this time they do not agree with all of the allotment objectives. We have tried to word the agreement to indicate only that the allotment objectives have been discussed. We are not asking the permittees to agree with us, only to acknowledge that they know what we are managing for.

Scott Billing

Revised January 9, 1989

Alder Creek Allotment Evaluation

I. Allotment Evaluation

A. Alder Creek Allotment, 051 - Julian W. and Edith Marcuerquiaga, Permittee - Priority 10, Category I

B. Allotment Description

The Alder Creek Allotment lies approximately 513 air miles south of Denio, Nevada. The allotment is bordered by State Route 140 on the east and the Sheldon Antelope Range on the west and encompasses the northern half of the Pine Forest Range. Total acres in the allotment are 117,087 of which 110,933 acres are public land. The lower elevations are dominated by shadscale and greasewood vegetation types and as elevation increases the vegetation changes to sagebrush, mountain browse, aspen, mountain mahogany and conifer vegetation types.

There is a relatively complex array of resources and resource conflicts in the Alder Creek allotment which includes recreation, wilderness, wildlife, riparian, fisheries, mining, cultural and livestock forage.

The portion of the allotment in the Pine Forest Range consists of east to west and west to east oriented drainages with steep, precipitous canyon side slopes. The drainages originate from high mountain wet meadows in Theodore Basin, Boyd Basin, and Florence Basin.

Other significant features in the allotment: Blue Lakes Recreation Area, Blue Lakes WSA, Winnemucca District's only population of white bark pine and one of the most popular mule deer hunting areas in Nevada.

C. Livestock Use

1. a.	Total Preference	12,368
b.	Active Preference	11,787
c.	Suspended Preference	581
d.	Exchange-of-Use	344

The Alder Creek allotment was divided into individual use areas, Alder Creek and Knott Creek in 1980 and into individual allotments in 1982. Data prior to creation of individual use areas and allotments would have little bearing on this evaluation.

2. Season(s) of Use

a. Current Periods of Use

	1/
Big Creek Seeding Complex	4/15 to 6/30
Gridley/Bog Hot	5/1 to 5/31 2/
McGee Mountain	

Low[redacted] Ashdown	4/[redacted] to 6/30
Upp[redacted] Ashdown	6/[redacted] to 10/31
Big Creek	6/1 to 10/31
Stone Cabin	6/1 to 10/31
Big Creek Winter	11/1 to 12/31

1/ Has a target date of May 1, however, earlier turnouts have been authorized based on ocular observations of range readiness.

2/ Proper season of use is most probably winter, however, spring use is a limiting factor. A compromise was reached and limited spring use is authorized.

b. Adjudicated Season of Use

The Pine Forest Unit will be licensed year long with the following limitations:

Spring use will be from April 1 to June 30 and in general will be limited to the foothills and up to the 6,000 foot elevation.

Summer use will be from July 1 through September 15 and will, in general, be above the 6,000 foot elevation.

Fall use will be from September 16 through November 30 and will be limited to the same area as spring use.

Winter use will be from December 1 to March 31 and will be limited to flats, and areas having shadscale and greasewood vegetative types.

3. Kind and Class of Livestock

The Pine Forest Unit, from which came the Alder Creek allotment, was adjudicated for cattle and horses. Alder Creek Ranch has been a cow/calf operation since that time. The permittee also runs a small band of domestic horses. *

4. Grazing System

The Alder Creek Allotment has been under the current grazing system since 1983. This system involves four individual grazing systems. Following is a brief description of each:

a. Alder Creek - Spring

In this system, there are two pastures/use areas-- Gridley and Lower Ashdown--that have been grazed each year from approximately April 20 to May 31. On or about June 1 these cattle are moved onto summer range in common with cattle that winter and/or spring on the east side of the Pine Forest Range.

The system was modified in 1988 to incorporate complete rest for the Lower Ashdown pasture.

b. Big Creek Seeding Complex

This system consists of four pastures that were seeded to crested wheatgrass. Pasture names and acres are below:

Highway	1,647 acres
Maintenance	1,513 acres
North Rattlesnake	1,847 acres
South Rattlesnake	1,888 acres

The intended grazing system for these seedings was to graze two and rest two each year. The charts below reflect the intended grazing system and licensed use for same time period.

Intended Grazing System

Pasture	82	83	84	85	86	87	88
N. Rattlesnake	REST	5/1-5/31	REST	5/1-5/31	REST	5/1-5/31	REST
S. Rattlesnake	REST	5/1-5/31	REST	5/1-5/31	REST		REST
Maintenance	5/1-5/31	REST	5/1-5/31	REST	5/1-5/31	REST	5/1-5/31
Highway	5/1-5/31	REST	5/1-5/31	REST	5/1-5/31	REST	5/1-5/31

Licensed Use

Pasture	82	83	84	85	86	87	88
N. Rattlesnake	REST	REST	REST	REST	5/2-5/31	REST	4/25-5/31
S. Rattlesnake	REST	4/15-5/31	4/15-5/31	5/15-6/25	REST	REST	REST
Maintenance	5/1-5/31	4/15-5/31	4/15-5/31	5/3-5/31	5/2-5/31	4/23-5/31	6/1-6/30
Highway	5/1-5/31	REST	REST	5/3-5/14	REST	REST	REST

The grazing system was not followed for the following reasons:

1) Due to the poor condition of these seedings and annual variation in production; from 1983-1985 scheduled use was determined by forage availability.

2) Portions of the South Rattlesnake and Highway seedings burned in 1985 and were seeded in 1986. They are not scheduled for use until spring of 1989.

c. Summer Grazing Season

The summer grazing system is a three pasture rest-rotation system which began in 1983. The pastures involved are Upper Ashdown, Stone Cabin and Big Creek. The pastures are not of equal size and carrying capacity which resulted in the use of all three pastures in some years.

The grazing treatments are:

A - 6/1 - 7/31
B - 8/1 - 10/31
C - REST

From 1979 to 1983 the grazing system for the summer pastures was a two pasture deferred system for Big Creek and Stone Cabin pastures, resting one if possible and deferred use each year for the Upper Ashdown pasture.

The following chart depicts licensed use for the years 1983-1987:

Licensed Use For Period 1979 to 1982

Pasture	79	80	81	82
Upper Ashdown	9/1-11/27	7/1-10/31	7/1-10/31	7/1-9/30
Stone Cabin	6/15-9/30	REST	6/1-9/30	REST
Big Creek	REST	6/16-9/30	REST	6/1-9/30
Big Creek Seeding	REST	6/1-6/15	REST	?

Pasture	83	84	85	86	87
Upper Ashdown	8/16-9/30	6/20-9/30	8/1-10/30	REST	6/4-7/31
Stone Cabin	6/1-8/15	6/12-9/30	REST	6/19-10/31	REST
Big Creek	6/1-9/30	REST	6/16-7/31	7/1-10/31	8/1-9/30

Grazing Schedule 1988 - 1997

Pasture	88	89	90	91	92	93	94	95	96	97
Upper Ashdown	B	C	A	B	C	A	B	C	A	B
Stone Cabin	A	B	C	A	B	C	A	B	C	A
Big Creek	C	A	B	C	A	B	C	A	B	C

Treatment A 06/01 to 07/31
Treatment B 08/01 to 10/31
Treatment C Rest

The consistency of this grazing system depends heavily on acceptance and cooperation by and with permittee and on support by management for enforcement. The variables have made administration of this system difficult. This ranch has changed ownership four times in last ten years which has also created various problems.

The grazing system(s) in place since 1979 for the summer pastures is/are extremely labor intensive which has presented a major problem concerning cooperation with the permittees.

d. Big Creek Winter

This simply involves repeated winter use in the Big Creek Winter Pasture. This option has been exercised in only two (1980 and 1984) of last 10 years.

e. Substantial nonuse has been taken each year since 1980, primarily due to change in ownership and fire closures.

D. Allotment Objectives

1. Short Term

a. Utilization of key streambank riparian plant species shall not exceed 30% on Big, N. Fork of Big, Alder, Little Alder, Wood Canyon, and Alta creeks except where adjusted by an approved activity plan. (WLA 1.1, WLA 1.2)

b. Utilization of key plant species in wetland riparian habitats shall not exceed 50% except where adjusted by an approved activity plan. (WL 1.3, WL 1.5, WL 1.28)

c. Utilization of key plant species in upland habitats shall not exceed 50% except where adjusted by an approved activity plan. (RM 1.11, WL 1.2, WL 1.4, WL 1.28)

2. Long Term

a. Manage, maintain, and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 1,311 AUMs for mule deer, 247 AUMs for pronghorn, 253 AUMs for elk, and 207 AUMs for bighorn sheep by:

1) Improve to and maintain 27,925 acres in McGee Mtn. DW-8, 25,000 acres in Pine Forest DW-7, and 25,841 acres in Pine Forest DS-5 in good or excellent mule deer habitat condition

2) Improve to and maintain 56,609 acres in Denio PY-1, 12,866 acres in McGee Mtn. PW-1, 11,540 acres in Alta Creek PW-2, and 4,176 acres in Big Creek PY-4, 14,203 acres in Alta Creek PS-1 and 260 acres in Leonard Creek PS-3 in fair or good pronghorn habitat condition.

3) Improve to and maintain 56,975 acres in Pine Forest BY-7 and BY-8 in good or excellent bighorn sheep habitat condition.

4) Improve to and maintain 59,994 acres in Pine Forest EY-1 in good elk habitat condition.

b. Manage, maintain, and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 11,787 AUMs. (RM 1.11)

c. Improve range condition [1] from poor to fair on 9,651 acres and from fair to good on 1,776 acres. (RM 1.11)

d. Manage, maintain and improve public rangeland conditions to provide an initial level of 492 AUMs of forage on a sustained yield basis for 41 wild burros. (WH/B 1.11A)

e. Improve to and maintain 286 acres of mahogany habitat types in good condition. [1] (WL 1.3, F 1.2)

f. Improve to and maintain 1,156 acres of aspen habitat types in good condition. [1] (WL 1.3, F 1.3)

g. Improve to and maintain 733 acres of riparian and meadow habitat types in good condition. [1] (WL 1.5)

h. Improve to and maintain in good condition 185 acres of pine-aspen-mahogany associations.

i. Improve the following stream habitat conditions on Big Creek, N. Fork, Big Creek, Alder Creek, Little Alder Creek, Wood Canyon Creek, and Alta Creek from 49% on Big Creek, 39% on N. Fork Big Creek, 56% on Alder Creek to an overall optimum to 60% or above. (WLA 1.1, WLA 1.2)

1) Streambank cover 60% or above.
2) Streambank stability 60% or above.
3) Maximum summer water temperatures below 70°F.
4) Sedimentation below 10%.

j. Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% cover of sagebrush for nesting and winter use.

k. Improve to and maintain Blue Lake to state Class A water standards.

l. Improve to and maintain the water quality of Alder, Big, Alta and Wood Canyon Creeks to the state criteria set for the following beneficial uses: livestock drinking water, cold water aquatic life, wildlife wildlife propagation, and wading.

m. Improve to and maintain the seeded pasture(s) in good condition (5-10 acres per AUM). (RM 1.11)

[1] The condition objective will be redefined/quantified to obtain a particular ecological status when site potential and identified uses are combined to meet vegetative objectives.

E. Monitoring Data and EIS/Range Survey Data and Analysis

1. a. A phase one watershed inventory was conducted in portions of the Paradise-Denio Resource Area from 1971-1974. Livestock forage condition was determined based upon data from this inventory which resulted in the following condition classifications for the Alder Creek allotment:

Good	Fair	Poor
5,547 (acres)	8,875 (acres)	96,511 (acres)

Appendix G, Pg-28 of the P-D EIS provides more discussion on origin of livestock forage condition.

b. In 1978 a range survey was conducted using the Ocular Reconnaissance Method. The survey was conducted to provide baseline data for analysis purposes in the Paradise-Denio EIS. This survey, along with suitability criteria, indicated that 9,471 AUMs were available in 1978 for livestock and burros. The Alder Creek allotment in 1978 included what is now the Alder Creek and Knott Creek allotments.

c. The Paradise-Denio EIS declared observed trend to be downward for the entire allotment (Appendix G, Table 6-1 and Chapter II, 2-9 PD EIS).

2. Climatological Data

No site specific climatological data has been collected for the Alder Creek allotment.

The following charts depict summarized precipitation data for the Denio and Leonard Creek NOAA Weather Stations from 1978-1987 and 1977-1986 respectively.

NOA - Denio Station

Precipitation in Inches			Departure From Normal*	
Year	Growing Season	Annual Total	Growing Season	Annual
1978	5.4	9.44	+ .23-	-1.83
1979	6.01	12.32	+ .84	+1.05
1980	6.26	14.42	+1.09	+3.15
1981	3.89	11.79	-1.28	+ .52
1982	3.02	8.72	-2.15	-2.55
1983	8.53	16.97	+3.36	+5.70
1984	6.08	10.96	+ .91	- .31
1985	2.32	6.45	-2.85	-4.82
1986	4.74	10.39	- .43	- .88
1987	5.44 M	M	M-.27	M

* No record, normal will be departure from 9 year average = 11.27"/Annual and 5.17"/Growing Season

M Insufficient or partial data

*

Year	Precipitation in Inches		Departure From Normal*	
	Growing Season	Annual Total	Growing Season	Annual
1977	4.33	8.23	+ .09	-1.99
1978	4.81	10.20	- .57	- .02
1979	5.84	12.26	+1.60	+2.04
1980	3.45	8.55	- .79	-1.67
1981	4.29	11.43	+ .05	+1.21
1982	2.38	8.87	-1.86	+1.35
1983	6.94	17.74	+2.70	7.52
1984	3.00	8.50	-1.24	-1.72
1985	2.48	6.82	-1.76	-3.40
1986	4.85	9.60	+.61	- .62

*Normal = 10 year average = 10.22" Annual

= 4.24" Growing Season

This is the best available climatological data for the northwest quarter of the Denio Planning Unit. The Denio Station is 5 miles north of the Alder Creek allotment and is at an elevation of 4,100 feet. The Leonard Creek Station is 18 miles south of the Alder Creek allotment at an elevation of 4,300'. The Alder Creek allotment ranges in elevation from 4,200' to 9,400'.

3. Livestock Use Data

a.

Year	AUMs Used
1979	11,787
1980	11,783
1981	10,908
1982	9,258
1983	10,245
1984	7,152
1985	8,194
1986	7,202
1987	5,871

b. Licensed Use Spring

Pasture	Year	AUMs	Period of Use
Gridley	1981	1885	4-19 to 5-31
	1982	1167	
	1983	1614	4-15 to 5-31, 8-1 to 8-15
	1984	1367	4-15 to 6-30
	1985	773	5-3 to 6-30
	1986	859	4-24 to 6-30
	1987	629	4-17 to 5-31

Low[redacted] Ashdown	1982	514	4[redacted]9 to 6-30
	1983	450	4[redacted]5 to 5-31
	1984	550	4-15 to 6-30
	1985	464	5-3 to 6-30
	1986	451	5-8 to 6-30
	1987	672	4-17 to 5-31
S. Rattlesnake	1983	345	4-15 to 5-31
	1984	630	4-15 to 5-31
	1985	344	5-15 to 6-25
N. Rattlesnake	1986	228	4-24 to 5-31
	1988	250	6-1 to 6-30
	1982	317	
Highway	1982	375	5-1 to 5-31
	1985	88	5-3 to 5-14 (Fire)
Maint	1982	204	5-1 to 5-31
	1983	338	4-15 to 5-31
	1984	498	4-15 to 5-31
	1985	389	5-3 to 6-15
	1986	195	5-2 to 5-31
	1987	247	4-23 to 5-31
	1988	250	6-1 to 6-30
McGee	1983	643	5-1 to 7-15
	1985	401	5-3 to 6-30
Big Cr. W.	1981	680	
	1982	406	
		87	5-6 to 5-31
Big Cr.	1984	219	5-16 to 5-31
Licensed Use Summer			
	1987	4176	6-1 to 9-30 (not run as per system)
	1985	1304	5-3 to 9-17
		95	9-18 to 10-2
		25	10-3 to 10-25
	1986	6711	
Big Creek		466	7-1 to 7-31
Stone Cabin		752	7-1 to 7-31
		497	6-19 to 6-30
Ashdown	1981	2960	
Stone Cabin		2038	
Big Cr.		1857	

Sto[redacted] Cabin	1982	[redacted]99
Up [redacted]ndown		2[redacted]7
Big Cr.		2655
Big Cr. Seeding	1981	815
Big Cr.	1983	4440
Big Cr.	1984	219

4. Utilization Data

Utilization has been assessed in this allotment in at least one pasture from 1980 to 1984 and in 1987.

Utilization has been assessed at key area locations and potential key areas using the key forage plant method and through use pattern mapping.

Following is a discussion of utilization assessments by pasture and year.

a. McGee Mountain Pasture

This pasture is void of permanent dependable water sources and therefore rarely receives any use by domestic livestock.

Utilization was assessed in 1981 to be no use, in 1983 moderate (41-60%) use was found in vicinity of two reservoirs that periodically hold water and in 1984 to be moderate and slight (0-20%) in some areas as 1983.

Water availability was inspected in 1982 and revealed that all reservoirs were dry.

b. Gridley Pasture

This pasture consists of 31,000 acres and is watered by four wells, 4.5 miles of pipeline and one spring. The pasture is dominated by shadscale-budsage communities with squirreltail and Indian ricegrass fairly abundant.

In 1984 use pattern mapping of the east half of the pasture revealed light use (21-40%). Heavy (61-80%) use occurred east of Gridley Lake and west of Gillotti Well.

In 1987 use pattern mapping revealed slight to light use over the majority of the pasture with moderate use in close proximity to Bog Hot Well and east (1 mile) of Gillotti Well.

c. Lower Ashdown Pasture

This pasture lies on the northwest side of the Pine Forest Range and ranges in elevation from 4,200' to 6,700'. The

lo[redacted] elevations (4,200' to 4,800') [redacted]re dominated by big sagebrush with annual plant understory. The higher elevations are dominated by big sagebrush with a perennial grass understory of bluebunch wheatgrass, Thurber's needlegrass, Indian ricegrass, and needle and thread grass.

Utilization was assessed in the lower elevations (4400' - 5000') in 1984 and found to be slight on squirreltail in shadscale budsage communities and slight on Indian ricegrass in big sagebrush communities. In both communities perennial grasses are very sparse and in general are found growing in the protection of shrub species. Majority of livestock use was on cheatgrass.

Use pattern mapping conducted in 1987 revealed heavy to severe (81-100%) use of area below 4,500' and slight to no use above 4,500'. Much of the area above 4,500' is steep, rock, and lacks adequate water for livestock.

d. Maintenance Seeding

This is a spring use pasture consisting of 1,513 acres that were seeded to crested wheat. Crested wheat is most abundant in the northern two thirds of the pasture.

Use pattern mapping in 1981 that resulted in light use (24%) in the north half and severe use (86%) in the south half. Grazing use was in the fall.

Use pattern mapping in 1984 resulted in light to moderate use in the north half of the seeding and heavy to severe use in the south half. Grazing use occurred from April 15 to May 31.

Use pattern mapping in 1987 revealed in heavy use throughout the seeding.

e. Highway Seeding

This is a spring use pasture consisting of 1,647 acres that was seeded to crested wheat, but has been dominated by big sagebrush and cheatgrass until 1985 when the Howard fire burned 1785 acres in this pasture and the South Rattlesnake pasture.

Utilization was assessed in May of 1984 and found to be heavy on remnant crested wheat plants.

This pasture was rested in 1983, 1986, 1987 and 1988.

f. South Rattlesnake Seeding

This is a 1,888 acre spring pasture that was seeded to crested wheat but has been dominated by big sagebrush and

cheatgrass until 1985 when the Howard fire burned 1785 acres in this field and the Highway Pasture.

Utilization was checked in May, 1984 and found to be heavy on remnant crested wheat plants, the majority of forage provided by cheatgrass and other annuals.

The pasture was rested in 1986, 1987 and 1988.

g. North Rattlesnake Seeding

This is a 1847 acre spring pasture that was seeded to crested wheat. Crested wheat is most abundant in the northwest quarter of the pasture and grows in the protection of sagebrush throughout the rest of the pasture.

The pasture has been rested four of last six years.

Utilization was assessed in June, 1988 and found to be heavy throughout. Granite Creek had heavy use.

h. Stone Cabin Pasture

This is a 10,971 acre summer pasture ranging in elevation from 4,400' to 7,230'. The pasture is dominated by sagebrush-bunchgrass communities with squirreltail the most dominant perennial grass. Other common grass species are needle and thread grass, Thurber's needlegrass, bluebunch wheatgrass and Idaho fescue.

Other features in this pasture are stringer meadows (associated with Alta, Granite and Rattlesnake Creeks), mountain browse communities, and aspen stands in the southern portion of the pasture.

At least one third of the pasture is rarely grazed by livestock due primarily to topographic features (numerous rock outcrops, slope etc).

Utilization was first assessed in 1983 which resulted in moderate to heavy use in the west half of the pasture (Thurber's - heavy, Idaho fescue-moderate) and slight use in the east half and very northern end.

Utilization was also assessed in 1982 which consisted of unauthorized use, when the pasture was scheduled for rest. Utilization was slight in upland communities and heavy in all riparian areas.

No utilization study sites have been established in this pasture, however, potential key areas have been identified, refer to memo dated August 16, 1983 in the allotment studies file.

1. Big Creek Pasture

This is a 15,440 acre summer pasture ranging in elevation from 4,300' to 8,400'. The pasture consists of west to east flowing drainages (Boyd, Willow and Big Creek) all with very steep, precipitous canyon side slopes. The lower elevations are dominated by big sagebrush-bunchgrass communities on very steep canyon side slopes. The higher elevations; above 6,500'; are dominated by mountain browse, aspen and sagebrush-bunchgrass communities.

Utilization was first documented for this pasture in 1980 when two utilization study sites were established. Since then utilization has been assessed in portions of this pasture in 1981-1983 and 1987.

1980

Utilization was checked at the Florence Basin study site. Utilization was in the moderate range on bluebunch wheatgrass and Thurber's needlegrass and heavy on Idaho fescue.

1981

Utilization was assessed at four locations revealing light use at the Florence Basin study site, moderate use 100-200 yards upslope from Florence Basin meadow, severe use in Florence Basin meadow and moderate use in a sagebrush-bluebunch wheatgrass community in T. 44 N., R. 30 E., Section 19 SE§SN§ (potential key area).

Data collected in 1981 indicates that light to moderate use occurred in accessible upland communities and severe use in meadows.

1982

Utilization transects were conducted at six locations and general observations made in six additional areas. This data was used to develop a use pattern map which revealed that the western third (above 6,800') received heavy to severe use on both upland and riparian communities. The 5,600' to 6,800' elevational level received light to moderate use and below 5,600' received slight use. Refer to memo dated October 29, 1982 for specifics.

1983

In 1983 a UPM was compiled showing the following utilization levels by area:

Area	Utilization Level
South Fork of Big Creek	Heavy to severe - uplands and riparian
Upper Boyd Basin	Heavy - uplands and meadow
Lower Boyd Creek	Light - Upland sites
North Fork of Willow Creek and Florence Basin	Moderate - Heavy on meadows Light - upland sites

Utilization was also assessed in the mid elevations (5,000' to 6,400') of the southern portion of the pasture and found to be slight to light in upland communities and heavy in the Big Creek riparian zone.

Although the entire pasture was not inspected the general use patterns observed were similar to those observed in 1982.

1987

Use patterns were mapped and revealed the following:

1) North Fork of Big Creek

The very narrow portions of the riparian zone were grazed light to moderate and wider meadows and spring areas moderate to heavy.

The steep rocky, canyon slopes received no use. North slopes are dominated by Idaho fescue and south slopes by bluebunch wheatgrass.

The aspen stand at the head of the North Fork of Big Creek received very severe use, understory reduced to bare ground. This was the only incident of such severe use observed in this allotment.

2) Florence Basin

The meadow received heavy to severe use. The photo's show vegetative recovery in the mud slide area.

Adjacent uplands, to 50 yards from edge of meadow, received moderate to heavy use on Idaho fescue. Above that slight to no use was observed.

In Florence Basin, North Fork of Willow Creek and Boyd Creek snowberry is the dominant browse species. Very slight use, if any, was detected at this time.

3) Boyd Basin

The meadow received heavy to severe use. Adjacent uplands received heavy use (needlegrass, mountain brome, bluegrass and Idaho fescue) to 7200' elevation. From 7200' to 7360' use was light to moderate and from 7360' and higher use was slight grading into no use at all.

4) Short Creek

At the head of this canyon bitterbrush has been severely hedged by deer. There were no signs of use by cattle. There was no use on steep canyon side slopes.

The small meadows/springs in this canyon received heavy use. Moderate use was observed below 4800', where dominant perennial grass is bluegrass. Thurbers needlegrass and squirreltail were observed in trace amounts and were grazed moderately.

5) Big Creek Seeding

This is a seeding within the Big Creek pasture that is grazed in conjunction with the Big Creek pasture.

Utilization was assessed in five of last eight years as follows on crested wheatgrass:

1980	59 percent
1981	34 percent
1982	57 percent
1983	30 percent
1987	Light -Agcr
	Heavy - willow, rose
	Moderate - other meadow species

Utilization in 1985 and 1986 was not documented.

j) Upper Ashdown

This is a 17,839 acre summer pasture ranging in elevation from 4500' to 8400'. The pasture consists of east to west flowing drainages (Wood Canyon, Alder, Little Alder Creek and Oakley Canyon) all with very steep, precipitous canyon side slopes. The lower elevations are dominated by big sagebrush - bunchgrass communities on steep slopes. The higher elevations are comprised of mountain browse, aspen, mahogany and sagebrush - bunchgrass communities.

Utilization was first documented in this pasture in 1980 at the Ashdown study site (established in 1980) and found to be heavy (72%) on Idaho fescue. The site was selected to represent upland communities in Theodore Basin.

Utilization was checked again in 1981 at the Ashdown study site and found to be moderate (58%). Theodore Basin Meadow has severe use.

Riparian areas (Wood Canyon, Theodore Basin Meadow, Canyon that drains Blue Lake into Onion, and the North Fork of Little Alder Creek) were all grazed heavy to severe.

Utilization of upland sites was assessed at several locations and in general was heavy in accessible areas at the head of drainages such as Theodore Basin and the head of the North Fork of Little Alder Creek and light to slight on steep canyon side slopes.

No data was collected in 1983-1986.

Utilization assessments made in 1987 revealed heavy use in all riparian zones.

Areas further from water, especially steep, rocky canyon side slopes were grazed slight.

Utilization of upland sites was heavy for 1/4 mile surrounding Theodore Basin; moderate from 1/4 to 1/2 mile and light beyond 1/2 mile.

5. Trend

Trend index summary data has been collected in 1969, 1974 and 1977 and is summarized by pasture as follows:

a. McGee Mountain Pasture

One 3'x3' photo trend plot was established and read in 1981 and has not been read since observed approval trend was upward.

b. Highway Pasture

One 5'x5' photo plot was established in 1969 and read again in 1974. The observer in 1969 believed trend to be down due to "invasion of Artr". Percent composition of crested wheatgrass of total plot cover decreased from 1969 to 1974 while big sagebrush increased substantially (19-32 percent)

No trend data has been collected since 1974 and much of this pasture burned in 1985 and was seeded in 1986. CSA Studies were initiated in 1986 and completed in 1987 and 1988. These studies indicated insufficient crested wheatgrass was established in 1986-87 but a substantial increase occurred in 1988.

c. South Rattlesnake

One 3'x3' photo trend plot was established in 1977 and has not been read since.

Much of this pasture burned in 1985 and was seeded in 1986.

d. Big Creek

One 5'x5' photo trend plot was established in 1969 and read again in 1974 and 1977. Trend index summary data components varied substantially and conclusions pertaining to trend are impossible to draw. In addition management has changed significantly since 1969-1977.

e. Florence Basin

There is a photo documenting post mud slide in 1983 and pre and post grazing in 1987. The photo's show vegetative recovery of the meadow in the mud slide area.

f. Upper Ashdown

Three 5'x5' photo trend plots were established in 1968 and 1969. No indication of trend could be drawn due to plot relocation, plant identification problems and incomplete information. The Knott Creek fire in 1985 burned portions of this pasture. The pasture revegetated naturally. In 1987 CSA Studies were conducted in the Knott Creek allotment, which also had portions burned. This study indicated fair recovery.

g. Gridley Pasture

The Knott Creek fire in 1985 burned portions of this pasture revegetated naturally. In 1987 cSA Studies indicated fair recovery. This study was conducted in the Knott Creek allotment portion of the burn.

6. Ecological Status Inventory (ESI)

ESI has not been initiated on this allotment.

7. Wildlife

a. Wildlife Habitat Inventory

1) Priority Species: Mule deer, sage grouse, trout, pronghorn, bighorn sheep, elk, Lahontan cutthroat trout (Blue Lake only) and waterfoul.

2) Other Game Species: Chukar and Hungarian partridge, Valley Quail, and mountain lion.

a) A special habitat features inventory was conducted in June and August, 1977. This inventory identified the location and acres of special habitats, listed observed plant and wildlife species, and documented ocular observations of the condition and utilization of these habitats. This information was analyzed in the Paradise-Denio EIS.

b) Riparian and meadow habitat - 733 acres located predominantly in the Stone Cabin, Big Creek, Upper Ashdown, and Lower Ashdown pastures of the allotment. Some is located around Gridley Lake as well.

Aspen - 1156 acres located in the Stone Cabin, Big Creek, and Upper Ashdown pastures.

Curlleaf mountain mahogany - 286 acres located in the Stone Cabin, Big Creek, Upper Ashdown, and Lower Ashdown pastures.

Ceanothus - 85 acres located in the Stone Cabin, Big Creek, Upper Ashdown, and Lower Ashdown pasture.

Pine and pine, mahogany, aspen associations - 540 acres located in the Stone Cabin, Big Creek, and Upper Ashdown pastures.

Mountain Browse - Antelope bitterbrush, serviceberry, snowberry, and currant are identified as components in most of the various ecological sites in the Stone Cabin, Big Creek, Upper Ashdown, and Lower Ashdown pastures. Total public acres of these areas is 52,198.

c) This inventory recorded the following in 1977:

Lower Ashdown - Heavy livestock use on riparian vegetation in lower Cherry Gulch.

Stone Cabin - The Stone Cabin Exclosure was in excellent condition including the riparian and meadow habitat. Two other riparian areas had received moderate use by livestock. Heavy use was recorded on five riparian areas. One aspen stand had fair diversity. Summary - most of this area is receiving heavy use unless inaccessible to livestock.

Upper Ashdown - Heavy use was documented on five riparian areas, while moderate use was indicated on eight. Five meadows were in fair condition and were receiving heavy use except for one which had moderate use. Another meadow was in fair condition but had evidence of excessive erosion. Three spring and associated meadow areas were in good condition and had received light to moderate use. One aspen stand had good reproduction but was receiving heavy use on the young trees. Nine aspen stands had little reproduction while six had fair reproduction. One deteriorated aspen stand was identified as well as one in good condition. No reproduction was found in a currleaf mountain mahogany stand while fair reproduction was found in a stand of pine. Summary - Riparian (springs and meadows) - Most are accessible and were receiving heavy use, being in fair condition at best. Some are deteriorating due to this use. Aspen stands have little reproduction overall and some are deteriorated. Accessibility is good by livestock for most stands. Mahogany has little reproduction while pine is good.

Big Creek - Two meadow areas were observed to be in good condition, receiving light use, but there was a high composition of iris. Four spring and associated meadow areas were in fair condition and were also receiving light use by livestock. Two meadows had moderate use while one was in fair condition with moderate to heavy use. Another meadow was in poor condition and had headcuts and livestock punching. Two meadows had heavy use with a lot of iris and two others were receiving severe. On inaccessible spring was receiving light use. Two additional springs had heavy to severe use. Of the aspen stands inspected, one had no reproduction, two had little reproduction, and two had fair reproduction. Two pine habitats were documented, one having light to moderate use on riparian within the stand while the other had no reproduction recorded. One mahogany stand was recorded to have no reproduction. Summary - Riparian (springs and meadows) are in fair condition overall and use was moderate to heavy on habitats with livestock access. Some are in deteriorated state. Aspen stands have little reproduction. Mahogany was found to have little reproduction.

Gridley - Gridley Lake was dry and had received heavy use by livestock earlier. Plant composition was mostly saltgrass with some themopsis. Very little rush type vegetation was observed.

4) Wildlife Use Areas:

McGee Mtn. DW-8	21,810 acres
McGee Mtn. DW-8 (concentration area)	6,115 acres
Pine Forest DW-7	15,342 acres
Pine Forest DW-7 (concentration area)	9,658 acres
Pine Forest DS-5	18,258 acres
Pine Forest DS-5 (concentration area)	7,583 acres
Denio PY-1	56,609 acres
McGee Mtn. PW-1	12,866 acres
Alta Creek PW-2	11,540 acres
Alta Creek PS-1	14,203 acres
Leonard Creek PS-3	206 acres
Big Creek PY-4	4,176 acres
Pine Forest BY-6 and BY-8	56,975 acres
McGee Mtn. BY-10	35,548 acres
Pine Forest EY-1	59,994 acres

Sage grouse - While only one strutting ground is identified on the allotment for sage grouse, there are eight brooding areas identified.

b. Habitat Evaluation

A habitat evaluation has not been conducted on this allotment for big game or sage grouse. Habitat evaluation was conducted on the Knott Creek fire which burned 1638 acres of deer winter range in this allotment (326 crucial acres). The burned area is in poor mule deer habitat condition.

c. Stream Survey

Stream	Year	Overall Opt.	% Sedimentation	Bank Cover	Bank Stability
Big Creek	1976	46	9	54	67
	1987	49	15	48	61
N. Fk. Big Ck.	1976	55	11	44	69
	1987	39	29	40	49
Alder Cr.	1976	57	17	73	84
	1987*	56	31	68	49
L. Alder Cr.	1987	39	25	43	36
Wood Cyn. Cr.	1987	44	14	50	49
Alta Cr.	1987	56	58	78	77

* Portion in Alder Creek Allotment.

8. Water Quality

a. Available data

Water quality samples were taken from Blue Lake in July and September, 1979. Another lab analyzed water quality for a sample taken in July 1985.

Water quality data was collected from Blue Lake in July/Sept. 1979 and in 1985. Both pH readings and two out of three temperatures did not meet the water quality standards. Dissolved oxygen was not tested. All other water quality parameters were acceptable.

b. Available data

There is a 1976 stream survey Hach Kit water quality data from Alder and Big Creeks. In 1979 water quality samples were analyzed for Alta, Alder, and Big Creeks (two locations) during May, July and September. Samples were also collected during May, July and September, 1982 from Alder Creek. Water quality samples were collected in 1983 from two locations on both Alder and Big Creeks and in 1984 one sample from Alder Creek and two samples from Big Creek.

Alder Creek - Turbidity was too high in 8 out of 10 samples tested. Water is released periodically from Onion Reservoir, even in late August the turbidity was high. Phosphate levels are high and increase downstream. Fecal coliform levels were usually low, but the sample taken in September, 1983 was 7,100/100 ml., which is very high. The only other water quality problems identified were one high stream temperature and high total dissolved solids.

Big Creek - The only water quality problem identified from the various samples was high turbidity, which increases downstream. Alkalinity was low in one sample, but probably is not a problem since all the other samples were acceptable.

Alta Creek - Only three samples were taken in 1979, which indicated good water quality.

Wood Canyon Creek - No water quality data.

F. Management Actions/Other Factors

1. In February of 1982 the Alder Creek allotment was divided into two allotments, Alder Creek and Knott Creek. The allotments had been managed as individual use areas since 1980.

2. The Alder Creek Ranch has had four owners in the last ten years which has created numerous management and administrative problems.

3. Fires in 1985 burned 1,700 acres in the Gridley and Upper Ashdown pastures and 1,785 acres in the South Rattlesnake and Highway pastures. The fire in the Gridley and Upper Ashdown pastures burned 1638 acres of mule deer winter range, including 326 acres of concentrated use. Both fires were closed to grazing for two years and the fire in South Rattlesnake and Highway pastures was seeded to primarily crested wheatgrass in 1986.

4. California bighorn sheep were released on this allotment in 1985 on Mahogany Mountain and now use this allotment as part of their normal use area. Additional bighorn sheep were released on the Sheldon NWR in 1987 and now use McGee Mountain on this allotment as part of their use area. Bighorn sheep were released adjacent to this allotment in 1988 which are expected to use additional portions of the allotment. Elk have been documented in adjacent allotments.

5. The P-D EIS indicated that forage demand on this allotment for big game was 1,743 AUMs for mule deer and 254 AUMs for pronghorn. Forage demand for 1986 was determined to be 4,876 AUMs for mule deer, 368 AUMs for pronghorn, and 91 AUMs for bighorn sheep. The methodology for calculating existing numbers as well as redefined use areas for the 1986 data reduces the potential to indicate significant changes in big

game use. However, population estimates have increased over the last ten years for all species in the Pine Forest Range.

6. An enclosure was constructed in 1981 around Gridley Lake to improve waterfowl habitat. Tne enclosure was partially reconstructed in 1986 after high water levels destroyed much of the fence. Two goose nesting platforms were also constructed in 1981 and were covered by high water until 1987. The Stone Cabin enclosure was constructed many years ago to rest or defer use on a large meadow complex in that area.

II. Management Evaluation

A. Short Term Objectives

1. Utilization of key streambank riparian plant species shall not exceed 30% on Big, N. Fk. Big, Alder, Little Alder, Wood Canyon, and Alta creeks except where adjusted by an approved activity plan.

   This objective is not being met under current management. *

   Current management results in heavy to severe use of these streams two out of three years and no use one out of three years.

2. Utilization of key plant species in wetland riparian habitats shall not exceed 50% except where adjusted by an approved activity plan.

   This objective is not being met.

   The majority of wetland riparian habitats are located in the summer pastures and current management results in heavy to severe use two out of three years and no use one out of three years.

3. Utilization of key plant species in upland habitats shall not exceed 50% except where adjusted by an approved activity plan.

   A discussion by pasture follows:

   McGee Mountain

   This pasture is void of perennial water sources and rarely receives any utilization by cattle. In 1983 moderate use was found in vicinity of two reservoirs. Therefore the objective has been met.

   Gridley

   Use pattern mapping in 1984 showed light use overall with two areas of heavy use indicating that a livestock distribution problem. In 1987, use was slight to light. Moderate use occurred in two areas associated with newly available water.

Data indicates this objective is being met. In 1984 the heavy use was a result of a heavier stocking rate and June use.

Lower Ashdown

This objective is not being met in this pasture. Current management results in heavy use of lower elevations below 4500' (approximately 50 percent of the pasture) and slight use of the higher elevation.

Maintenance

In 1981 (fall use) and 1984 (spring use) the objective was met in the north half and not met in the south half. The objective was not met in 1987 (spring use).

North Rattlesnake

This pasture received no use in four of last six years and heavy use in 1988. This objective is not being met.

Highway and South Rattlesnake

Over half of these pastures burned in 1985 and were seeded to crested wheat in 1986. Data is insufficient to determine if current management will result in achievement of this objective.

Stone Cabin

Data collected in 1983 indicates that current management will not result in achievement of this objective in the west half of this pasture.

Big Creek

Utilization conducted in five of last eight years indicates that current management will result in achievement of this objective for inaccessible upland sites. Current management is not resulting in achievement of this objective for accessible upland sites. The majority of the upland sites in this pasture have been identified as unsuitable for livestock.

Big Creek Seeding is not fenced off from the rest of Big Creek pasture. Utilization levels varied from light in 1987 to moderate in 1980. Insufficient baseline and trend data are available to evaluate the achievement of this objective for big Creek Seeding.

Upper Ashdown

Current management will not result in achievement of this objective.

In general, accessible upland sites within one quarter mile of meadows and at the head of drainages is heavy grading to light within .5 miles. Areas further from water, especially steep, rocky canyon side slopes receive slight use.

B. Long Term

1. Manage, maintain, and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand for mule deer of 1311 AUMs, 247 AUMs for pronghorn, 253 AUMs for elk, and 207 AUMs for bighorn sheep by:

   a. Improve to and maintain 27,925 acres in McGee Mtn. DW-8, 25,000 acres in Pine Forest DW-7, and 25,841 acres in Pine Forest DS-5 in good or excellent mule deer habitat condition.

   b. Improve to and maintain 56,609 acres in Denio PY-1, 12,866 acres in McGee Mtn. PW-1, 11,540 acres in Alta Creek PW-2, and 4,1767 acres in Big Creek PY-4, 14,203 acres in Alta Creek PS-1 and 260 acres in Leonard Creek PS-3 in fair or good pronghorn habitat condition.

   c. Improve to and maintain 57,975 acres in Pine Forest BY-7 and BY-8 in good or excellent bighorn sheep habitat condition.

   d. Improve to and maintain 59,994 acres in Pine Forest EY-1 in good elk habitat condition.

   Baseline and trend are not available to evaluate the achievement of this objective except on the burned area. Mule deer and pronghorn antelope populations have increased over the last ten years. However, the 1638 acres burned by the 1985 Knott Creek fire are in poor condition. This fire also impacted 326 acres of crucial winter range, which are in poor condition.

2. Manage, maintain, and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 11,787 AUMs.

   This objective is not being met. Although the allotment has not been stocked at the initial stocking level of 11,787 AUMs since 1979. Use pattern mapping indicates that current management will not result in achievement of this objective.

3. Improve range condition from poor to fair on 9,651 acres and from fair to good on 1,776 acres.

   The objective will be redefined and quantified to obtain a particular ecological status when site potential and identified uses are combined to determined vegetative objective.

4. a. Manage, maintain, and improve public rangeland conditions to provide an initial level of 492 AUMs of forage on a sustained yield basis for (AML) 41 wild burros.

   b. Maintain and improve the free-roaming behavior of wild burros by protecting and enhancing their home ranges.

   c. Maintain/Improve wild burro habitat by assuring free access to water.

   Data is insufficient to determine if progress has been made toward achievement of this objective.

   However, observations by BLM personnel indicate that much of the identified herd management area is void of water and the majority of burro sitings are in areas outside the HMA wherever water is available.

   Use pattern mapping in 1987 revealed nine burros in the Gridley pasture, outside the HMA.

5. Improve to and maintain 286 acres of mahogany habitat types in good condition.

   Baseline and trend are not available to evaluate the achievement of this objective.

6. Improve to and maintain 1,156 acres of aspen habitat types in good condition.

   Baseline and trend information is not available to evaluate the achievement of this objective.

   Observations made by the allotment range conservationist indicate that reproduction is occurring in some aspen stands Data is inconclusive whether progress is being made toward this objective.

7. Improve to and maintain 733 acres of riparian and meadow habitat in good habitat condition. (WL 1.5)

   Baseline and trend information is not available to evaluate the achievement of this objective.

   The riparian and meadow habitat receives heavy-severe utilization (generally |80%) two out of three years and no use one out of three years. This would indicate that progress is not being made toward this objective.

8. Improve to and maintain 185 acres of pine-aspen-mahogany associations.

   Baseline and trend data are not available to evaluate the achievement of this objective.

9. Improve the following stream habitat conditions on Big Creek, N. Fk. Big Creek, Alder Creek, Little Alder Creek, Wood Canyon Creek, and Alta Creek from 49% on Big Creek, 39% on N. Fk. Big Creek, 56% on Alder Creek, 39% on Little Alder Creek, 44% on Wood Canyon Creek, and 56% on Alta Creek to an overall optimum of 60% or above.

   a. Streambank cover 60% or above.
   b. Streambank stability 60% or above.
   c. Maximum summer water temperatures below 70 deg. F.
   d. Sedimentation below 10%.

   This objective has not been achieved on any of the above mentioned streams. Further evaluation by stream is as follows:

   Alder Creek

   This stream was found to be in fair condition in 1976 and 1987. A strong indication that current management is capable of maintaining habitat condition for this creek.

   A review of stream survey data indicates acceptable bank cover on the two stations on the Alder Creek allotment. Bank stability and sedimentations are the limiting factors indicating excessive erosion and impacts from livestock grazing. Flows are a factor of irrigation needs at Alder Creek Ranch. Based on this data, progress is not being made in this stream on this allotment.

   Big Creek

   The upper portion of the stream appears to have acceptable bank stability, whereas the lower stretch does not. Bank cover and sedimentation are not being achieved over the entire stream. All factors have decreased since 1976 except percent pools, indicating a downward trend. The increase in percent pools indicates that further improvement is possible if the other factors are improved. Progress is not being made towards the objective on this stream.

   North Fork of Big Creek

   This stream was found in high fair condition in 1976 and in poor condition in 1987. Bank stability, bank cover, and percent pools has decreased on this stream since 1976. Sedimentation has increased. Progress is not being made towards the objective.

   Little Alder Creek, Alta Creek, and Wood Canyon Creek

   Little Alder Creek was found in poor condition in 1987. All stream habitat factors were below the objective. Progress is not occurring on this stream.

Alta Creek was in fair condition in 1987. Bank stability, bank cover, percent pools were acceptable.

Sedimentation was not meeting the objective, and pool quality was poor. The reasons for increased sedimentation are unclear; while pool quality may be a factor that is related only partially to livestock use. While trend is impossible to determine, adequate progress towards the objective is occurring on this stream, based on available data.

Wood Canyon Creek was in poor condition in 1987 all stream habitat factors were below acceptable levels. Progress is not being made towards achievement of the objective on this stream.

10. Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% cover of sagebrush for nesting and winter use.

    Baseline and trend information are not available to evaluate the achievement of this objective.

11. Improve or maintain Blue Lake to State Class A water standards.

    a. Overall water quality appears to be good. Total dissolved solids, phosphate, nitrate, and fecal coliform levels were all very low which is good. The temperature readings were probably taken in very shallow water along the lake edge and may not be indicative of the overall lake temperature. The high pH is probably due to the mineral breakdown of granodiorite.

       Further monitoring will be necessary to draw any definite conclusions, but it appears progress is being made toward this objective.

    b. Improve to and maintain the water quality of Alder, Big, Alta, and Wood Canyon creeks to the State criteria set for the following beneficial uses: livestock drinking water, cold water aquatic life, wildlife propagation, and wading.

Alder Creek

There is a definite trend from water samples taken on the same date upstream and downstream for turbidity to increase downstream. The turbidity is too high for cold water aquatic life and is not just a problem in spring when runoff peaks. Phosphate levels are also too high, particularly downstream for fish. The water quality objective is not being met, probably due to overuse by livestock.

Only one fecal coliform sample was taken as late as September and it was very high.

Progress is not being made toward this objective.

Big Creek

High turbidity that increases downstream, even in late summer is an indicator of possible poor livestock management in the watershed. Temperatures increase downstream also. There probably is inadequate streambank cover to keep the water cool in summer.

Based on this data, the water quality objective is not being met for cold water aquatic life.

Alta Creek

The water quality objective is being met, based on samples taken in 1979.

Wood Canyon Creek

No data was collected so no conclusions can be made.

12. Improve to and maintain the seeded pasture(s) in good condition (5-10 acres per AUM).

Baseline data is not available to evaluate the achievement of this objective on Highway and South Little Snake pastures due to reseeding after the fire in 1985. Crested wheatgrass seedling establishment has increased in the last year. Data is insufficient to evaluate the achievement of this objective for North Rattlesnake and Maintenance Seedings. Based on utilization levels for these two pastures, this objective has been met. However, proper use levels have not been established for the seedings.

III. Conclusions

A. 1. Use pattern mapping and utilization studies indicate that current management is not capable of resulting in progress toward achievement of short term utilization objectives for riparian or upland communities two out of every three years. Topography is the primary factor determining use patterns in this allotment.

2. The streams are in poor or fair condition. Progress is not being made towards the stream habitat objectives, except on Alta Creek. Current management does not have the potential to improve stream condition.

3. The current management has not resulted in achievement of short term riparian utilization objectives or progress toward long term riparian condition objective.

4. Current management is not resulting in achievement of short term upland utilization in the following spring pastures: Lower Ashdown, Maintenance, North Rattlesnake, Upper Ashdown and Stone Cabin. Its inconclusive in South Rattlesnake and

Highway pastures. We are meeting the objective in the following pastures: McGee and Gridley.

5. McGee Mountain is still unavailable to livestock grazing due to a lack of water. Efforts to explore development of water have been extensive and there are several options for development of water all of which have been cost prohibitive and have always resulted in similar conclusion: These include:

   a. Pumping water from valley floor to storage tank on McGee Mountain and piping to desired locations.

   b. Construct numerous livestock guzzlers and/or cachments.

   c. Haul water.

6. Winter use in the Big Creek water pasture has only been exercised 2 of the last ten years.

7. McGee Mountain Herd Management Area is void of adequate water and is not the actual use area of burros. Burros are using the Gridley pasture which is outside the HMA. Adequate information pertaining to the McGee Mountain HMA is lacking.

8. Fires have resulted in poor mule deer habitat condition on 1638 acres. Population estimates of mule deer and pronghorn antelope have increased over last 10 years.

9. The intended rest/rotation grazing system for the seeding complex has not been followed for several reasons:

   a. Poor condition of seedings resulted in using those that provided forage in any given year.

   b. Fires in 1985.

   c. Changing permittees often resulted in requests to "change management."

10. Use pattern mapping indicates that the lower elevations of the Big Creek and Stone Cabin pastures receive very little if any use when scheduled for grazing. The Upper Ashdown pasture has little use in large areas. This is primarily a result of topography and suitability (steep and rocky). This area is also at a lower elevation and the livestock simply travel through on their way to the higher elevation basins and meadows.

11. Current data indicates potential crested wheatgrass seedling establishment in Highway and South Rattlesnake seedings.

LIVESTOCK USE AGREEMENT
FOR THE
ALDER CREEK ALLOTMENT

DRAFT

I. INTRODUCTION

This agreement is based on the Alder Creek Allotment Evaluation dated August 8, 1988.

The agreed upon livestock use, as documented below, is consistent with the achievement of the management objectives for the public lands administered by the Bureau of Land Management in the Alder Creek Allotment.

This agreement was prepared after consultation, cooperation, and coordination with the affected permittee, (Julian Marcuerquiaga/Alder Creek Ranch) and the Nevada Department of Wildlife.

II. ALLOTMENT OBJECTIVES

A. Short Term

1. Utilization of key streambank riparian plant species shall not exceed 50% on Big Creek and Alder Creek except where adjusted by an approved activity plan. [1]

2. Utilization of key plant species in wetland riparian habitats shall not exceed 50% except where adjusted by an approved activity plan. [1]

3. Utilization of key plant species in upland habitats shall not exceed 50% except where adjusted by an approved activity plan. [1]

B. Long Term

1. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 1,311 AUMs for mule deer, 247 AUMs for pronghorn, 253 AUMs for elk, and 207 AUMs for bighorn sheep by:

   a. Improve to and maintain 27,925 acres in McGee Mtn. DW-8, 25,000 acres in Pine Forest DW-7, and 25,841 acres in Pine Forest DS-5 in good or excellent mule deer habitat condition.

   b. Improve to and maintain 56,609 acres in Denio PY-1, 12,866 acres in McGee Mtn. PW-1, 11,540 acres in Alta Creek PW-2, and 4,176 acres in Big Creek PY-4, 14,203 acres in Alta Creek PS-1 and 260 acres in Leonard Creek PS-3 in fair or good pronghorn habitat condition.

c. Improve to and maintain 56,975 acres in Pine Forest BY-7 and [redacted]-8 in good or excellent bighorn sheep habitat condition.

d. Improve to and maintain 59,994 acres in Pine Forest EY-1 in good elk habitat condition.

2. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 11,787 AUMs.

3. Improve range condition from poor to fair on 9,651 acres and from fair to good on 1,776 acres. [2]

4. Manage, maintain and improve public rangeland conditions to provide an initial level of 492 AUMs of forage on a sustained yield basis for 41 wild burros.

5. Improve to and maintain 286 acres of mahogany habitat types in good condition. [2]

6. Improve to and maintain 1,156 acres of aspen habitat types in good condition. [2]

7. Improve to and maintain 733 acres of riparian and meadow habitat types in good condition. [2]

8. Improve to and maintain in good condition 185 acres of pine-aspen-mahogany associations.

9. Improve the following stream habitat conditions on Big Creek and Alder Creek from 49% on Big Creek, and 56% on Alder Creek to an overall optimum to 60% or above.

   a. Streambank cover 60% or above.
   b. Streambank stability 60% or above.
   c. Maximum summer water temperatures below 70°F.
   d. Sedimentation below 10%.

10. Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% cover of sagebrush for nesting and winter use.

11. Improve to and maintain Blue Lake to state Class A water standards.

12. Improve to and maintain the water quality of Alder, Big, Alta and Wood Canyon Creeks to the state criteria set for the following beneficial uses: livestock drinking water, cold water aquatic life, wildlife propagation, and wading.

13. Improve or maintain the seeded pasture(s) in good condition (5-10 acres per AUM).

[1] The utilization levels are target levels to be evaluated over a period of time and are not intended to be an allowable use level dictating livestock removal on a seasonal basis.

[2] The condition objective will be redefined/quantified to obtain a particular ecological status when site potential and identified uses are combined to meet vegetative objectives.

III. AGREED UPON CHANGES IN AVAILABLE LIVESTOCK FORAGE AND/OR LIVESTOCK USE ADJUSTMENTS

A. From (Description of Existing Use)

1.

Kind	Period Begin	Period End	% Public Land	Type Use	AUMs
Cattle	04/15	12/31	95	Active	*

* As many as 11,787 AUMs have been used in the past. Livestock numbers vary but approximately 1,085 cattle will be licensed at any one time.

2. Allotment Preference Summary

a.	Total Preference	12,368 AUMs
b.	Suspended Preference	581 AUMs
c.	Active Preference	11,787 AUMs
d.	Exchange of Use	344 AUMs

3. Season of Use

Season Long - (04/01 to 12/31)

4. Grazing System

The grazing system consists of specific use areas and rest-rotation systems in the seedings and summer pastures.

a. Spring Use

1) West Side

The use areas include Gridley and Lower Ashdown. Use occurs 04/20 to 05/31. Approximately 06/01 livestock are moved into summer range. In 1988 rest was incorporated into this system for Lower Ashdown pasture.

2) East Side

The east side of the Alder Creek allotment is to be utilized in the spring only. This area consists of the following seedings:

Rattlesnake
Rattlesnake
Maintenance
Highway

Treatments

The following treatments were utilized

Treatment A 05/01 to 05/31
Treatment B Rest

Grazing Formula

Year	Pastures N. Rattlesnake	S. Rattlesnake	Maintenance	Highway
1	B	B	A	A
2	A	A	B	B
3	B	B	A	A

This system consists of rest two pastures each year and utilizing two each year.

b. Summer

The summer use consists of a three pasture rest-rotation system. Use occurs 06/01 to 10/31, with the following treatments:

Treatments

Treatment A 06/01 to 07/31
Treatment B 08/01 to 10/31
Treatment C Rest

Pastures

a. Upper Ashdown
b. Stone Cabin
c. Big Creek and Big Creek Seeding

Grazing formula

Year	Pasture Upper Ashdown	Stone Cabin	Big Creek/Big Creek Seeding
1	B	A	C
2	C	B	A
3	A	C	B

Winter

This simply involved repeated winter use in the Big Creek winter pasture use occurred 11/01 to 12/31.

B. To (Description of Agreed Upon Changes)

1.

Livestock Numbers	Kind	Period Begin	Period End	% Public Land	Type Use
685	Cattle	05/01	06/30	95	Active
250	Cattle	05/01	05/31	95	Active
150	Cattle	05/01	06/30	95	Active
250	Cattle	06/01	06/30	95	Active
1,085	Cattle	07/01	08/07	95	Active
1,085	Cattle	08/08	09/15	95	Active
685	Cattle	11/01	12/31	95	Active

2. A total of 11,787 AUMs may be licensed as active use. Livestock numbers vary but approximately 1,085 cattle will be licensed at any one time.

3. Allotment Preference Summary

a.	Total Preference	12,368 AUMs
b.	Suspended Preference	581 AUMs
c.	Active Preference	11,787 AUMs
d.	Exchange of Use	344 AUMs

4. Grazing System

The grazing system will consist of specific use areas and rest-rotation systems in the seedings and summer pastures. The west side of the Alder Creek allotment will be used primarily in the spring/winter. The east side will be used in the spring only.

a. Spring Use

1. West Side

The use areas include Gridley Lake and Bog Hot. The system is applied realizing that a division fence does not separate these two areas and that livestock may drift in and utilize both areas. However, altering the area turned into incorporates rest into the system. McGee Mountain area will be utilized when water is available. Bog Hot use area will be uitlized in 1989 resting Gridley Lake and in 1990, Gridley Lake will be utilized and Bog Hot rested. Use occurs 05/01 to 06/15 or 06/30 with approximately 685 cows.

2. East Side

The east side of the Alder Creek allotment is to be utilized in the spring only. This area consists of the following seedings and use areas. Use occurs 05/01 to 06/15 or 06/30 with approximately 250 cows in the seedings and 150 in the native pastures.

Pasture Arrangement

a. South Rattlesnake Seeding, Highway Seeding and Big Creek winter.
b. North Rattlesnake Seeding, Maintenance Seeding and Lower Ashdown.

Treatments

The following treatments will be utilized

Treatment A	05/01 to 05/30
Treatment B	06/01 to 06/30
Treatment C	05/01 to 06/30
Treatment D	Rest

Grazing Formula

	Pastures		
Year	South Rattlesnake	Highway	Big Creek Winter
1 (89)	A	B	C
2	D	D	D
3	B	A	C
4	D	D	D

	Pastures		
Year	North Rattlesnake	Maintenance	Lower Ashdown
1 (89)	D	D	D
2	A	B	C
3	D	D	D
4	B	A	C

b. Summer

The summer use consists of a three pasture rest-rotation system. Use occurs approximately 06/15 to 07/01 to 09/15, with the following treatments:

a.	Treatment A	07/01 to 08/07
b.	Treatment B	08/08 to 09/15
c.	Treatment C	Rest

Pastures

a. Big Creek
b. Stone Cabin
c. Upper Ashdown

Grazing formula

Year	Pasture		
	Big Creek	Stone Cabin	Upper Ashdown
1 (89)	A	B	C
2	C	A	B
3	B	C	A

Winter

Winter use will occur 11/01 to 12/31. The areas utilized will be Bog Hot and Gridley Lake. Use will be controlled by water from wells. The first year the Gridley Lake area will be utilized and wells in the Bog Hot area will be shut off. The second year Bog Hot area will be utilized first and the wells in Gridley Lake will be shut off.

Flexibility is required due to dependence on water and plant phenology. It is agreed that on years of early turn out a comparable early removal will occur. A two week flexibility, as indicated above, is required on summer turn out.

If monitoring data shows a forage imbalance, pasture use will need to be readjusted to correct the imbalance.

IV. MONITORING PROGRAM

Monitoring data used in the Alder Creek allotment evaluation consists of utilization transects, and use pattern maps in specific areas compiled from 1980 to 1984 and 1987. Future monitoring data will include:

1. Actual Use
2. Utilization/Use Pattern Mapping
3. Trend
4. Climate data collected from existing stations

Additional types of monitoring data may be collected if the need arises.

As time and funding permits future monitoring will entail the identification of key areas and associated key species. This will be done in coordination and cooperation with the livestock permittee.

V. FUTURE ADJUSTMENTS

This agreement documents and establishes the grazing practices to be used on the Alder Creek Allotment and acknowledges that the allotment objectives as listed in the introduction have been discussed between both parties. Any future adjustments will be the result of additional monitoring data collected and evaluated towards the achievement of the allotment objectives. This process will be done in coordination and cooperation with the livestock permittee.

VI. FUTURE MANAGEMENT CONSIDERATIONS

A. The BLM and permittee agree in concept to fencing the recreational opportunities around Blue Lake. The BLM will work with the permittee in locating any fences that are needed.

B. The BLM and permittee agree in concept to an elevational fence in the Stone Cabin and Big Creek pastures to help keep livestock off the upper riparian areas during early season and to make better use of forage in the lower elevations.

VII. Authority for this agreement is given through 43 CFR 4100.8, 4110.3 and 4110.3-3

VIII. The agreed upon livestock use identified above is binding on any successor interest or future transferees with such modifications as approved or required by the authorized officer.

IX. SIGNATURES

_____ _____

Julian Marcuerquiaga/Alder Creek Ranch Date

_____ _____

Scott Billing Date
Area Manager, Paradise Denio RA