

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 (NW 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 NDCW 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, NDCW 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 NDCW. 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. A lot 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 streams 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

Little Owyhee
Allotment Evaluation Summary

I. Allotment Information

- A. Little Owyhee Allotment, Allotment Number (00036), Permittee - Charlie Amos, Management Priority (1), Category (I).
- B. Allotment Description - Refer to Paradise Planning Unit Resource Analysis P-RM-187 thru P-RM-196 and the Paradise-Denio Environmental Impact Statement for specific details. These documents are located in the Winnemucca District Office. The following information is a brief description of the Little Owyhee Allotment.

The Little Owyhee Allotment is the largest grazing unit in the Paradise-Denio Resource Area. The allotment has a total of 579,808 acres, of which 98% is public land and 2% is private land. The allotment is separated into spring and summer use areas. The spring use area has a total of 427,299 acres which represents 74% of the allotment. The spring use area constitutes the eastern and southern portion of the allotment. The summer use area is made up of four pastures in the NW portion of the allotment. The vegetation in the summer use area is dominated by big and low sagebrush communities. The spring use area is dominated by shadscale, big and low sagebrush communities. In general, the elevation of the allotment increases in a westwardly direction ranging from 4,500 ft. to 7,500 ft. The allotment itself is located in northeastern Humboldt County, east of the Santa Rosa Range into Elko County, north of the Little Humboldt River to the Idaho and Oregon State lines.

C. Livestock Use

1. Grazing Use Summary

- | | |
|-------------------------|----------------------------------|
| a. Total Preference | 47,463 |
| b. Suspended Preference | 2,581 |
| c. Active Preference | * 27,850 (initial stocking rate) |

* As per CRMP Agreement and Land Use Plan Decision

2. Season of Use

Spring/Summer

Spring turn out has been as early as 3/5 and summer use authorized as late as 9/30.

3. Class of Livestock

Cattle (Cow-Calf)

4. Land Status

Public land 579,808 acres (98%)
Private Land 13,509 acres (2%)

5. Grazing System

The Little Owyhee AMP was first approved in 1969 and revised in 1972. The grazing system developed in the revised AMP divides the allotment into a Spring use area and a Summer use area. Both areas were put under a three pasture rest-rotation grazing system. The Spring use area consists of three large pastures and three treatments, these treatments were as follows:

Treatment "A" Early Spring use 3/1 to 6/1
Treatment "B" Late Spring use 4/1 to 6/1
Treatment "C" Rest

The pastures in the Spring use area and an example of the grazing system are as follows:

	First Year	Second Year	Third Year
Fairbanks Field	Rest	Early Use	Late Use
Twin Valley Field	Early Use	Late Use	Rest
Lake Creek Field	Late Use	Rest	Early Use

The Summer use area consists of four pastures, the fourth pasture, Capitol Peak, was designed to be used every year after seedripe (about July 20). The Summer use area also calls for three treatments, those are as follows:

Treatment "A" Early Summer use 5/15 to 10/31
Treatment "B" Late Summer use 7/20 to 10/31
Treatment "C" Rest

	First Year	Second Year	Third Year
Calico Field	Early use	Late use	Rest
Rock Springs Field	Late use	Rest	Early use
Antelope Field	Rest	Early use	Late use
Capitol Peak Field	Late use	Late use	Late use

In April of 1978 an attempt was made to combine Calico and Capitol Peak Fields. The rationale behind the recommendation was based on pasture size and the differences in carrying capacity between the four pastures in the summer area. The combined Calico and Capitol Fields would then be approximately the same size as the other pastures and would have a similar carrying capacity, also less cattle movement would be required. This recommendation was never adopted.

Since the AMP was approved the operators on the allotment have, in general, complied with the two use area, three pasture

rest-rotation system set up in the AMP for the spring use area. In February, 1982, a Coordinated Resource Management Plan was adopted for the allotment. A recommended grazing sequence and schedule was agreed to. This schedule utilizes the two use area, three pasture rest-rotation system developed in the AMP. Refer to the Little Owyhee CRMP file for specific details. There have been deviations, but they have been tied to droughty condition or closure of areas due to wildfires on the allotment.

6. Other

In 1987 all seven pastures were used, this deviation was due to lack of available water caused by droughty conditions in portions of the pasture scheduled to be used. The rationale was to spread the use out and not to overutilize the portions of the allotment with available water.

D. Allotment Objectives

1. Short Term Objectives

- a. Utilization of the key plant species on 596 acres of wetland riparian shall not exceed 50% except where adjusted by an approved activity plans. (WL 1.3, WL 1.5, WL 1.28, CRMP obj. #5)
- b. Utilization of key streambanks plant species along the North Fork and South Fork of the Little Humboldt River and East Little Owyhee River shall not exceed 30% except where adjusted by an approved activity plan. (WLA 1.1, WLA 1.2, CRMP #5)
- c. The Little Owyhee Monitoring Plan has established specific allowable use levels, not to exceed 50%, per key management area. The uplands shall be managed by objectives established in the monitoring plan. (RM 1.11, WL 1.2, WL 1.4, WL 1.28, CRMP obj. #1, CRMP obj. #2)

2. Long Term Objectives

- a. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 27,850 AUMs. (RM 1.11, CRMP obj. #1, CRMP obj. #2)
- b. Improve to and maintain the ecological status per key management area as determined in the Little Owyhee Monitoring Plan. (CRMP obj. #1)
- c. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 324 AUMs for mule deer and 1,331 AUMs for pronghorn. (WL 1.2, WL 1.4)

- 1) Improve to and maintain 2,756 acres in Paradise Valley DY-1, 29,612 acres in Santa Rosa DY-10, 31,678 acres in Santa Rosa DW-2, and 44,210 acres in Santa Rosa DS-1 in good or excellent mule deer habitat condition.
 - 2) Improve to and maintain 2,490 acres in Mahogany Ridge PS-8, 25,837 acres in Santa Rosa PS-7 and 21,608 acres in Little Owyhee PS-10 to good condition. Improve to and maintain 457,963 acres in Owyhee Desert PY-9, 17,847 acres in Maiden Butte PW-9, 2,306 acres in Evans Lake PW-10, 7,762 acres in Button Lake PW-11, 4,939 acres in Button Lake PS-9, 8,322 acres in Evans Lake PS-11, and 7,469 acres in Bullhead PW-13 in fair or good pronghorn habitat condition.
- d. Maintain and improve the free roaming behavior of wild horses by protecting and enhancing their home ranges. (WHB 1.1, WHB 1.5)
- 1) Manage, maintain and improve public rangeland conditions to provide an initial level of 2,400 AUMs of forage on a sustained yield basis for 200 wild horses.
 - 2) Maintain and improve wild horse habitat by assuring free access to water.
- e. Improve to and maintain 596 acres of riparian and meadow habitat types in good condition. [1] (WL 1.5)
- f. Improve to and maintain 21 acres of aspen habitat types in good condition. [1] (WL 1.3, F 1.3)
- g. Improve to and maintain 60 acres of mahogany habitat types in good condition. [1] (WL 1.3, F 1.2)
- h. Improve to or maintain the following stream habitat conditions on the North Fork and the South Forks of the Little Humboldt and the East Little Owyhee from 47% on the North Fork, 54% on the South Fork and unknown on the East Little Owyhee to an overall optimum of 60% or above. (WLA 1.1, WLA 1.2)
- 1) Streambank cover to 60% or above.
 - 2) Streambank stability to 60% or above.
 - 3) Maximum summer water temperature below 70° F.
 - 4) Sedimentation below 10%.
- i. Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% cover of sagebrush for nesting and winter use. (WL 1.28)

- j. Improve to or maintain the water quality of the North and South Fork Humboldt Rivers and the East Little Owyhee River to the State criteria set for the following beneficial uses: livestock drinking water, cold water aquatic life, wading and wildlife propagation. (WL 1.1)

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

E. Monitoring and Inventory Display and Analyze

1. Climatological Data

The following table represents the mean from the combined stations.

<u>TEMPERATURE AND PRECIPITATION DATA FOR PARADISE VALLEY INW (NOAA)</u>			
	<u>PRECIPITATION</u>	<u>DEPARTURE FROM NORMAL</u>	<u>TEMPERATURE</u>
1983 Total (July Not Measured)	= 20.59"	11.43"	Not available
March - June	= 5.75"		
1984 Total	= 12.69	3.53"	45.4°
March - June	= 5.59"		
1985 Total	= 8.76"	-.40"	45.3°
March - June	= 1.51"		
1986 Total	= 9.95"	.79"	48.7°
March - June	= 2.78"		
1987 Total	= 10.95"	1.79"	48.4°
March - June	= 5.61"		
<hr/>			
Total; X for 5 years	= 12.56"		Temp X for 5 years =
March-June; X for 5 years	= 4.25"		46.95°

CLIMATOLOGICAL DATA
FOR
McDERMITT STATION (NOAA)

	<u>PRECIPITATION</u>	<u>DEPARTURE FROM NORMAL</u>	<u>TEMPERATURE</u>
1983 Total	= 17.27"	Not available	46.5°
Growing Season	= 7.33"		
1984 Total	= 10.56"	Not available	N/A
Growing Season	= 5.04"		
1985 Total	= 6.11"	Not available	44.9°
Growing Season	= 1.63"		
1986 Total	= 8.70"	Not available	47.7°
Growing Season	= 4.75"		
1987 Total	= 7.91"	Not available	47.1°
<u>Growing Season</u>	<u>= 6.25"</u>		
Average Precipitation for the last 5 years	= 10.11"	Average Temp. for 5 years	= 46.5°
Average Growing Season Precip. 5 years	= 5.00"		

2. Livestock Use Data: Little Owyhee Allotment

	<u>Livestock Use (AUMs)</u>					<u>Average Use</u>
<u>Spring Use Pastures</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	
Fairbanks	1,342	Rested	Rested	Rested	3,354	2,348
Lake Creek	Rested	6,537	4,584	5,286	1,450	4,464
Twin Valley	<u>4,140</u>	<u>6,013</u>	<u>3,296</u>	<u>2,253</u>	<u>2,972</u>	<u>3,735</u>
Spring Use Area Totals	5,482	12,550	7,880	7,539	7,776	8,245
 <u>Summer Use Pastures</u>						
Antelope	5,100	Rested	2,167	1,572	3,139	2,995
Calico	1,071	1,826	Rested	Rested	299	1,065
Capitol	204	Rested	2,155	1,366	987	1,229
Rock Springs	Rested	<u>2,622</u>	<u>2,307</u>	<u>1,366</u>	<u>1,080</u>	<u>1,844</u>
Summer Use Area Totals	6,375	4,448	6,629	4,304	5,505	5,452
 Allotment Totals	11,857	16,998	14,609	11,843	13,281	13,697

X for the last 5 years + 13,697 AUM's

3. Utilization Data

Refer to the tables for utilization levels determined by past transects at each key management area by year, as they compare to the specific allowable use level set forth in the Little Owyhee Monitoring Plan.

a. Spring Use Area

1) Fairbanks Field

<u>Key Area</u>	<u>Key Species</u>	<u>Allowable Use Levels</u>	<u>Years</u>				
			<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
0401	SIHY	40%	-	-	-	-	31%
0402	AGSP	50%	-	-	-	-	10%
	SIHY	40%	-	-	-	-	-
0403	STTH ₂	40%	-	-	-	-	21%
	AGSP	50%	-	-	-	-	-
	SIHY	40%	-	-	-	-	-
	STTH ₂	40%	-	-	-	-	-

Due to the 1984 wildfire in the Fairbanks Field no grazing by livestock occurred in 1984, 1985 and 1986. In 1987, UPM was developed for the pasture in early July of 1987. The UPM revealed no use in the northern and eastern portions of the field. The rest of the field had slight (0-20%) to light (21-40%) use on the uplands. Small areas associated with riparian areas or developed water sources exhibited moderate (41-60%) to heavy (61-80%) use. Two areas with extensive heavy use were Little Mud Springs and the North Fork Little Humboldt River SE of Greeley Crossing.

2) Lake Creek Field

<u>Key Area</u>	<u>Key Species</u>	<u>Allowable Use Levels</u>	<u>Years</u>				
			<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
0501	EULA5	50%	-	-	39%	12%	5%
	ORHY	50%	-	33%	42%	18%	12%
	SIHY	40%	-	32% ¹	11%	12%	4%
0502	ORHY	40%	-	-	6%	-	2%
	Pose	50%	-	-	-	-	-
0503	SIHY	40%	-	-	5%	-	6%
	SIHY	40%	-	-	-	-	-
0504	STTH ₂	40%	-	-	-	-	-
	ORHY	50%	-	-	12%	-	4%
0505	Pose	50%	-	-	-	-	-
	SIHY	40%	-	-	11.5%	-	4%
	ORHY	50%	-	-	-	-	-
0506	SIHY	50%	-	-	-	-	-
	EULA5	50%	-	-	.5%	-	-
0507	ORHY	50%	-	-	8.5%	25%	-
	SIHY	40%	-	-	3.5%	-	-
	ORHY	50%	-	-	-	-	-
0507	STTH ₂	40%	-	-	-	-	-
	SIHY	40%	-	-	-	-	-

Use Pattern Mapping was also conducted on the pasture in 1985, 1986 and 1987. The UPM developed in 1985 showed light use overall, with moderate to heavy use surrounding water sources. In 1986 the UPM showed large areas of the field as unused. Portions that were used showed slight to light use. There was an area surrounding a reservoir near the East Little Owyhee River that had heavy use. In 1987 the UPM showed slight use overall. Moderate to heavy use was indicated close to water sources. Severe (81-100%) use was observed along the S. Fork of the Little Humboldt River at Rodear Flat.

3) Twin Valley Field

<u>Key Area</u>	<u>Key Species</u>	<u>Allowable Use Levels</u>	<u>Years</u>				
			<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
0701	AGSP	50%	19%	-	1%	3%	15%
	STTH ₂	40%	-	-	-	-	-
0702	ORHY	50%	-	-	-	7%	10%
	SIHY	40%	-	-	-	-	10%
0703	ORHY	50%	25%	-	-	-	-
	SIHY	40%	18%	-	-	-	-
	STTH ₂	40%	35%	-	-	-	-

Use pattern mapping was also conducted in this pasture in 1985, 1986 and 1987. In 1985 the UPM showed overall light use, with small areas of moderate use. There were two areas, one along or near the Little Owyhee River which showed heavy use and another area around Raven Creek that showed heavy use. In 1986 a good portion of the pasture showed no use, the use that was made was slight to light. Two areas, Four Mile Butte and an area just west of Humboldt Hill showed moderate to heavy use. The UPM developed in 1987 revealed overall use to be slight to no use except along the Little Owyhee River where utilization was heavy along the riparian zone. Observations in 1987 also show heavy to severe use at Twin Valley Springs.

b. Summer Use Area

1) Antelope Field

<u>Key Area</u>	<u>Key Species</u>	<u>Allowable Use Levels</u>	<u>Years</u>				
			<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
0101	STTH ₂	40%	-	-	36%	15%	39%
	SIHY	40%	-	-	-	-	-
0102	STTH ₂	40%	28%	-	1%	11%	13%
	SIHY	40%	17%	-	1%	-	-
0103	STTH ₂	40%	24%	-	-	-	-
	SIHY	40%	-	-	-	-	-

Use pattern maps were also developed for this pasture in 1985, 1986 and 1987. The UPM's for 1985 and 1986 seem to have similar use levels as identified by the utilization transects. However, the 1987 UPM does not concur with the transects read that year. The two upland key areas showed use to be slight to light, but the UPM reveals moderate to heavy use in the same upland areas. Unauthorized use was documented in this pasture, extending well into October.

2) Calico Field

<u>Key Area</u>	<u>Key Species</u>	<u>Allowable</u>		<u>Years</u>			
		<u>Use Levels</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
0201	SIHY	40%	20%	-	-	-	-
	STTH ₂	40%	19%	-	-	-	13%
0202	AGSP	50%	50%	-	-	-	-
	SIHY	40%	29%	-	-	-	-
	STTH ₂	40%	30%	-	-	-	-

Use Pattern Maps were also developed for this pasture in 1985, 1986 and 1987. The UPM's show no use in 1985, overall slight use in 1986 with the exception of a small area near Maiden Springs which showed severe use. In 1987 the UPM again indicated overall slight use, with heavy to moderate use around Maiden Springs.

3) Capitol Peak Field

<u>Key Area</u>	<u>Key Species</u>	<u>Allowable</u>		<u>Years</u>			
		<u>Use Levels</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
0301	FEID	40%	-	38%	55%	3%	28%
	STTH ₂	40%	20%	58%	49%	6%	46%

Use pattern maps were also developed for this pasture in 1985, 1986 and 1987. The UPM developed in 1985 shows heavy use for over half the pasture with moderate use on the remaining portion. In 1986 the UPM showed overall slight to light use with small areas of moderate use. The 1987 UPM indicates the majority of the pasture received slight to light use, with moderate to heavy use being made around water sources such as William Creek. A correlation between actual use and utilization levels in this field 1987 indicates light livestock actual use but the pasture was utilized almost as much as 1985 when the pastures stocking rate was much higher. Utilization of upland species in this pasture may be less critical because grazing generally doesn't start until after 7/2 or seedripe.

4) Rock Springs Field

Key Area	Key Species	Allowable Use Levels	Years				
			1983	1984	1985	1986	1987
0601	FEID	40%	-	11%	-	-	6%
6 0702	SSTH ₂	40%	-	21%	-	-	16%
	SIHY	50%	-	-	-	-	-
6 0703	SSTH ₂	40%	-	30%	32%	-	22%
	SIHY	40%	-	-	-	-	-
	SSTH ₂	40%	-	-	42%	-	56%

Use pattern maps were developed for this pasture in 1985, 1986 and 1987. In 1985 the UPM showed no use in the eastern portion of the field with slight to light use being made in the western half. However, heavy use was made along Willow Creek and Piccolo Creek. In 1986 the UPM indicated no use in most of the pasture. Slight use was made in the Willow Creek area and along portions of Mahogany Ridge. The 1987 UPM reveals slight use overall with pockets of light and moderate use. Heavy use was made on a small portion of Piccolo Creek. In 1987, severe use was documented at L..O. Res. #3 on Piccolo Creek, including inside the enclosure.

- c. In 1987, thirteen potential riparian and mountain browse key management sites were read. The Extensive Utilization Method was employed for mountain browse and the Key Forage Plant Method was used for the riparian transects. These proposed key areas are all located in the Summer use area, in Antelope, Capitol Peak and Rock Springs Fields. The finalization of these sites as key management areas will be determined at a later date.

The following tables will depict the results of the transects read in 1987 at the potential key management areas:

1) Antelope Field

Potential Key Area	Key Species	Allowable Use	Utilization Level
		Levels	
0104	CELE3	*50%	43%
0105 (East Little Owyhee River)	SALIX	*30%	82%
	ROWO	50%	84%
	RIAU	50%	82%
	DECA3	30%	41%
	PONE3	30%	60%
	HOB2	30%	68%
	JUNCU	30%	68%
	POTEN	30%	60%
	CAREX	30%	70%

0106 (Antelope Lower Meadow)	ROWO	50%	91%	
	SALIX	*30%	93%	
	PONE3	50%	76%	
	DECA3	50%	74%	
	CAREX	50%	78%	
	JUNCU	50%	66%	
	HOB2	50%	84%	
	POTEN	50%	80%	
	0107 (Downstream from Antelope Excl.)	PONE3	50%	83%
		HOB2	50%	82%
CAREX		50%	85%	
JUNCU		50%	77%	
DECA3		50%	83%	
0108 (Antelope Upper Meadow)	HOB2	50%	70%	
	PONE3	50%	66%	
	JUNCU	50%	67%	
	CAREX	50%	77%	
	DECA	50%	54%	
	ELTR3	50%	60%	

2) Capitol Peak Field

<u>Potential Key Area</u>	<u>Key Species</u>	<u>Allowable Use Levels</u>	<u>Utilization Level</u>
0302 (Capitol Meadow)	JUNCU	50%	50%
	PONE3	50%	62%
	CAREX	50%	64%
	DECA	50%	40%
	HOB2	50%	60%
	0303 (Willow Creek)	ROWO	50%
SYOR		*40%	63%
AMAL		*40%	43%
SALIX		*30%	79%
PONE3		30%	64%
HOB2		30%	58%
JUNCU		30%	66%
AGROP2		30%	47%
DECA3		30%	45%
0304 (Meadow)		PONE3	50%
	CAREX	50%	78%
	JUNCU	50%	44%
	DECA	50%	35%
	AGROP2	50%	50%
	HOB2	50%	43%
0305 (Calico Spr.)	PONE3	50%	63%
	DECA3	50%	52%
	HOB	50%	40%
	CAREX	50%	65%
	JUNCU	50%	63%

3) Rocks Springs Field

<u>Potential Key Area</u>	<u>Key Species</u>	<u>Allowable Use Levels</u>	<u>Utilization Level</u>
0604 (Rock Springs Meadow North)	PONE3	50%	65%
	CAREX	50%	66%
	DECA	50%	53%
	HOBR2	50%	43%
	MURI	50%	40%
0605 (Downstream from Mahogany Ridge Excl)	HOBR2	50%	59%
	PONE3	50%	63%
	JUNCU	50%	58%
	AGROP2	50%	74%
	DECA3	50%	42%
0606 (Mahog Ridge Spring Meadow)	CAREX	50%	54%
	PONE3	50%	41%
	JUNCU	50%	41%
	DECA3	50%	32%
0607 (Mahogany Ridge)	CELE3	50%	54%

*Allowable use levels based on Paradise-Denio EIS Table 1-4.

c. Summary of Utilization Data

The spring use area uplands appear to be grazed at slight to light use levels overall. The water sources and riparian zone are being grazed at moderate to heavy utilization levels. The summer use area has encountered higher use levels overall than the spring use areas on both upland and riparian sites. The utilization levels on riparian areas are heavy. Utilization levels in upland areas were generally higher on summer pastures than spring pastures, but were still within prescribed allowable use levels.

4. Trend Data

Refer to the Little Owyhee Monitoring file for specific details concerning trend studies conducted on the Little Owyhee Allotment.

Trend studies were conducted at various key areas in all pastures from 1984 through 1986 employing the Quadrat Frequency Method. The frequency of occurrence of the key species showed no significant change between 1984 and 1987.

In Capitol Peak Field one trend study, on Lone Willow Meadow (Key Area #0304) to indicate change in a headcut, was read in 1982, 1983 and 1987. Results from this study show no appreciable change in the lower end of the cut but additional cutting has occurred towards the upper end of the headcut.

Therefore, this meadow is in a slight downward trend and is not stabilized. The Paradise-Denio EIS and the Elko Resource Area RMP/EIS both indicate that this allotment is in an apparent downward trend.

5. Ecological Site Inventory

Refer to the Little Owyhee monitoring file for specific details concerning ESI. The following is a summary of the ecological status in the Little Owyhee Proper (Humboldt County) and Little Owyhee Administration area (Elko County).

Little Owyhee Allotment (Humboldt Co.)

<u>PNC</u>	<u>Late Seral</u>	<u>Mid Seral</u>	<u>Early Seral</u>
995 acres (0.3%)	104,749 acres (32%)	214,760 acres (65%)	8,986 acres (2.7%)

Little Owyhee Allotment (Elko Co.)

<u>PNC</u>	<u>Late Seral</u>	<u>Mid Seral</u>	<u>Early Seral</u>
-0-	84,880 acres (42%)	99,643 acres (50%)	15,199 acres (8%)

6. Stream Survey Data

North Fork Little Humboldt River

<u>Year</u>	<u>Overall Optimum</u>	<u>Bank Cover</u>	<u>Bank Stability</u>	<u>% Sedimentation</u>
1976	46	46	52	57
1978	50	33	46	47
1980	50	43	74	19
1982	49	35	44	44
1984	47	28	36	50

South Fork Little River

All stations on this river are in the Bullhead allotment. The condition of the portion of the river in the Little Owyhee allotment is poor based on the station near the allotment boundary.

7. Wildlife

a. Wildlife Habitat Inventory

- 1) Priority Species: Mule deer, sage grouse, trout, pronghorn
- 2) Other Game Species: Chukar and Hungarian Partridge, Valley Quail.

3) Special habitat features.

a) A special habitat features inventory was conducted in June and August, 1978. 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 habitat - Rock Springs pasture: 88 acres. Capitol pasture: 142 acres. Antelope pasture: 234 acres including 98 acres along the N. Fk. Little Humboldt River. Calico pasture: 37 acres. Fairbanks pasture: 4 acres. Lake Creek pasture: 5 acres including 3 acres along the S. Fk. Little Humboldt River. Twin valley pasture: 2 acres.

Button Lake - unique ecological site - 688 acres

Curlleaf mountain mahogany - 60 acres in the Rock Springs, Antelope, and Capitol pastures.

Ceanothus - 18 acres in the Capitol pasture.

Aspen - 21 acres in the Capitol pasture.

Bitterbrush - Identified as a component in 2,404 acres of various ecological sites in the Fairbanks pasture and 130 acres in the Antelope and Capitol pastures.

Serviceberry - Identified as a component in 5 acres of various ecological sites in the Antelope and Capitol pastures.

Mountain Browse - 4,129 acres of ecological sites in the Antelope and Capitol pastures are identified as having snowberry, serviceberry, currant, and bitterbrush in the vegetative composition.

c) The inventory recorded the following in 1978:

Rock Springs pasture - Little to no cattle use was observed during the inventory. Spring and meadow areas showed moderate past use on 64 acres with condition being fair to good. Punching and trampling by livestock and some headcut problems were identified. One six acre meadow area was in good condition with little use and contained partially healed headcuts. Another meadow area of 1.5 acres had heavy use. Two reservoirs inspected had heavy use

Capitol Peak pasture - Spring and associated riparian acres were documented to be receiving heavy use on 47 acres. Moderate use was observed on 21 acres of riparian habitat. Light use was identified on 14 acres of riparian habitat, although headcuts were identified on one of the meadows (10 acres) and aspen reproduction was occurring at one spring. One aspen stand was receiving moderate to heavy use by livestock and was in fair condition with little reproduction. One mahogany stand had no reproduction but good diversity of understory species. Two reservoirs were receiving heavy use.

Antelope pasture - Light or no cattle use was observed during the time of inventory. Five acres of meadow were observed to have had severe past use. Heavy past use had occurred on 12 acres of riparian habitat including that along the East Little Owyhee River. Moderate aspen reproduction was noted in one of these riparian areas but was also receiving heavy use. Willow was recorded as just about eliminated from another spring area, while aspen was deteriorated in another. Headcutting was documented as well. Moderate past use was observed on 48 acres of riparian habitat. Of this acreage, 8 acres was considered in good condition while 36 acres was in fair condition. Headcutting was documented on one of these meadows. Sixteen acres of riparian habitat was classified in good condition and receiving light use. Two acres of riparian habitat was receiving moderate to heavy wild horse use in the eastern portion of the pasture. Two troughs in this area also had heavy wild horse use. The N. Fk. Little Humboldt River had received moderate use. One mahogany stand was in fair to good condition with light cattle use. Little reproduction was present and bitterbrush in the area was heavily browsed. Another mahogany stand had excellent reproduction but was receiving heavy use

Calico pasture - Moderate to heavy use was occurring on 14 acres of riparian habitat. Six reservoirs inspected had water.

Fairbanks pasture - Little cattle use and moderate to heavy wild horse use was occurring in this pasture on 3 acres of riparian habitat and along the N. Fk. Little Humboldt River. Seven of 13 reservoirs inspected were dry.

Lake Creek pasture - Moderate wild horse use was observed around 14 reservoirs which were dry.

Twin Valley Springs pasture. No use was documented at Twin Valley Springs containing two acres of riparian habitat. Button Lake had heavy wild horse and pronghorn use and was considered to be in fair to good condition. Only three reservoirs out of 18 checked had water.

4) Wildlife Use Areas:

Paradise Valley DY-1	2,756 acres
Santa Rosa DY-10	29,612 acres
Santa Rosa DW-2	31,678 acres
Santa Rosa DS-1	44,210 acres
Lake Creek DW-14	23,867 acres
Snowstorms DY-23	43,579 acres
Santa Rosa PS-7	25,837 acres
Owyhee Desert PY-9	258,006 acres
Mahogany Ridge PS-8 (conc.)	2,490 acres
Little Owyhee PS-10	21,608 acres
Maiden Butte PW-9 (conc.)	17,847 acres
Evans Lake PW-10 (conc.)	3,206 acres
Button Lake PW-11 (conc.)	7,762 acres
Button Lake PS-11 (conc.)	4,939 acres
Evans Lake PS-11 (conc.)	8,322 acres
Bullhead PW-13 (conc.)	7,469 acres
Owyhee Desert PY-9 (Elko Co)	199,957 acres
Santa Rosa BY-4	14,338 acres

Sage grouse - There are 12 identified sage grouse strutting grounds on this allotment. Eight brooding areas are identified in conjunction with the strutting grounds. Three sage grouse wintering areas are also identified in the northern, central, and southeastern portions of the allotment. In general, the entire allotment has sage grouse habitat and supports one of the highest populations in northern Nevada.

b. Habitat Evaluation

A habitat evaluation was conducted on the majority of this allotment based on wildlife use areas that have since been revised. Some use areas therefore do not have a rating but are considered to be similar to those which do. Nevada Manual Supplement 6630 procedures were used in the evaluations. Major use areas and corresponding habitat condition is as follows:

Santa Rosa DW-2	Fair mule deer habitat condition overall except on the 1984 Bullhead fire area where it is in poor mule deer habitat condition.
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Santa Rosa DS-1 Fair mule habitat condition

Santa Rosa PS-7 Fair pronghorn habitat condition

Owyhee Desert PY-9 Poor to fair pronghorn condition
(primary limiting factors for poor condition are the lack of water and excessive shrub height).

Little Owyhee PS-10 Fair pronghorn habitat condition

Maiden Butte PW-9 Poor pronghorn habitat condition
(primary limiting factor is lack of adequate water)

Button Lake PW-11 Fair pronghorn habitat condition

Button Lake PS-9 Fair pronghorn habitat condition

The Calico-Capitol Peak Bighorn Use Area (Santa Rosa BY-4) was evaluated as part of the draft Little Owyhee-Snowstorm HMP. The area is ~~rated~~ in good habitat condition for bighorn sheep.

8. Water Quality Sampling

Water quality data was collected on the North Fork of the Little Humboldt River between 1976 and 1982. Most of the data was collected along the Little Owyhee and William Stock allotment boundary. Some samples were taken only within the Little Owyhee allotment much farther downstream.

In February and September, 1976, dissolved oxygen (D.O.), pH, and temperature data were collected and all met State standards. During August 1977 all the necessary water quality parameters were sampled and analyzed at four different locations along the stream. The 1977 stream temperature taken farthest downstream were too high for a trout water.

Water quality samples were taken during May, July and September, 1979 at three different locations along the stream. One third of the temperatures and pHs exceeded Class B water quality standards. Turbidity was too high at two locations for fish during May. The other water quality parameters were at acceptable levels.

Hach Kit tests for D.O., alkalinity, and TDS were taken in September, 1980 near Greeley Crossing and all met Class B water quality standards. Stream temperature was also taken and it was suitable.

Two sites were sampled along the William Stock and Little Owyhee allotment boundaries during May, July and September, 1982. Both of the July temperatures were too high and the

fecal coliform in September at the lower site was 500. Half of the water samples were more turbid than what is recommended for fish. All other parameters were at acceptable levels, except for D.O. which was not tested.

9. Past Inventory Data

- a. In 1978 a range survey was conducted to provide baseline data for analysis purposes in the Paradise-Denio EIS. The survey, along with suitability criteria, indicated that 12,628 AUMs were available in 1978 for wild horses and livestock use for the Little Owyhee Allotment in Humboldt County.
- b. The Elko Resource Area RMP/EIS indicates that 15,246 AUMs were available in 1984 for livestock use for the Little Owyhee allotment in Elko County.
- c. A Phase I Watershed Inventory was conducted on the allotment in Humboldt County in the early 70's. The results of that survey are as follows:

<u>[1] Good Condition</u>	<u>[1] Fair Conditions</u>	<u>[1] Poor Condition</u>
7,121 acres	92,572 acres	255,996 acres

- [1] The range condition used in this inventory is livestock forage condition.

F. Management Actions and Other Factors

1. From 1983 through 1986 the Little Owyhee allotment had two permittees, SECO and Charlie Amos. SECO had an active preference of 30,782 AUMs but never ran over 15,000 AUMs. Charlie Amos had a total of 14,100 AUMs. Both SECO and Charlie Amos leased base properties from the Nevada First Corp. In 1987 SECO relinquished their lease from NFC, NFC transferred the 30,782 AUMs previously leased to SECO to Charlie Amos. Currently, Charlie Amos is leasing the full active preference (44,882 AUM) from NFC.
2. Maintenance Problems on Range Improvement

There is documentation which indicates that normal maintenance has not been performed on some water developments, especially reservoirs. This is more evident on reservoirs in the spring use area. This lack of maintenance may contribute to the distribution problem identified in this area.

Listed below are water developments known to need maintenance:

Water Development
 Lone Willow Meadows
 East Mahogany Pass
 Reservoir

Project # or Legal Description

4372
 4361
 T. 41 N., R. 22 E., Sec. 11
 T. 44 N., R. 45 E., Sec. 25
 T. 44 N., R. 45 E., Sec. 25
 (1/4 mile below)
 T. 33 N., R. 32 E., Sec. 26
 T. 46 N., R. 42 E., Sec. 26
 T. 42 N., R. 46 E., Sec. 6
 T. 43 N., R. 45 E., Sec. 13
 T. 43 N., R. 45 E., Sec. 34
 T. 45 N., R. 41 E., Sec. 26
 T. 44 N., R. 45 E., Sec. 3
 T. 42 N., R. 45 E., Sec. 34
 T. 43 N., R. 45 E., Sec. 29
 T. 47 N., R. 45 E., Sec. 7
 T. 42 N., R. 45 E., Sec. 28
 T. 46 N., R. 42 E., Sec. 7
 T. 42 N., R. 45 E., Sec. 16
 T. 42 N., R. 46 E., Sec. 6
 T. 46 N., R. 32 E., Sec. 26
 T. 42 N., R. 46 E., Sec. 6

3. Wildlife Populations

The P-D EIS indicated that forage demand on this allotment for big game was 141 AUMs for mule deer and 735 AUMs for pronghorn. Forage demand for 1986 was determined to be 259 AUMs for deer and 837 AUMs for pronghorn. Survey methods to determine forage demand for big game differ for the two time periods, so data is not comparable. In general, population trends for mule deer have increased slightly in the Santa Rosa Range over the last 10 years, while pronghorn numbers have remained somewhat static.

Bighorn sheep use has been reported on this allotment in the last few years, but at this time has not been verified by BLM or NDOW.

Since 1977, six exclosures have been built on the summer pastures of this allotment, containing approximately 580 acres. Approximately 48 acres of riparian habitat is included within these exclosures.

4. In 1987, thirteen potential riparian and mountain browse key management areas were read. No utilization data had been collected on riparian or mountain browse prior to 1987. Currently these study sites are potential key management areas only, a final determination on location will be made at a later date.

5. Wild Horses

In the last 9 years 2,671 wild horses have been removed from the Little Owyhee allotment. The Appropriate Management Level for the allotment (200 adult animals) was established through the CRMP process. The wild horses are being managed under the Little Owyhee Snowstorm Wild Horse Herd Management Area Plan. The plan makes a provision for the adult population to reach 270 before removal action will take place. Population census and removal data for the allotment is as follows:

<u>Census Data</u>									
<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1979</u>	<u>1980</u>	<u>1982</u>	<u>1984</u>	<u>1986</u>	<u>1988</u>
*875	*954	*1399	*1381	*1081	*1483	*1024	*883	*291	**377

* Actual Count

** Estimated population based upon a 14% increase.

Removal Data

<u>1977</u>	<u>1981</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
1065	55	342	487	726

6. Wildfires

In July of 1984, 38,770 acres of the Fairbanks Field burned in the wildfire. The field was closed to grazing for two years but not grazed for three (1984, 1985 and 1986). Fire Rehabilitation efforts were not employed in the field and natural recovery was allowed. The absence of this pasture disrupted the three pasture rest-rotation system used in the Spring Use Area and slightly increased use on the two remaining fields.

7. Coordinated Resource Management Plan (CRMP)

On February 12, 1982 a coordinated resource management plan (CRMP) was adopted which listed the major problems/issues for the Little Owyhee allotment. It also developed objectives to manage and resolve these problems. The CRMP was accepted and adopted into the planning process through MFP III Decision.

As a part of this plan a voluntary reduction from 44,882 AUMs to 27,850 AUMs was taken by the permittee.

Another objective of the CRMP was to establish monitoring systems for all objectives. An allotment monitoring plan was issued in 1986. This plan listed key area objectives and established a schedule for monitoring. An analysis of these objectives is located in the Management Evaluation Section of this evaluation.

8. Technical Review Team

A Technical Review Team was created in 1987 to review, discuss and develop methods and practices that relate to achieving the Little Owyhee Allotment CRMP planning objectives. In 1987, the TRT recommended winter use (CRMP objective #2) in the Fairbanks and Lake Creek Fields. This recommendation has the intent of reducing the stocking rate or shorten the grazing period in the summer pastures.

II. Management Evaluation

A. Short Term

1. Utilization of key streambank riparian plant species shall not exceed 30% on the North Fk. Little Humboldt River, East Little Owyhee River, and the South Fk. Little Humboldt River except where adjusted by an approved activity.

No data has been collected on the above streambank riparian areas prior to 1987. A utilization transect (0105) was conducted in the Antelope pasture along the East Little Owyhee River in 1987. Use on key species exceeded 30%. Use pattern mapping conducted in 1985, 1986 and 1987 revealed moderate use along portions of the North Fork of the Little Humboldt River in the Antelope pasture. No data has been collected along the South Fork of the Little Humboldt; however, observations were made in 1987 and based on professional judgment, use along the river was severe at Rodear Flat in the Twin Valley pasture. Based on UPM, a utilization transect and observations this objective is not being met under present management.

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

Based on UPM conducted in 1985, 1986 and 1987, supplemented by utilization transects conducted on various wetland riparian area this objective is not being met in the summer pastures. The use on wetland riparian appears to be much more of a problem in the summer use area. Most of the 596 acres of identified wetland riparian is located in the summer use area which has authorized grazing in some fields extending into late August and early September.

3. The Little Owyhee monitoring has established specific allowable use levels not to exceed 50% per key management area. The uplands shall be managed by objectives established in the monitoring plan.

The above objective is based on the achievement of the allowable use levels stated in the Little Owyhee Monitoring Plan. Based on utilization transects conducted at the key management areas throughout the allotment, this objective has been met.

B. Long Term Objectives

1. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 27,850 AUMs.

The above objective is based on the achievement of the desired ecological status objective set forth in the monitoring plan. Baseline data indicates that the desired ecological status has been achieved or adequate progress is being made towards achievement of the objective. Therefore, adequate progress is being made towards the achievement of the above objective. However, 27,850 AUMs have not been used on the allotment since 1977 when 33,051 AUMs were licensed.

2. Improve to or maintain the ecological status per key management area as determined in the Little Owyhee Monitoring Plan.

The above objective is based on the achievement of the range conditions (ecological status) stated in the Little Owyhee Monitoring Plan. Refer to the following table for a determination if the specific objectives above have been met or if adequate progress is being made towards achievement of the following objectives:

<u>Summer Pastures</u>	<u>Key Area</u>	<u>Desired Ecological Status</u>	<u>Have Objectives Been Met</u>
Antelope	0101	Late Seral	Yes
	0103	Late Seral	Yes
Calico	0201	Late Seral	Yes
	0202	Late Seral	No-However, progress is being made
Capitol Peak	0301	Late Seral	No-However, progress is being made
Rock Springs	0602	Late Seral	No-However, progress is being made
	0603	Late Seral	No-However, progress is being made
<u>Spring Pastures</u>			
Fairbanks	0402	Late Seral	Yes
	0403	Late Seral	Yes
Lake Creek	0501	Late Seral	No-However, progress is being made
	0502	Late Seral	No-However, progress is being made

	0504	Late Seral	No-However, progress is being made
	0505	Late Seral	Yes
	0506	Late Seral	Yes
Twin Valley	0701	Late Seral	Yes
	0702	Late Seral	Yes
	0703	Late Seral	Yes

Overall this objective is being met or progress is being made towards the achievement of this objective. However, the active preference of 27,850 AUMs has not been used on the allotment since 1977.

3. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 324 AUMs for mule deer, 1331 AUMs for pronghorn, and 72 AUMs for bighorn sheep.

- a. Improve to and maintain 2,756 acres in Paradise Valley DY-1, 29,612 acres in Santa Rosa DY-10, 31,678 acres in Santa Rosa DW-2, 44,210 acres in Santa Rosa DS-1, 23,867 acres in Lake Creek DW-14, and 43,579 Snowstorms DY-23 in good or excellent mule deer habitat condition.

Mule deer habitat condition ranges from poor on burned areas to fair and good condition. The majority is in fair condition. Species diversity is the primary limiting factor in mule deer habitat.

- b. Improve to and maintain 2490 acres in Mahogany Ridge PS-8, 25,837 in Santa Rosa PS-7, and 21,608 acres in Little Owyhee PS-10, 457,963 acres in Owyhee Desert PY-9, 17,847 acres in Maiden Butte PW-9, 3,206 acres in Evans Lake PW-10, 7,762 acres in Button Lake PW-11, 4,939 acres in Button Lake PS-9, 8,322 acres in Evans Lake PS-11, and 7,469 acres in Bullhead PW-13 in fair to good habitat condition.

- c. Maintain 14,338 acres in Santa Rosa BY-4 in good to excellent bighorn habitat condition. Bighorn sheep habitat is currently rated in good condition.

Based on utilization levels and UPM, progress is being made towards these objectives in the spring use pastures. Utilization levels and UPM are inconclusive in determining progress towards these objectives in the summer pastures.

4. Maintain and/or improve the free-roaming behavior of wild horses by protecting and enhancing their home ranges.

- a. Manage, maintain and/or improve public rangeland conditions to provide forage for 3,200 AUMs (270 adult horses) on a sustained yield basis
- b. Maintain/Improve wild horse habitat by assuring free access to water.

Based on the best available data, it appears that this objective is being met. There is adequate forage in the spring country for both livestock and wild horses. A limiting factor for wild horses and cattle is a lack of adequate water. Our CRMP goals to maintain existing reservoirs has not yet been met. This may detract from the portion of the objective concerned with enhancing their home range. The pasture fence between Lake Creek and Twin Valley may restrict the free-roaming behavior of wild horses during the season of use by livestock when pasture gates are closed. The UPMs have not revealed any adverse impacts on the uplands, however, the adverse impacts on riparian depicted by the UPMs in the spring pastures are a combination of both livestock and wild horse use. Currently the Little Owyhee wild horse herd is 133% over the AML.

5. Improve to and maintain 591 acres of riparian habitat in good condition.

Baseline data is not available to evaluate the achievement of this objective. However, based on utilization studies and UPM, progress is not being made towards this objective. One trend study on a meadow in Capitol pasture to indicate change in a headcut shows that little change has occurred at the lower end between 1982 and 1987 while additional cutting has occurred near the head of the headcut. This data indicates a downward trend for this meadow.

6. Improve to and maintain 21 acres of aspen habitat types in good condition.

Baseline information is not available to evaluate the attainment of this objective. Based on UPM done in 1985 and 1987, progress is not being made towards this objective due to utilization mapped in Capitol Peak Field as heavy in the general areas where aspen occurs. No specific utilization information for this vegetative type has been collected, so it is assumed that if heavy use is mapped in the area of aspen stands, the aspen suckers also received heavy use in those areas. This is primarily the result of livestock concentrating in these areas for water and shade as well as forage.

7. Improve to and maintain 60 acres of mahogany habitat types in good condition.

Baseline data is not available to evaluate the achievement of this objective. Based on UPM in 1985, utilization in areas where mahogany occurs in the Capitol Peak pasture was heavy. Use pattern mapping in 1986 and 1987 indicates moderate or less utilization levels in areas where mahogany stands occur. 1987 utilization studies on two mahogany stands resulted in 43% use in the Rock Springs pasture and 54% use in the Antelope pasture. UPM and utilization data collected indicates that progress is being made towards this objective at the present livestock stocking rate, with the possible exception of a few isolated stands.

8. Improve to or maintain the following stream habitat conditions on the North Fork and the South Forks of the Little Humboldt and the East Little Owyhee from 47% on the North Fork, 54% on the South Fork and unknown on the East Little Owyhee to an overall optimum of 60% or above.
 - a. Streambank cover to 60% or above.
 - b. Streambank stability to 60% or above.
 - c. Maximum summer water temperature below 70° F.
 - d. Sedimentation below 10%.

Baseline data indicates that this objective is not met on the N. Fork and S. Fork Little Humboldt Rivers. The E. Little Owyhee River has not been surveyed. UPM for 1985, 1986, and 1987 and utilization studies in 1987 indicate moderate or greater utilization levels on all three streams resulting in progress not being made towards the achievement of this objective. The primary reason for this is the natural tendency for livestock to concentrate on the streams in summer for water, shade and forage.

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

Baseline data is not completely available to evaluate the achievement of this objective. However, available information indicates that this objective is met on a large portion of the allotment except in the burned areas (Fairbanks pasture), riparian habitat, and large areas in the summer pastures.

10. Improve to and maintain the water quality of the North Fk. Little Humboldt River, East Little Owyhee River, and the South Fk. Little Humboldt River to the State criteria set for the following beneficial uses: livestock drinking water, cold water aquatic life, wading (water contact recreation) and wildlife propagation.

This objective is not being met on the North Fork of the Humboldt River. Temperatures and pH exceed Class B standards particularly at the site farthest downstream. Management on the William Stock may be partially responsible, but water

quality declines farther downstream on the Little Owyhee allotment. There is inadequate streambank vegetation to shade the stream and the rest of the watershed may also not have enough vegetative cover.

Baseline data is not available to evaluate the achievement of this objective for the East Little Owyhee and South Fork Little Humboldt Rivers.

III. Conclusions

- A. Adequate forage exists in the spring and summer use areas under the present stocking rate. The lack of available water is contributing to a distribution problem throughout the allotment.
- B. Most of the resource conflicts (wetland/streambank riparian and some uplands) in the allotment are in the summer pastures. Only a small percentage of the total wetland/streambank riparian acreages occur in the spring pastures.
- C. The wetland riparian objective is not being met on the allotment, in the summer pastures. Cattle and wild horses are overutilizing the riparian habitat in the spring pasture. Monitoring data and documentation has revealed that the following may be contributing to the non achievement of this objective:
 - 1. Normal maintenance on some water developments
 - 2. Livestock distribution.
 - 3. Unauthorized use in the Antelope and Capitol Fields.
 - 4. Improper period of use (summer) and/or extent of summer use.
 - 5. Grazing system has not been followed.
 - 6. The UPM indicates that the western portion of Capitol Peak Field is being under utilized.
- D. The 30% utilization objective on streambank vegetation is not being met in the allotment. The reason used for wetland riparian also apply for streambank riparian.
- E. The average livestock use (AUMs) since the adoption of the CRMP (1982) has been as follows:

<u>Spring Use Pastures</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>Average</u>	
Livestock Use	5,482	12,550	7,880	7,539	7,776	8,245	AUMs
<u>Summer Use Pastures</u>							
Livestock Use	6,375	4,448	6,629	4,304	5,505	5,452	AUMs
<u>Allotment Totals</u>							
Livestock Use	11,857	16,988	14,609	11,843	13,281	16,101	AUMs