8/26/91

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WINNEMUCCA DISTRICT OFFICE
705 EAST 4TH STREET
WINNEMUCCA, NEVADA 89445

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

August 26, 1991

4100
(NV-240)

Wild Horse Organ. Assist.
Ms. Dawn Lappin
P.O. Box 555
Reno, NV 89505

Dear Ms. Lappin:

Please find enclosed a draft copy of an allotment evaluation prepared for the Little Owyhee allotment.

I ask that you review the evaluation and provide me with your comments by September 30, 1991.

If you have any questions, please refer them to Jeff Rawson at (702) 623-1500.

Sincerely yours,

Area Manager
Paradise-Denio Resource Area

Enclosure

August 5, 1991

Draft Little Owyhee Allotment Evaluation Summary

I. INTRODUCTION

A. Little Owyhee Allotment (00036)

B. Permittee - Charley Amos

C. Evaluation Period - October 1983 to present

D. Selective Management Category I

II. INITIAL STOCKING LEVEL

A. Livestock Use

1. Grazing Preference (AUMs)

a.	Total Preference	47,463
b.	Suspended Preference	2,581
c.	Active Preference	44,882
*d.	Initial Stocking Rate	27,800

* As per CRMP Agreement and Land Use Plan Decision

2. Season of Use

Spring, Summer and Winter

Spring Use	03/01 to 06/30
Summer Use	07/01 to 08/30
Winter Use	12/01 to 02/28

3. Kind and Class of Livestock

Cattle (Cow/Calf)

4. Percent Federal Range

100% Public Land
Allotment Licensed at (98%)

5. Grazing System

In 1969 a grazing system was developed for the Little Owyhee Allotment and approved under the Little Owyhee Allotment Management Plan (AMP). In 1972 the AMP grazing system was revised. In February 1982 a Coordinated Resource Management Plan was adopted for the allotment. The grazing system

agreed to in the CRMP plan adopted the same two use area, three pasture rest-rotation system developed in the revised AMP of 1972. The season of use for the pasture treatments in the spring and summer use areas were also changed. A Technical Review Team (TRT), which was created in 1987 recommended winter use (CRMP Objective #2) in the Fairbanks and Lake Creek Fields.

The Little Owyhee Allotment (CRMP) Plan recommended a stocking level (AUMs) and proportion as follows:

Livestock	27,800 AUMs (88.6%)
Wild Horses	2,400 AUMs (7.6%)
Wildlife	1,164 AUMs (3.7%)
	31,364 AUMs

These stocking levels were arrived at from mutual agreement between CRMP members; however, the levels (AUMs) chosen were based on the results of vegetative inventories conducted by the Winemucca and Elko districts, which indicated these levels to be available at the time of CRMP agreement. While the BLM does not, as policy, use one point in time inventories to set stocking rates, the CRMP group used this data as a focal point for agreement. These recommended levels were adopted by the BLM, via MFP III decision, as the initial stocking levels for the Little Owyhee grazing allotment (including the little Owyhee WHMA). In essence, these levels constituted the thriving ecological balance between wild horses, livestock, and wildlife.

a. Current Grazing System

The current grazing system divides the allotment into three use areas; Spring, Summer and Winter. The Spring and Summer Use Areas are under a three pasture rest-rotation grazing system. The Spring Use Area consists of three large pastures and three treatments.

Treatment "A"	Early Spring use 03/01-06/30
Treatment "B"	Spring use 04/01-06/30
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 current grazing system on the Summer Use Area consists of four pastures, the fourth pasture, Capitol Peak, was designed to be used every year after seedripe. The Summer use area also calls for three treatments, those are as follows:

Treatment "A" - 07/01 to 08/15
Treatment "B" - 08/15 to 09/30
Treatment "C" - Rest
Treatment "D" - 08/15 to 09/30 (Capitol Peak)

	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

A Winter Use Area has been designated in Fairbanks and Lake Creek Pastures. The Winter Use Area treatment is 12/01 to 02/28. Both pastures could be used each year during the winter period. Specific use areas within the pastures will be based on monitoring data and areas which have been rested during the years scheduled use.

CRMP Grazing System

Table 1 Grazing Sequence and Schedule Under the CRMP Grazing System

Year one - (1982)

Field	Dates	# Head	AUM's
Twin Valley	04/01 - 06/01	1,900	3,800
Lake Creek	04/01 - 06/30	(0)	(0)
Fairbank	Rest	0	0
Calico	08/15 - 09/30	2,000	3,000
Capitol Peak	08/15 - 09/30	500	750
Rock Springs	07/01 - 08/15	4,000	6,000
	08/15 - 09/30	1,500	2,250
Antelope	Rest	0	0
Total AUM's livestock use			(15,800)
Total AUM's wild horse use			(15,578)

Years 2, 5, 8

Field	Dates	# Head	AUM's
Twin Valley	04/01 - 06/30	4,000	12,000
Lake Creek	Rest	0	0
Fairbank	04/01 - 06/01	1,900	3,800
Calico	07/01 - 08/15	4,000	6,000
	08/15 - 09/30	1,500	2,250
Capitol Peak	08/15 - 09/30	500	750
Rock Springs	Rest	0	0
Antelope	08/15 - 09/30	2,000	3,000
Total AUM's livestock use			27,800
Total AUM's wild horse use			3,578

Years 3, 6, 9

Twin Valley	Rest	0	0
Lake Creek	03/15 - 06/01*	1,900	4,750*
Fairbank	04/01 - 07/01	4,000	12,000
Calico	Rest	0	0
Capitol Peak	08/15 - 09/30	500	750
Rock Springs	08/15 - 09/30	2,000	3,000
Antelope	07/01 - 08/15	4,000	6,000
	08/15 - 09/30	1,500	2,250
Total AUM's livestock use			28,750
Total AUM's wild horse use			3,578

Years 4 & 7

Twin Valley	04/01 - 06/01	1,900	3,800
Lake Creek	04/01 - 06/30	4,000	12,000
Fairbank	Rest	0	0
Calico	08/15 - 09/30	2,000	3,000
Capitol Peak	08/15 - 09/30	500	750
Rock Springs	07/01 - 08/15	4,000	6,000
	08/15 - 09/30	1,500	2,250
Antelope	Rest	0	0
Total AUM's livestock use			27,800
Total AUM's wild horse use			3,578

B. Wild Horse Use

The Little Owyhee Allotment Coordinated Resource Management Plan (CRMP) recommended a wild horse herd of 200 wild horses. This was agreed as being in balance with livestock operations, wildlife demand, and resources available in the Little Owyhee spring range area.

The Little Owyhee Desert Herd Management Area (HMA) is situated entirely within the Little Owyhee Allotment.

Wild horses are being managed under the Little Owyhee Desert - Snowstorm Mountains Wild Horse Herd Management Area Plan which was approved 08/06/87.

C. Wildlife Use

1. Wildlife Species

a. Reasonable Numbers

Mule deer - 300 AUMs
Antelope - 792 AUMs
Bighorn Sheep - 72 AUMs

b. Wildlife Use Areas:

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

III. ALLOTMENT PROFILE

A. Description

The Little Owyhee Allotment is the largest grazing allotment in the Paradise-Denio Resource Area. The allotment has a total of 567,544 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 460,981 acres which represents 81% 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 northwest 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.

B. Acreage:

1. Allotment

a.	Total acres	567,544
b.	Public acres	555,646
c.	Private acres	11,898

2. Pastures

The allotment is divided into two major use areas. The Spring Use Area consisting of three pastures (Lake Creek, Twin Valley and Fairbanks). The Summer Use Area is made up of four pastures (Rock Springs, Calico, Capitol Peak and Antelope). There is a Winter Use Area, these winter use areas are within the Spring Use Area and are portions of Fairbanks and Lake Creek Fields.

The acreage by pasture is as follows:

Lake Creek	216,845
Twin Valley	142,347
Fairbanks	101,789
Calico	22,269
Antelope	35,941
Capitol Peak	16,306
Rock Springs	32,047

C. Other Information

1. 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.

2. 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.

The TRT also recommended a modification to rest-rotation grazing system. The modification recognizes that water availability in the Little Owyhee allotment varies on a yearly and seasonal basis with some areas receiving no use during the years of scheduled use, and then with water available, the same area may be suitable for grazing in a rested year. The recommendation was to allow grazing use of these areas during a rested year, if monitoring data indicated such. This recommendation was adopted.

3. Permit History

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 an active preference 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 Circle A Ranches (previously NFC).

4. Range Improvements

Project planning has been initiated for the development of a fence along the North Fork of the Little Humboldt River to control grazing use of the stream and provide water gaps for livestock use. This project was recommended by CRMP group for the Little Owyhee allotment. The project should be constructed in fiscal year '93 (Oct. 1992 - Sept. 1993).

D. Objectives

1. AMP Objectives

a. To provide the forage to meet the Class I demand for grazing use in this allotment which includes the following:

*Little Owyhee Unit	-	27,798 AUMs
*Taylor Unit	-	13,370 AUMs
*Paradise Unit	-	6,295 AUMs
Total		47,463 AUMs

* Grazing units are defined in the 1972 AMP.

b. To increase the average density of vegetative cover on the allotment from 25% to 35%.

c. To increase the percent composition of bluebunch wheatgrass in the summer area from 2% to 10% and in the spring area from 1% to 5%.

d. Provide for an increase in plant vigor of the major forage species of bluebunch wheatgrass and Thurber's needlegrass.

e. Provide pasture fences in locations which will provide for the natural drift of livestock resulting in

uniform utilization of each pasture and designed to provide adequate stockwater in each area.

f. Provide for the management of wild free roaming horses now established in the area and still meet the objectives of the other natural resources and livestock operator. This can be accomplished in the following manner.

1) By providing pastures large enough so as not to interfere with the normal roaming instinct of the horses.

2) Provide pasture fences which will allow for the natural drift of the horses between their winter and summer range.

3) Develop through the grazing system, additional forage to sustain a maximum herd of 500 wild and free roaming horses on a year long basis.

g. To meet the following objectives of the Little Owyhee HMP using livestock as a tool.

1) Provide exclusive use for antelope and other wildlife on 25% of the area each year.

2) Increase litter from 15% to 20%.

3) Reduce barren areas from present 53% of the area to 20% of the area.

4) Provide exclusive use of meadows on one-fourth of the area for sage grouse in particular, and other wildlife species.

5) Extend the sage grouse range over the entire area by improving the habitat through rest rotation grazing.

6) Allow for non-use on one-half the area during the nesting period.

7) Increase the diversity of plant species to provide a greater variety of wildlife food, hereby allowing for a more diversified and healthier overall wildlife population.

2. Land Use Plan Objectives

a. Objective RM-1

To provide forage on a sustained yield basis through natural regeneration. Reverse the downward deterioration of public grazing lands by improving 1,000,.000 acres in poor condition, and 400,000 acres in fair condition to good condition within 30 years.

b. Maintain wild horse and burros on public lands, where there was wild horse or burro use as of December 15, 1971, and maintain a natural ecological balance on the public lands.

c. Objective WLA-1

Improve and maintain the condition of all the aquatic habitat of each stream, lake, or reservoir having the potential to support a sport fishery at a level conducive to the establishment and maintenance of a healthy fish community.

d. Objective WL-1

Improvement and maintenance of a sufficient quantity, quality and diversity of habitats for all species of wildlife in the planning area.

e. Objective W-1

Preservation and improvement of quality water necessary to support current and future use.

f. Objective W-2

Provision of adequate water to support public land uses.

g. Objective W-3

Reduction of soil loss and associated flood and sediment damage from public lands caused by accelerated erosion (man-induced) from wind and water.

h. Objective W-4

Preservation of threatened, endangered or ecologically unique plant specie and/or improvement of their habitats.

3. CRMP

a. Establish proper long range stocking rates for livestock, wild horses, and wildlife.

b. Establish proper initial stocking rates, seasons of use and pasture schedule for livestock.

1) Perpetuate a viable herd which is manageable and compatible with livestock operations, wildlife, and resources available.

2) Preserve unique types of primitive mustang markings.

3) Reduce internal barriers to herd migration within wild horse herd area.

d. Maintain current trailing rights associated with the allotment.

e. Improve condition of riparian habitats.

f. Preserve wilderness characteristics of Wilderness Study Areas within allotment until final wilderness designations are made.

g. Develop range improvement programs to:

1) Repair and up-grade current improvements,
2) increase range capacities to achieve objective #1,
3) control pests and noxious weeds,
4) control watershed problems,
5) enhance and protect wildlife areas.

h. Continue public access to allotment areas.

i. Establish reasonable numbers for wildlife demand.

j. Design grazing system to protect and enhance shrub, forb, winterfat, and meadow areas critical to wildlife populations.

k. Protect sage grouse strutting grounds.

l. Develop potential waterfowl habitats.

m. Provide for mining activities compatible with other objectives of this plan.

n. Coordination of planning process with Elko district BLM.

o. Align and develop base properties to complement this plan.

p. Protect significant cultural, archaeologic or historic values.

q. Establish an on-going monitoring system for all objectives.

4. Rangeland Program Summary Objectives

a. Increase available forage for livestock to sustain an active preference of 44,883 AUMs.

b. Improve range condition on the two seasonal use areas (Spring and Summer) by operating a three pasture rest-rotation grazing system between 04/01 and 09/30.

c. Develop CRMP.

d. Revise AMP.

e. Ecological status will be determined for each key area using the double sampling technique as described in the National Range Handbook (SCS, 1976).

f. Manage range condition to allow big game to reach reasonable numbers. Estimated forage use required to achieve this is:

Deer	300 AUMs
Antelope	1,233 AUMs
Bighorn Sheep	72 AUMs
(If reestablishment occurs)	

g. Protect sage grouse strutting areas and associated brooding complexes.

h. Develop potential waterfowl habitats.

i. Fence Button lake if monitoring shows need.

j. Aspen, mahogany, mountain browse, riparian, and meadows are critical species or vegetative types. Specific management objectives will be designed and used for those species/types.

k. Improve the riparian and aquatic habitat to good or better overall condition to support a sport fishery on the North Fork Little Humboldt River and East Little Owyhee River.

l. Develop an HMP.

5. Herd Management Area Plan (HMAP)

a. Wild Horse Habitat Objectives

1) Maintain the forage use levels for all herbivores within the HMA at a level which does not exceed proper use of key forage plant species as identified by the Little Owyhee and Bullhead Monitoring Plan. By 1988, provide 3,578 AUMs of forage for wild horses in the Little Owyhee Desert HMA.

2) Provide for additional year-round water in the HMA.

3) Improve the free-roaming nature of the horses within the HMA by the installation of let down panels, and leaving gates open at critical times during migration.

4) Acquire data on the home ranges and distribution/movement patterns of the animals in the HMA to facilitate evaluation of effects of range improvement.

5) Determine to what extent, if any, horses move back and forth between the HMAs located in the Elko District.

b. Animal Objectives

1) Within the AMLs of 200 adult wild horses in the Little Owyhee Desert HMA allow the population to increase by +35 percent in both HMAs before another removal is considered. The +35 percent

variance factor would allow the population to increase to 270 adult wild horses in the Little Owyhee HMA, before an additional reduction is considered.

2) Acquire data on the demographic characteristics of the wild horse population in the HMA to include information on sex ratios, age structures, young/adult ratios, and actual use. These parameters will be analyzed to determine natality, mortality, and rate of increase.

3) Genetically enhance the color patterns in the HMA.

6. Table 2. Key Management Area Objectives

KEY AREA NUMBER	KEY SPECIES[1]	ALLOWABLE USE LEVELS[2]	DESIRED ECOLOGICAL STATUS[3]	INTERIM (5 YEARS) FREQUENCY TREND[4]	SHORT TERM 10 YEARS) FREQUENCY TREND	SHORT TERM 10 YEARS) ECOLOGICAL STATUS OBJECTIVES	LONG TERM (35 YEARS) FREQUENCY TREND	LONG TERM (35 YEARS) ECOLOGICAL STATUS OBJECTIVES
0101	CREPI	50	Late Seral	Static	Static	Maintain Late Seral	Static	Maintain Late Seral
	$STTH_2$	40						
	SIHY	40						
0102	CREPI	50	Late Seral	Static	Static	Maintain Late Seral	Static	Maintain Late Seral
	SIHY	40						
	$STTH_2$	40						
0103	SIHY	40	Utilization Study Only					
	$STTH_2$	40						
0201	LUPIN	50	Late Seral	Static	Static	Maintain Late Seral	Static	Maintain Late Seral
	SIHY	40						
	$STTH_2$	40						
0202	CREPI	50	Late Seral	Static	Upward	Mid-Seral	Upward	Late Seral
	SIHY	40						
	$STTH_2$	40						
0301	CREPI	40	Late Seral	Static	Upward	Late Seral	Upward	Maintain Late Seral
	FEID	40						
	$STTH_2$	40						
0401	SIHY	40	Utilization Study Only					
0402	AGSP	50	Late Seral	Static	Static	Maintain	Static	Maintain Late Seral
	CREPI	50						
	SIHY	40						
	$STTH_2$	40						

1 Plant abbreviation codes are used here. These codes are identified in the Plant List (See Appendix).

2 Allowable use levels are the objectives established for utilization. They are derived from the Paradise-Denio Grazing Environmental Impact Statement (BLM 1981).

3 This is the Seral stage that would have the greatest value for all resources (livestock, wild horses, and wildlife).

4 Frequency identified as static or upward. If an important plant forage species appears on a study that previously was not recorded, then all monitoring objectives for that key area should be reevaluated.

KEY AREA NUMBER	KEY SPECIES[1]	ALLOWABLE USE LEVELS[2]	DESIRED ECOLOGICAL STATUS[3]	INTERIM (5 YEARS) FREQUENCY TREND[4]	SHORT TERM 10 YEARS) FREQUENCY TREND	SHORT TERM 10 YEARS) ECOLOGICAL STATUS OBJECTIVES	LONG TERM (25 YEARS) FREQUENCY TREND	LONG TERM (25 YEARS) ECOLOGICAL STATUS OBJECTIVES
0403	AGSP	50	Late Seral	Static	Static	Maintain Late Seral	Static	Maintain Late Seral
	CREPI	50						
	SIHY	40						
	$STTH_2$	40						
0501	$EULA_5$	50	Late Seral	Static	Upward	Mid Seral	Upward	Late Seral
	ORHY	40						
	SIHY	40						
0502	ORHY	50	Late Seral	Static	Upward	Mid Seral	Upward	Late Seral
	POSE	50						
	SIHY	40						
0503	SIHY	40	Utilization Study Only					
	$STTH_2$	40						
0504	ORHY	50	Late Seral	Static	Upward	Mid Seral	Upward	Late Seral
	POSE	50						
	SIHY	40						
0505	ORHY	50	Utilization Study Only					
	SIHY	40						
0506	$EULA_5$	50	Late Seral	Static	Upward	Mid Seral	Upward	Late Seral
	ORHY	50						
	SIHY	50						
0507	ORHY	50	Utilization Study Only					
	$STTH_2$	40						
	SIHY	40						
0601	FEID	40	Utilization Study Only					
	$STTH_2$	40						
0602	CREPI	50	Late Seral	Static	Upward	Mid Seral	Upward	Late Seral
	ELCI	50						
	$STTH_2$	40						
0603	CREPI	50	Late Seral	Static	Static	Maintain Late Seral	Static	Maintain Late Seral
	SIHY	40						
	$STTH_2$	40						
0701	AGSP	50	Late Seral	Static	Static	Maintain Late Seral	Static	Maintain Late Seral
	CREPI	50						
	$STTH_2$	40						

7. Allotment Specific Objectives

The allotment specific objectives tie the AMP, Land Use Plan, CRMP, Allotment Monitoring Plan, RPS and HMAP objectives together into quantified objectives for this allotment.

a. Short Term

1) Utilization of the key plant species on 594 acres of wetland riparian shall not exceed 50%. [1]

2) Utilization of key streambank riparian plant species along the East Little Owyhee River shall not exceed 50%. [1]

3) Utilization of key streambanks plant species along the North and South Forks of the Little Humboldt River shall not exceed 30%. [1]

[Short term objectives are used to monitor progress towards long term objectives.]

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. (RM 1, W-3; CRMP-a, CRMP-b; RPS-a)

2) Improve to and maintain the ecological status per key management area as determined in the Little Owyhee Monitoring Plan. (RM-1; CRMP-a; RPS-e,f)

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 and 1,331 AUMs for pronghorn. (WL-1, W-1, W-3, CRMP-a, CRMP-g, CRMP-i; RPS-f, g)

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, and 44,210 acres in Santa Rosa

DS-1 in good or excellent mule deer habitat condition.

b) 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.

4) Maintain and improve the free roaming behavior of wild horses by protecting and enhancing their home ranges. (WHB 1; CRMP-c; HMAP a-1, 2)

   a) 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 adult wild horses.

   b) Maintain and improve wild horse habitat by assuring free access to water.

5) Improve to and maintain 594 acres of riparian and meadow habitat types in good condition. (WL 1, CRMP-3, g, j, l; RPS-h, j)

6) Improve to and maintain 21 acres of aspen habitat types in good condition. (WL 1; RPS-j)

7) Improve to and maintain 60 acres of mahogany habitat types in good condition. (WL 1; RPS-j)

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. (WLA 1, W 1; CRMP-e, l; RPS-h, j, k)

   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%.

9) Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% cover

of sagebrush for nesting and winter use. (WL 1; CRMP-g, j, k; RPS-g, j)

10) 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. (WLA 1, W-2, W-3; RPS-j)

[1] Utilization levels will be used to evaluate and adjust management practices over a period of time.

E. Key Species Monitored

See Key Management Area Objectives - Table 2.

F. Other Information

1. 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.

2. 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. In 1989 the thirteen potential riparian and mountain browse key management areas were reread and evaluated as a key area. The permittee was notified but declined to participate in the selection process. The permittee had no objection to the locations of these wildlife habitat study sites. The thirteen study sites will need to be incorporated into the Little Owyhee Monitoring Plans as per manual procedures.

3. Exclosures

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.

IV. MANAGEMENT EVALUATION

A. Purpose

The purpose of the management evaluation is to assess if current management practices are meeting the allotment specific and Land Use Plan objectives and to identify management changes needed to meet objectives.

B. Summary of Studies Data

1. Actual Use

a. Current Stocking Levels (AUMs) and Proportions-1990

Livestock 15,733 AUMs
Wild Horses 11,208 AUMs
Wildlife 1,164 AUMs
28,105 AUMs (Total)

b. Livestock (AUMs)

Spring Use Pastures	1984	1985	1986	1987	1988	1989	1990
Fairbanks	Rested	Rested	Rested	3,354	*3,684	*3,601	**4,920
Lake Creek	6,537	4,584	5,286	1,638	*3,802	1,698	3,048
Twin Valley	6,013	3,296	2,253	2,972	1,963	499	3,036
Spring Use Area Totals	12,550	7,880	7,539	7,964	9,449	5,798	11,004
Summer Use Pastures							
Antelope	Rested	2,167	1,572	302	Rested	234	1,559
Calico	1,826	Rested	Rested	299	Rested	1,708	890
Capitol Peak	Rested	2,155	1,366	987	729	829	2,105
Rock Springs	2,622	2,307	1,366	1,080	269	842	175
	4,448	6,629	4,304	2,668	998	3,613	4,729
Allotment Totals	16,998	14,509	11,843	13,469	10,447	9,411	17,954

* In 1988 winter use was taken as per TRT. This resulted in 707 AUMs for Lake Creek and 990 AUMs for Fairbanks fields. In 1989 winter use was taken in Fairbanks fields, which resulted in 1693 AUMS.

** Does not include 1990 winter use.
Average allotment livestock use over the last 7 years = 13,519 AUMs.

c. Wildlife (Existing Numbers)

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.

d. Wild Horses

Five wild horse gathers have been conducted on the Little Owyhee Desert HMA since 1977. The numbers of wild horses removed during each gather is as follows:

Removal Data

1977	1981	1983	1984	1985	Total
1065	55	342	487	726	2,675

Census data collected for the period (1972-1990) is as follows:

Census Data (Adult Animals)

1972*	1973*	1974*	1975*	1976*	1979**	1980*	1982*	1986**	1989**	1990**	1991*
799	522	1,353	1,398	1,870	1,143	1,483	1,104	359	819	811	823

* Census conducted by a Super Cub fixed winged aircraft.
** Census conducted by a Bell-47 Helicopter.

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Census data collected by pasture/field for the period (1979-1990) is as follows:

LITTLE OWYHEE HMA CENSUS DATA

YEAR	TOTAL		PASTURE/FIELD					
			Fairbanks	Twin Valley	Lake Ck.	Antelope	Calico	Rock Sp.
1991	823	(823)	144	309	347	--	15	8
1990 (02/15-20)	811	(793/18)	129/9	248/4	408/5	8/0	--	--
1989 (07/19-25)	819	(672/147)	123/23	203/45	331/76	7/0	8/3	--
1986 (09/23-24)	359	(294 Adults, 65 Foals; This is a total count!)						
1982 (09/2,7,8)	1024	(985/77)	297/25	348/33	304/15	--	5/2	31/2
1980 (10/7-16)	1483	(1211/233)	289/60	480/88	405/88	31/5	6/0	32/4
1979 (10/7-16)	1143	(895/248)	217/46	349/103	281/85	24/6	3/2	21/6

Forage (AUMs) use by wild horses in the spring pastures for the Little Owyhee Allotment for the years 1987, 1988, 1989 and 1990 are as follows. A 14% per year increase factor was assumed for each pasture when census data was not available. The last removal occurred in 1985.

Fairbanks Pasture

Census and Estimated Population Numbers	AUMs Consumed
1987 - 91 adults (estimated	1,092 AUMs
1988 - 106 adults (estimated)	1,272 AUMs
1989 - 123 adults (census)*	1,476 AUMs
1990 - 129 adults (census)**	1,548 AUMs
1991 - 144 adults (census)**	1,728 AUMs
	Total 7,116 AUMs

Twin Valley Springs

Census and Estimated Population Numbers	AUMs Consumed
1987 - 150 adults (estimated	1,800 AUMs
1988 - 175 adults (estimated	2,100 AUMs
1989 - 203 adults (census)*	2,436 AUMs
1990 - 248 adults (census)*	2,976 AUMs
1991 - 309 adults (census)**	3,708 AUMs
Total	13,020 AUMs

Lake Creek Field

Census and Estimated Population Numbers	AUMs Consumed
1987 - 261 adults (estimated	3,132 AUMs
1988 - 303 adults (estimated	3,636 AUMs
1989 - 331 adults (census)*	3,972 AUMs
1990 - 416 adults (census)*	4,992 AUMs
1991 - 347 adults (census)**	4,164 AUMs
Total	19,896 AUMs

* Census conducted by a Bell-47 Helicopter
** Census conducted by a fixed-wing aircraft

e. Actual Use - Wild Horses and Cattle

Year	Pasture	Cattle AUMs	Wild Horse AUMs	Total AUMs
1987	Fairbanks	3,354	1,092	4,446
	Lake Creek	1,638	3,132	4,770
	Twin Valley	2,972	1,800	4,772
	Total	7,964 AUMs	6,024 AUMs	13,988 AUMs
1988	Fairbanks	3,684	1,272	4,956
	Lake Creek	3,802	3,636	7,438
	Twin Valley	1,963	2,100	4,063
	Total	9,449 AUMs	7,008 AUMs	16,457 AUMs
1989	Fairbanks	3,601	1,476	5,077
	Lake Creek	1,698	3,972	5,670
	Twin Valley	499	2,436	2,935
	Total	5,798 AUMs	7,884 AUMs	13,682 AUMs
1990	Fairbanks	4,920	1,548	6,468
	Lake Creek	3,048	4,992	8,040
	Twin Valley	3,036	2,976	6,012
	Total	11,004 AUMs	9,516 AUMs	20,520 AUMs

2. Climate

Precipitation
For
Paradise Valley (NOAA Station 1984-1988)
Precipitation in Inches

Year	Departure From 30 Year Normal	*Growing Season	Yearly
1984	3.53	6.58	12.69
1985	.40	3.07	8.76
1986	.79	2.84	9.95
1987	1.89	5.20	11.05
1988	.92	3.29	10.08
1989	.04	4.18	9.12

* Growing season is defined as March through August.

Precipitation
For
McDermitt (NOAA Station 1984-1988)
Precipitation in Inches

Year	*Growing Season	Yearly
1984	5.68	10.56
1985	2.63	6.11
1986	4.99	8.70
1987	5.12	7.91
1988	3.23	6.52
1989	2.70	5.77

Data not available for deviation from normal.
* Growing season is defined as March through August.

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Table 3. KEY MANAGEMENT AREA STUDIES DATA SUMMARY

Key Area	Utilization Objective	Met	Frequency Objective 5 yrs	Frequency Objective 10 yrs	Met	Ecological Seral Stage Objective	Rationale
Fairbanks							
0401	(Utililization Study Only)						
	SIHY 40%	No					AUL exceeded in 1990 - 48%
0402			Static	Static		Late Seral	
	AGSP 50%	Yes			Yes		
	SIHY 40%	Yes			Yes		
	STTH2 40%	Yes			Yes		
	$CRAC_2$ 50%	No Data			Yes		
0403			Static	Static		Late Seral	
	AGSP 50%	Yes			No Data		
	SIHY 40%	Yes			Yes		
	$STTH_2$ 40%	Yes			Yes		
	$CRAC_2$ 50%	No Data			No		
Lake Creek							
0501			Static	Upward			
	$EULA_5$ 50%	No			Yes		
	ORHY 50%	No			No		
	SIHY 40%	Yes			No		
0502			Static	Upward		Late Seral	
	ORHY 40%	Yes			Yes		
	POSE 50%	Yes			Yes		
	SIHY 40%	Yes			Yes		
0503	(Utililization Study Only)						
	SIHY 40%	Yes					
	$STTH_2$ 40%	Yes					
0504			Static	Upward		Late Seral	
	ORHY 50%	Yes			Yes		
	POSE 50%	Yes			Yes		
	SIHY 40%	Yes			No		
0505	(Utililization Study Only)						
	ORHY 50%	Yes					
	SIHY 40%	Yes					
	$STTH_2$ 40%	Yes			Yes		
0506			Static	Upward			
	$EULA_5$ 50%	Yes			Yes		
	ORHY 50%	Yes			Yes		
	SIHY 40%	Yes			No		
0507	(Utilization Study Only)						
	ORHY 50%	Yes					
	$STTH_2$ 40%	Yes					
	SIHY 40%	Yes					

= Static in change
= Declining trend
= Improved trend

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Table 3. KEY MANAGEMENT AREA STUDIES DATA SUMMARY

Key Area	Utilization Objective	Utilization Met	Frequency Objective (5 yrs 10 yrs)	Frequency Met	Ecological Seral Stage Objective	Rationale
Twin Valley						
0701			Static Static		Late Seral	
	AGSP 50%	Yes		Yes		
	$STTH_2$ 40%	No		No		AUL exceeded in 1990 - 64%
	$CRAC_2$ 50%	No Data		Yes		
0702			Static Upward		Late Seral	
	ORHY 50%	No		Yes		AUL exceeded in 1990 - 54%
	SIHY 40%	No		No		AUL exceeded in 1990 - 62%
	$CRAC_2$ 50%	No Data		Yes		
0703			Static Static		Late Seral	
	ORHY 50%	No		Yes		AUL exceeded in 1990 - 78%
	SIHY 40%	No		No		AUL exceeded in 1990 - 48%
	$STTH_2$ 40%	Yes		No Data		
	ERIOG	No Data		No		
Antelope						
0101			Static Static		Late Seral	
	$STTH_2$ 40%	Yes		No		
	SIHY 40%	Yes		No		
	CREPIS 40%	No Data		Yes		
0102			Static Static		Late Seral	
	$STTH_2$ 40%	Yes		No		
	SIHY 40%	Yes		No		
	$CRAC_2$ 50%	No Data		No		
0103	(Utilization Study Only)					
	$STTH_2$ 40%	No				AUL exceeded in 1990 - 58%
0104	(Utilization Study Only)					
	$CELE_3$ 50%	Yes				
0105	(Utilization Study Only)					
	SALIX 50%	Yes				
	CAREX 50%	No				AUL exceeded in 1987 - 70%
	$PONE_3$ 50%	No		Yes		AUL exceeded in 1987 - 60%
0106	(Utilization Study Only)					
	SALIX 50%	No		No		AUL exceeded in 1987 - 92%
						1988 - 64%
	CAREX 50%	No				AUL exceeded in 1987 - 78%
	$PONE_3$ 50%	No				AUL exceeded in 1987 - 76%
						1988 - 52%

Table 3. KEY MANAGEMENT AREA STUDIES DATA SUMMARY

Key Area	Utilization Objective	Met	Frequency Objective (5 yrs / 10 yrs)	Met	Ecological Seral Stage Objective	Rationale
Antelope						
0107	(Utilization Study Only)					
	$PONE_3$ 50%	No				AUL exceeded in 1987 - 83%
						1988 - 61%
	CAREX 40%	No				AUL exceeded in 1987 - 85%
0108	(Utilization Study Only)					
	CAREX 50%	No				AUL exceeded in 1987 - 77%
	$PONE_3$ 50%	No				AUL exceeded in 1987 - 66%
						1988 - 54%
Calico						
0201			Static Static		Late Seral	
	$STTH_2$ 40%	No		Yes		AUL exceeded in 1990
	SIHY 40%	Yes		No		
	LUPIN 50%	Yes		Yes		
	$CRAC_2$ 50%	Yes		No Data		
0202			Static Upward		Late Seral	
	SIHY 40%	Yes		No		
	$STTH_2$ 40%	Yes		Yes		
	CREPI 50%	No Data		Yes		
Capitol Peak						
0301			Static Upward		Late Seral	
	FEID 40%	No		No		AUL exceeded in 1985 - 55%
	$STTH_2$ 40%	No		No		AUL exceeded in 1984 - 58%
						1985 - 49%
						1987 - 48%
	CREPI 50%	No Data		No		
0302	(Utilization Study Only)					
	CAREX 50%	No				AUL exceeded in 1987 - 64%
						1988 - 88%
	$PONE_3$ 50%	No				AUL exceeded in 1987 - 62%
						1988 - 90%
0303	(Utilization Study Only)					
	SALIX 30%	No				AUL exceeded in 1987 - 79%
						1988 - 77%
	ROWO 50%	No				AUL exceeded in 1988 - 55%
	$PONE_3$	No				AUL exceeded in 1987 - 64%
						1988 - 71%
0304	(Utilization Study Only)					
	$PONE_3$ 50%	No				AUL exceeded in 1988 - 87%
						1989 - 72%
	CAREX 50%	No				AUL exceeded in 1987 - 78%
						1988 - 79%
0305						
	$PONE_3$ 50%	No				AUL exceeded in 1987 - 83%
						1988 - 85%
	CAREX 50%	No				AUL exceeded in 1987 - 65%
						1988 - 83%

Table 3. KEY MANAGEMENT AREA STUDIES DATA SUMMARY

Key Area	Utilization Objective	Met	Frequency Objective 5 yrs	Frequency Objective 10 yrs	Frequency Met	Ecological Seral Stage Objective	Rationale
Rock Springs							
0601	(Utilization Study Only						
	FEID 50%	Yes					
	$STTH_2$ 40%	Yes					
0602			Static	Upward		Late Seral	
	$STTH_2$ 40%	Yes			Yes		
	$ELCI_2$ 50%	Yes			No		
	$CRAC_2$ 50%	Yes			Yes		
0603			Static	Static		Late Seral	
	$STTH_2$ 40%	No			No		AUL exceeded in 1985 - 42%
							1987 - 56%
							1988 - 50%
	SIHY 40%	Yes			No		
	$CRAC_2$ 50%	Yes			No		
0604	(Utilization Study Only)						
	CAREX 40%	No					AUL exceeded in 1987 - 66%
	$PONE_3$ 50%	No					AUL exceeded in 1987 - 65%
							1988 - 51%
0605	(Utilization Study Only)						
	CAREX 50%	No					AUL exceeded in 1987 - 74%
							1988 - 70%
	$PONE_3$ 50%	No					AUL exceeded in 1987 - 63%
							1988 - 68%
0606	(Utilization Study Only)						
	CAREX 50%	No					AUL exceeded in 1987 - 54%
							1988 - 73%
	$PONE_3$ 50%	No					AUL exceeded in 1988 - 68%
							1989 - 57%
0607	(Utilization Study Only)						
	$CELE_3$ 50%	No					AUL exceeded in 1987 - 54%
							1988 - 59%

* Ecological Status was determined in 1985, and has not been reevaluated since then. Frequency data indicates the need to reevaluate Ecological Status.

3. Use Pattern Mapping, Utilization and Trend Data Summary by Pasture.

a. Fairbanks Pasture

1) For the years 1985 to 1989 Use Pattern Mapping (UPM) data indicates the majority of use over the pasture ranged from slight to moderate use. For all years heavy use was less than 10% and associated with waters..

2) Utilization conducted at the Key Management Areas (KMA's) for the years data was collected 1987 to 1990 indicates that the utilization objectives has been met at all but one key area (0401) for one year (1990).

3) Analysis of trend data indicates that overall, trend frequency is static in change and that progress is being made toward achieving this objective. Ecological status has not been re-evaluated since the initial seral stage was determined.

b. Lake Creek Pasture

1) For the years 1985 to 1989 UPM data indicates the majority of use over the pasture was slight to light. For all years heavy use was less than 3% except in 1988, when heavy use was 14% and associated with waters sources. Water sources include Lake Creek Reservoir and the South Fork Little Humboldt River.

2) Utilization studies conducted at the KMA's for the years 1984 to 1990 indicates that the utilization objectives have been met at 6 or 7 KMA's. Heavy use has occurred at KMA 0501 during 1989 and 1990. This KMA is located near Lake Creek Reservoir.

3) Analysis of trend data indicates that overall frequency trend is static in change with a few species declining in frequency. Overall data indicates progress is being made toward achievement of this objective.

c. Twin Valley Springs

1) Over the period that UPM has been conducted (1985-1989) data indicates the majority of use over the pasture was slight to light. Heavy use was less than 10% and was associated with waters sources.

2) Utilization studies conducted at the KMA's over the period 1983 to 1990 indicates that Allowable Use Levels (AUL's) were exceeded at all three key areas during 1990. Prior to 1990 utilization was below (AUL's) for all years data was collected. Stocking levels during 1990 were highest since 1987.

3) Analysis of trend data indicates that frequency trend is erratic in change and is not maintaining or moving towards achievement of this objective.

d. Antelope Pasture

1) For the years 1985 to 1989 UPM data indicates the majority of annual use over the pasture has been slight with areas of light and moderate also being mapped. Heavy use has been mapped on meadow/riparian vegetation during 1987 and 1989 at springs and along the Little Owyhee River and the North Fork Little Humboldt River.

2) Utilization conducted on the upland KMA's over the period (1983 to 1990) indicates utilization levels to be below AUL's for all years except 1990 where the AUL on one key species was exceeded. Utilization conducted on the riparian/meadow KMA's indicates utilization was above AULs at most KMA's during 1987 and 1988.

The pasture was rested from livestock use during 1988. The heavy use may have resulted from the tendency of wildlife, stray livestock and/or wild horses from outside the HMA to concentrate on the upland riparian and meadow zones.

3) Analysis of trend data indicates frequency is declining on four of the six key species on two KMA's. Progress is not being made toward achieving the trend objective in this pasture.

The KMA's for trend are located on upland vegetative sites.

e. Calico Pasture

1) For the years 1986 to 1989 UPM data indicates the majority of annual use over the pasture has been slight use with areas of light and moderate use also occurring. Heavy use has been shown to occur for the period of (1986 to 1989) along the Little Owyhee River, the Calico Drainage and along Maiden Springs Pipeline.

2) Utilization studies conducted during 1988, 1989 and 1990 indicated the majority of use recorded was No Use. Use above AUL occurred only one year on (STTH2) where use was 58% on KMA 0201.

3) Analysis of trend data indicates that as a majority of trend frequency is static in change and progress is being made toward achieving this objective.

f. Capitol Peak Pasture

1) For the years 1985 to 1989 UPM data indicates the majority of annual use over the pasture has been slight use with light, moderate and heavy also occurring. Heavy use has been shown to occur primarily along the forks of Willow Creek, but also occurring along the forks of Calico Creek and at Lone Willow Springs.

2) Utilization data has been collected at the only upland site annually from 1983 to 1990. Data indicates utilization was above AUL's for the years 1984, 1985 and 1987.

Utilization conducted on the riparian/meadow KMA's indicates that for the three years data was collected, (1987, 1988, 1989) AULs were exceeded at all KMA's and the majority of use was heavy to severe.

3) Analysis of trend data at the only KMA 0301 indicates frequency of occurrence for (FEID) and (CRAC2) is below 10% for all years and has not shown a significant change greater that 10%. The key species (STTH2) is declining at this site. Overall trend is declining.

g. Rock Springs

1) For the years 1985 to 1989 UPM data indicates the majority of annual use over the pasture has been slight with areas of light, moderate and heavy also recorded. Heavy use has been shown to occur primarily along Piccolo Creek and also occurring at Rock Springs and along Willow Creek.

2) Utilization data has been collected on the upland KMAs annually from 1984 to 1990. Utilization was below AUL's at all upland KMAs for all years except 1987 and 1990 when use on (STTH2) at KMA 063 exceeded AULs.

Utilization data has been collected on the riparian/meadow KMA's for the years 1987, 1988, and 1989. AULs were exceeded at all KMA's during 1987 and 1988. During 1989 one KMA was read and AULs were exceeded for both key species.

3) Analysis of trend data indicates trend frequency is declining for all three key species at KMA 0603 and at KMA 0602 (STTH2) and (CRAC2) are static and (ELCI) is declining. Overall trend is declining at this pasture.

4. Range Survey 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:

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

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

5. Ecological Status Inventory

In 1987 an Ecological Status Inventory was conducted on the allotment. 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.)

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

Little Owyhee Allotment (Elko Co.)

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

6. Wildlife Habitat Inventory

a. Priority Species: Mule deer, sage grouse, trout, pronghorn

b. Other Game Species: Chukar and Hungarian Partridge, Valley Quail.

c. Special habitat features.

1) 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.

2) 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.

3) Button Lake - unique ecological site - 688 acres

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

Utilization transects and condition summaries were conducted at the two Mahogany key management areas in 1987, 1988 and 1989. The condition summary conducted at study site #0607 (Rock Springs) concluded that this Mahogany stand is in unsatisfactory condition. The condition of study site #0104 (Antelope) was determined to be satisfactory in 1989. The small isolated mahogany stands scattered on the high plateau east of the Calico Mountains are

currently not meeting this objective. However, the permittee has indicated that he would cooperatively work with BLM to fence off these small scattered stands.

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.

5) The Special Habitat 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.

d. 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.

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. Based on current utilization levels (Slight to light) progress is probable being made toward increased species diversity on the burn areas due to increased opportunity for reestablishment of those species which are present in proportions well below their potentials in the subject range sites.

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.
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 in good habitat condition for bighorn sheep.

e. The sagebrush component for sage grouse nesting and winter use is presently in Later Seral Ecological Condition on ARTRW sites.

7. Riparian/Fisheries Habitat

a. Stream Survey Data

North Fork Little Humboldt River

Year	% Overall Optimum	Bank Cover	Bank Stability	% Sedimentation
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

Data indicates the percent Overall Optimum Habitat Condition has not changed. Bank Cover and Bank Stability are declining and the percent Sedimentation in static. UPM for 1985, 1986, 1987, 1988 indicate heavy utilization levels on both rivers. Bank cover and stability have declined, however, as previously discussed, fencing projects already in place and scheduled for construction will result in progress being made toward achievement of the objectives.

South Fork Little Humboldt 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.

b. Riparian Habitat Utilization Data

There are 594 acres of wetland riparian habitat in the Little Owyhee Allotment. Utilization of the key plant species on 594 acres of wetland riparian shall not exceed 50%. For this short-term objective refer to the allotment objectives under Section (III-6-a.)

Achievement of this objective is measured at the following Key Management Areas:

Pasture	Key Management Areas
Antelope	0105, 0106, 0107, 0108
Capitol Peak	0302, 0303, 0304, 0305
Rock Springs	0604, 0605, 0606

UPM data is also used along with KMA data to determine achievement of the objective. The following is an analysis of utilization data on Riparian Habitat.

1) Antelope Pasture

Utilization studies conducted at the KMAs indicates that utilization was above the AUL of 50% at the four riparian KMAs during 1987 and 1988. Data was collected for these two years.

For the purpose of this evaluation, the KMAs represent the total riparian acreage in the pasture which is 189 acres.

UPM data indicates heavy use has occurred during 1987 and 1989 on riparian vegetation along the Little Owyhee River, the North Fork Little Humboldt River and at Spring locations.

2) Capitol Peak Pasture

Utilization studies conducted at the KMAs indicates that utilization was above the AUL of 50% at the four riparian KMAs, during 1987, 1988 and 1989. Data was collected for these three years at the riparian KMA.

UPM data indicates heavy use has been shown to occur for the years 1987, 1988 and 1989 primarily along the forks of Willow Creek but also along the forks of Calico Creek and at Lone Willow Springs.

For the purpose of this evaluation, the KMAs represent the total riparian acreage in the pasture which is 142 acres.

3) Rock Springs Pasture

Utilization data has been collected on the riparian KMAs for the years 1987, 1988 and 1989. AULs were exceeded at all three KMAs during 1987 and 1988. During 1989 one KMA was read and AULs were exceeded for both Key Species.

UPM data indicates Heavy use has occurred for the years 1985 to 1989 primarily along Piccolo Creek and also at Rock Springs and along Willow Creek.

For the purpose of this evaluation, the KMAs represent the total riparian acreage in the pasture which is 88 acres.

4) Calico Pasture

There are no KMAs established on riparian habitat UPM data indicates heavy use has occurred for the period (1986-1989) along the Little Owyhee River, Calico Drainage and along Maiden Springs Pipeline.

For the purpose of this evaluation the UPM data represents a portion of the 37 acres on the pasture.

5) Lake Creek, Twin Valley Springs and Fairbanks Pastures

There are no KMAs established on riparian habitat in these three pastures. UPM indicates heavy use has been associated with developed water sources in addition to the South Fork Little Humboldt River.

The riparian acreage in Fairbanks Pasture, is 131 acres; Lake Creek Pasture, 5 acres; Twin Valley Springs Pasture, 2 acres.

c. Riparian Habitat Ecological Status Data

Achievement of this objective is measured at the following Key Management Areas.

Pasture	Key Management Area
Antelope	0108
Capitol Peak	0304, 0305
Rock Springs	0604

An initial Ecological status was determined at these KMAs during the 1988 Riparian Inventory. The Ecological Status determination indicated several acres were in Late Seral. The results of the 1988 Riparian Inventory is as follows:

1988 Riparian Inventory and Status

Pasture	MDW (Acres) Not Checked	MDW Not Met	MDW Met	MDW Total	RIV Not Checked	RIV Not Met	RIV Met	RIV Total	RIP Not Checked	RIP Not Met	RIP Met	RIP Total
Rock Springs			51.0	51.0	37.0			37.0	37.0	0.0	51.0	88.0
Capitol Peak		110.0	110.0	32.0	32.0			32.0	32.0	0.0	110.0	142.0
Antelope	102.4	3.6	15.0	121.0	68.0			68.0	170.4	3.6	15.0	189.0
Calico	37.0			37.0				0.0	37.0	0.0	0.0	37.0
Fairbanks				0.0	131.0			131.0	131.0	0.0	0.0	131.0
Lake Creek	3.0			3.0	2.0			2.0	5.0	0.0	0.0	5.0
Twin Valley				0.0	2.0			2.0	2.0	0.0	0.0	2.0
Acres	142.4	3.6	176.0	322.0	272.0	0.0	0.0	272.0	414.4	3.6	176.0	594.0

The results of the inventory indicate that all 51 acres in Rock Springs Pasture and all 110 acres in Capitol Peak Pasture are in Late Seral. This initial inventory indicates all riparian acres in Rock Springs and Capitol Peak are at the desired Ecological Status.

In Antelope Pasture 18.6 acres of the 121 total acres were inventoried. Fifteen (15) acres are in Late Seral and are at the desired Ecological Status. The remaining 3.6 acres are not in Late Seral and are below the desired Ecological Status. The remaining 414.4 acres riparian were not checked.

The Ecological Status Inventory conducted in 1987 revealed that the 594 acres of riparian habitat were at Mid Seral.

Ecological Status in one of the parameters used to determine overall achievement of objectives for riparian functionality. No other data has been collected to measure riparian functionality.

d. Riparian Habitat Trend Data

Trend data has not been collected.

8. Wild Horse and Burro Habitat

Utilization studies data indicates that the utilization objectives for wild horse habitat have consistently been met throughout the HMA to include the Lake Creek, Twin Valley Springs and Fairbanks pastures.

Over the period UPM has been conducted (1985-1989) heavy use has been less than 10% on the three pastures and has been associated with waters.

For the Fairbanks and Lake Creek Pastures, analysis of trend data indicates that overall trend is static in change and progress is being made toward achieving the objective.

For the Twin Valley Springs Pasture trend is erratic in change and is not maintaining or moving toward achievement of the objective.

Range studies indicate that overall progress is being made toward maintaining or achieving habitat objectives within the HMA.

The primary limiting factor within the HMA is a lack of adequate water

The pasture fences between Lake Creek and Twin Valley Springs may restrict the free roaming behavior of wild horses during the season of use by livestock March 15-July 01. However, as per CRMP Objective #3 Action 9, all gates on division fences between Lake Creek, Twin Valley and Fairbanks pastures shall be opened from July 01 to March 15 to facilitate free roaming migration of the base herd within the spring range area.

Wild horses have free access to water.

9. 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 that what is recommended for fish. All other parameters were at acceptable levels, except for D.O. which was not tested.

V. CONCLUSIONS

A. Key Management Area Objectives

Achievement of the Key Management Area (KMA) objectives will be analyzed under short-term. Refer to Table 2 for the KMA Objectives. Analysis of the KMA objectives shall be made on a pasture basis.

1. Fairbanks Pasture

The utilization objectives indicated by both UPM and KMA data have been consistently met throughout the pasture except around waters and during 1990 when the AUL on (SIHY) was exceeded at KMA 0401.

Analysis of trend data indicates that overall trend frequency is static in change and that progress is being made toward achieving this objective.

2. Lake Creek Pasture

The utilization objectives indicated by both UPM and KMA data have been consistently met throughout the pasture except around waters and during 1989 and 1990 when heavy use occurred at KMA 0501 located near Lake Creek Reservoir.

Analysis of trend data indicates that overall trend frequency is static in change and that progress is being made toward achieving this objective.

3. Twin Valley Springs Pasture

The utilization objectives indicated by both UPM and KMA data have been consistently met throughout the pasture except around waters and during 1990 when AULs were exceeded at all three KMAs.

Analysis of trend data indicates that overall trend frequency is erratic in change and is not maintaining or moving toward achievement of this objective.

4. Antelope Pasture

The utilization objectives indicated by both UPM and KMA data have not been met. Heavy use has been primarily associated with meadow/riparian vegetation at springs and along the Little Owyhee River and the North Fork Little Humboldt River. UPM conducted on the uplands indicates the majority of annual use to be slight for the period 1985 to 1989. Heavy use occurred on meadow/riparian KMAs in 1987 and also during 1988 when the pasture was rested.

Analysis of trend data indicates a declining trend frequency, and that progress is not being made toward achieving the trend objective for this pasture.

5. Calico Pasture

The UPM data indicates this objective has not been met. Heavy use has been associated with meadow, riparian and upland vegetation along the Little Owyhee River, Maiden Springs and pipeline and Calico Drainage. However, the majority of use over the pasture has been slight for the period (1986-1989).

The utilization objectives indicated by KMA data on upland sites have been met.

Analysis of trend data indicates overall trend frequency is static in change and progress is being made toward achieving the objective.

6. Capitol Peak

The KMA utilization and UPM data indicate this objective has not been met. Heavy use has been primarily associated with the riparian and meadow vegetation along the forks of Willow Creek, along Calico Creek and at Lone Willow Springs. The KMA utilization indicates that for the years data was collected at the riparian/meadow KMAs, (1987, 1988, 1989) AULs were exceeded and the majority of use was heavy to severe.

UPM conducted on the uplands indicates the majority of annual use to be slight. At the one and only upland KMA utilizations has been above AULs.

Analysis of trend data indicates that overall trend frequency is declining.

7. Rock Springs Pasture

UPM data indicates that the upland utilization objectives have consistently been met over the period 1985-1989.

However, for this same period heavy use has occurred on the riparian/meadow vegetation primarily along Piccolo Creek and also at Rock Springs and along Willow Creek.

KMA utilization data indicates AULs were exceeded at all KMAs for the three years 1987, 1988 and 1989 at the riparian/meadow KMAs. At the upland KMAs utilization overall was below AULs for the period 1984-1990.

Analysis of trend data indicates overall a declining trend and progress not being made toward achieving the objective.

B. Short Term

Refer to allotment objectives by number under Section (III.6.a)

1. The utilization objectives indicated by both UPM and KMA data have not been met for all the summer pastures, (Antelope, Calico, Capitol Peak and Rock Springs. For the spring pastures, Lake Creek, Twin Valley and Fairbanks, UPM indicates heavy use has been associated with water sources. KMAs or key species have not been

established or selected in the spring pastures to measure achievement of this objective.

2. Key Management Areas and Key Species have not been established or selected.

3. Key Management Areas and Key Species have not been established or selected.

C. Long Term

1. Analysis of trend data indicates that overall progress is being made toward achieving the trend objective in the Fairbanks, Lake Creek, and Calico Pastures. Trend is declining in Antelope, Capitol Peak and Rock Springs Pastures. Trend in Twin Valley Springs Pasture is erratic in change and is not maintaining or moving toward achievement of this objective.

   Analysis of short term objective in relation to the upland habitat on the Spring Pastures indicates that as a majority the AUL objectives have been met except at water sources where heavy use has occurred and where heavy use has been less than 10%.

   The AUL has not been achieved in the Summer Pastures where heavy use has been primarily associated with riparian vegetation.

2. Baseline Ecological Status has not been collected since initial establishment of the KMAs.

3. The majority of mule deer habitat is in fair condition. This does not meet the objectives of good to excellent conditions.

   Based on the big game habitat evaluation the following pronghorn use areas are meeting or making progress towards meeting this objective:

Little Owyhee	PS-10
Button Lake	PW-11
Button Lake	PS-9
*Santa Rosa	PS-7

*Based on the 1989 NDOW Status and Hunting Season Recommendations the Santa Rosa PS-7 use area in the vicinity of Goosey Lake Flat has declining habitat conditions.

Based on the habitat evaluation, the following pronghorn use area is currently not meeting this objective.

Maiden Butte	PW-11
Owyhee Desert	PY-9

4. Baseline trend data and utilization and UPM data indicate that progress is being made toward maintaining or achieving habitat objectives within the HMA.

   Access to water is not restricted.

   The objective has been met.

5. Key Management area utilization and UPM data indicates this objective has not been met. Progress is not being made toward achieving this objective primarily in the summer pasture but also in the spring pastures.

   The Ecological Status Inventory conducted in 1987 revealed that the 594 acres of riparian habitat were in mid seral.

   The 1988 Riparian Inventory indicates that 176 acres were in Late Seral Ecological Status which have met the objective. There were 3.6 acres checked that did not meet objectives. The remaining 414.4 acres were not checked. Baseline trend data has not been collected to evaluate achievement of this objective.

6. Baseline (ESI) and trend data has not been collected to evaluate achievement of this objective.

7. Based on utilization and condition data progress is not being made toward achieving this objective. Objective is not being met.

8. Stream Survey data, UPM data and utilization studies indicate progress is not being made towards achievement of this objective on the North and S. Fork Little of the Humboldt River.

9. 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) and riparian habitat in the summer pastures.

10. 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.

VI. RECOMMENDATION

A. Technical

1. Maintain the current CRMP three pasture rest-rotation grazing system on the spring pastures with the flexibility as recommended by the 1987 TRT. This flexibility includes winter use in Fairbanks and Lake Creek fields and flexibility to use the rested pasture if monitoring data shows that areas have been rested during the year(s) scheduled for use. The season of use would be 03/01 to 06/30.

2. Continue winter use in the Fairbanks pasture. Period of use will be 11/15 to 02/28 for 2,000 AUMs as per TRT recommendation. Allow for winter use in Lake Creek field if requested as per TRT, however total winter use will not exceed 3,000 AUMs.

3. Change the grazing system from the current CRMP deferred three pasture rest-rotation system, with the use of Capitol Peak every year after seedripe, to a two pasture flip-flop between Rock Springs and Antelope. Calico field would be used early every year and Capitol Peak would continue to have deferred use after seedripe, late every year. There would be flexibility in the proposed grazing system based on water availability and plant phenology. The CRMP grazing system and the recommended grazing system are as follows:

   CRMP Grazing System

   Treatment "A" - 07/01 to 08/15
   Treatment "B" - 08/15 to 09/30
   Treatment "C" - Rest
   Treatment "D" - 08/15 to 09/30 (Capitol Peak)

Recommended Grazing System

Treatment "A" - 07/01 to 08/31
Treatment "B" - Rest
Treatment "C" - 07/01 to 07/15 (Calico Field)
Treatment "D" - 07/16 to 08/31 (Capitol Peak)

4. Do not use the summer pastures during the hot season.

5. Make a proportionate share adjustment based on actual use for Lake Creek, Twin Valley Springs as follows:

Lake Creek	5,480 AUMs
Twin Valley Springs	3,830 AUMs

6. Continue stocking Fairbanks at the 1990 level

7. Fence key wetland riparian habitat in the summer pasture as proposed by permittee to eliminate the current conflicts which exist in the summer pastures. With fencing, an adjustment in stocking levels would not be required.

8. Implement a proportionate share adjustment for livestock and wild horses based on CRMP.

9. Water availability is the limiting factor in the spring/winter pastures. Any further increase in stocking levels should be based on the availability of waters.

10. Continue to achieve stocking levels as identified in the CRMP plan.

11. Corridor fence the Upper and Lower Gorge Area of the North Fork Little Humboldt River as recommended by CRMP.

Reconstruct portions of the existing boundary fence to compliment the new fence. This fencing would eliminate or greatly reduce the current conflicts which exist on the allotment due to utilization exceeding 30% on portions of the river.

Fence riparian areas at Twin Valley Springs, and 4 acres identified in Fairbanks field.

Corridor fence, with water gaps primarily for wild horses, approximately 2 1/2 miles of the South Fork Little Humboldt River from Rodear Flat NW to private land.

B. Monitoring Needs

1. Continue to implement the rangeland monitoring program on the Little Owyhee Allotment.

2. Continue to identify establishment of key areas and collect baseline data on upland sites.

3. Establish monitoring studies on riparian areas, 21 acres of Aspen Habitat and for Sage Grouse Habitat.

4. Initiate Wildlife Habitat Inventory and Riparian/Fisheries Habitat Studies.

5. Develop ecological site descriptions for riparian areas and determine ecological status for wet meadows and stream riparian areas.

   Determine desired seral stages for key areas where ecological condition has been determined.

   Redefine/quantify long term objective (3) with ecological status condition as information becomes available.

6. Continue with intensive wild horse habitat and monitoring studies. Collect data to determine population estimates, population trend, population characteristics, population dynamics, and population analysis.

Table 4:

Key Management Area Utilization

Spring Use Area:

Area	Key Pasture	Species	Key Use Levels	Allowable 1983	Allowable 1984	% Utilization by Year 1985	1986	1987	1988	1989	1990
*0401	Fairbanks	SIHY	40%	-	-	-	-	31%	3%	10%	48%
*0402	Fairbanks	AGSP	50%	-	-	-	-	10%	-	10%	-
		SIHY	40%	-	-	-	-	-	9%	-	18%
		STTH2	40%	-	-	-	-	21%	23%	10%	28%
0403	Fairbanks	AGSP	50%	-	-	-	-	-	0%	0%	12%
		SIHY	40%	-	-	-	-	-	0%	0%	10%
		STTH2	40%	-	-	-	-	-	0%	0%	20%
0501	Lake Creek	EULA5	50%	-	-	39%	12%	5%	0%	31%	68%
		ORHY	50%	-	33%	42%	18%	12%	0%	56%	70%
		SIHY	40%	-	32%	11%	12%	4%	0%	20%	70%
0502	Lake Creek	ORHY	40%	-	-	6%	-	2%	6%	12%	15%
		POSE	50%	-	-	-	-	-	-	-	1%
		SIHY	40%	-	-	5%	-	6%	7%	10%	2%
0503	Lake Creek	SIHY	40%	-	-	-	-	-	19%	0%	3%
		STTH2	40%	-	-	-	-	-	0%	0%	0%
0504	Lake Creek	ORHY	50%	-	-	12%	-	4%	27%	0%	2%
		POSE	50%	-	-	-	-	-	-	-	2%
		SIHY	40%	-	-	12%	-	4%	22%	0%	0%
0505	Lake Creek	ORHY	50%	-	-	-	-	-	6%	10%	18%
		SIHY	40%	-	-	-	-	-	4%	10%	15%
0506	Lake Creek	EULA5	50%	-	-	.5%	-	-	-	-	12%
		ORHY	50%	-	-	9%	25%	-	2%	10%	12%
		SIHY	40%	-	-	4%	-	-	.5%	10%	10%
0507	Lake Cree	ORHY	50%	-	-	-	-	-	9%	-	9%
		STTH2	40%	-	-	-	-	-	8%	14%	5%
		SIHY	40%	-	-	-	-	-	3%	10%	0%
0701	Twin Valley	AGSP	50%	19%	-	1%	3%	15%	7%	-	48%
		STTH2	40%	-	-	-	-	-	-	-	64%
0702	Twin Valley	ORHY	50%	-	-	-	7%	10%	44%	-	54%
		SIHY	40%	-	-	-	-	10%	6%	-	62%
0703	Twin Valley	ORHY	50%	25%	-	-	-	-	20%	-	78%
		SIHY	40%	18%	-	-	-	-	12%	-	48%
		STTH2	40%	35%	-	-	-	-	-	-	-

* The utilization levels depicted at these key areas are winter/early spring use by livestock and wild horses.

Key Management Area Utilization

Summer Use Areas:			1983	1984	1985	1986	1987	1988	1989	1990
0101 Antelope	STTH2	40%	-	-	36%	15%	39%	-	-	12%
	SIHY	40%	-	-	-	-	-	-	-	12%
0102 Antelope	STTH2	40%	28%	-	1%	11%	13%	-	-	40%
	SIHY	40%	17%	-	1%	-	-	-	-	10%
0103 Antelope	STTH2	40%	24%	-	-	-	-	-	-	58%
0104 Antelope	CELE3	50%	-	-	-	-	43%	39%	-	-
0105 Antelope	SALIX	*50%	-	-	-	-	43%	39%	43%	-
	CAREX	50%	-	-	-	-	70%	43%	-	-
	PONE3	50%	-	-	-	-	60%	49%	-	-
0106 Antelope	SALIX	50%	-	-	-	-	93%	64%	-	-
	CAREX	50%	-	-	-	-	78%	50%	-	-
	PONE3	50%	-	-	-	-	76%	52%	-	-
0107 Antelope	PONE3	50%	-	-	-	-	83%	61%	-	-
	CAREX	50%	-	-	-	-	85%	48%	-	-
0108 Antelope	CAREX	50%					77%	30%	-	-
	PONE3	50%	-	-	-	-	66%	54%	-	-
0301 Capitol	FEID	40%	-	38%	55%	6%	28%	14%	15%	14%
	TTH2	40%	20%	58%	49%	3%	46%	18%	20%	18%
0302 Capitol	CAREX	50%	-	-	-	-	64%	86%	-	-
	PONE3	50%	-	-	-	-	62%	90%	-	-
0303 Capitol	SALIX	*30%	-	-	-	-	79%	77%	-	-
	ROWO	50%	-	-	-	-	49%	55%	21%	-
	PONE3	30%	-	-	-	-	64%	71%	-	-
0304 Capitol	PONE3	50%	-	-	-	-	49%	87%	72%	-
	CAREX	50%	-	-	-	-	78%	79%	55%	-
0305 Capitol	CAREX	50%	-	-	-	-	65%	83%	-	-
	PONE3	50%	-	-	-	-	63%	85%	-	-
0601 Rock Spr	FEID	40%	-	11%	-	0%	6%	14%	-	
	STTH2	40%	-	21%	-	0%	16%	-	28%	-
0602 Rock Spr	STTH2	40%	-	-	32%	0%	22%	-	32%	18%
	ELCI2	50%	-	-	21%	0%	20%	-	34%	-
	CRAC2	50%	-	-	-	-	-	-	-	-
0603 Rock Spr	STTH2	40%	-	-	42%	0%	56%	-	20%	50%
	SIHY	40%	-	-	-	-	-	-	10%	16%
	CRAC2	50%	-	-	-	-	-	-	10%	-
0604 Rock Spr	CAREX	50%	-	-	-	-	66%	47%	-	-
	PONE3	50%	-	-	-	-	65%	51%	-	-
0605 Rock Spr	PONE3	50%	-	-	-	-	63%	68%	-	-
	CAREX	50%	-	-	-	-	74%	70%	-	-
0606 Rock Spr	CAREX	50%	-	-	-	-	54%	73%	59%	-
	PONE3	50%	-	-	-	-	41%	68%	57%	-
0607 Rock Spr	CELE3	50%	-	-	-	-	54%	59%	28%	-
0201 Calico	STTH2	40%	-	-	-	-	-	1%	34%	58%
	SIHY	40%	-	-	-	-	-	1%	22%	-
	LUPIN	50%	-	-	-	-	-	0%	0%	0%
	CRAC2	50%	-	-	-	-	-	0%	0%	0%
0202 Calico	SIHY	40%	-	-	-	-	-	0%	0%	0%
	STTH2	40%	-	-	-	-	-	0%	0%	0%

Table 5: Appendix II

Frequency Trend Data:

Key Management Area	Key Species	% Frequency 1985	1986	1990
0402	STTH2	18.50	22.50	23.50
	SIHY	58.00	54.00	51.50
	AGSP	.50	1.00	0.00
	CRAC2	13.50	12.00	11.50
0403	STTH2	9.00	8.50	4.50
	SIHY	37.00	35.00	34.50
	AGSP	0.00	0.00	0.00
	CRAC2	7.00	3.00	1.00
0501	EULA5	2.00	2.00	1.00
	ORHY	11.00	10.00	5.50
	SIHY	60.00	56.50	39.00
0502	ORHY	14.50	16.50	11.50
	SIHY	87.00	83.50	85.00
	POSE	79.50	72.00	77.50
0504	ORHY	16.50	13.50	14.50
	SIHY	86.00	85.00	68.50
	POSE	9.00	5.50	9.50
0506	ORHY	41.50	45.00	41.00
	SIHY	56.00	64.00	45.00
	EULA5	7.00	-	3.00
0701	AGSP	39.00	37.50	48.50
	STTH2	7.00	4.50	2.50
	CRAC2	6.00	11.50	6.00
0702	SIHY	89.00	77.50	67.50
	ORHY	7.50	6.00	6.00
	CRAC2	1.50	2.00	4.00
0703	ORHY	76.50	64.00	74.00
	SIHY	9.50	1.00	6.50
	ERIOG	2.00	-	.50
0101	STTH2	25.50	28.50	3.00
	SIHY	54.00	59.50	76.50
	CRAC2	15.50	30.50	12.00
0102	STTH2	76.50	74.50	35.50
	SIHY	60.00	54.50	41.50
	CRAC2	17.50	20.50	1.50

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Appendix II

Key Management Area	Key Species	% Frequency 1984	1985	1986	1900
0201	STTH2	47.50	-	40.00	53.00
	SIHY	-	62.50	63.00	23.50
	LUPIN	43.00	38.00	53.50	-
0202	STTH2	0.00	0.00	-	1.00
	SIHY	73.00	68.00	77.00	36.00
	CRAC2	6.50	4.50	7.50	3.50
0301	STTH2	36.00	41.00	34.00	32.50
	FEID	7.50	9.50	9.50	3.50
	CRAC2	7.00	6.00	9.50	1.00
0602	STTH2	10.00	7.00	7.00	12.00
	ELCI2	16.00	17.50	20.00	10.50
	CRAC2	5.50	5.00	6.00	-
0603	STTH2	-	48.50	50.00	38.50
	SIHY	-	60.50	58.00	50.50
	CRAC2	-	6.50	11.50	0.50