5-23-94

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Winnemucca District Office
705 East 4th Street
Winnemucca, Nevada 89445

IN REPLY REFER TO:

41601-1
(NV-241.3)

MAY 23 1994

CERTIFIED MAIL NO. Z776765486
RETURN RECEIPT REQUESTED

Ms. Cathy Barcomb
Commission for the Preservation
of Wild Horses
50 Freeport Blvd. #2
Sparks, NV 89431

Dear Interested Party:

Please find enclosed the Bullhead Final Allotment Evaluation Summary, Biological Opinion, and the Proposed Multiple Use Decision.

The Bureau of Land Management entered into formal section 7 consultation with the U.S. Fish and Wildlife Service, and in their opinion dated May 2, 1994, concurred with the Bureau's determination that the proposed decision for the Bullhead Allotment is not likely to jeopardize the continued existence of the threatened LCT.

If you have any questions, please feel free to contact Gene Seidlitz or Bob Hopper at (702) 623-1500.

Sincerely yours,

Scott Belling

Area Manager
Paradise-Denio Resource Area

Enclosures
Final Bullhead Allotment Evaluation Summary
Biological Opinion
Proposed Multiple Use Decision

Bullhead Allotment
Final Allotment Evaluation Summary

I. Introduction

A. Bullhead Allotment (00033)

B. Permittee - Nevada First Corporation

C. Evaluation Period - 1983 - 1991

D. Selective Management Category I

II. Initial Stocking Level

A. Livestock Use

1. Grazing Preference (AUMS)

a.	Total preference	19,283 AUMS
b.	Suspended preference	7,233 AUMS
c.	Active preference	12,050 AUMS
d.	Initial stocking use*	8,350 AUMS
e.	Non Use	3,700 AUMS
f.	Exchange of use**	1,051 AUMS

* As per CRMP recommendation and land use plan decision.

**April 30, 1993 Nevada First Corporation withdrew their Exchange of Use.

2. Seasons of Use

Spring/Summer	04/01 to 09/30
Fall/Winter	10/01 to 12/15

3. Kind and Class of Livestock

Cattle (cow/calf)

4. Percent Federal Range

Allotment licensed at 91% federal range throughout the evaluation period. The Bullhead Allotment is licensed at 100% federal range as of April 30, 1993.

5. Grazing System

The current grazing system consists of spring, summer and winter use pastures. Two of the pastures are grazed in either fall/winter or spring. One field is not grazed by livestock due to lack of adequate stock water. Consistent patterns of rest-rotation and periods of use have not been applied to the Bullhead Allotment throughout the evaluation period. Use is displayed on Table 1, Bullhead Allotment Actual Use by Livestock Summary.

The summer fields, Kinney, Snowstorm Flat, and Upper and Lower Kelly Burn Pastures, have been utilized from June 1 through September 30 in a three pasture rest-rotation. While Kinney and Snowstorm Flat Pastures have consistently been rested every third year, at a minimum, Kelly Burn Pasture has been grazed every year except one during the evaluation period.

Spring grazing has been provided by either First Creek Pasture, Dry Hills Pasture or Bullhead Seeding. First Creek has also been grazed in the summer and early fall. Dry Hills has been grazed in the spring, as stated above, and in the winter. Bullhead Seeding has been grazed during all seasons.

Rabbit Pasture has been used consistently in the winter only. As stated above, Dry Hills and Bullhead Seeding have also been used for winter grazing.

Castle Ridge Pasture has not been grazed by livestock due to lack of adequate stock water.

B. Wild Horse Use

The Bullhead Coordinated Resource Management Plan (CRMP) recommended a wild horse herd of 50 adult wild horses.

The Snowstorm Mountain Herd Management Area (HMA) is situated entirely within the Bullhead Allotment and is contained within the Castle Ridge, First Creek, Snowstorm Flat, Kinney, Kelly Burn, and a portion of the Dry Hills pastures. The HMA consists of 145,538 acres. There are 133,138 acres of public land and the remaining 12,400 acres are on private land.

Wild horses are being managed under the Little Owyhee Desert-Snowstorm Mountains Wild Horse Herd Management Area Plan which was approved August 6, 1987. The HMAP is to be revised in 1994.

C. Wildlife Use

1. Wildlife Species

a. Reasonable Numbers (AUMs)

	Winnemucca[1]	Total
Mule Deer	1,029	1,029
Antelope	101	101
Bighorn Sheep[2]	0	190

[1] Bullhead CRMP

[2] South Fork of the Little Humboldt River Bighorn Sheep Reestablishment Release Plan

b. Wildlife Use Areas

Deer

Snowstorms DY-23	25,268 acres
Snowstorms DY-23 (Elko Co.)	35,359 acres
Snowstorms DY-23 (Crucial, Elko Co.)	8,256 acres
Snowstorms DS-2	1,130 acres
Snowstorms DS-2 (Elko Co.)	6,522 acres

Pronghorn

Snowstorms PY-10 (Elko Co.)	50,137 acres
Hot Springs PY-11	24,242 acres
Snowstorms PY-10	18,171 acres

Bighorn Sheep

Snowstorms BY-11	12,023 acres
Snowstorms BY-11 (Elko Co.)	48,403 acres

Sage grouse - There are nine sage grouse strutting grounds identified on the allotment, however the majority of the allotment is identified as general distribution for sage grouse.

III. Allotment Profile

A. Description

The Bullhead allotment has a total of 170,456 acres, of which 85% is public, and 15% is private lands. The eastern third of the allotment lies within the Elko BLM District. Major topographic features include the Dry Hills, Snowstorm Flat, Winters Ridge, Snowstorm Mountains, and the Castle Ridge area. The area has a wide variety of vegetative communities, soils and elevational (4,500' to 7,500') differences. Generally, the vegetation in the low elevations is characteristic of the shadscale, budsage, greasewood and big sagebrush communities. The higher elevations are typified by big sagebrush communities.

B. Acreage

1. Allotment

a.	Total acres	170,456
b.	Public acres	145,016
c.	Private acres	25,440

2. Pastures

The allotment is divided into three use areas. The spring use area is comprised of the lower elevational pastures (Dry Hills, First Creek, and Castle Ridge Pasture), the summer use area (Kinney, Snowstorm Flat, and Kelly Burn Pasture) is comprised of the higher elevational pastures and the winter use area is comprised of Rabbit Field and the Bullhead Seeding.

The acreage by pasture is as follows:

First Creek	-	44,543
Dry Hills	-	41,890
Castle Ridge	-	19,759
Rabbit	-	18,818
Kinney	-	17,770
Snowstorm	-	16,328
Upper Kelly	-	7,536
Lower Kelly	-	3,812

C. Other Information

1. Coordinated Resource Management Plan (CRMP)

On July 23, 1982, a Coordinated Resource Management Plan (CRMP) was adopted which listed the major problems/issues for the Bullhead Allotment. It also developed objectives to manage and resolve these problems. The CRMP was accepted and adopted.

As a part of this plan, a voluntary reduction from 12,050 AUMs to 8,350 AUMs was taken by the permittee.

Another objective of the CRMP was to establish monitoring for all objectives. An allotment monitoring plan was completed in 1986. This plan lists key area objectives and established a schedule for monitoring.

2. Allotment Management Plan

The Bullhead Allotment Management Plan (AMP) signed March 4, 1985, outlines spring (04/01 to 06/30) and summer (07/01 to 09/30) rest-rotation grazing systems. Each system has three pastures, one of which was to have been rested each year. Winter use pastures (10/01 to 12/15) were also included in the plan.

The spring system was to have been composed of the Dry Hills, First Creek and Castle Ridge Pastures. This system was never implemented primarily because Castle Ridge Pasture lacks adequate stockwater. New stockwater has not been developed because the pasture is within the boundaries of a wilderness study area. The AMP outlines an interim grazing system to be followed until Castle Ridge Pasture could be included in the system. Under that system First Creek and Dry Hills Pastures were to be alternately grazed and rested. To balance the available forage, Bullhead Seeding was to receive spring use in the years Dry Hills Pasture was grazed.

The summer system is composed of Kinney, Snowstorm Flat and Kelly Burn Pastures.

3. Technical Review Team (TRT)

A Technical Review Team was created in 1990 to review, discuss and develop methods and practices that relate to achieving the Bullhead CRMP planning objectives. In 1990, the TRT recommended the following:

a. The Bullhead Seeding will be used as a holding field to facilitate the overall livestock operation.

b. Winter use in the Rabbit Field will be confined to the southern portion of the pasture south of section six.

c. Locate and develop suitable sites for a seeding in the Dry Hills pasture to compensate for the loss of forage in the Rabbit Field and Bullhead Seeding due to mineral exploration.

d. Divide the Dry Hills Pasture with the west side being winter use and the east side spring use.

e. In the short term, continue to use Castle Ridge Pasture, but limit use (50-100 head) based on the current water availability. In the long term, develop water in the pasture to improve livestock and wild horse distribution. Incorporate this pasture into the spring three pasture rest-rotation grazing system described in the Bullhead AMP.

4. Permit History

1983-1988 Seco Inc., leased the base property for the Bullhead Allotment grazing privileges (Bullhead Ranch and Kelly Creek Ranch) from owner, Nevada First Corporation.

1986-1988 Seco Inc., managed cattle belonging to Gene and Jody Christison on Bullhead Allotment. This use was initiated to allow rest on the Osgood Allotment (where the Christisons are permittees) following the Pettit Fire in 1985.

1987 Nevada First Corporation entered into a limited partnership with other partners to form Circle A Ranches LP. Thus, Nevada First Corporation properties are deeded to Circle A Ranches LP. This did not affect existing leases.

1989 Grazing preference was transferred from the Bullhead and Kelly Creek Ranches to the Kelly Creek Ranch only.

1989-1990 Gene and Jody Christison leased the base property (Kelly Creek Ranch) for the Bullhead Allotment grazing privileges.

1991 Control of base property was transferred to Circle A Ranches LP upon expiration of lease with the Christisons.

1992 All matters concerning Circle A Ranches LP were quit claimed and conveyed unto Nevada First Corporation.

D. Objectives

1. 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. Objective WHB-1

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 species and/or improvement of their habitats.

2. CRMP Objectives

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

b. Establish proper initial stocking rates, season of use, and pasture sequence of livestock use.

c. Establish winter range area.

d. Establish rest-rotation system for spring and summer pastures.

e. Establish a wild horse management plan.

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

2) Preserve unique types and primitive mustang markings.

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

f. Improve condition of riparian habitats, fisheries, and aspen stands.

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

h. Develop range improvement programs to:

1) Repair and up-grade current improvements.

2) Return range capacities to goals of objective #1.

3) Control pests and noxious weeds.

4) Control watershed problems.

5) Enhance wildlife areas.

6) Enhance riparian, fisheries and aspen stands.

i. Continue public access through allotment areas.

j. Establish reasonable AUM demand for wildlife.

k. Protect sage grouse strutting grounds.

l. Develop potential waterfowl habitats.

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

n. Coordinate planning process between Winnemucca and Elko BLM Districts.

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

p. Assign grazing system to protect and enhance areas critical to wildlife populations.

q. Establish monitoring systems for all objectives.

3. AMP Objectives

a. Implement a three-pasture rest-rotation grazing system for both the spring/summer country. This will provide for better livestock distribution and increased plant vigor.

By 1992, forage availability will be 12,050 AUMs through use of the rest-rotation grazing system for livestock and wild horses.

Increase forage availability by range improvement projects as funding becomes available from 12,050 AUMs to 21,013 AUMs. This would include all multiple resource uses, livestock active and suspended AUMs, wild horse use, and current wildlife demand.

b. Establish proper seasons-of-use and initial stocking rate. The CRMP Plan recommended a season-of-use of April 1 to December 15 and an initial stocking rate of 5,700 livestock AUMs. Refer to Objective #2 of the CRMP Plan for additional information.

c. The goal of this plan is to make grazing by wild horses compatible with livestock and wildlife grazing. To this end, wild horse use will be reduced from 3,064 AUMs to approximately 600 AUMs. This will meet the recommended management levels of 50 head. Refer to page 4 of the CRMP Plan for additional information.

d. Improve the stream habitat in the Bullhead Allotment from poor condition to good (BLM Stream Survey Manual 6740).

Action: Apply a rest-rotation grazing system to the Bullhead Grazing Allotment (Objective a). This action may not be enough to improve the streams in the Bullhead Allotment from poor to good or above, but it will contribute to the overall achievement of the CRMP objective.

e. Improve public access on private and public lands through construction of range improvement facilities. Refer to Objective #8 of the CRMP Plan.

f. Maintain and improve wildlife and fisheries habitat (as identified in the planning system and recommended in CRMP) to a good condition.

g. Develop a coordinated monitoring plan by September 30, 1985. Reliable data on vegetation condition does not exist, therefore, the objectives developed for the monitoring plan will become the vegetation objectives for this plan.

4. Rangeland Program Summary Objectives

a. Increase available forage for livestock to sustain an active preference of 12,050 AUMs.

b. Improve range condition on the two seasonal use areas (spring and summer) by operating a three-pasture rest-rotation grazing system. A deferred rest system will be used for the seeding and proposed seedings.

c. Implement a three-pasture rest-rotation grazing system for both the spring/summer country.

d. By 1992, forage availability will be 12,050 AUMs through use of the rest-rotation grazing system for livestock and wild horses.

e. Increase forage availability by range improvement projects as funding becomes available from 12,050 AUMs to 21,013 AUMs.

f. Establish proper seasons-of-use and initial stocking rate. The CRMP Plan recommended a season-of-use April 1 to December 15 and an initial stocking rate of 5,700 livestock AUMs.

g. Develop CRMP.

h. Develop AMP.

i. Decision to monitor objectives or ecological condition identified in allotment monitoring plan.

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

Deer	1,029 AUMs
Antelope	101 AUMs
Bighorn Sheep	370 AUMs

k. Improve condition of riparian areas.

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

m. Develop potential waterfowl habitat.

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

o. Improve habitat for the Lahontan cutthroat trout, a threatened species, by increasing overall aquatic/riparian habitat condition to good or better.

p. Develop 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 900 AUMs for wild horses in the Snowstorm Mountains HMA.

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

3) Improve the free-roam 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 AML of 50 adult wild horses in the Snowstorm Mountains HMA allow the population to increase by +35 percent in the HMA before another removal is considered. The +35 percent variance factor would allow the population to increase to 68 adult wild horses in the Snowstorm Mountain 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 and young/adult ratios. These parameters will be analyzed to determine natality, mortality and rate of increase.

3) Genetically enhance the color patterns in the HMA.

6. Allotment Specific Objectives

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

a. Short Term Objectives

1) Utilization of key plant species on wetland riparian habitats shall not exceed 50%.

2) Utilization of key streambank riparian plant species in riparian habitats shall not exceed 30% on South Fork Little Humboldt River, Pole, First, Snowstorm and Winters Creeks, and shall not exceed 50% on Kelly Creek.

3) Utilization of key upland plant species shall not exceed the allowable use levels set forth in the Bullhead Monitoring Plan. (See table 3, pages 113-116.)

b. Long Term

1) Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 8,350 AUMs. (RM 1.11, CRMP obj. #1, CRMP obj. #2, AMP obj. #1, AMP obj. #2)

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

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 1,029 AUMs for mule deer, 101 AUMs for pronghorn, 190 AUMs for bighorn sheep. (WL 1.2, WL 1.4, AMP obj. #6, CRMP obj. #16)

a) Improve to and maintain 25,268 acres in Snowstorms DY-23, 35,359 acres in Snowstorms DY-23 (Elko Co.), 8,256 acres in DY-23 (Crucial, Elko Co.), 1,130 acres in Snowstorms DS-2 and 6,522 acres in Snowstorms DS-2 (Elko Co.) in good to excellent mule deer habitat condition.

b) Improve to and maintain 50,137 acres in Snowstorms PY-10 (Elko Co.), 24,242 acres in Hot Springs PY-11 and 18,171 in Snowstorms PY-10 acres in fair or good pronghorn habitat condition.

c) Improve to and maintain 12,023 acres in Snowstorms BY-11 and 48,403 acres in Snowstorms BY-11 (Elko Co.) in good to excellent bighorn sheep habitat condition.

4) Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% canopy cover of sagebrush for nesting and winter use. (WL 1.23, CRMP obj. #11)

5) Maintain and improve the free roaming behavior of wild horses by protecting and enhancing their home ranges. (WHB 1.1, WHB 1.5)

a) Manage, maintain and improve public rangeland conditions to provide an initial level of 600 AUMs of forage on a sustained yield basis for 50 wild horses. (AMP obj. #3)

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

6) Improve to and maintain 245 acres of aspen habitat types in good condition. (WL 1.3, F 1.3, CRMP obj. #6)

7) Improve to and maintain 544 acres of riparian and meadow habitat types in good condition. (WL 1.5, AMP obj. #6, CRMP obj. #6)

8) Improve to or maintain the following stream habitat conditions on South Fork Little Humboldt River, Pole, First, Snowstorm, Winters and Kelly, and Kinney Creeks from 42% on South Fork Little Humboldt, 29% on Pole Creek, 46% on First

Creek, unknown % on Snowstorm, unknown % on Winters Creek, 57% on Kelly Creek and unknown % on Kinney Creek to an overall optimum of 60% or above (WLA 1.1, WLA 1.2, CRMP obj. #6, CRMP obj. # 16, AMP obj. #4)

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

9) Improve to or maintain the water quality of the South Fork of the Little Humboldt River to Class A Water Quality Standards and the following beneficial uses: livestock drinking water, cold water aquatic life, wading (water contact recreation) and wildlife propagation. (W 1.1, CRMP obj. #16)

Improve to and maintain the water quality of Pole, First, Snowstorm, Winters, and Kelly Creeks to the state criteria set for the following beneficial uses: Livestock drinking water, cold water aquatic life, wading (water contact recreation) and wildlife propagation. Kinney Creek's water quality should meet state criteria for livestock drinking water and wildlife propagation. (W 1.1)

E. Key Species Monitored

Key upland plant species are listed on Table 3 pages 113-116. Tables are from Bullhead Monitoring Plan - July 1986

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. Livestock

Actual use by livestock is displayed on Table 1, page 17.

b. Wildlife (Existing Numbers)

The following data is based upon NDOW estimates of wildlife populations in Hunt Unit 066 and observations of wildlife distribution. Bighorn sheep were reintroduced in 1985 and have been augmented since.

	Mule Deer	Pronghorn Antelope	Bighorn Sheep	Mule Deer AUM's	Pronghorn Antelope AUM's	Bighorn Sheep AUM's	Total Wildlife AUM's
1983	77	45	0	232	108	0	340
1984	110	45	0	330	108	0	438
1985	103	46	9	309	110	22	441
1986	153	46	15	458	110	36	604
1987	246	46	20	738	110	48	896
1988	367	46	25	1,100	110	60	1,270
1989	336	46	30	1,007	110	72	1,189
1990	260	47	35	779	113	84	976
1991	211	47	40	632	113	96	841

c. Wild Horses

Three wild horse gathers have been conducted on the Snowstorm Mountain HMA since 1983. The numbers of wild horses removed during each gather is as follows, Census data is on Table 2, page 18:

Removal Data

	1983	1984	1985
	293 adults	155 adults	214 adults
	133 foals	44 foals	44 foals
Total	426	199	258

actual use from 1983 to

Bullhead Allotment

May 20, 1994

Table 1 BULLHEAD ALLOTMENT ACTUAL USE BY LIVESTOCK SUMMARY (Computed at 91% federal range)

Year	Dry Hills Pasture Use Period	AUMs	First Creek Pasture Use Period	AUMs	Castle Ridge Pasture Use Period	AUMs	Kinney Pasture Use Period	AUMs	Snowstorm Flat Pasture Use Period	AUMs		Kelly Burn Pasture Use Period	AUMs	Rabbit Pasture Use Period	AUMs	Bullhead Seeding Use Period	AUMs	Total AUMs
1983	04/15-06/30	1849	07/01-07/24	560	rest		rest		rest			07/25-09/30	1582	rest		10/01-10/18	419	4410
1984	03/24-06/30	1473	rest		rest		07/01-08/15	1242	rest			08/16-09/30	1811	rest		03/25-06/17	932	
																10/08-10/29	408	5866
1985	rest		04/06-07/02	3008	rest		07/02-09/15	450	rest			07/02-09/05	450	rest		01/17-02/28	200	4108
1986*	11/0102/28	1820	rest		rest		rest		06/01-07/31	910	Upper	08/01-09/30	1820			03/16-04/30	1138	
											Lower	05/01-05/31	910	03/01-03/15	63	11/01-02/28	728	7394
1987	03/01-03/31	470	04/01-06/30	2730	rest		07/01-09/15	1138	rest		Upper	07/01-09/15	1138			03/01-03/31	122	
	11/01-02/18	1019									Lower	09/16-09/30	455	11/06-02/28	72	11/06-02/28	113	7317
1988	03/03-03/31	455	07/01-07/15	197							Upper	07/01-09/30	578					
	11/01-12/31	292	09/15-09/30	74	rest		07/01-09/30	828	07/01-09/30	479	Lower	09/16-09/30	196	rest		03/10-03/31	66	2965
1989	rest		04/15-06/30	1482	rest		06/22-10/05	1680	rest			07/01-10/05	945	11/01-01/09	1047	04/15-06/03	684	5838
1990*	**		**		**		rest		07/01-08/15	1376		08/16-09/30	1376	11/01-02/28	1845	10/01-02/28	278	**
1991	rest		04/10-06/25	1714	rest		06/26-08/11	1100	08/12-10/03	960		rest		rest		rest		3774

* Licensed use, not actual use

** Data in spring use is not available for 1990.

Bullhead Allotment May 20, 1994

TABLE 2. BULLHEAD ALLOTMENT WILD HORSE NUMBERS BY PASTURE, 1983-1992 (Adults)

Grazing Year	Dry Hills	First Creek	Castle Ridge	Kinney	Snowstorm Flat	Upper Kelly Burn	Lower Kelly Burn	Rabbit	Bullhead Seeding	Total
1983	20	121	66	106	207	0	0	0	0	520 BEFORE 07/26/83
1983	9	53	29	46	90	0	0	0	0	227 AFTER 07/26/83
1984	13	79	43	70	136	0	0	0	0	341 BEFORE 07/84
1984	7	43	24	38	74	0	0	0	0	186 AFTER 07/84
1985	12	71	38	62	121	0	0	0	0	304 BEFORE 08/12/85
1985	3	21	11	18	36	0	0	0	0	90 AFTER 08/12/85
1986	4	24	13	21	41	0	0	0	0	103
1987	1	2	96	0	0	0	0	0	0	99
1988	1	2	91	0	0	0	0	0	0	94
1989	1	2	87	0	0	0	0	0	0	90
1990	0	59	23	4	0	0	0	0	0	86
1991	0	114	3	0	6	0	0	0	0	123
1992	47	87	34	29	17	0	0	0	0	214

NOTES - 1) NUMBERS REFLECT HORSE GATHERS 7/26/83, 7/84 & 8/12/85
2) TOTAL NUMBERS & NUMBERS BY PASTURE FOR 1986, 1989-1992, & TOTAL NUMBERS FOR 1984 ARE CENSUS DATA. REMAINING NUMBERS EXTRAPOLATED FROM CENSUS DATA.
3) GRAZING YEAR IS MARCH 1 THROUGH FEBRUARY 28 OR 29.

2. Climate

Precipitation
For
Paradise Valley (NOAA Station 1983-91)
Precipitation in Inches

Year	Departure From 30 Year Normal	*Growing Season	Yearly
1983	11.43	6.27	20.59
1984	3.53	4.97	12.69
1985	- .40	2.04	8.76
1986	.79	2.84	9.95
1987	1.79	5.20	10.86
1988	.92	3.29	10.08
1989	- .04	4.18	9.12
1990	- -	4.47	7.03
1991	- .01	4.26	8.39

*Growing season is defined as March through August.

3. Summary of Use Pattern Mapping and Utilization at Key Areas by Pasture

Utilization was collected using the following utilization classes:

Utilization Class	Percent Utilization
No Use	0%
Slight	1-20%
Light	21-40%
Moderate	41-60%
Heavy	61-80%
Severe	81-100%

a. Dry Hills Pasture

Key management area utilization was collected in 1983, 1984, 1987, 1989 and 1990, for Dry Hills Pasture. The data is summarized on the following table:

Key Area	Species	Allowable Use Levels	Utilization 1983	1984	1987	1988	1990
DH 0201	SIHY	40	9	34	64	10	
	ARSP5	30				12	
DH 0202	STTH2	40	10	28	10	42	40
	SIHY	40	10	11	7	17	32
DH 0203	STTH2	40		38	16	22	36
	SIHY	40		54		9	20
DH 0204	ORHY	50		58	51		
	SIHY	40		43	36	70	
DH 0205	SIHY	40		27	52	56	

1983 data was collected on 09/08/83
1984 data was collected on 07/31/84 and 08/01/84
1987 data was collected on 04/04/88 and 04/11/88
1988 data was collected on 03/14/89
1990 data was collected on 07/26/90

Use Pattern Mapping was conducted on Dry Hills Pasture in 1984 and 1988, and is summarized below:

1984:

In 1984, utilization on the Dry Hills pasture and higher elevations was slight. The area west of the Dry Hills and the area from Chimney Reservoir to Kelly Creek Spring were used lightly. The range adjacent to Kelly Creek Ranch and around all watering sources was used moderately. Utilization for the pasture was slight.

Use pattern mapping was conducted on 6/26.

1988:

In 1988 the pasture received slight use overall with isolated areas of light, moderate and heavy use associated with water sources. The only exception to this was an area of heavy use in the northeast corner of the pasture where a large community of shadscale/budsage occurs.

Use pattern mapping was conducted on 4/5 and 4/11.

b. First Creek Pasture

Key management area utilization was collected in 1987, 1988, 1989, 1990 and 1991, for First Creek Pasture. The data is summarized on the following table:

			Utilization				
Key Area	Species	Use Levels	1987	1988	1989	1990	1991
FC 0301	AGSP	50	53	27	56	31	44
	ELCI	50	44	42	50	38	37
	CREPIS	50	no data collected				
FC 0302	AGSP	50	47	0	28	11	25
	ELCI	50	30	0	0	-	20
FC 0303	AGSP	50			30	18	8
	ORHY	50			17	34	10
	SIHY	40	27	50	10	22	14

1987 data was collected on 06/24-25/87
1988 data was collected on 07/26/88
1989 data was collected on 07/12,14,26/89
1990 data was collected on 11/01/90
1991 data was collected on 08/14/91

Use Pattern Mapping was conducted on First Creek Pasture in 1985, 1987, 1988 and 1989, and is summarized below:

1985:

Use on water sources was heavy (eg. upland, riparian, reservoirs, meadows and stream drainages). The only other extensive heavy use area was near Chimney Reservoir. Several moderate use areas in the uplands were located proximate to heavy areas. The remaining upland range was mapped as slight/light use.

Use pattern mapping was conducted on 8/6 and 8/7.

1987:

Severe use was noted around Ernie Spring drainage and the associated wetland habitat. Layton Spring road was used moderately. The remaining upland areas were mapped as light use.

Use pattern mapping was conducted on 6/24.

1988:

Heavy use was found in this pasture in the southwest portion bordering the Dry Hills pasture around Kelly Spring and to the northwest of Kelly Spring along the fenceline. Wild horse use was evident in Rodear Flat itself, but no obvious sign of horse use was found in the basin. Moderate use surrounded the heavy use for approximately one half mile. Another area of moderate use was found in the basin in the southeastern half of the pasture. The moderate use extends for approximately one half mile. Overall, utilization levels in the remaining areas of the pasture observed were considered to be light with some patches of slight use interspersed. Areas that were not checked are felt to have received either slight or light use as depicted in similar terrain.

Use pattern mapping was conducted on 7/27.

1989:

The majority of the pasture was mapped as light use. The portion of the pasture north of Kelly Creek Spring was mapped as moderate. The areas north of First Creek, and that portion of the pasture associated with Twenty One Creek as it flows in Kinney Field were also mapped as moderate use. There were several areas in the pasture that are not readily associated to stock water, either due to distance or topography, that were mapped as slight.

Use pattern mapping was conducted on 7/12, 7/14, and 7/26.

1990:

The majority of this pasture received no use to slight use. Some light use occurred along the South Fork. Light use also occurred along the fence at the southern portion of this pasture.

Use pattern mapping was conducted on 10/30 and 11/01.

c. Castle Ridge Pasture

There has been no livestock use in the Castle Ridge pasture during the evaluation period due to the lack of available water. This pasture lies within a Wilderness Study Area which inhibits the construction of new water developments.

Use pattern mapping was conducted on Castle Ridge pasture in 1990.

1990:

This pasture showed moderate use primarily in the eastern portion and in the Haystack Peak area. Use in the remainder of the pasture was no use to slight use. The only water source is this pasture is the South Fork of the Little Humboldt River. Heavy trailing by wild horses near the river was obvious. The use on the vegetative resource was made by wild horses.

Use Pattern Mapping was conducted on 10/30 - 11/01

d. Snowstorm Flat Pasture

Key management area utilization was collected in 1986, 1988, 1990 and 1991 for Snowstorm Flat Pasture. The data is summarized on the following table:

		Allowable	Utilization			
Key Area	Species	Use Levels	1986	1988	1990	1991
SF 0901	AGSP	50	62	38	19	0
	ELCI	50	49	37	29	0
SF 0902	CAREX	50	no data collected			
	PONE	50	no data collected			

1986 data was collected on 09/17/86
1988 data was collected on 10/13/88
1990 data was collected on 10/30/90
1991 data was collected on 08/14/91

Use Pattern Mapping was conducted on Snowstorm Flat Pasture in 1986, 1988, and 1990, and is summarized below:

1986:

Utilization on streambank riparian and the associated drainages of Snowstorm Creek, First Creek, Winter's Creek and Pole Creek was heavy. The entire western border of the pasture was used moderate/heavy. Utilization on the low sage type was slight/light.

The date of use pattern map was not recorded.

1988:

The heaviest use in the pasture was found along Pole and Snowstorm Creeks and associated springs. Heavy use was found along Snowstorm Creek except the last one half mile near the Little Humboldt River where moderate use was found. At this point, the creek had no running water. Snowstorm Flat Spring had severe use with adjacent areas having moderate use. Severe use was found along Pole Creek and its associated springs. The surrounding uplands received moderate to heavy use. Light use was found on the Pole Creek Road in Section 28, with salting areas every quarter mile having heavy use. The overall utilization in the pasture was considered to be light to moderate. On Snowstorm Creek road, the area surrounding the road from this pasture fence to Snowstorm Flat Spring was moderate while the remainder was light. On Winters Ridge road, use was light with the exception of an area that had moderate use, due to being a bedding area for cattle.

Distribution is as expected based on the location of water sources and variation in vegetation types.

Use pattern mapping was conducted on 10/13.

1990:

Light and moderate use was evident along the South Fork. Heavy use occurred on the springs and water sources in the pasture. The remainder of the pasture received no use to slight use.

Data was collected on 10/30 and 11/1.

e. Kinney Pasture

Key management area utilization was collected in 1987, 1988, 1989 and 1991 for Kinney Pasture. The data is summarized on the following table:

Key Area	Species	Allowable Use Levels	Utilization 1987	1988	1989	1991
KF 0601	SIHY	50	67	53	48	24
	FEID	40	75	68	70	42
	SENEC	50	19			
KF 0602	POTRT	40	50			
KF 0603	CAREX	50	no data collected			
	PONE3	50	no data collected			

1987 data was collected on 09/16/87
1988 data was collected on 10/04/88
1989 data was collected on 10/10/89
1991 data was collected on 08/14/91

Use Pattern Mapping was conducted on Kinney Pasture in 1985, 1987, and 1989, and is summarized below:

1985:

Private lands comprise a significant land area in each pasture, primarily along stream drainages, spring sources, meadows, basins and riparian areas. Portions of these areas would have been mapped in the moderate/heavy category due to proximity to water. Drainages, basins, saddles and spring sources were used moderate/heavy. Heavy use was apparent around Kelly Creek Spring and along the Kelly Creek stream riparian zone. The remaining upland areas were used lightly in a uniform manner.

The date of use pattern mapping was not recorded.

1987: no hours record to data

All lands, public and private were considered in developing the use map. The following areas were used severely: Twenty-one Creek, Spring Creek, Kinney Creek, First Creek, Kelly Creek Spring, all upland meadows, springs and associated riparian. The area between Kelly Creek Spring and Kinney Creek and the areas bordering the aforementioned were all used heavily. The balance of the pasture was grazed moderately with the exception of several areas in the western half which were used lightly.

Use pattern mapping was conducted on 10/5.

1988:

The heaviest use in the pasture was at water sources. Severe use was found at Kelly Creek and First Creek road spring with outlying areas receiving moderate and heavy use. The corral area near Kinney Creek in the southwest portion of the pasture also received severe use with heavy and moderate use found along Kinney Creek. Moderate use was found along Spring Creek and heavy use near undeveloped springs the Crow Nest area along First Creek road. The remainder of the allotment in areas observed was considered to be moderate.

Use pattern mapping was conducted on 10/4 and 10/5.

1989:

The majority of the pasture (75%) was mapped at slight utilization level. Light use was detected in the SW portions of the pasture on the uplands adjacent to Kinney Creek. The NE corner of the pasture and the uplands in the Crows Nest area also received light use. The light use areas are either associated with a water source or livestock concentration area in the more accessible portions of the pasture. Moderate use levels were revealed along the western boundary with First Creek Basin just inside the fence line. This area is commonly used by livestock as a trailing route to water sources like Kelly Springs Reservoir. Moderate use was also detected in the uplands north of First Creek, and north of Snowstorm Creek along the more accessible uplands which are associated with various private meadows and developed spring. Heavy use was mapped along First Creek and adjacent uplands as well as the Crows Nest plateau above the First Creek drainage area. This area is readily accessible to livestock and in fairly close vicinity to water and meadows.

Use pattern mapping was conducted on 10/10.

f. Kelly Burn Pasture

Kelly Burn Pasture has generally been managed as one pasture, but is separated by fence into the upper and lower portion.

Key management area utilization was collected in 1986, 1987, 1988, 1989 and 1990 for the upper portion of Kelly Burn Pasture. The data is summarized on the following table:

Key Area	Species	Allowable Use Levels	Utilization 1986	1987	1988	1989	1990
KB 0401	SIHY	40	55	57	41	12	0
	FEID	40	65	67	68	30	15
	SYOR	40				14	
KB 0402	POTRT	40	no data collected				
KB 0403	TRIFOI	50	no data collected				

1986 data was collected on 09/18/86
1987 data was collected on 09/15/87
1988 data was collected on 10/12/88
1989 data was collected on 10/10/89
1990 data was collected on 10/24/90

Use Pattern Mapping was conducted on Kelly Burn Pastures in 1986, 1987, 1988 and 1989, and is summarized below:

1986:

Utilization on the streambank riparian areas of Kinney Creek, Kelly Creek, Winter's Creek and Pole Creek was heavy. Meadows, springs and associated riparian were also heavily used. The Snowstorm basin and Snowstorm Creek were used moderately. The balance of upland areas were lightly used or not checked.

The date of use pattern mapping was not recorded.

1987:

The Upper Kelly, Snowstorm Creek, Winter's Creek and Pole Creek drainages were used heavy. Other springs, meadows and riparian areas were also used heavily. Snowstorm mountain and the southeast corner of the pasture were used lightly. The balance of Upper Kelly was used moderately.

The upper (eastern) end of the field was used moderately. Most of the springs and associated riparian/meadows were grazed heavy. The balance of the upland range areas in the central and western portions of the pasture were used slight/light.

Use pattern mapping was conducted on 9/16 and 9/29.

1988:

Lower Kelly

The primary source of water in the pasture was Kelly Creek. Use along the creek (private) was moderate and heavy on the floodplain. The uplands above the floodplain had light to moderate use. Following a fenceline road which parallel the Kinney Field, use was revealed to be slight to light.

Upper Kelly

Severe use was found along Snowstorm Creek, the springs in the Snowstorm Mountain drainage basin and along Kinney Creek and associated springs. Heavy use was found along Winters Creek with an "undeveloped" spring at the junction of Winters Creek and First Creek roads receiving severe use. The majority of the use in the pasture was moderate to heavy in the Snowstorm Mountain drainage basin. Mid-slopes received moderate use while heavy use occurred in the valleys and drainage. Moderate to heavy use was also found in the Snowstorm Creek and Winter Ridge roads area. Slight to light use occurred in the uplands above Kinney and Winters Creek.

Use pattern mapping was conducted on 10/5-6 and 10/11-12.

1989:

Upper Kelly

The majority of the pasture was mapped at slight utilization levels. Light use levels were mapped in the SW portion of the pasture which are uplands associated adjacent to water sources or accessible uplands or both. Light use levels were also detected along Winters Creek and the adjacent uplands. Moderate use levels were mapped in the SW corner of the pasture associated with two developed private springs and the uplands adjacent to Snowstorm Creek. Heavy use was detected along Snowstorm Creek and three small areas which are salting areas or near troughs. The two springs in the SW corner of the pasture also displayed heavy use.

Lower Kelly

The vast majority of the pasture (95%) was mapped at slight utilization levels. Light use levels were mapped along two major drainages and on the uplands above Kelly Creek. Moderate use was detected at the mouth of these drainages which are very accessible to livestock and on the uplands above Kelly Creek. Heavy use was mapped on the floodplain adjacent to Kelly Creek. Kelly Creek (private) itself was mapped at slight utilization levels, substantial regrowth was evident.

Use pattern mapping was conducted on 10/10-12.

g. Rabbit Pasture

Key management area utilization was collected in 1987, 1988, 1989 and 1990 for Rabbit Pasture. The data is summarized on the following table:

		Allowable	Utilization			
Key Area	Species	Use Levels	1987	1988	1989	1990
RF 0801	SIHY	40	10	1	14	12
RF 0802	ELCI	50	14	2		

1986 data was collected on 03/04/87
1987 data was collected on 04/05/88
1988 data was collected on 03/14/89
1989 data was collected on 01/30/90

Use Pattern Mapping was conducted on Rabbit Pasture was collected in 1988 and 1990, and is summarized below:

1988:

No obvious sign of livestock use was found in this field.

Use pattern mapping was conducted 4/88.
1990:

The majority of the pasture was mapped at slight utilization levels. Light use was mapped adjacent to he Bullhead Seeding in the northern portion of the pasture and at Key Area #0802. Moderate use was mapped on the remaining pasture. The moderate use was detected in the NE and SW portions of the pasture. Heavy use was observed to have occurred along Kelly

Creek (Primarily on ELCI2) south of where Rabbit and Kelly Creeks verge. This area is very accessible to livestock.

The SE portion of the pasture has been burned in the past and is dominated by annual vegetation. There was indication of some livestock use in this area, however it is extremely difficult to determine utilization on the present annual forage base. The surrounding unburned native vegetation exhibited very low production and low densities of perennial forage species (e.g. squirreltail).

The NW portion of the pasture was not mapped due to excessive snow cover. The area just south of there was heavily disturbed by mining activity and was not mapped.

Use pattern mapping was conducted 1/30.

h. Bullhead Seeding

Key management area utilization was collected in 1983, 1984 and 1986, for Rabbit Pasture. The data is summarized on the following table:

Key Area	Species	Allowable Use Levels	1983	1984	1986
BS 0501	AGCR	50	17	30	49* 64**
BS 0502	SIHY	40	15	8	39
BS 0503	AGCR	50	22	40	42* 26**

1983 data was collected on 10/18/83
1984 data was collected on 06/06/84 and 08/02/84
1986 data was collected on 05/08/86* and 03/04/87**

Use Pattern Mapping on Bullhead Seeding was collected in 1987 and 1989, and is summarized below:

1987:

Approximately 60% of this field received heavy use and the other 40% received moderate use with a small area of light use in the northeast corner.

1989:

Use pattern mapping was conducted on 4/11/88.

1989:

The seeding itself is heavily encroached with big sagebrush. Only the public sections are seeded. The private sections, representing about 40% of the delineated area is native range. In the seeded area, crested wheatgrass is clumped in small pockets with large areas between clumps having little or no observed seeded plants. Even the areas with seeded plants have a low density. There is very little regrowth evident to the observers on this date, the plants exhibited poor vigor. Many of the plants were dead or dying. Utilization levels on the seeded plants were uniformly heavy to severe.

Due to the proximity of the seeding to the Kelly Creek Ranch it appears that the permittee uses the seeding as a holding field for spring and winter turnout.

Use pattern mapping was conducted on 10/31.

4. Trend

Trend Data
Quadrat Frequency

PASTURE	KEY AREA	KEY SPECIES	1984	1985	1986	1990
Dry Hill	201	SIHY	44	72	67.5	
		POSE	1	0	1	
		ATCO	33	37	37.5	
	202	SIHY	58	85	80	
		STTH2	27	36	40.5	
		POSE	88	98.5	98	
	203	SIHY	42	67.5	71	
		POSE	97	100	99.5	
		STTH2	8	13.5	12	
	204	ORHY	16.5	18		
		SIHY	64.5	64.5		
First Creek	301	POSE			73.5	99
		ELCI			15.5	1.5
		AGSP			14.5	4
	302	AGSP			42.5	37.5
		POSE			94.5	100
		ELCI			1.5	1
Kelly Burn	401	POSE		81	92.5	
		SIHY		69.5	69	
		FEID		10.5	14	
Kinney	601	POSE		24	76.5	
		FEID		28	31	
		SIHY		62	63	
Rabbit	801	SIHY		45	52	
	802	SIHY		10	30	
		ELCI		29.5	26	
Snowstorm	901	POSE			93	
		SIHY			61	
		AGSP			17	

5. 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 918 AUMs were available in 1978 for livestock use for the Bullhead allotment in Humboldt County.

b) The Elko Resource Area RMP/EIS indicated that 4,116 AUMs were available in 1984 for livestock use in the Bullhead 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	[2] Fair Condition	[3] Poor Condition
0 acres	25,189 acres (28%)	64,568 acres (72%)

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

6. Ecological Site Inventory

In 1987 and 1988 an Ecological Site Inventory was conducted on the allotment. The following is a summary of the Ecological Status in the Bullhead allotment.

Bullhead Allotment (Humboldt County)

PNC	Late Seral	Mid Seral	Early Seral
0	19,901 acres (18.8%)	3,610 acres (79.2%)	2,118 acres (2.0%)

Bullhead Allotment (Elko County)

PNC	Late Seral	Mid Seral	Early Seral
0	8,277 acres (16%)	43,892 acres (83%)	510 acres (1%)

7. Wildlife Habitat Inventory

a) Priority Species:Mule deer, sage grouse, trout, pronghorn, bighorn sheep, Lahonton cutthroat trout (threatened species).

b) Other Game Species: Chukar, Hungarian partridge and California Quail.

c) Special habitat features

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

2) Riparian and meadow habitat - 688 acres total in the allotment. Since pastures have now been created, the breakdown by pasture is as follows: Kinney - 72 acres; Kelly Burn - 38 acres; First Creek - 63 acres, mostly along the S. Fork Little Humboldt River; Snowstorm Flat - 361 acres including 153 acres along the S. Fork; Castle Ridge - 1 acres.

Aspen - 245 acres total, with 35 acres in Kinney, 196 acres in Kelly Burn, and 14 acres in Snowstorm Flat.

Mountain browse - Snowberry, serviceberry, and currant are identified in the vegetative composition at the higher elevations.

3) The Special Habitat Inventory recorded the following in 1978:

Cattle use on springs and associated riparian habitat was generally moderate except for the Snowstorm Mountain area, where the average use was heavy. Most wet areas were trampled and punched to some degree by livestock. One meadow area was rated in poor to fair condition and was receiving heavy to severe cattle use. A fairly large portion of the summer use area had burned and subsequently rested from livestock use, resulting in profuse suckering of most aspen stands in this area. These aspen stands were considered to be in good condition. Other aspen stands, generally unburned and/or isolated ones, had received moderate to heavy use on reproduction and understory vegetation.

Use on the South Fork Little Humboldt River was moderate to heavy, and wild horses were considered to also be impacting the stream. Cattle use on First Creek around and on the private lands was heavy. Kelly Creek was receiving moderate use by livestock and contained cutbanks 10-15 feet wide in places. Pole Creek had fair to good cover on the stream.

d. Habitat Evaluation

In the absence of big game habitat condition and trend data, a habitat evaluation has not been completed for the Bullhead Allotment. Meadow and aspen utilization studies have been in place since 1985 and 1986 in Kinney, Kelly, and Snowstorm Flat Pastures, however, data has not been evaluated from the study sites since the initial establishment. Meadow, riparian, and aspen sites provide essential habitat for deer during parturition and young rearing by providing quality cover and forage. Meadow and riparian areas are also essential to Sage Grouse during brood rearing, again by providing quality cover and forage values. The 1985 and 1986 findings on meadows and aspen, verified the observations by personnel, during Use Pattern Mapping, that meadow, riparian and aspen areas were receiving heavy use by livestock which were grazing well into the late summer months. From 1985/86 to 1992, the grazing license remained essentially unchanged aside from a self imposed reduction in the period of use from a September 30 off date to a September 19 off date in 1991, and further reduced to August 30 off date in 1992. These new off dates are still within the traditional hot season, and would have amounted to only minimal relief for meadow, riparian, and aspen sites. It is therefore not unreasonable to assume that conditions have remained essentially the same on meadow, riparian, and aspen sites since 1985. BLM Manual 6630 monitoring procedures will be used to evaluate condition and trend of big game habitat in the Bullhead Allotment before the next evaluation period.

8. Riparian/Fisheries Habitat

a. Description

The headwaters of the South Fork of the Little Humboldt River (SFLHR) originate on the north slope of the Snowstorm Mountains at about 7,000 feet. Several streams are

tributary to the South Fork. Those within the Bullhead Allotment are First Creek, Snowstorm Creek, Winters Creek, and Pole Creek. Kelly and Kenny Creeks are tributary to the mainstem Humboldt River. There are many smaller ephemeral drainages that flow into the South Fork which have potential to support riparian habitat.

The South Fork flows northerly then westerly for about 21 miles (within the Bullhead Allotment) before entering Chimney Reservoir. 11.5 miles of the South Fork of the Little Humboldt River flow through public land and have been fenced for protection against livestock grazing and horse use. The fence was completed in 1985 and later modified in 1989.

The South Fork is slightly to moderately alkaline in nature with an average pH of 8.0 (BLM water quality inventory, 1979 and 1983; NDOW stream survey, 1988). Flows ranged from 0.48 cubic feet per second (CFS) (NDOW 1988 stream survey) to about 750 CFS during spring runoff periods.
Lahontan cutthroat trout (LCT) (Oncorhynchus clarki henshawi), federally listed as a threatened species, reside in the South Fork Little Humboldt River within the Bullhead Allotment. These are remnant populations, genetically pure and native to the Humboldt system. A 1988 NDOW stream survey report found that cutthroat trout were the only salmonid species found in the enclosed wilderness study area. The cutthroat averaged 113 fish per mile for an estimated population of 424 and were distributed between Snowstorm and Pole Creeks. No cutthroat were found below the confluence of Snowstorm Creek (NDOW 1988). The South Fork once produced large cutthroat from 12 - 17 inches prior to and through 1958 (NDOW). Potential LCT habitat within the allotment includes the 11.5 miles of BLM administered lands along the South Fork extending from Pole Creek to Rodear Flat, and on Pole Creek (1.5 miles). Other fish species reported to exist in this system are the Lahontan redside shiner, speckled dace, and the Lahontan mountain sucker.

There are no records to indicate that the SFLHR was ever planted with hatchery-reared trout. The stream was closed to fishing during 1961 and 1962 to protect the fishery resource.

Stream Surveys

First Creek begins its flow in the Snowstorm Mountains at about 6800 feet and flows northeasterly for about six miles. The headwaters and the upper three miles flow through privately owned lands. BLM stream surveys on private lands and visual observations in July, 1992 (Table 4, page 45) indicated poor habitat conditions. The lower three miles are BLM administered public land and flow through a steep gorge. First Creek is ephemeral and is dry during moderately dry years. There are undocumented reports that Lahontan cutthroat trout use the lower parts of the stream for spawning during the spring.

Snowstorm Creek, similar in nature to First Creek, is approximately eight miles in length and begins its flow at the 7200 foot level. The headwaters and the upper one half of the stream flow through private land with only the gorge area transversing public land. There is no habitat condition survey on Snowstorm Creek, but personal observations in 1991 and 1992 by the District Fish Biologist indicate little difference in habitat condition and Lahontan cutthroat trout occurrence from First Creek.

Winters Creek, an ephemeral stream, originates at the 7000 foot level on the Snowstorm Mountains and flows easterly to the South Fork Little Humboldt River. Approximately 2.5 miles of this four mile long stream flow through private land. The public portion of the stream flows through a steep and spectacular gorge. The condition of the riparian habitat ranges from poor to excellent, depending on livestock accessibility. Poor habitat conditions exist throughout most of the upper watershed (private). Much of this area has little riparian vegetation resulting in the encroachment of upland species to the streambanks. Better habitat conditions prevail where the canyon becomes steeper and narrower. This area (mostly public) consists of dense stands of aspen, willow, and rose making it impassable to livestock.

Previous undocumented reports and personal communications indicate that Pole Creek supports a population of Lahontan cutthroat trout. In July of 1992, LCT were observed in the lower reaches of Pole Creek by the P-D Fishery Biologist. This was later confirmed by an NDOW stream survey crew. This small perennial stream has midsummer flows less than one CFS. Pole Creek begins its flow at 7800 feet on the east side of the Snowstorms and flows approximately 5 miles to the South Fork of the Little Humboldt River. BLM stream surveys (Table 4, page 44) show poor stream conditions

throughout the private and public portions of Pole Creek. Visual observations in July of 1992 by the P-D Fishery Biologist indicated that conditions on Pole Creek within the Bullhead Allotment were within acceptable limits. Lack of quality pools, bank cover and poor bank stability are the primary limiting factors leading to this condition. The stream almost entirely flows through private land, with the last mile being on BLM administered public land.

The Bureau's standard stream habitat survey documents broad scale habitat deterioration throughout most of First and Pole Creeks. Visual observations indicate similar conditions on Winters and Snowstorm Creeks as well. Subsequent monitoring has documented the condition trend to be static or downward on these South Fork tributaries. Poor riparian conditions appear to be mainly on private lands throughout the Winters, Snowstorm, and First Creek drainages. These conditions directly influence stream habitat downstream on BLM administered public lands. The primary cause appears to be concentrated livestock grazing and wild horses.

Kelly Creek originates on the west side of the Snowstorm mountains and flows in a westerly direction. Nearly all of Kelly Creek within the Bullhead Allotment lies in private lands with the exception of a one mile reach near the headwaters. A 1987 BLM stream survey showed fair conditions. Rainbow and brook trout appear to be the only salmonid species in this system.

Kenny Creek originates on the west side of the Snowstorm Mountains near Kelly Creek. No BLM stream surveys have been conducted as this stream lies nearly entirely on private lands. There apparently are no Lahontan cutthroat trout in this system.

The potential for recreational use of the Bullhead Allotment is very high. Improvement of fish and wildlife habitat will be translated to increased hunting and fishing opportunities and other outdoor recreation.

b. STREAM HABITAT CONDITIONS/SURVEYS

Stream survey data has been collected on the SFLHR since 1976 utilizing the methodology found in the BLM 6671 Stream Survey Manual. Stream habitat conditions on the South Fork have ranged from poor to good. Table 4 shows that the Habitat Condition Index (HCI) from 1976 and 1990 has ranged from a low of 38% (poor) to a high of 60% (good). The location of these stations (S-1, S-2, S-3, S-4) are shown in

figures 1 through 3, which were included in December 9, 1992 draft evaluation. Future monitoring will occur every other year and will employ stream survey methodologies, described in BLM manual handbook 6720-1 Aquatic Habitat Inventory and Monitoring and BLM manual 6671 Stream Surveys. 1991 field observations by the Paradise-Denio Fishery Biologist indicate that conditions have improved above 60% as evidenced by improved width to depth ratio and increased bank cover and bank stability. Continued annual maintenance of the South Fork fence exclosure and future wild horse gatherings should continue to improve riparian stream conditions.

A comparison of changes in percent habitat optimum between 1976 and 1990 show a gradual improvement in habitat conditions on the South Fork of the Little Humboldt River (SFLHR) over the past 10 years (Table 4, page 43). Initial habitat ratings of 63 and 52 found in 1976 and 1977 declined further to 38 percent by 1983. The declines in habitat condition in 1983 was most likely attributed to the 1983 high water event, livestock grazing, and wild horses. These conditions prompted construction of the South Fork Exclosure Fence in 1985. Riparian habitat conditions began to respond favorably with 1990 showing a rating of 59% of optimum, an increase of 21% in seven years.

In 1990, a cooperative agreement was established with Cordex Exploration Company whereby Cordex agreed to accept annual fence maintenance responsibilities for the exclosure fence. Although stream surveys have not been conducted on the SFLHR since 1990, personal observations by the BLM Fishery Biologist in October of 1991 indicated continuing improvements being made with regard to stream habitat conditions. Although this area has been experiencing a sixth consecutive year of drought, establishment of woody riparian vegetation along with a significant narrowing of the stream channel and improved width to depth ratio are evidence of this improvement.

FIRST CREEK

As mentioned previously, stream habitat condition surveys conducted on First Creek from 1976 - 1988 were conducted on private land. The lower three miles of BLM administered lands were not surveyed probably due to dense stands of vegetation and poor access. This reach flows through a steep, narrow gorge which acts as a natural exclosure.

A comparison of changes in percent habitat optimum between 1976 and 1988 show declines in habitat conditions on First Creek on private land (Table 4, page 45). Stream habitat condition ratings of fair recorded in 1976 declined to poor by 1988 when the private land portion of the stream was considered. This area was briefly visited in 1991 and 1992 by the Paradise-Denio Fishery Biologist where stream habitat still appeared in poor condition due to heavy concentrations of livestock in riparian areas during the hot season combined with the sixth consecutive year of drought. Major limiting factors on the private land portion include poor pool-riffle ratio, an absence of quality pools and poor bank cover and stability. Heavy sedimentation of the stream bottom continues to be a limiting factor throughout the stream's length and is most likely washing downstream onto the public section.

OTHER CONSIDERATIONS

Because it is a high gradient stream, First Creek is especially prone to erosion problems in the absence of a healthy, vigorous riparian zone. Severe erosion in the form of downcutting, accelerated transport and deposition of gravel and fine sediments, and mass wasting of streambanks are occurring throughout the upper First Creek system. Localized areas of cutting have greatly increased since 1976 as a result of a deteriorating riparian zone combined with the effects of record flooding in 1983 and 1984. A significant decline in woody riparian vegetation has also compounded erosion problems. Heavy livestock use on emergent willows is preventing regeneration which may eventually lead to a total loss of willow. Bank trampling and overuse of riparian forage by livestock are clearly the cause of poor habitat conditions.

SNOWSTORM CREEK

Snowstorm Creek, similar in nature to First Creek, has been surveyed only once in 1976. Results of the 1976 survey showed that the habitat condition rating was 57% of optimum. Personal observations by the Paradise-Denio Fishery Biologist in October of 1991 and 1992 showed degraded conditions along the privately owned reaches of Snowstorm Creek. The lower half of the stream (BLM) is in a deep gorge which offers natural protection from livestock grazing and wild horse use.

WINTERS CREEK

No stream surveys have been conducted on Winters Creek by the BLM or NDOW. Visual observations by the Paradise-Denio Fishery Biologist in October of 1991 and 1992 showed that the condition of the riparian habitat ranged from poor to good depending on livestock accessibility. Poor riparian habitat conditions exist throughout most of the privately owned upper watershed. Better stream habitat conditions prevailed where the canyon became steeper and narrower and prevented livestock access.

POLE CREEK

Pole Creek was first surveyed by the BLM in 1976, then resurveyed in 1982, 1983, 1985, 1987, 1988, and 1990. Data on habitat parameters was collected during all surveys, while undocumented reports and personal communications indicate that Pole Creek may still support a population of Lahontan cutthroat trout. In July of 1992, observations of LCT in Pole Creek were confirmed by the P-D Fishery Biologist and an NDOW Stream Survey Crew.

Stream Habitat Conditions

Table 4 shows that habitat conditions on Pole Creek have remained poor since the 1976 survey. Although only one mile of Pole Creek is on BLM, both the BLM and privately owned sections provide access to livestock. Major limiting factors on both private and public land portions include a poor pool-riffle ratio, absence of quality pools and poor bank cover and stability. Heavy sedimentation of the stream bottom continues to be limiting throughout the stream's length.

Because it is a high gradient stream, Pole Creek is especially prone to erosion problems in the absence of a healthy, vigorous riparian zone. Localized areas of cutting have greatly increased since 1976 as a result of a deteriorating riparian zone combined with the effects of record flooding in 1983 and 1984. Bank damage in the form of trampling and overuse of riparian forage by livestock are important causes of poor habitat conditions.

A 1992 stream survey by NDOW (unsummarized) and visual observations by the P-D Fishery Biologist indicated that habitat conditions along Pole Creek were within acceptable limits (HCI$\geq$60).

A review of actual use records for First, Winters, Snowstorm, and Pole Creeks shows grazing has been typically summer long in these areas. Woody riparian vegetation, critical for stabilizing degrading streams, has been heavily browsed while regeneration is lacking. Actual use records show grazing has occurred during the hot season most years.

Bullhead Stream Survey Data

Stream/Riparian Habitat Condition Classification (% of Habitat Optimum)

70-100% - Excellent
60-69% - Good
50-59% - Fair
0-49% - Poor

Table 4. South Fork, Little Humboldt River Stream Survey Data

South Fork, Little Humboldt River, Little Humboldt Allotment (Elko BLM)

Date of Survey	Survey Agency	Percent of Optimum	Percent Sedimentation	Bank Cover (% Opt.)	Bank Stability (% Opt.)	Water Temperature (°F)
(Objective Levels)		≥60	≤10	≥60	≥60	≤70
7/21/77	BLM	52	54	63	61	--
South Fork, Little Humboldt River, Snowstorm Flat Pasture, Bullhead Allotment 5-3, 5-4						
9/27/76	BLM	36	13	31	38	68
8/17/83	BLM	39	41	35	20	71
9/24/85	BLM	41	32	25	39	
9/10/86	BLM	49	38	31	28	
8/13/87	BLM	28	57	44	34	68
10/11/90	BLM	63	45	63	64	
South Fork, Little Humboldt River, Castle Ridge Pasture, Bullhead Allotment 5-1, 5-2						
9/28/76	BLM	62	52	56	63	68
8/17/83	BLM	43	21	38	46	71
8/12/85	BLM	42	19	25	39	
9/10/86	BLM	45	41	27	35	
8/13/87	BLM	53	21	30	40	68
9/20/88	NDOW	60	42	72	67	52
10/11/90	BLM	41	31	30	71	

Bullhead Allotment May 20, 1994

South Fork, Little Humboldt River, all stations

Date of Survey	Survey Agency	Percent of Optimum	Percent Sedimentation	Bank Cover (% Opt.)	Bank Stability (% Opt.)	Water Temperature (°F)
(Objective Levels)		≥60	≤10	≥60	≥60	≤70
9/28/76	BLM	63	45	48	54	68
7/21/77	BLM	52	54	63	61	
1982	BLM	47	36	34	25	
8/13/83	BLM	38	18	38	39	71
8/12/85	BLM	54	23	25	39	
9/10/86	BLM	45	40	27	34	
8/13/87	BLM	48	36	34	38	68
9/20/88	NDOW	60	42	72	67	52
10/11/90	BLM	59	33	43	68	

Bullhead Stream Survey Data

Pole Creek

Date of Survey	Survey Agency	Percent of Optimum	Percent Sedimentation	Bank Cover (% Opt.)	Bank Stability (% Opt.)	Water Temperature (°F)
(Objective Levels)		≥60	≤10	≥60	≥60	≤70
1976	BLM	43	17	58	73	64
1982	BLM	27	4	42	39	
1983	BLM	36	0	34	31	
1985	BLM	29	0	28	38	
1987	BLM	32	4	44	34	
1988	BLM	32	49	28	34	
1990	BLM	32	21	44	50	
1992	NDOW	56		73	77	
All stations - Snowstorm Flat Pasture						
Snowstorm Creek - Snowstorm Flat Pasture						
9/29/76		57	--	77	73	47

First Creek Stream Survey Data

Date of Survey	Survey Agency	Percent of Optimum	Percent Sedimentation	Bank Cover (% Opt.)	Bank Stability (% Opt.)	Water Temperature (°F)
(Objective Levels)		≥60	≤10	≥60	≥60	≤70
First Creek, Snowstorm Flat Field, Bullhead Allotment						
8/29/76	BLM	57	24	77	73	--
8/16/83	BLM	48	7	37	61	--
8/12/85	BLM	49	44	28	40	--

Bullhead Allotment May 20, 1994

First Creek (all stations)

Date of Survey	Survey Agency	Percent of Optimum	Percent Sedimentation	Bank Cover (% Opt.)	Bank Stability (% Opt.)	Water Temperature (°F)
(Objective Levels)		≥60	≤10	≥60	≥60	≤70
8/29/76	BLM	57	24	77	73	--
1982	BLM	Dry	42	41		
8/16/83	BLM	48	7	37	61	--
8/12/85	BLM	49	44	28	40	--
8/14/87	BLM	35	53	27	50	
*9/12/88	BLM	33	86	25	38	--

* 2 of 3 stations were dry.

All stations in Snowstorm Flat Field

* First Creek Stations - pvt.

Kelly Creek

1977	BLM	59			
1987	BLM	57	14	66	72

9. Wild Horse and Burro Habitat

Utilization studies data indicates that the utilization objectives for wild horse habitat on the uplands have consistently been met throughout the HMA. Over the period UPM has been conducted and heavy use has been associated with waters.

Wild horses use the area yearlong; however, there is limited use of the summer pastures due to fences. Seasonal distribution data shows horses concentrated in First Creek and/or Castle Ridge pastures near the South Fork of the Little Humboldt River. There is usually a small herd in the Dry Hills.

A complete (4 seasons) seasonal distribution has not been completed.

There are numerous water sources within the HMA. However, perennial and intermittent springs and seeps are concentrated in the higher elevations, in the summer pastures. Eleven stock reservoirs and two wells intermittently produce water. Water gaps in the South Fork of the Little Humboldt River at Rodear Flat and Castle Place (private) provide dependable year-round water.

There is no detailed data at present regarding migration routes, or movement in response to climatic conditions such as the present drought. It is believed that historically horses have used the higher elevations as summer range. Division fences constructed in the allotment since the adoption of the CRMP agreement in 1982 have restricted horse movements.

10. Water Quality Sampling

a. South Fork of the Little Humboldt

Some water quality parameters were tested in 1976 as part of the stream survey. A more extensive water quality lab analysis was done in 1983 and at three locations in August, 1977. Additional lab analysis was done at two locations in May, July and September, 1979.

Stream temperatures were quite variable ranging from a low of 46°F in May, 1983 to a high of 79°F in July, 1979. The pH ranged from 6.89 to 9.3 and total dissolved solids from 45 to 570 mg/l. Phosphate ranged from 0.01 to 0.60 mg/l. Fecal coliform was only above detectable levels once, when it was 90/100 ml. in September, 1979. Dissolved oxygen was only tested in 1976 when it was 10 mg/l.

b. Creeks

Pole Creek was sampled in May, July and September of 1979 and May, July and September of 1982 and the results analyzed by a water quality lab. Four of the parameters listed on Table 5 were also tested in 1976 during the stream survey.

Water quality samples were collected and analyzed at two locations on First Creek in May, July and September, 1982 and at one location during the same months of 1979. In addition, four of the parameters listed on Table 5 were also measured during the 1976 stream survey.

No water quality data was collected on Snowstorm, Winters, Kelly and Kinney Creeks.

Temperatures on Pole Creek ranged from 48 to 66°F and pH from 6.7 to 8.25. Turbidity was often high with a maximum reading of 30 TDS in May, 1982. TDS ranged from 62 to 150 mg/l and alkalinity from 31 to 73 mg/l. Phosphates and nitrates ranged from nondetectable to 0.14 mg/l and 0.73 mg/l, respectively. Fecal coliform was 10/100 ml or less for all but the September, 1982 sample which was 300/100ml. Dissolved oxygen was 9 mg/l the only time it was measured.

Most of the riparian area along Pole Creek is private land. The creek was sampled on public land and it is difficult to determine whether the water quality problems are coming from private or public lands without a second sampling site.

Temperatures on First Creek ranged from 52 to 73°F and pH from 7.0 to 8.5. Total dissolved solids were low ranging from 14 to 175 mg/l and turbidity was high in the spring when it got up to 17 TDS. Nitrates ranged up to 1.2 mg/l and phosphates up to 0.20 mg/l. Fecal coliform levels were less than 100/100 ml all nine times that they were tested. Alkalinity ranged from 37 to 72 mg/l except for one sample that was 271 mg/l. Dissolved oxygen was not tested.

Bullhead Allotment May 20, 1994

Table 5 South Fork of the Little Humboldt River

Date	Dissolved Oxygen Mg/L	Total Alkalinity Mg/L	Hardness Mg/L	Turbidity JTU's	pH	Water Temp. °F	CO_2 Mg/L	Conductivity	Sulfate	Total Coliform	Fecal Coliform
9-76[1]	10	90	60	8	6.89	60	4				
5-79[2]	--	--	--	20 45	8.55 8.0	63 50	--	---	13 13	18 400	0 0
7-79[2]	--	--	--	9 2	8.2 7.9	79 63	--	---	6 10	0 0	0 0
1982[2]				10.9	7.4						
6-84[3]		48			7.6					5260	10
8-84[3]										4208	22
9-88[4]		77		Clear	8.	48		237	<50		
82[2] Snowstorm Creek				10.5	7.5	70					
82[2] First Creek					8.4	8.0	72				
82[2] Pole Creek				16.1	6.9	67					

1 BLM Stream Survey - 1976
2 Chinook Research Laboratories, Inc 1979
3 BLM 1984 Annual Water Quality Analysis Report for Nevada
4 NDOW 1988 Stream Survey Report

11. Minerals Development

a. As of this date (12/01/93) Hanson Resources (Gold Fields Operating Company - Chimney Creek's (GFOC-CC) parent company has sold GFOC-CC to Santa Fe Pacific Gold Corp. Rabbit Creek and Chimney Creek Mines are now operated under a consolidated management and are known as the Twin Creeks Mine. We do not yet have a consolidated Plan of Operations. The only immediate effect on grazing expected is the potential move of the south end of the operation's west boundary fence from the east side of the access road to the west side. This will remove an additional small amount of forage from availability for grazing, but will also eliminate the exposure of cattle to the traffic along about three miles of that road.

Over the next three to five years, the increased economy of scale, changes in mining plans, and the possible development of the Section 30 ore body, may impact more public land. We are expecting expansion of the existing operation, but we no not know to what extent that expansion will involve lands outside the present operation boundaries. We project the potential removal from grazing of another 2000 acres of public land.

b. Exploration and development of what had been the Chimney Creek Mine, in the Dry Hills pasture, has impacted the range resources and affected management of livestock in the Rabbit and Dry Hills pastures and the Bullhead Seeding.

1) The fenced operating area with its associated roads, mining and milling facilities, pipelines, settling ponds, and heap leach pads has excluded approximately 6000 acres of rangeland from grazing with the loss of the associated forage estimated at 250 AUMs.

2) GFOC-CC has cooperated in the development of improved and increased livestock water sources and facilities by providing water via a pressurized line to an existing BLM pipeline and troughs, as well as several new sources which will improve distribution.

c. What had been Rabbit Creek Mining Inc. (RCMI, a subsidiary of Santa Fe Pacific Gold Corp.) has impacted the range resources and affected management of livestock in the Rabbit Pasture and the Bullhead Seeding by their exploration and development of the Rabbit Creek Mine, which is entirely on private land. Private grazing leases have been canceled on sections 19, 29, and 31 of T. 39 N., R. 43 E. About 2000 acres of private land have been fenced, affecting cattle movement and distribution. RCMI has provided some alternate livestock water sources, thereby improving distribution.

d. Santa Fe Pacific Gold has recently begun renewed exploration/development drilling in areas adjacent to the Twin Creeks operation. Exploration away from the mine has slowed, and is not expected to significantly impact range resources or livestock management.

V. Conclusions

Conclusions will be made on a pasture basis, based on whether or not the short term objectives are being met.

A. Short Term

1. Utilization of key plant species on wetland riparian habitats shall not exceed 50%.

2. Utilization of key streambank riparian plant species in riparian habitats shall not exceed 30% on the South Fork Little Humboldt River, Pole, First, Snowstorm and Winter's Creeks, and shall not exceed 50% on Kelly Creek.

3. Utilization of key upland plant species shall not exceed the Allowable Use Level (AUL) set forth in the Bullhead Monitoring Plan.

First Creek Pasture:

1. This objective has not been met. In 1985, 1987, and 1988 heavy use occurred by cattle and wild horses on wetland/riparian habitats. Ernie Spring and associated wetland habitats, Chimney Creek, and Twenty One Creek have had heavy use associated with them.

2. This objective has been met.

3. This objective has been consistently met throughout the evaluation period.

Dry Hills Pasture:

1. There are no wetland riparian habitats in this pasture.

2. There are no streambank riparian habitats in this pasture.

3. The upland objective has not been met. In 1984, 1987, and 1988 the allowable use levels were exceeded for ORHY and SIHY. The moderate and heavy use occurred by livestock.

Snowstorm Flat Pasture:

1. This objective has been met.

2. This objective has not been met due to heavy use by cattle and wild horses. In 1986, heavy use occurred on First, Snowstorm, and Pole Creeks. In 1988, heavy use occurred on Snowstorm and Pole Creeks.

3. For the years that data was collected (1986, 1988) one year the objective was met and the other year it was not. A high livestock stocking rate, wild horse numbers, and draughty conditions all contributed to the heavy use.

Kinney Pasture:

1. This objective has not been met on the wetland riparian habitats of Kelly Creek Spring and other springs and meadows in this pasture. The heavy use can be attributed to livestock, wild horses, and the drought.

2. This objective has been met.

3. The upland objective has not been met. Heavy use by cattle and wild horses has occurred in this pasture.

Upper Kelly Pasture:

1. This objective has not been met. In 1986 and 1987 heavy use by cattle occurred on meadows, springs and associated wetland habitats.

2. This objective has been met.

3. The upland objective has not been met three out of the five years that data was collected. The moderate and heavy use by livestock occurred on SIHY and FEID.

Lower Kelly Pasture:

1. This objective has not been met. In 1986 and 1987 heavy use by livestock along with draughty conditions attributed to the non attainment of this objective on meadows, springs and associated wetland habitats in this pasture.

2. This objective has been met.

3. No key areas are located in this pasture, but the UPMs throughout the evaluation period indicate that this objective is being met.

Bullhead Seeding:

1. There are no wetland riparian habitats in this pasture.

2. There are no streambank riparian habitats in this pasture.

3. The UPM of 1988 and 1989 showed heavy and severe use by cattle. This can be attributed to the proximity of the seeding to the Kelly Creek Ranch. The permittee used the seeding as a holding field for spring and winter turnout.

Rabbit Pasture:

1. This objective has been met.

2. This objective has been met.

3. This objective has been met.

B. Long Term

1. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 8,350 AUMs.

   Analysis of trend data indicates that overall progress is being made toward achieving the trend objective in Rabbit pasture. Trend is declining in First Creek pasture at KA #301 as indicated by a decrease in Agropyron spicatum and Elymus cinereus, and an increase in Poa secunda. A change can not be detected at this time in Dry Hills, Kelly Burn, and Kinney pastures and movement toward or away from the objective can not be assessed.

   Analysis of short term objective in relation to the upland habitat indicates that as a majority, the AUL objectives have been consistently met in all pastures except Kelly Burn and Kinney pastures.

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

   Production data is not available.

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 1,029 AUMs for mule deer, 101 AUMs for pronghorn, 190 AUMs for bighorn sheep.

a. Improve to and maintain 25,268 acres in Snowstorms DY-23,35,359 acres in Snowstorms DY-23 (Elko Co.), 8,256 acres in DY-23 (Crucial, Elko Co.), 1,130 acres in Snowstorms DS-2 and 6,522 acres in Snowstorms DS-2 (Elko Co.) in good to excellent mule deer habitat condition.

Data has not been collected to assess the condition and trend of mule deer summer and yearlong range, therefore, no conclusions can be drawn concerning the achievement of this objective.

b. Improve to and maintain 50,137 acres in Snowstorms PY (Elko Co.), 24,242 acres in Hot Springs PY-11 and 18,171 acres in Snowstorms PY-10 in fair to good pronghorn habitat condition.

Data has not been collected to assess the condition and trend of pronghorn yearlong habitat, therefore, no conclusions can be drawn concerning the achievement of this objective.

c. Improve to and maintain 12,023 acres in Snowstorms BY-11 and 48,403 acres in Snowstorms BY-11 (Elko Co.) in good to excellent bighorn sheep habitat condition.

Data has not been collected to assess the condition and trend of bighorn sheep yearlong habitat, therefore, no conclusions can be drawn concerning the achievement of this objective. The consistent achievement of the upland utilization objective for the First Creek Basin Pasture indicates that there are no significant conflicts between livestock and bighorn sheep on spring use areas. Winter use does not occur by livestock at this time in the First Creek Basin Pasture. It is reasonable to assume, that there are no significant conflicts with livestock and bighorn on winter ranges.

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

Baseline data is not 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 and riparian habitats where cattle and wild horse use has been heavy to severe.

5. Maintain and improve the free roaming behavior of wild horses by protecting and enhancing their home ranges.

   a. Manage, maintain and improve public rangeland conditions to provide an initial level of 600 AUMs of forage on a sustained yield basis for 50 wild horses.

      Utilization studies and UPM data indicate that progress is being made toward maintaining or achieving habitat objectives within the HMA.

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

      Access to water is not restricted, but water rights should be secured for continued use.

6. Improve to and maintain 245 acres of aspen habitat types in good condition.

   Baseline (ESI) and trend data has not been collected on Aspen habitat types to evaluate achievement of this objective.

7. Improve to and maintain 688 acres of riparian and meadow habitat types in good condition.

   Baseline (ESI) and trend data has not been collected on riparian and meadow habitat types to evaluate achievement of this objective. The levels of utilization shown by the UPM, show current management is not compatible with maintenance of good condition riparian and meadow habitat types.

8. Improve to or maintain the following steam habitat conditions on The South Fork Little Humboldt River, Pole, First, Snowstorm, Winters, Kelly and Kinney Creeks from 42% on South Fork Little Humboldt, 29% on Pole Creek, 46% on First Creek, unknown % on Snowstorm Creek, unknown % on Winters Creek, 57% on Kelly Creek and unknown % on Kinney Creek to an overall optimum of 60% or above.

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

   Baseline data indicates that this objective is not being consistently met on any of the above mentioned creeks, but progress is being made toward achievement of >60% HCI on some creeks. The UPMs developed, indicate moderate or

greater utilization levels on the creeks mentioned. The South Fork, within the exclosure, had a 59% overall optimum in 1990. Progress is being made toward the objective for this river.

First Creek has shown a decline in percent habitat optimum throughout the evaluation period. Snowstorm Creek has not been resurveyed since 1976, but visual observations by the P-D Fishery Biologist in 1991 and 1992 showed degraded conditions along several reaches. Winters Creek has not been surveyed. Visual observations on Winters Creek by the P-D Fishery Biologist in 1991 and 1992 showed that the condition of the riparian habitat ranged from poor to good depending on livestock accessibility. Poor conditions exist throughout most of the privately owned upper watershed. Stream habitat conditions improved where the channel became steeper and narrower. Habitat conditions on Pole Creek, once poor in 1976, have improved. A 1992 stream survey by NDOW and visual observations by the P-D Fishery Biologist indicated that habitat conditions along Pole Creek were within acceptable limits (HCI >60%). Kelly Creek was surveyed in 1987 with a percent optimum of 57% and no data has been collected since. Kinney Creek has not been surveyed.

9. Improve to or maintain the water quality of the South Fork of the Little Humboldt River to Class A Water Quality Standards and the following beneficial uses: livestock drinking water, cold water aquatic life, wading(water contact recreation) and wildlife propagation.

The objective is not being met. Stream temperature, pH, TDS and phosphate exceed state standards at least some of the time, stream temperatures were highest in 1979 at the lower sampling site. This would indicate that there is not enough streambank cover on the allotment. Temperatures rose an average of 46°F from the upper to lower stream sampling points in May, July and September, 1979. TDS also rose significantly from upper to lower sites in 1979.

Phosphate levels are highest at the lower site and are higher for the more recent samples. This indicates a downward trend in water quality on the allotment.

High pH is a water quality problem that was identified in the MFP. The pH was not tested again at the same site where it was so high in 1977 (9.3). It also rises between the upper and lower sampling sites.

b. Improve to and maintain the water quality of Pole, First, Snowstorm, Winters and Kelly Creeks to the state criteria set for the following beneficial uses: livestock drinking water, cold water aquatic life, wading (water contact recreation) and wildlife propagation. Kinney Creek's water quality should meet state criteria for livestock drinking water and wildlife propagation.

The objective is not entirely being met on Pole Creek. Turbidity exceeds the state criteria half the time for cold water aquatic life. The pH was sometimes too low for wildlife propagation and one fecal coliform test was too high for wading, although the minimum number of samples were not taken, the objective is being met for livestock drinking water.

The objective is not being met on First Creek for cold water aquatic life, because summer stream temperatures and spring turbidity are too high. One of the alkalinity values was extremely high which would make the water unsuitable for wildlife propagation. The high value was so out of scale with the others that it probably was a bad sample. Assuming that the alkalinity and dissolved oxygen is at acceptable levels, then the objective is being met for the other uses. Streambank cover is probably inadequate because stream temperatures and turbidity are often high.

It is not known if the objective is being met for Snowstorm, Winters, Kelly and Kinney Creeks since no data has been collected.

VI. Technical Recommendation

A. Water Rights

Water rights have not been secured on the public lands within the Bullhead Allotment to ensure that water will continue to be available to wild horses. Regardless of the management alternative selected, water rights for use by wild horses should be secured on the waters listed on Table 6, page 98. These water rights should include use by livestock and wildlife.

B. Water Developments

In order to assist in relieving the wetland/riparian habitats from the pressure they are receiving from present management, the development of alternative water sources is recommended. By developing water sources on the uplands, use made by livestock,

wild horses and wildlife will be expanded. The better distribution of herbivores on the vegetative resource on the uplands, will allow for the much needed improvement of the riparian areas. With the development of water sources on the allotment, the vegetative resource will sustain a more uniform utilization pattern.

There are numerous locations for small stock reservoirs throughout the allotment. Undeveloped springs and seeps also exist. The recommendation is to construct reservoirs and to develop the springs and seeps. Fencing off the spring headboxes and diverting the water into a trough via pipeline is recommended.

C. Appropriate Management Level

The appropriate management level (AML) is the number of horses which can occupy an area in a thriving natural ecological balance with other resource values including livestock and wildlife.

The following are alternative methods for determining the AML on the Bullhead Allotment.

1. The AML for the Bullhead Allotment is affected by the constraints imposed by the Strategic Plan for the management of Wild Horses and Burros on Public Lands (Strategic Plan), signed June 4, 1992. In Nevada, the Plan calls for attainment of AML within 6 years, by 2 gathers at 3 year intervals following an initial gather. Only horses 5 years of age and younger will be shipped for adoption. All older animals must be returned to the range provided for.

   Population modeling shows that the general trend with an initial removal of the 0-5 year age class and subsequent removal of younger age class is for the population to continue to decrease following the last removal (due to the removal of the most productive age class) until it bottoms out and starts to slowly climb again. A second total removal of the 0-5 year old age class, 6 years after the first, will result in the virtual extinction of the population.

   The following alternatives are proposed for the Bullhead Allotment/Snowstorm HMA AML.

   a) The proposed AML is 108 adult horses. Maintain the herd within -35% of AML (70-108 horses).

      This AML can be reached after one gather.

b) The proposed AML is existing numbers of 161 adult horses. Maintain the herd within -35% of AML (105-161 horses).

c) An AML of 50 horses, as per the CRMP, will not be considered, for the following reason. Given current numbers, a gather of 0-5 year olds in FY 1994 and 0-3 year olds in 1997 will cause population to drop to approximately 40-45 animals before rebounding. This number, however, is below the base herbivore schedule established in the Land Use Plan. The base number was established to minimize the potential of loss due to accidents, disease, or natural catastrophe such as drought or severe winters.

Due to the relatively large amount of private land within the summer pastures, (Kinney - 5325 acres, Kelly Burn - 1914 acres, Snowstorm - 1856 acres) particularly Kinney Pasture, it is recommended that wild horses be maintained primarily within Castle Ridge, First Creek and Dry Hills pastures. During removals, the first priority should be to gather horses from the summer pastures. Notwithstanding, the HMA boundary shall remain as is and will not be adjusted to exclude Kinney, Kelly Burn and Snowstorm Flat pastures.

D. Livestock Grazing System

All of the grazing system alternatives would include the following terms and conditions:

Salt and/or mineral blocks shall not be placed within one quarter (1/4) mile of springs, meadows, streams, riparian habitats or aspen stands.

The permittee is required to perform normal maintenance on the range improvements for which he has maintenance responsibility as per his signed cooperative agreements prior to turnout.

The permittees actual use report, by pasture, is due 15 days after the end of the authorized grazing period.

Any livestock owned or controlled by the permittee must be eartagged. The permittee must supply the BLM with a list of private ear tags and numbers. Tags will be a different color for each person's cattle that is being pastured. This list must be submitted prior to turnout along with livestock use agreements.

For Desired Stocking Rates, see attached appendix, page 106.

1. Alternative 1 - Continue Current Season Of Use

Under this alternative, cattle grazing would continue during the current season of use, but at a lower stocking rate so allotment specific objectives can be met. The stocking rate will range from 3,800 AUMs to 4,900 AUMs depending on the year, on which pastures would be used, and on the wild horse distribution.

Rationale:

This grazing system includes spring (04/01 to 06/30), summer (07/01 to 09/30) and winter (11/01 to 03/31) grazing. Spring grazing would be a two pasture rest rotation system. Summer grazing would be a three pasture rest rotation system which would enhance the opportunity for seedling establishment and restore plant vigor. The summer use period, under this alternative, may adversely impact the riparian habitats in the summer pastures. During the hot season, livestock tend to concentrate on the riparian areas and make less use on the surrounding uplands. Several streams in the summer pastures are tributaries to the South Fork. Lahontan cutthroat trout, federally listed as a threatened species, reside in the South Fork. Thus, the management on these tributaries directly affects the South Fork. Kinney and Lower Kelly Pastures are treated as one pasture under the three pasture rest rotation system to provide a more balanced system. The winter use fields are grazed yearly during periods of minimal growth, minimizing impact on vegetative resources.

The grazing treatments and pasture rotations follow:

Spring Use:

Year	Grazing Treatment	
	04/01 to 06/30	Rest
1	First Creek	Dry Hills
2	Dry Hills	First Creek
3	First Creek	Dry Hills

Summer Use:

Year	Grazing Treatment		
	07/01 to 08/15	08/16 to 09/30	Rest
1	Snowstorm	Kelly Burn	Kinney
2	Kelly Burn	Kinney	Snowstorm
3	Kinney	Snowstorm	Kelly

Winter Use:

Year	Grazing Treatment
	11/01 to 03/31
1	Rabbit and Bullhead Seeding
2	Rabbit and Bullhead Seeding
3	Rabbit and Bullhead Seeding

2. Alternative 2 - Summer Riparian Pasture

Under this alternative, portions of the existing pasture fences for Snowstorm, Kelly Burn, and Kinney will be removed. Once these fences have been removed, a riparian pasture will be built that encompasses the following watersheds: First, Snowstorm, Winters, Pole, Kinney and Kelly Creeks. The fencing project will be cost shared between the B.L.M. and the permittee. The stocking rate would range from 6,700 AUMs to 6,900 AUMs, depending on the year and which pastures would be used.

Rationale:

Early spring use (03/01 to 03/31) will be made in the Castle Ridge Pasture every other year. The rest that would take place in this pasture every other year, would enhance the opportunity for seedling establishment and restore plant vigor. This pasture is short of late spring and summer water in the uplands. Using this pasture in early spring would allow for better distribution of cattle on the uplands during the cool part of the year.

Spring use (04/01 to 06/30) would continue to be made in First Creek Pasture. Spring use (04/01 to 05/30) would also be made in Kinney Pasture on the west side of the rim. This area is dominated by cheatgrass and cattle would maximize the use on this green, palatable vegetation at this time of year. Portions of the rim may have to be gap fenced to inhibit movement into and from the eastern portion of Kinney Pasture, which would be part of the riparian pasture. In years that Castle Ridge Pasture is used, the eastern half of First Creek Pasture will be used, and the years when West Kinney is used, the western half of First Creek Pasture

would be used. Spring Creek, which lies on private ground, would split First Creek Pasture. This creek would have to be fenced to insure the success of this system. To enhance the movement of wild horses, the fence will be constructed with gates which would be left open once the livestock are out of this pasture.

The Dry Hills and Rabbit Pastures would be winter use (11/01 to 03/31). Use during this time would not have an adverse effect on the vegetative resource because plant growth during most of this time is minimal, and the potential for regrowth is favorable once the livestock are removed on 03/31.

The Bullhead Seeding would be used to facilitate the livestock operation. The seeding would not be incorporated into the grazing system due to the mining impacts it is currently receiving.

The grazing treatments and pasture rotations follow:

Spring Use:

Year	Grazing Treatment		
	3/1 to 3/31	4/1 to 5/30	4/1 to 6/30
1	Castle Ridge		E. First Ck.
2		W. Kinney	W. First Ck.
3	Castle Ridge		E. First Ck.

Summer Use:

Riparian Pasture:

Implement the following terms and conditions for livestock use in the riparian pastures:

Cattle use in the riparian pasture will be authorized for a 60 day period when the summer pasture is scheduled for use and shall be dependent on soil moisture and vegetative conditions. Livestock will be removed when 30% utilization levels are reached on meadows and/or riparian areas, or at the end of the 60 day period. To determine removal dates, mid-point utilization studies will be conducted.

The use period may vary due to yearly fluctuations in vegetative conditions, soil moisture and climatic conditions. Prior to authorization of cattle use, meadow and riparian areas within the riparian pasture will be inspected by BLM personnel to make certain the conditions are adequate to support livestock without causing degradation to meadows and/or riparian areas. CAREX Spp. and JUNCUS Spp. will be used as indicators of range

readiness. The BLM will determine the range readiness for this pasture.

Interim System - Summer Use

Prior to the riparian pasture being built, the summer pastures would be under a three pasture rest rotation grazing system. The rest in this system would enhance the opportunity for seedling establishment and restore plant vigor. Snowstorm Pasture contains the majority of the public reaches of First, Snowstorm, Winters and Pole Creeks. Each pasture would receive two growing seasons of rest before being utilized. Stocking rates would range from 5300 to 6300 AUMs depending on the year and which pastures would be used.

The grazing treatments and pasture rotations follow:

Year	Grazing Treatment		
	7/1 to 7/31	8/1 to 8/31	Rest
1	Snowstorm	Kelly Burn	Kinney
2	Kelly Burn	Kinney	Snowstorm
3	Kinney	Snowstorm	Kelly

Winter Use:

Year	Grazing Treatment
	11/01 to 03/31
1	Dry Hills and Rabbit
2	Dry Hills and Rabbit

3. Alternative 3 - Permittees Proposal

On June 10, 1993, the Winnemucca District Office received the permittees proposal, written by Intermountain Range Consultants.

Seasons of Use:

Nevada First Corporation proposes designating the areas of the Bullhead Allotment for the following seasons of use:

Winter	Rabbit and Dry Hills	10/15 to 04/30
Early Spring	Castle Ridge	03/01 to 04/30
Spring	First Creek; Snowstorm Pasture north of Winter's Creek; Kinney Pasture east of the rim	04/01 to 06/30
Summer	Kinney Pasture west of the rim; Snowstorm Pasture south of Winter's Creek; both Kelly Burn Pastures	06/01 to 08/30
Utility	Bullhead Seeding as needed	

Rationale:

The designated times listed above have been purposely been overlapped in order to allow flexibility in the annual operations on the Bullhead, in accordance with the type of year (wetter or drier) the allotment is experiencing. In wetter years, the cattle would be held lower for a longer period of time, moving up into the spring and summer pastures toward the end of the period. The overlap also allows the ranch manager to begin moving livestock at earlier dates and better distribute them throughout the respective pastures.

Use of the Rabbit and Dry Hills in the proposed times would maximize the livestock distribution, would provide for grazing during primarily the dormant season, and would allow for regrowth of upland vegetation following removal of livestock by the end of April. These are the lowest-lying fields and are appropriately used during this time.

The Castle Ridge Pasture is short of late spring and summer water, and animals would have to depend upon water gaps in the South Fork exclosure fence. Using this pasture in March and April would allow best distribution of cattle on the uplands during the cool part of the year and would remove livestock from the pasture at time when full upland and riparian vegetation growth would still be made annually (if there were no wild horses using the vegetation), and would prevent or diminish any pressure on the riparian fences of the South Fork which may occur later in the season.

The Kinney Pasture east of the rim is primarily cheatgrass-dominated and is most properly used earlier in the year than presently called for, to maximize cattle use of cheatgrass at time of year when it is palatable and at which cattle tend to prefer it

over coarser-stemmed perennial. The Snowstorm Pasture north of Winter's Creek includes the BLM-administered lower portions of Snowstorm Creek and First Creek (most of the length of BLM administered area of these creeks is inaccessible to livestock at any rate). Use terminating as proposed by the end of June each year will allow for regrowth and continued growth of riparian vegetation. The same is true of use in the First Creek Pasture. The Kinney Pasture west of the rim, Upper Kelly Burn, and the South Snowstorm Pasture are the highest elevation pastures and are therefore best deferred annually until somewhat later in the season. Lower Kelly Burn is somewhat transitional between the upper and lower elevations of the allotment and are proposed in this season for the purposes of cattle movement and rotation as described below.

Annual Rotation And Use:

Winter and Early Spring use areas would be authorized use each year, with no restriction of areas of use within the designated area.

Spring use areas would likewise be authorized for use each year, but the fluctuation in yearly precipitation may allow for restricted use in some years, similar to the situation in the spring range of the Little Owyhee Allotment. On wetter years, portions of the spring range would not be used because sufficient waters would be in evidence on smaller areas of the range. In drier years, the livestock would be distributed lightly throughout the entire spring range area.

Summer use areas (West Kinney, South Snowstorm, Upper Kelly, and Lower Kelly) would be used in the following every-other-year clockwise/counter-clockwise rotation:

Counter-Clockwise

Cattle would be gathered out of the East Kinney area to which they had been pushed prior to moving to spring range. They would be rotated through Lower Kelly from 06/01 to 06/30; Upper Kelly and South Snowstorm from 07/01 to 08/15; and Kinney from 08/01 to 08/30. This rotation would occur regardless of whether the year was wetter or drier, primarily because the Lower Kelly Pasture with its high percentage of cheatgrass should not be used past the month of June. The variable 08/15 off-date from Upper Kelly and South Snowstorm and the 08/01 on date in Kinney would allow both earlier removal of livestock from the upper elevations if necessary and the facilitation of movement of livestock between pastures. Depending on the given year, livestock may be on Upper Kelly and South Snowstorm for as much as 45 days at full stocking, for 30 days at full stocking and 15 days at lesser stocking, or 30

days at full stocking with the majority of removal by 08/01. Likewise, Kinney might have full stocking for 30 days, partial stocking for 15 days and full stocking for 15 days, or full stocking for 15 days.

Clockwise:	drier years	wetter years
Kinney	06/01 to 07/15	07/01 to 07/30
Upper Kelly & South Snowstorm	07/01 to 08/15	08/01 to 08/30
Lower Kelly	08/01 to 08/30	trail through

Rationale:

Again, on wetter years, livestock would be held lower longer, and therefore enter the upper elevation pastures at a later date. The schedule for drier years would allow early movement between pastures and provide for earlier removal from the primary summer range, using Lower Kelly to bring the livestock home during the month of August.

Livestock and Wild Horse Numbers:

Livestock would be stocked at the following numbers:

500 cattle	10/01 to 03/30	3000 AUMs
1000 cattle	04/01 to 08/31	5000 AUMs

Nevada First Corporation would like it noted that they will agree to these livestock reductions in the short term (five years) in anticipation of the Bureau removing excess wild horses from the allotment, and in anticipation of other range improvements to be developed in the five-year period, and not because they believe or because the data supports any reduction of livestock on the allotment.

Nevada First Proposes three alternatives for wild horses.

Alternative 1. Remove all wild horses from the allotment, adding their numbers to the Little Owyhee Allotment. We recognize the administrative difficulties involved in this alternative, but the present evidence strongly indicates that wild horses are creating downward trend on portions of the South Fork of the Little Humboldt River in which essentially no livestock grazing has occurred in the past ten years or more. When faced with a choice of year-round horse populations in the Castle Ridge Pasture or the improvement and maintenance of habitat for Threatened species such as the Lahontan cutthroat trout, we believe the Bureau has no

choice but to take action on the excess wild horse populations of the allotment by drastic reduction or removal. Removal of the horses which access the South Fork year-round is therefore an action which needs serious contemplation by the Bureau. Under this alternative, none of the Bullhead would any longer be considered wild horse herd use area.

Alternative 2. Wild horses would be reduced to 50 head in accordance with the agreed upon level of the CRMP signed by the Bureau and accepted as the Land Use Plan decision for this allotment. These horses would be recognized as being on the allotment for 12 months each year. The Bureau has never reduced the horses to this level and monitored for the thriving ecology of the allotment under this number of horses. This number should be monitored over a period of time to determine their long-term effects on the areas which they inhabit.

The horses would be confined to the Castle Ridge and North Snowstorm Pasture at these numbers, and the herd use area would be restricted to this area. At these numbers, the horses may very well not have the effect on the riparian areas which they apparently are now having.

Nevada First Corporation's proposal includes the condition that once the horses were removed and monitored over time, and once NFC's Active Preference is being authorized annually, that horse numbers be authorized in proportion to the cattle numbers and AUMs, if such authorization is consistent with monitoring.

Alternative 3. Wild horses would be reduced to 50 head in accordance with the agreed-upon level of the CRMP signed by the Bureau and accepted as the Land Use Plan decision for this allotment. These horses would be recognized as being on the allotment for 12 months each year. The Bureau has never reduced the horses to this level and monitored for the thriving ecology of the allotment under this number of horses. This number should be monitored over a period of time to determine their long-term effects on the areas which they inhabit.

The horses would be confined only to the First Creek Pasture at these lower numbers, and the herd use area would be restricted to this area. Horses would be removed from the Castle Ridge Pasture in recognition of the apparent damage they are causing in that area.

Nevada First Corporation's proposal includes the condition that once the horses were removed and monitored over time, and once NFC's Active Preference is being authorized annually, that horse numbers be authorized in proportion to the cattle numbers and AUMs, if such authorization is consistent with monitoring.

Each of these alternatives includes the understanding that the Bureau will correct the administrative record to reflect that horses have been removed from the checkerboard lands of the Dry Hills Pasture, and that the herd use area should be changed to reflect the fenceline separating the Dry Hills from the First Creek Pasture.

Fences, Spring Developments, and Other Considerations:

Small areas and gaps between rims may be necessary to completely effect the division between East Kinney and West Kinney. NFC proposes to accomplish such fencing as necessary within the next two fiscal years.

Winter's Creek Gorge forms an effective barrier between North Snowstorm and South Snowstorm, and no additional fencing is contemplated. If a need manifests itself, NFC proposes to create such fencing as needed immediately upon identification of the need.

NFC is willing to work with BLM on the fencing of watersheds or creek drainages which contain their private lands on the creeks of the allotment. Because of the topography, land ownership patterns, and areas involved, NFC proposes that any fences which the BLM and NFC agree upon would be built primarily on BLM lands outside creek bottom areas, and Mr. Bengochea and Mr. Amos requested in our meeting of June 4 the specific identification of areas which the BLM would like to see managed specifically for their riparian values, even though they may be private lands not under the jurisdiction of management of the BLM. Upon such specific identification, upon the Bureau completing necessary clearances and EA's, and upon the BLM providing materials, Nevada First Corporation is willing to supply labor to construct such fences and is willing to agree to maintenance of such fences on BLM lands. NFC agrees that any fencing which might cross private lands on agreed-upon fencelines would be the funding responsibility of NFC. We envision such fences to be used in order to effect time-controlled grazing use of any sub-pastures or "riparian pastures" thereby created. Nevada First stands ready at this point to work cooperatively with the BLM, NDOW, and any other agency of interest in such management. Until such agreements are reached, however, we will remind the Bureau that Nevada First Corporation's private inholdings have been removed from exchange of use authorization, and the Bureau exercises no grazing management authorization or responsibility over those lands.

Nevada First Corporation will work cooperative with BLM to provide alternate upland watering sites on the allotment and away from creek bottoms. Springs are numerous on the allotment summer range, and some sources are private while others are on BLM-

administered lands. Nevada First proposes that the BLM identify specific springs which should be developed, and upon BLM's completion of clearances and EA's and provision of materials, Nevada First Corporation will volunteer its labor to construct such spring developments, pipelines, and spring source fencing which may be considered. NFC is also willing to develop spring sources on its private lands at its own cost, without the need for BLM involvement.

This spring development, in concert with the above-noted specifically-identified fencing of "riparian areas", will effect better upland distribution of livestock and allow time-controlled grazing of creek drainages.

Again, Nevada First is under no obligation to effect such agreements with BLM, but proposes these actions in a cooperative agreements with BLM. Private lands and private lands grazing are the sole responsibility of the land owner.
Isolated meadows on BLM which demonstrate a need for fencing (soil loss, etc.) may be fenced by BLM, and Nevada First supports such actions where a need is demonstrated.

To facilitate livestock control and distribution following gathering and pasture movements, a holding corral should be constructed in the northeast corner of the Kinney Pasture. This has been previously discussed, and we believe the Bureau and the permittees are in agreement on this corral.

Interim System:

Nevada First Corporation proposes no interim grazing system to effect the above proposals. Their proposals are applicable immediately, and await only the Bureau's acceptance and immediate identification of areas of concern, and necessary paperwork which can be completed only by the Bureau. Nevada First stands ready to construct necessary fencing, spring development, and pipelines upon the Bureau's completion of such paperwork and funding accomplishments.

Non-Allotment Livestock:

A necessary management action which Nevada First Corporation believes must be a priority with the Bureau is the enforcement of allotment boundaries and the closure of gates on the South Fork Exclosure which are being left open by persons unknown and are being accessed by livestock not permitted on the Bullhead Allotment.

4. Alternative 4 - Fencing Pole Creek and Kinney Pasture

Under this alternative the public portion of Pole Creek will be fenced along with gap fencing the rim in Kinney Pasture. Also, under this alternative, Snowstorm Flat Pasture will be two pastures, with Winters Creek Gorge separating the north and south. By splitting Snowstorm Flat Pasture, Upper Kelly and South Snowstorm would be treated as one pasture. The stocking rates would range from 7200 to 7700 AUMs depending on the year and which pastures would be used.

Seasons of Use:

Early Spring	03/01 to 03/31	Castle Ridge
Spring	04/01 to 06/30	West Kinney; North Snowstorm; First Creek
Summer	07/01 to 08/31	Upper Kelly & South Snowstorm; East Kinney; Lower Kelly
Winter	11/01 to 02/28	Dry Hills and Rabbit

Holding Facility Bullhead Seeding

The grazing treatments and pasture rotations follow:

Spring Use:

Year	Grazing Treatment	
	03/01 to 03/31	04/01 to 06/30
1	Castle Ridge	E. First Creek & North Snowstorm
2	Castle Ridge	W. First Creek & West Kinney

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Summer Use:

Year	Grazing Treatment		
	7/1 to 7/20	7/21 to 8/10	8/11 to 8/31
1	East Kinney	Upper Kelly & Lower Kelly	S. Snowstorm
2	Lower Kelly	Upper Kelly & East Kinney	S. Snowstorm

Winter Use:

Year	Grazing Treatment
	11/01 to 03/31
1	Dry Hills and Rabbit
2	Dry Hills and Rabbit

Rationale:

Early spring use (03/01 to 03/31) would be made in the Castle Ridge Pasture every year. This pasture is short of late spring and summer water. Using this pasture in early spring would allow for better distribution of livestock on the uplands during the cool part of the year. Use in this pasture every year would not have an adverse impact on the vegetative resource because the vegetation has the complete growing season for regrowth which would allow the plants to store food reserves in their root system for the next growing season.

Spring use (04/01 to 06/30) would be made in First Creek, North Snowstorm and West Kinney. In the Snowstorm Pasture, Winter's Creek Gorge Splits the pasture. The northern portion is more suited for spring use. Using the northern part of this pasture during the spring would allow for better distribution of cattle on the uplands. The livestock removal date of 06/30 would be beneficial to the streambank riparian habitats of First and Snowstorm Creeks because of the regrowth potential, which in turn would improve the water quality and fisheries of these habitats. Although the lower reaches of these streams are on public land, access to these reaches is limited due to topography and/or dense stands of willow, aspen and rose.

In the year that the North Snowstorm Pasture is used, the West Kinney Pasture will be rested. This rest would allow for an increase in plant vigor and seedling establishment plus give the riparian areas a recovery period. The "rim" in Kinney Pasture splits the pasture. Small areas and gaps between rims may have to

be fenced for complete effectiveness in separating east and west Kinney. The West Kinney Pasture is dominated by cheatgrass and livestock would maximize the use on this green, palatable vegetation at this time of year (04/01 to 06/30).

First Creek Pasture would continue to be used every year as a spring pasture. In the years that North Snowstorm Pasture is scheduled for use, the eastern half of First Creek Pasture would be used and in the years that West Kinney would be used, the western half of First Creek Pasture would be used. Spring Creek, which lies on private ground, would split this pasture. This creek would have to be fenced to insure the success of this system. To enhance wild horse movement, gates will be constructed along the fence and would be left open once the livestock are removed from this pasture.

The summer pastures would be East Kinney, Lower Kelly, South Snowstorm & Upper Kelly. Upper Kelly and South Snowstorm would be treated as one pasture under this system. It is proposed at this time, that the lower reach (public) of Pole Creek be fenced since it is recovery habitat for LCT.

In the years that spring use occurs in North Snowstorm and East First Creek, the summer rotation would start with East Kinney, then Upper Kelly & South Snowstorm and ending with Lower Kelly. In the years that West Kinney and West First Creek are used in the spring, the summer rotation would start with Lower Kelly, then Upper Kelly & South Snowstorm and ending with East Kinney. The livestock will be in each pasture for 20 days.

Winter use would be taken from 11/01 to 03/31 in the Dry Hills and Rabbit Pastures. The utilization would be taken when plants are dormant; thus the vegetative resource would not be adversely effected. The 03/01 removal date would allow for regrowth of upland vegetation.

E. Monitoring Needs

1. Continue to implement the rangeland monitoring program on the Bullhead Allotment.

2. Continue to identify and establish Key Areas and collect baseline data on upland sites.

3. Establish monitoring studies on riparian areas.

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

5. Initiate utilization studies to differentiate use by livestock and wild horses.

6. Determine ecological status for wet meadows and stream riparian areas.
Determine desired seral stages for Key Areas where ecological condition has been determined.

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

F. Revise Bullhead Monitoring Plan

Add ORHY to key species for key area 201
Add AGSP to key species for key area 202
Add AGSP to key species for key area 203
Add STTH2 to key species for key area 204
Add AGSP and ELCI to key species for key area 401
Add ELCI to key species for key area 601
Add ORHY and STTH2 to key species for key area 801
Add AGSM to key species for key area 802

VII. Consultation

A. Consultation of this evaluation is listed chronologically as follows:

12/18/92	Draft Bullhead Allotment Evaluation sent out to RPS mailing list.
01/11/93	Comments received from Sagebrush Chapter of Trout Unlimited.
01/25/93	Comments received from the Elko Resource Area
01/25/93	Comments received from Nevada Jim's Outdoor Sport
01/27/93	Comments received from Commission For The Preservation of Wild Horses
01/27/93	Comments received from Wild Horse Organized Assistance
01/27/93	Comments received from Nevada Department of Wildlife
01/27/93	Comments received from Nevada First Corporation
02/05/93	Comments received from USFWS

06/01/93 Comments received from Nevada First Corporation by IRC.

09/14/93 Revised conclusion and technical recommendation sections sent out to RPS mailing list.

10/06/93 Comments received from Nevada Department of Wildlife.

12/15/93 Biological assessment, Final Bullhead Allotment Evaluation, and Draft Proposed Multiple Use Decision sent to USFWS for Formal Section 7 Consultation

04/04/94 Draft biological opinion received from the USFWS

04/13/94 Comments on the draft biological opinion sent to USFWS

05/02/94 Final biological opinion received from the USFWS

B. Summary of Comments From Bullhead Evaluation dated 12/09/92,

Comments Received From Sagebrush Chapter of Trout Unlimited

Comment: Riparian areas should be included in separate pastures with separate management objectives and strategies.

Response: The selected management action will include separate management objectives and strategies for riparian areas. The four summer pastures, which include the majority of the riparian habitats, will be used from 07/01 to 08/31 with allowable use levels dictating livestock removal. Allowable use levels of 30% for streambank riparian on Pole Creek and 50% for wetland/riparian habitats, will be enforced for all summer pastures. To determine removal dates from the summer pastures, mid-point utilization studies will be conducted by BLM specialists. Additional studies may be required before and after the mid-point inspection. When streambank riparian utilization levels on Pole Creek reach 25% or wetland/riparian utilization levels reach 45%, the livestock operator will be given a seven (7) day notice in which to remove livestock from the pasture and/or allotment. The allowable use level reached first will dictate livestock removal. No grazing will be authorized after 08/31 in the summer pastures.

Comment: Fencing or herding livestock out of riparian areas for as long as necessary to allow vegetation and streambanks to recover.

Response: The public reach of Pole Creek, existing habitat for Lahontan cutthroat trout, will be fenced. Prior to fence construction, an allowable use level of 30% will be enforced. This allowable use level will dictate livestock removal. When streambank riparian utilization levels on Pole Creek reach 25%, the livestock operator will be given a seven (7) day notice in which to remove livestock from the pasture and/or allotment.

Comment: Control the timing of grazing to keep livestock off streambanks when they are most vulnerable to damage.

Response: Shortening the season of use from 7/01 through to 09/30 to 07/01 through 08/31 will help in the recovery of streambank habitats. The 30% allowable use level that will be enforced, will also assist in meeting the stream habitat conditions objectives for this allotment.

Comment: Add more rest to the grazing cycle.

Response: The rest that will be incorporated into the selected management action will improve plant vigor and enhance seedling establishment.

Comment: Limit grazing intensity to a level which will develop and maintain desirable plant species composition and vigor (30% or less).

Response: See allotment specific objectives. Page 13.

Comment: Change from cattle to sheep to obtain better animal distribution through intensive herding.

Response: MFP III RM 1.7. District Manager's decision was to allow for conversion from cattle to sheep on all allotments within the resource area except where conflicts with bighorn sheep would occur. Since bighorn sheep have been reintroduced on this allotment, the conflict exists if domestic sheep were allowed to graze.

Comment: Permanently exclude livestock from riparian areas at high risk and with poor grazing recovery potential when there is no practical alternative to protect streams while grazing adjacent uplands.

Response: The riparian exclosure built in the 1980's encompasses nearly the entire reach of the South Fork Little Humboldt River within the Bullhead Allotment. The fence was built to exclude livestock and wildhorses from a majority of the South Fork as well as to protect and enhance the existing Lahontan cutthroat trout fishery.

Comments Received From Nevada Jim's Outdoor Sports

Comment: Of the listed alternatives, I would pick Alternative 3, riparian fencing.

Response: The selected management action calls for the construction of fence along Pole Creek. In order to meet wetland/riparian objectives, allowable use levels of 30% for streambank riparian on Pole Creek and 50% for wetland/riparian habitats will be enforced for all summer pastures.

Comment: In order for this alternative to work it is necessary to eliminate grazing entirely in the First Creek Basin, Snowstorm Flat, and Castle Ridge pastures until such time that the exclosures are in place and in full functional condition.

Response: Total livestock removal from these pastures is not being considered at this time. To totally remove livestock because of an emergency situation, the authorized officer must determine that the soil, vegetation, or other resources on public land require temporary protection because of conditions such as drought, fire, flood, or insect infestations. After consultation with affected permittees or lessees and other affected interests, action shall be taken to close allotments or portions of allotments to grazing by any kind of livestock or to modify authorized grazing use. Notices of closure and decisions requiring modification of authorized grazing use shall be issued as final decisions which are placed in full force and effect. Since no emergency exists at this time, a closure is not necessary. The selected management action will effect a change in management practices that will result in achievement of management objectives.

Comments Received From Elko Resource Area

Comment: The TRT indicated that there has been some livestock use in the Castle Ridge Pasture on a yearly basis, but the evaluation says the pasture hasn't been used at all.

Response: One of the issues of the 1990 TRT was to determine if the Castle Ridge pasture was a viable part of the long term grazing system. The TRT recommended, in the short term, to continue to use the pasture, but limit use (50-100 head) based on the current water availability. The long term recommendation was to develop water in the pasture to improve livestock and wild horse distribution. Livestock did not use this pasture during the evaluation period due to the lack of available water.

Comment: No where in the evaluation is a discussion of whether horses are causing adverse impacts to vegetation or water sources. According to IBLA, if horses are not impacting the vegetation or not causing damage to the range they should not be reduced in numbers. Pages 62 and 63 give several alternatives for AML, but other than discarding the CRMP number doesn't favor one alternative over another. Since there is no data to show the impact of horses under any of the alternative it would be difficult to pick a course of action.

Response: According to IBLA, "section 3(b)(2) of the [wild horse and burro] Act expressly provides that removal shall proceed only 'until all excess animals have been removed so as to restore a thriving natural ecological balance to the range, and protect the range from the deterioration associated with overpopulation.' 16 U.S.C. §1333(b)(2) (1982) (emphasis added).... We interpret the term AML within the context of the statute to mean that 'optimum number' of wild horses which results in a thriving natural ecological balance and avoids a deterioration of the range." (109 IBLA 119, 6/7/89)

"'[E]xcess animals' are defined in the statute as wild free-roaming horses and burros 'which must be removed from an area in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area.' 16 U.S.C. §1332(f) (1982)." (109 IBLA 115) (emphasis added)

The carrying capacity (= Desired Stocking Rate) of the Bullhead Allotment was determined through monitoring data to be 5,990 AUMs. This figure represents the "thriving natural ecological balance" referred to in the Act, inasmuch as any use by herbivores in excess of this level will result in range deterioration.

Therefore, the "optimum number" of wild horses that will result in a thriving natural ecological balance is anywhere from zero (no horses on the range, all forage allocated to livestock and wildlife) to 492 (all forage is allocated to horses and none to livestock and wildlife) which was analyzed as an alternative in the P-D Grazing EIS. There is no biological basis for determining the allocation of forage between competing uses. This determination is a decision to be made by the Area Manager. The alternatives presented represent a choice of such decisions, which are based on projected population dynamics and constrained by the Strategic Plan and multiple-use mandates.

Comment: A great deal of information was presented for the riparian\fisheries resources, however, none was presented for terrestrial wildlife. The conclusions section addresses results of terrestrial wildlife studies, however, this information is not available for review in the evaluation.

Response: The determination as to the success or failure of the wildlife objectives was based on data gathered from range utilization transects located in crucial habitats in the various pastures. The key areas used in the decisions concerning wildlife objectives were: 0301, 0302, 0303, 0401, 0601, and 0902. In most cases, trend and utilization data was collected at each site. Refer to Table 1 of the Bullhead Allotment Evaluation dated December 9, 1992, as well as Section IV.B.3,4 (pp. 24-36) for the specific findings at each key area. While the key species sampled were not necessarily important to wildlife, the evidence they present as to the level of grazing use is a good indication as to the general impacts both livestock and wildhorses are having on the area. BLM manual 6630 big game habitat monitoring transects have not yet been established on this allotment, but are scheduled to be established in 1993.

Comment: p. 14, Long Term Objectives, Items 6 & 7-What is meant by "good condition" for riparian areas needs to be defined.

Response Items 6 & 7 should be rewritten to read:

6) Improve or maintain 245 acres of aspen habitat types to ensure good reproduction and maximize recruitment within the stand. (WL 1.3, F 1.3, CRMP Obj. #6)

7) Improve or maintain 544 acres of riparian and meadow habitat types to ensure species diversity and quality, and maximize reproduction and recruitment of wood riparian species. (WL 1.5, AMP Obj. #6, CRMP Obj. #6)

Comments From Nevada Department of Wildlife

Comment: The CRMP recommended livestock exclosures at South Fork, Pole Creek, and Kelly Creek. In addition to fencing projects, it proposed three years rest to protect fisheries and aspen vegetation associated with South Fork, Kelly Creek, Snowstorm Creek, Winters Creek and Pole Creek by 1983.

Response: The CRMP recommended a complete pasture division fence separating Castle Ridge Pasture from First Creek Pasture and Snowstorm Flat Pasture in a manner that excluded livestock from access into the South Fork except at water gaps. The South Fork Exclosure was built in the 1980's. Three years of rest, 1983-1985, was taken in the Snowstorm Flat Pasture. Rest was given to riparian, fisheries, and aspen stands of First Creek, Snowstorm Creek, Winters Creek, and Pole Creek during these three years.

Comment: CRMP objective #4 states full rest to Layton Creek Seeding, Castle Ridge Burn, and Snowstorm Flat for a minimum of three years.

Response: Castle Ridge Pasture was rested throughout the evaluation period, 1983-1991. Snowstorm Flat Pasture was rested from 1983-1985 and the Layton Creek Seeding was never implemented.

Comment: We found no reference in the CRMP objectives to establish reasonable AUM demand for wildlife.

Response: Objective #10 of the CRMP established AUM demand for wildlife.

Comment: Water developments were proposed in the Bullhead AMP in 1985. After eight years, is it reasonable to assume that funding is not available to complete these projects by 1996?

Response: With budget constraints, work load priorities, and water rights issues the BLM has not been able to implement the proposed range improvements in the normal three year planning cycle.

Comment: We do not concur that allowable use levels or utilization limits are mere targets to be met or not met.

Response: The allowable use levels are to be used for monitoring and analysis of achievement of short and long term objectives. These allowable use levels will dictate livestock removals. The short term objectives can be examined on an annual basis after the end of the grazing season when monitoring data is collected and analyzed. All data will be evaluated annually to determine if short and long term objectives are being met and to determine if changes in management will be required to meet objectives. The next evaluation is scheduled for 1997.

Comment: The addition of more perennial grasses to be monitored further emphasizes the dominance of livestock grazing objectives over fish and wildlife resources.

Response: The technical recommendation to revise the Bullhead Monitoring Plan was warranted because the key species to be added were not included under the key species in the monitoring plan. When the Key Areas were selected and set up, the present key species in that particular range site were accounted for, but if a change in seral stage was to occur and movement occurred toward a higher seral stage, the occurrence of the additional key species should occur as indicated by the range site description and be accounted for.

Comment: The Bullhead Allotment Monitoring Plan lists chokecherry, serviceberry and snowberry as key species to be monitored. These species were not addressed in the allotment evaluation

Response: The three species you have referred to are lacking in the available data for the Bullhead Allotment, and other allotments due to a lack of terrestrial big game habitat monitoring transects. This allotment and others are slated for establishment of BLM Manual 6630 habitat studies in 1993, which include age and form class of the key browse species.

Comment: We assume wildlife existing numbers are based on the percentage of Snowstorm deer and antelope habitat as compared to the habitat located in Unit 066-068. Also, bighorn sheep numbers are based on a population model for the herd residing in the Little Humboldt Allotment.

Response: Reasonable numbers for deer and antelope, as listed in the Bullhead Allotment Evaluation are derived from 1983 Paradise-Denio RPS (Table 2. page seven). After reviewing the 1981 P-D Land Use Plan, and the CRMP decision for the Bullhead Allotment, it was found that the listing of 370 AUM's for bighorn sheep in the RPS and allotment evaluation, was incorrect. The correct value for the reasonable forage demand for bighorn sheep should be 190 AUM's. Several discrepancies have been found in the 1983 RPS, and are being corrected. The Subheading (ELKO) in the LUP indicates that Units 066 and 068 were considered in coming up with this figure of 190 AUM's.

Mr. Don Armentrout, former Wildlife Biologist in the Winnemucca District, and others derived the initial reasonable numbers as shown in the LUP, and I discussed this work on reasonable numbers with Mr. Armentrout on February 12, 1993. We discussed whether or not a population model had been used in arriving at the original number for bighorn sheep reasonable numbers. He told me that the original number was arrived at using methods derived from BLM Technical Notes 384. He further provided a simplified recount of the steps they went through to obtain the reasonable numbers in the 1983 RPS. The methods which were used in simple terms were: Reasonable density of sheep (4 per mi.^{2} for instance) X number of square miles of potential habitat X a habitat rating value which represents habitat conditions as a percent of optimum = the reasonable carrying capacity for the area.

Comment: How can mule deer habitat be rated as good, when key mountain browse species of the Bullhead Allotment evaluation did not recognize these key species nor assess the habitat delineated in the land use plan.

Response: The arrival of a "Good" rating for mule deer habitat on the Bullhead Allotment was derived from range key areas locate in crucial big game habitat. Trend and Utilization data from the following key areas (0301, 0302, 0303, 0401, 0601, 0902) indicate slight to moderate utilization of key livestock forage species. While the key species sampled on the range transects are not the species identified in the AMP, the evidence they present as to the level of grazing use is a good indication as to the general impacts livestock and horses are having on the area. BLM manual 6630 big game habitat monitoring transects will be established in 1994.

Comment: How can sage grouse habitat be considered "protected" when all available use pattern mapping data indicated heavy to severe use by livestock and wild horses on all riparian areas?

Response: The term "protected" was intended to mean maintained in its current status. Available range monitoring data for the Bullhead Allotment indicates an overall decline in levels of use on the uplands. The condition of riparian habitat is recognized as posing a significant threat to sage grouse populations in the Bullhead Allotment. The reduction in use of the monitored key species indicates progress has been made toward improving the wildlife habitat on the allotment. The drought conditions which have persisted throughout the region in the last five years have intensified the effects livestock are having on the riparian habitats by modifying livestock movements and reducing the overall production potential of those areas. A change in management identified in the evaluation process can minimize this threat.

<u>Comments Received From Commission For The Preservation of Wild Horses</u>

Comment: "The HMA consists of the entire Bullhead Allotment of which the horses can use only a portion under the Land Use Plan. As you state 'the HMA boundary shall remain as is,' however, wild horses are not allowed the benefit of use of that entire area.... Initially the horses would be allocated 21% of the limited portion of the HMA they are allowed to use, this seems only fair."

Response: The HMA boundary does not consist of the entire Bullhead allotment. See page 2 of allotment evaluation dated December 9, 1992, and the HMA map that was also included. Excluding the summer pastures, Rabbit, and that portion of the Dry Hills within the HMA boundary, the main use area is 41% of the allotment. If the entire Dry Hills pasture is included in the use area, the figure rises to 62%.

The HMA boundary was established in 1982 with publication of the final Paradise-Denio Grazing EIS. The eastern boundary represented an arbitrary division between the Snowstorm and Osgood Mountains herd use areas. At the time of the EIS, there were no fences whatsoever within the Bullhead Allotment other than the allotment boundary fence. It was assumed migration would occur between the Snowstorms and the Osgoods. The Osgood area subsequently had all its horses removed when the resource area gathered all horses from the checkerboard lands, but the boundary remains, and divides the Dry Hills Pasture in an arbitrary and meaningless fashion. As a result the herd use area for the Snowstorm Mountains HMA has de facto included the entire Dry Hills field, as well as that portion of First Creek Basin that is technically outside the boundary.

Horses are allowed to use the entire HMA. The Allotment Evaluation states (p. 58) "it is recommended that wild horses be maintained primarily within Castle Ridge, First Creek and Dry Hills pastures." (emphasis added) This does not preclude use of the other pastures; however horse use in the summer pastures is expected to be limited due to the fences.

It is unclear what the 21% figure quoted refers to. If it refers to the amount of land area available to the horses, that is incorrect, see above. If it refers to the amount of forage consumed by wild horses under Alternative 2, that number is those AUMs consumed by the projected minimum number of horses. The initial rate would be 33% of DSR. If only the AUMs in the spring pastures are considered under Alternative 2 the percentage of DSR would be 47%, 72% and 97% for minimum, initial and maximum numbers respectively. Under Alternative 1, the percentages would be 23%, 36%, 48%.

Comment: "We could [sic] like to commend you on the use of population modeling in determining the future viability of your wild horse herds."

Response: The population model was based on data obtained during a recent gather (Black Rock East). As more information becomes available specifically for this area, the model parameters may change which could change the predictions.

Comments Received From Wild Horse Organized Assistance

The comments were the same as Commission For The Preservation Of Wild Horses.

Comments Received From The Permittee

Comment: First Creek Pasture and a portion of the Kinney Pasture is the spring use area.

Response: The selected management schedules will have spring use in the Castle Ridge, First Creek and West Kinney pastures.

Comment: Summer pastures should also include a cooperative effort from the wildlife and livestock interest to fence the riparian areas of both federal and private lands to eliminate overuse .

Response: The objectives for wetland/riparian habitats have not been met throughout the evaluation period due to heavy use by livestock and wild horses. The selected management action will reduce stocking levels, shorten the summer season of use, enforce allowable use levels, and fence Pole Creek. To ensure that the streambank riparian and wetland/riparian utilization objectives will be met, allowable use levels of 30% and 50% will be enforced, dictating livestock removal. Cooperation in fencing Pole Creek, existing habitat for LCT, will allow for attainment of the streambank riparian habitat objective, thus, improving water quality and fisheries on this allotment. At this time, fencing is not being considered on the public reaches of First, Snowstorm, and Winter's Creeks due to the topography and/or dense stands of woody riparian vegetation.

Comment: The summer season of use should begin from 6/1-6/30 and end from 8/1-9/1.

Response: The summer season of use will begin 07/01. Allowable use levels will be enforced to ensure attainment of the streambank riparian and wetland/riparian habitats. The allowable use levels will also dictate pasture movement and/or removal of livestock from the allotment if the allowable use levels are reached.

Comment: Winter use should begin from 10/15 - 11/15 and end 3/1 - 4/1.

Response: The selected management action will have winter use in the Dry Hills and Rabbit pastures starting 11/01 and ending 02/28. Extending the winter use period will not have an adverse effect on the vegetative resource because plant growth during most of this time is minimal, and the potential for vegetative growth is favorable once the livestock are removed on 02/28.

Comment: Removing horse use that is 400% of the agreed levels and implementing the proper tools for range management are the answers.

Response: The "agreed levels" were invalidated by the IBLA Decision of June 7, 1989.

Comments Received From USFWS (Verbal)

Comment: Why is there a different utilization percentage in wetland and riparian habitats especially Kelly Creek.

Response: Kelly Creek has less than one mile of publicly owned land (BLM) along it. This system previously was stocked with brook trout by NDOW and is not scheduled for Lahontan cutthroat trout recovery. None the less, Kelly Creek will be managed for riparian values.

Comment: We would like to see a table of key riparian plant species.

Response: See Table 3 (pp. 113-116) of allotment evaluation.

Comment: We would like a monitoring plan incorporated and would like to see midpoint monitoring initiated.

Response: A monitoring plan is in the process of being developed for streams located within the Bullhead Allotment. In 1992, utilization cages were established along Pole Creek. To determine removal dates, mid-point utilization studies will be conducted. Initially, monitoring will be focused on the priority Lahontan

cutthroat trout streams (Pole Creek and the South Fork Little Humboldt River). It is anticipated that stream surveys will be conducted about once every four to five years.

Comment: Stream habitat conditions are < 60%. We would like to see more emphasis on streambank stability parameters (ie. measurements of bank cover, etc.).

Response: Streambank stability parameters are gathered during stream surveys. When utilization data is collected in riparian areas streambank stability factors will also be collected.

VIII. Selected Management Actions

A. Livestock

1. Grazing Preference Status (AUMs)

a.	Total preference	12,050
b.	Suspended preference	6,060
c.	Active preference	5,990

2. Season of Use

Early Spring Use	03/01 to 03/31
Spring Use	04/01 to 06/30
Summer Use	07/01 to 08/31
Winter Use	11/01 to 02/28

3. Kind and Class of Livestock - Cattle, Cow/Calf

4. Percent Federal Range - 100%

5. Grazing System

The grazing system listed below is for the next evaluation period.

Early Spring Use (Each Year)

Pasture	Livestock #	Period of Use	AUMs
Castle Ridge	460	03/01 to 03/31	460

Spring Use

Year	Pasture	Livestock #	Period of Use	AUMs
1995	E. First Creek	328	04/01 to 06/30	980
	N. Snowstorm	132	04/01 to 06/30	395
1996	W. First Creek	328	04/01 to 06/30	980
	W. Kinney	136	04/01 to 06/30	406
1997	E. First Creek	328	04/01 to 06/30	980
	N. Snowstorm	132	04/01 to 06/30	395

Summer Use (Each Year)

Pasture	Livestock #	Period of Use	AUMs
Lower Kelly	234	07/01 to 08/31	476
Upper Kelly	518	07/01 to 08/31	1056
S. Snowstorm	194	07/01 to 08/31	395
E. Kinney	200	07/01 to 08/31	406

Winter Use (Each Year)

Pasture	Livestock #	Period of Use	AUMs
Dry Hills	194	11/01 to 02/28	767
Rabbit	265	11/01 to 02/28	1047

Interim System

The Bureau's strategic plan for wild horses will be implemented with the first capture slated for 1994. This will reduce the estimated population of 304 adults to 90 adults which will be within the selected management range for population of adult wild horses.

During the interim, forage will be allocated for the estimated population of wild horses. This forage will be made available by reducing the number of livestock using the First Creek and Snowstorm Flat Pastures. The interim grazing system that will be followed until the population of adult horses is reduced is as follows:

1. Grazing Preference Status (AUMs)

   a. Total preference 12,050

   b. Suspended preference 6,060

   c. Active preference 5,990

      1. Authorized Use 5,022

      2. Not Scheduled

         a. Unavailable to livestock due to wild horse use 968

2. Season of Use

Early Spring	03/01 to 03/31
Spring	04/01 to 06/30
Summer	07/01 to 08/31
Winter	11/01 to 02/28

3. Kind and Class of Livestock - Cattle, Cow/Calf

4. Percent Federal Range - 100%

5. Grazing System

Early Spring

Year	Pasture	Livestock #	Period of Use	AUMs
1994	Castle Ridge	460	03/01 to 03/31	469
	Spring			
1994	W. First Creek	0	No Livestock	0
	W. Kinney	136	04/01 to 06/30	406
	Summer			
1994	Lower Kelly	234	07/01 to 08/31	476
	Upper Kelly	518	07/01 to 08/31	1056
	S. Snowstorm	194	07/01 to 08/31	395
	E. Kinney	200	07/01 to 08/31	406
	Winter			
	Dry Hills	194	11/01 to 02/28	767
	Rabbit	265	11/01 to 02/28	1047

Terms and Conditions:

Salt and/or mineral blocks shall not be placed within one quarter (1/4) mile of springs, streams, meadows, riparian habitats or aspen stands.

You are required to perform normal maintenance on the range improvements as per your signed cooperative agreements and section 4 permits prior to livestock turn out.

Any livestock owned or controlled by the permittee must be eartagged. The permittee must supply the BLM with a list of private eartags and numbers for the livestock that the permittee owns or controls. This list must be submitted prior to turnout along with copies of livestock use agreements.

Your certified actual use report by pasture is due 15 days after the end of the authorized grazing period.

Allowable use levels of 30% for streambank riparian on Pole Creek and 50% for wetland/riparian habitats will be enforced for all summer pastures. These allowable use levels will dictate livestock removals.

To determine removal dates from the summer pastures, mid-point utilization studies will be conducted by BLM specialists. Additional studies may be required before and after the mid-point inspection. When streambank riparian utilization levels on Pole Creek reach 25% or wetland/riparian utilization levels reach 45%, the livestock operator will be given a seven (7) day notice in which to remove livestock from the pasture and/or allotment. The allowable use level reached first will dictate livestock removal. If the use levels reach 25% or 45%, the livestock may be moved to another pasture if the use levels are less than 20% on wetland/riparian habitats in the summer pasture that the livestock are to be moved to. If the use exceeds 20%, livestock will be removed from the allotment. No grazing will be authorized after 09/31 in the summer pastures. Utilization data will be collected at the end of the grazing period in the spring and winter pastures.

The grazing authorization with the schedule of use outlined in the Selected Management Action will be the only approved use and all other schedules, flexibilities and terms and conditions addressed in the 1982 Coordinated Resource Management Plan and the 1985 Allotment Management Plan are suspended until the plans are revised.

B. Wild Horses

Establish an Appropriate Management Level (AML) for the Snowstorm Mountain Herd Management Area (HMA) of 140 adult wild horses. The AML will be managed within the range of 90-140 adult wild horses.

Schedule a gather for the fall of 1994 to reduce the population of horses to the AML if funding is available for such gather.

C. Wildlife

Adjustment to the wildlife population levels is not warranted. Wildlife populations will remain at current levels.

D. Monitoring

1. Continue to implement the rangeland monitoring program on the Bullhead Allotment.

2. Continue to identify and establish Key Areas and collect baseline data on upland sites.

3. Establish monitoring studies on riparian areas.

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

5. Initiate utilization studies to differentiate use by livestock and wild horses.

6. Determine ecological status for wet meadows and stream riparian areas.

   Determine desired seral stages for Key Areas where ecological condition has been determined.

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

E. Objectives

The allotment objectives under which the grazing use will be monitored and evaluated should have the phrasing modified to accurately reflect how these objectives will be used in the future. The short term objectives can be examined on an annual basis after the end of the grazing season when monitoring data is collected and analyzed. All data will be evaluated to determine if short term objectives are being met to determine if changes in management will be required to meet objectives.

1. Short Term

   a. The objective for utilization of key plant species (CAREX, JUNCUS, POA, ASPEN) in wetland riparian habitats is 50%. Utilization data will be collected at the mid point and at the end of the grazing period.

   b. The objective for utilization of key streambank riparian plant species (CAREX, JUNCUS, POA, SALIX, ASPEN, ROWO) on South Fork, Pole, First, Snowstorm, Winters, and Kelly Creeks is 30%. Utilization data will be collected at the mid point and at the end of the grazing period.

   c. The objective for utilization of key upland plant species will be 50% for ORHY, AGSP, ELCI, CREPIS, AGCR, SENEC, TRIFO, PONE3, 40% for SIHY, STTH2, FEID, SYOR, and 30% for ARSP5. Utilization data will be collected at the end of the grazing period.

d. Utilization of key upland browse species (snowberry, serviceberry, currant) is 50%. Utilization data will be collected at the end of the grazing period.

2. Long Term

a. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 5,990 AUMs.

b. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 1029 AUMs, for mule deer, 101 AUMs for pronghorn, and 190 AUMs for bighorn sheep.

1. Improve to and maintain 25,268 acres in Snowstorms DY-23, 35,359 acres in Snowstorms DY-23 (Elko Co.), 8,256 acres in DY-23 (Crucial, Elko Co.), 1,130 acres in Snowstorms DS-2 and 6,552 acres in Snowstorms DS-2 (Elko Co.) in good to excellent mule deer habitat condition.

2. Improve to and maintain 50,137 acres in Snowstorms PY-10 (Elko Co.), 24, 242 acres in Hot Springs PY-11 and 18,171 in Snowstorms PY-10 acres in fair or good pronghorn habitat condition.

3. Improve to and maintain 12,023 acres in Snowstorms BY-11 and 43,403 acres in Snowstorms BY-11 (Elko Co.) in good to excellent bighorn sheep habitat condition.

c. Improve or maintain suitable sage grouse strutting, nesting, brood rearing, and/or wintering habitat in good condition with the following conditions.

Strutting Habitat

1. Low sagebrush or brush free areas for strutting, and nearby areas of sagebrush having 20-50% canopy cover for loafing.

Nesting Habitat
1. Areas within 2 miles of strutting grounds
2. Sagebrush between 7 and 31 inches in height (optimum = 16 inches)
3. Sagebrush canopy coverage 20-30% (optimum = 27%)
4. Understory cover allows for concealment of the nest

Brood Rearing Habitat
1. Sagebrush canopy cover 10-21% (optimum = 14%)
2. High composition of forb species
3. Vigorous available meadow vegetation in late summer and fall

Winter Habitat
1. Greater than 20% sagebrush canopy cover
2. Areas do not maintain high winter snow depth as a function of elevation or topography

d. Maintain and improve the free roaming behavior of wild horses by protecting and enhancing their home ranges.

1. Manage, maintain and improve public rangeland conditions to provide an initial level of 1680 AUMs of forage on a sustained yield basis.

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

e. Improve to and maintain 245 acres of aspen habitat types to ensure good reproduction and maximize recruitment within the stand.

f. Improve to and maintain 544 acres of riparian and meadow habitat types to ensure species diversity and quality, and maximize reproduction and recruitment of woody riparian species.

g. Improve to and maintain snowberry, serviceberry, and currant with good reproduction and maximize recruitment within the stand.

h. Improve to or maintain the following stream habitat conditions on South Fork Little Humboldt River, Pole, First, Snowstorm, Winters, Kelly, and Kinney Creeks from 59% on South Fork Little Humboldt, 56% on Pole Creek, 33% on First Creek, unknown % on Snowstorm Creek, unknown % on Winters Creek, 57% on Kelly Creek and unknown % on Kinney Creek to an overall optimum of 60% or above.

1. Streambank cover 60% or above.
2. Streambank stability 60% or above.

i. Improve to or maintain the water quality of the South Fork of the Little Humboldt River to Class A Water Quality Standards and the following beneficial uses: livestock drinking water, cold water aquatic life, wading (water contact recreation) and wildlife propagation.

Improve to and maintain the water quality of Pole, First, Snowstorm, Winters, and Kelly Creeks to the state criteria set for the following beneficial uses: Livestock drinking water, cold water aquatic life, wading (water contact recreation) and wildlife propagation. Kinney Creek's water quality should meet state criteria for livestock drinking water and wildlife propagation.

IX. Rationale

It has been determined through monitoring that heavy and severe use has occurred on wetland/riparian and streambank riparian habitats. By continuing with present management, these sensitive areas will continue to be degraded.

Due to the lack of adequate stock water on the uplands in the Castle Ridge Pasture, the present AMP spring grazing system has never been followed. Consistent patterns of rest-rotation and periods of use in other pastures has not been applied to the Bullhead Allotment throughout the evaluation period.

The spring pastures have been utilized from 04/01 to 06/30 in a two pasture rest-rotation. While rest was incorporated into this system, the patterns of rest have been irregular.

The summer pastures, which contain the majority of the riparian areas, have been utilized from 07/01 to 09/30. While Kinney and Snowstorm Flat Pastures have been consistently rested every third year, at a minimum,

Kelly Burn Pasture has been grazed every year except one during the evaluation period.

Under the present system, utilization and distribution patterns are showing heavy use around wetland/riparian and streambank riparian habitats within the spring and summer pastures.

The selected management actions will reduce the active preference of livestock and also reduce wild horse numbers to a level that is compatible with meeting allotment specific objectives. Along with the reduction of livestock and wild horses, the summer season of use will be shortened by one month and Pole Creek will be fenced.

The management action will eliminate the present two pasture spring rest rotation system. Early spring use (03/01 to 03/31) will be made in the Castle Ridge Pasture every year. This pasture is short of late spring and summer water. Using this pasture in early spring will allow for better distribution of livestock on the uplands during the cool part of the year. Use in this pasture every year will not have an adverse impact on the vegetative resource because the vegetation has the complete growing season for regrowth which will allow the plants to store food reserves in their root system for the next growing season.

Spring use (04/01 to 06/30) will be made in the First Creek, North Snowstorm and West Kinney Pastures. In the Snowstorm Pasture, Winter's Creek Gorge splits the pasture. The northern portion is more suited for spring use. Using the northern part of this pasture during the spring will allow for better distribution of cattle on the uplands. Drift fences may have to be constructed along portions of Winter's Creek to ensure complete effectiveness in separating north and south. The livestock removal date of 06/30 will be beneficial to the streambank riparian habitats of First and Snowstorm Creeks because of the regrowth potential, which in turn will improve the water quality and fisheries of these habitats.

In the year that the North Snowstorm Pasture is being utilized, the West Kinney Pasture will be rested. This rest will allow for an increase in plant vigor and seedling establishment plus give the riparian areas a recovery period. The "rim" in Kinney Pasture splits the pasture. Small areas and gaps between rims may have to be fenced for complete effectiveness in separating east and west Kinney. The West Kinney Pasture is dominated by cheatgrass and livestock will maximize the use on the green, palatable vegetation at this time of year (04/01 to 06/30).

First Creek Pasture will continue to be used every year as a spring pasture. In the years that North Snowstorm Pasture is scheduled for use, the eastern half of First Creek Pasture will be used and in the years that West Kinney will be used, the western half of First Creek Pasture will be used. Riding of First Creek Pasture is essential to maintain the integrity of this system. This will require commitment by the livestock operator to ensure that the livestock are in the authorized areas.

The selected management action will also change the grazing system from the current AMP three pasture rest-rotation system on the summer pasture, to a four pasture grazing system. Under this system each pasture will be used every year from 07/01 to 08/31. Livestock numbers in each pasture will vary based on the Desired Stocking Rates per pasture. Allowable use levels of 30% for streambank riparian on Pole Creek and 50% for wetland/riparian habitats will be enforced for all summer pastures. These allowable use levels will dictate livestock removals. To determine removal dates from the summer pastures, mid-point utilization studies will be conducted by BLM specialists. Additional studies may be required before and after the mid-point inspection. When streambank riparian utilization levels on Pole Creek reach 25% or wetland/riparian utilization levels reach 45%, the livestock operator will be given a seven (7) day notice in which to remove livestock from the pasture and/or the allotment. If the use levels reach 25% or 45%, the livestock may be moved to another pasture if the use levels are less than 20% on wetland/riparian habitats in the summer pasture that the livestock are to be moved to. If the use exceeds 20%, livestock will be removed from the allotment. No grazing will be authorized in the summer pastures after 08/31.

Allowable use levels on streambank riparian habitats for First, Snowstorm, and Winter's Creek will not be enforced because the public reaches of these habitats are inaccessible to livestock due to topography and/or dense stands of woody riparian vegetation. Allowable use levels of 50% for upland riparian habitat in the summer pastures will be enforced.

Winter use will be taken from 11/01 to 02/28 in the Dry Hills and Rabbit Pastures. The utilization will be taken when plants are dormant, thus the vegetative resource will not be adversely effected. The 02/28 removal date from these pastures will allow for growth of the vegetative resource during the spring and summer growing season.

Due to the impacts of mining, the Bullhead Seeding will be used as a holding facility to facilitate livestock movements to and from winter and spring use areas.

The current estimated population of adult wild horses on the Bullhead Allotment is 304 animals. After a gather in the fall of 1994, horses will be distributed throughout Castle Ridge, First Creek, and Dry Hills Pastures based on wild horse distribution through the years 1986-1993.

A distribution flight conducted with a fixed wing aircraft on October 7, 1993 counted 311 horses (255 adults 56 foals). Since this number was well above the numbers counted in 1992, a confirmation flight using a helicopter was made November 5, 1993. This flight counted 297 total horses (238/59). This analysis will use the figures from the 11/5/93 flight. The reasons for the difference with 1992 at this point is unknown; however it is unlikely that significant numbers of horses are migrating back and forth from Elko District to skew the figures. The only other possibility for migration is via Rodear Flat, but that has not been observed. Therefore the 1992 horse numbers are not 161 but something else. The 1992 numbers are estimated at 267, as follows:

238 adult horses (1993) ÷ .893 (avg. survival rate) = 267.
Of this, 19.8% are assumed to be foals (1993 foal crop, 59/297). So then, 267 x 0.198 = 214 adults (1992).

The next step is to take the average number of horses in each pasture for the 4 flights in 1992. The assumption is that although the numbers may be off, the proportion was reasonably accurate. The figures are:

	3/92	5/92	7/92	9/92	Ave.	% of ave.
First Creek	75	105	71	14	66	40.5%
Castle Rdg	9	8	10	78	26	15.9
Dry Hills	47	29	32	35	36	22.1
Kinney	51	23	0	15	22	13.5
Snowstorm Flt	3	4	26	17	13	8.0
Total	185	169	139	159	163	100.0

Multiplying the percentage in each pasture by the assumed number of adults in 1992, i.e. 214:

First Creek .405 x 214 = 87
Castle Ridge .159 x 214 = 34
Dry Hills .221 x 214 = 47
Kinney .135 x 214 = 29
Snowstorm Flat .080 x 214 = 17

Use pattern mapping conducted November 13, 1992 showed areas of heavy use in eastern First Creek pasture. This was caused by horses and cattle, of which there were 966 in the pasture using 1185 AUMs (from actual use report). Horse use is computed using the average number of adults in the pasture and multiplying by 12: 87 x 12 = 1044 AUMs.

Therefore the heavy use was caused by 1044 AUMs of horse use and 1185 AUMs of cattle use; total of 2229 AUMs. The desired stocking rate (from AE) is 1505 AUMs. The difference is therefore 2229 - 1505 = 724 AUMs. Of this, 46.8% was caused by horses (1044/2229). Therefore horse AUMs above the DSR should be reduced 724 x .468 = 339 AUMs. This will support 339/12 = 28 horses, which is the number to be removed from the pasture.

No horses need be removed from Castle Ridge and Dry Hills pastures, since there is no excessive utilization. All horses should be removed from Kinney and Snowstorm Flat since these are summer pastures, for which the recommendation is to try to keep horses out.

Therefore the AML calculation by pasture is:

First Creek - 87-88	= 60 horses
Castle Ridge	= 34
Dry Hills	= 47
Total	140

The AML range would be 91-140. This range should be attainable within one gather.

The analysis of monitoring data indicates that the multiple use objectives for the Bullhead Allotment are not being met. The analysis of utilization and use pattern mapping data, indicated that livestock were the primary factor in the non-achievement of the multiple use objectives in the summer pastures and that livestock and wild horses were the primary factors inhibiting achievement of the multiple use objectives in the spring pastures. Analysis of the existing management of wildlife indicates that wildlife populations in the Bullhead Allotment are not contributing to the failure in meeting the multiple use objectives. Therefore, a change in the existing wildlife populations or the existing wildlife management within the Bullhead Allotment is not warranted.

The Bullhead Allotment is scheduled to be re-evaluated in 1997.

XI. NEPA Review

The selected management action for grazing in the Bullhead Allotment conforms with the environmental analysis of grazing impacts described in the Final Paradise-Denio Environmental Impact Statement dated September 18, 1981.

The EIS and NEPA Compliance Record are on file in the Winnemucca District Office, located at 705 E. Fourth Street, Winnemucca, NV 89445.

Table 6 Bullhead Water Sources

Twp	Range	Sec	Subdiv	Source Type	Water Status	Pasture
39N	43E	06	NW NE	Reservoir	Intermittent	Dry Hills
		06	SE NW	Well	"	" "
		09	SW SW	"	"	" "
	44E	06	NW NW	Seep	"	Kinney
40N	42E	23	NE SE	Reservoir	"	Dry Hills
	43E	13	SE NE	Spring	"	Kinney
		19	SE SW	Reservoir	"	Dry Hills
		25	SE SE	Seep	"	Kinney
			SW NE	"	"	"
		26	NE SW	Spring	Perennial	"
		29	SE NW	Reservoir	Intermittent	Dry Hills
		36	SW NE	Spring	Perennial	Kinney
			NW SW	Seep	Intermittent	"
	44E	02	SE SW	Spring	Perennial	"
		03	SW NE	"	"	"
			SE NW	Reservoir	Intermittent	First Creek
				"	"	" "
		04	SW NE			
		06	NW SE	Spring	Perennial	Kinney
		09	SE SE	"	Intermittent	"
			NE SW	"	Perennial	"
		11	NE SE	Seep	Intermittent	"
				Spring	"	"
			SW NE	"	Perennial	"
				Seep	Intermittent	"
			NW NE	Spring	Perennial	"
			SE NE	Seep	Intermittent	"
			SW SE	Spring	Perennial	"
		12	NW NW	"	"	"
				Seep	Intermittent	"
			SW NW	"	"	"
			SW SW	"	"	"
		13	SE SE	Spring	Perennial	Kelly Burn
		14	NW NE	"	"	Kinney
		16	NW SW	"	Intermittent	"
			NW NW	"	Perennial	"
		18	NE SE	"	Intermittent	"
			NW SW	"	"	"
			NE NE	"	Perennial	"
		21	SW NE	"	Intermittent	Kelly Burn
		23	NE SW	"	Perennial	" "
				"	Intermittent	" "
			NW SW	"	"	" "
		24	NW SW	"	Perennial	" "
			SE NE	"	Intermittent	" "
				Seep	"	" "
		25	SE SE	Spring	"	" "

Twp	Range	Sec	Subdiv	Source Type	Water Status	Pasture
				"	"	" "
		26	NE NE	"	"	" "
		32	SW SE	"	"	" "
			NW SE	Seep	"	" "
		33	NE NE	Spring	Perennial	" "
			NW SW	"	Intermittent	" "
			SW NW	"	"	" "
			NE NE	"	Perennial	" "
			NW SW	"	"	" "
			SW NW	"	Intermittent	" "
			NW SW	"	Perennial	" "
	45E	18	SE SE	"	Intermittent	" "
		19	SE SW	Seep	"	" "
				Spring	"	" "
			NW NE	"	"	" "
			SE SW	"	"	" "
			SE NW	"	Perennial	" "
			SE SW	Seep	Intermittent	" "
				Spring	"	" "
			NE SW	Seep	"	" "
			NW NE	Spring	"	" "
			SE NW	"	"	" "
			SE SW	Seep	"	" "
		20	SW NW	Spring	Perennial	" "
		30	NW NE	"	Intermittent	" "
			SE SE	"	"	" "
			NE NE	"	Perennial	" "
			NE SE	"	Intermittent	" "
			NW SE	"	"	" "
			SE NE	"	Perennial	" "
				Seep	Intermittent	" "
			SW NE	Spring	"	" "
			SW SE	Seep	"	" "
			NE SE	Spring	Perennial	" "
			NW NW	"	"	" "
				"	Intermittent	" "
			NW SE	"	Perennial	" "
		31	NW NE	"	Intermittent	" "
			NE NE	"	"	" "
				"	Perennial	" "
			NE NE	"	"	" "
			NE NE	"	"	" "
				Seep	Intermittent	" "
		32	NE NW	Spring	"	Snowstorm Flat

Twp	Range	Sec	Subdiv	Source Type	Water Status	Pasture
41N	43E	15	SE NE	Seep	"	First Creek
	44E	14	NE SE	Spring	"	"
		15	SW SW	"	Perennial	"
		16	NE SW	"	Intermittent	"
		25	NW SE	Reservoir	"	"
		26	NW NW	"	"	"
	45E	19	SE SE	"	"	"
		32	NE SE	"	"	"

All waters on BLM land.
"Perennial" as of date of survey (1983).

APPENDIX Plant list for Table 3 pages 113-116

Upland Species

KEY SPECIES	SCIENTIFIC NAME	COMMON NAME
SIHY	Sitanion hystrix	bottlebrush squirreltail
ORHY	Oryzopsis hymenoides	Indian ricegrass
STTH2	Stipa thurberana	Thurber needlegrass
AGSP	Agropyron spicatum	bluebunch wheatgrass
ELCI	Elymus cinereus	basin wildrye
FEID	Festuca idahoensis	Idaho fescue
AGCR	Agropyron cristatum	crested wheatgrass
ARSP 5	Artemisia spinescens	bud sagebrush
CREPI	Crepis	hawksbeard
SYOR	Symphoricarpos orbiculatus	indiancurrant
SENEC	Senecio	groundsel
TRIFO	Trifolium	clover

Riparian Species

SALIX	Salix	willow
ROWO	Rosa woodsii	Woods rose
POMO5	Polypogon monspeliensis	rabbitfootgrass
CAREX	CAREX	sedge
PONE3	Poa nevadensis	Nevada bluegrass
POTR5	Populus tremula	aspen

Bullhead Allotment May 20, 1994

Key Management Area Utilization

% Utilization by Year

Key Area	Key Species	Allowable Use Levels	1983	1984	1985	1986	1987	1988	1989	1990	1991
Dry Hills	SIHY	40		9			34	64		10	
DH 0201	ARSP 5	30						12			
0202	STTH2	40	10	28			10	42		40	
	SIHY	40	10	11			7	17		32	
0203	STTH2	40		38			16	22		36	
	SIHY	40		54			9	20		32	
0204	ORHY	50		58			51	20			
	SIHY	40		43			36	70			
0205	SIHY	40	27				52	56		10	
First Creek	AGSP	50					53	27	36		44
FC 0301	EICI	50					44	42	50		37
	CREPIS	50									
0302	AGSP	50					47	0	28		25
	CREPIS	50				0	0	0			
0303	AGSP	50							30		8
	ORHY								17		10
	SIHY						27	50	10		14
Kelly Burn	SIHY	40				55	57	41	12	0	
KB 0401	FEID	40				65	67	68	30	15	
	SYOR	40							14		
0402	POTRT	40									
0403	TRIFOI	50									
Bullhead Seeding											
0501	AGCR	50	17	30		49	64				
0502	SIHY	40	15	8			39				
0503	AGCR	50	22	40		42	26				
Kinney	SIHY	40					67	53	48		24
Pasture	FEID	40					75	68	70		42
KP 0601	SENEC	50					19				
0602	POTRT	40					50				
0603	CAREX	50									
	PONE3	50									
Rabbit											
RP 0801	SIHY	40					10	1	14	12	
0802	EICI	50					14	2			
Snowstorm Flat	AGSP	50				62		38			
SF 0901	EICI	50				49		37			
0902	CAREX	50									
	PONE3	50									

Bullhead Allotment May 20, 1994

Age Specific Survival

Assumptions:

1. Essentially all horses within this population are dead after 20 years.

2. Mortality favors younger age classes i.e. 0-3. Mortality is higher in young males than it is in young females.

3. Mortality increases in older animals i.e. 8-20. Mortality is higher in older females than in older males.

4. Mortality increases dramatically in age classes 14-20.

	% SURVIVAL	
AGE CLASS	MALES	FEMALES
0-1	.84	.86
1-2	.86	.88
2-3	.87	.89
3-4	.92	.92
4-5	.95	.95
5-6	.96	.96
6-7	.96	.96
7-8	.96	.96
8-9	.96	.94
9-10	.95	.93
10-11	.94	.92
11-12	.91	.89
12-13	.90	.88
13-14	.89	.87
14-15	.87	.85
15-16	.84	.82
16-17	.78	.72
17-18	.70	.64
18-19	.55	.45
19-20	.55	.45
20+	0	0

It is recognized that some wild horses live past twenty; however both their numbers and contribution to the population are negligible.

Bullhead Allotment May 20, 1994

Age Specific Fecundity

AGE CLASS	% FECUNDITY
0-1	0
2	.30
3	.50
4-9	.75
10-13	.35
14-20	.15

Bullhead Allotment

May 20, 1994

BULLHEAD ALLOTMENT WILD HORSE POPULATION MODEL
INITIAL POPULATION 161 ADULTS, GATHER FALL 1993 0-5 YEAR OLDS

Year	1992		1993		1994		1995		1996		1997		1998		1999		2000		2001	
Sex	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	16	16	21	21	10	10	8	8	7	7	7	7	7	7	8	8	9	9	9	9
	10	11	13	14	0	0	8	9	7	7	6	6	6	6	6	6	7	7	8	8
	9	10	9	10	0	0	0	0	7	8	6	6	5	5	5	5	5	5	6	6
	8	9	8	9	0	0	0	0	0	0	6	7	5	5	4	4	4	4	4	4
	7	8	7	8	0	0	0	0	0	0	0	0	6	6	5	5	4	4	4	4
	6	8	6	7	0	0	0	0	0	0	0	0	0	0	5	6	4	5	3	4
	5	7	6	7	0	0	0	0	0	0	0	0	0	0	0	0	5	5	4	4
	5	5	4	7	5	6	0	0	0	0	0	0	0	0	0	0	0	0	4	5
	4	5	4	6	4	7	4	5	0	0	0	0	0	0	0	0	0	0	0	0
	4	4	3	4	4	6	3	6	4	6	0	0	0	0	0	0	0	0	0	0
	3	4	4	4	3	4	4	5	3	5	4	5	0	0	0	0	0	0	0	0
	3	3	3	4	4	4	3	4	4	6	3	6	4	5	0	0	0	0	0	0
	2	2	3	3	3	4	4	4	3	4	4	5	3	5	4	4	0	0	0	0
	2	2	2	3	3	3	3	4	4	4	3	4	4	4	3	4	4	4	0	0
	2	1	2	2	2	2	3	3	3	3	4	3	3	3	4	3	3	3	4	3
	2	1	2	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3
	2	1	2	1	2	1	2	2	2	2	3	2	3	2	3	2	3	2	3	2
	1	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
Total Ad.		193		216		98		104		109		110		107		107		110		2111
AUMs		151		174		78		82		85		86		93		91		92		93

Bullhead Allotment

May 20, 1994

YEAR	2002		2003		2004		2005		2006		2007		2008		2009		2010		2011	
SEX	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	10	10	10	10	11	11	12	12	13	13	14	14	15	15	16	16	18	18	19	19
	8	8	8	9	8	9	9	9	10	10	11	11	12	12	13	13	13	14	15	15
	7	7	7	7	7	8	7	8	8	8	9	9	9	10	10	11	11	11	11	12
	5	5	6	6	6	6	6	7	6	7	7	7	8	8	8	9	9	10	10	10
	4	4	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	8	8	9
	4	3	3	4	5	4	5	5	5	5	5	5	5	5	5	5	6	6	6	8
	2	3	3	2	2	4	4	4	5	5	5	4	5	5	4	4	4	5	5	5
	4	3	1	2	2	1	2	3	4	4	4	4	5	4	6	4	4	4	3	4
	3	5	4	3	1	1	2	1	1	2	4	4	4	3	5	4	6	4	4	4
	0	0	3	4	4	3	1	0	1	1	0	2	3	3	4	3	5	4	5	4
	0	0	0	0	3	4	4	3	1	0	1	1	0	2	3	3	4	3	5	4
	0	0	0	0	0	0	3	4	4	3	1	0	1	1	0	2	3	3	4	3
	0	0	0	0	0	0	0	0	3	4	4	3	1	0	1	1	0	2	3	3
	0	0	0	0	0	0	0	0	0	0	3	4	4	3	1	0	1	1	0	2
	0	0	0	0	0	0	0	0	0	0	0	0	3	3	4	3	1	0	1	1
	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	1	0
	3	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	3	2	3	2
	2	1	2	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1
	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	1	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0
Total Au.		113		114		119		129		137		150		162		178		196		211
AUM's		93		94		97		104		111		122		132		148		160		173

Bullhead Allotment May 20, 1994

Year	No. Ad. Male	No. Ad. Female	No. Adults	AUMs
1992	78	83	161	1,932
1993	83	91	174	2,088
1994	37	41	78	936
1995	41	47	88	1,056
1996	45	50	95	1,140
1997	47	49	96	1,152
1998	47	46	93	1,116
1999	47	44	91	1,092
2000	47	45	92	1,104
2001	48	45	93	1,116
2002	48	45	93	1,116
2003	48	46	94	1,128
2004	49	48	97	1,164
2005	52	52	104	1,248
2006	56	55	111	1,332
2007	62	60	122	1,464
2008	67	65	132	1,584
2009	74	72	146	1,752
2010	80	80	160	1,920
2011	86	87	173	2,076

Bullhead Allotment May 20, 1994

Desired Stocking Rates

The desired stocking rates for the pastures were determined in accordance with BLM Manual Rangeland Monitoring Analysis, Interpretation, and Evaluation, Technical Reference 400-7.

The following formula was used for calculating desired stocking levels.

$$\frac{\text{ACTUAL USE}}{\text{KMA UTILIZATION}} = \frac{\text{DESIRED ACTUAL USE}}{\text{DESIRED KMA UTILIZATION}}$$

Stocking Rates By Pasture

BULLHEAD SEEDING

Key Management Areas

1983 $\frac{419 \text{ AUMs}}{17\%}$ x 50% = 1232 AUMs

1984 $\frac{932 \text{ AUMs}}{30\%}$ x 50% = 1553 AUMs

1986 $\frac{1866 \text{ AUMs}}{64\%}$ x 50% = 1458 AUMs

Use Pattern Map

1987 $\frac{295 \text{ AUMs}}{70\%}$ x 50% = 211 AUMs

1989 $\frac{684 \text{ AUMs}}{90\%}$ x 50% = 380 AUMs

The 50% Desired KMA Utilization, is the allowable use level for AGCR.

Average of the three key areas = 1414 AUMs
Average of the two UPMs = 296 AUMs

RABBIT PASTURE

Key Management Areas

1987 $\frac{72 \text{ AUMs}}{2\%} \times 50\% = 1800 \text{ AUMs}$

1988 $\frac{14 \text{ AUMs}}{14\%} \times 50\% = 50 \text{ AUMs}$

1989 $\frac{1047 \text{ AUMs}}{12\%} \times 50\% = 4362 \text{ AUMs}$

$\frac{1800 \text{ AUMs} + 50 \text{ AUMs} + 4362 \text{ AUMs}}{3} = 2070$

Use Pattern Mapping

1989 $\frac{1047 \text{ AUMs}}{50\%} \times 50\% = 1047 \text{ AUMs}$

The 50% Desired KMA Utilization, is the allowable use level for the perennial grass species.

Use 1047 AUMs as a starting point because the TRT recommended use only south of Section 6 and small areas of heavy use are starting to appear.

LOWER KELLY BURN PASTURE

Use Pattern Mapping

1986 $\frac{978 \text{ AUMs}}{70\%} \times 50\% = 700 \text{ AUMs}$

1987 $\frac{455 \text{ AUMs}}{90\%} \times 50\% = 253 \text{ AUMs}$

$\frac{700 \text{ AUMs} + 253 \text{ AUMs}}{2} = 476 \text{ AUMs}$

The 50% Desired KMA Utilization, is the utilization objective for wetland/riparian habitats.

UPPER KELLY BURN PASTURE

Key Management Areas

1986 $\frac{1820 \text{ AUMs}}{65\%} \times 40\% = 1120 \text{ AUMs}$

1987 $\frac{1138 \text{ AUMs}}{67\%} \times 40\% = 679 \text{ AUMs}$

1988 $\frac{578 \text{ AUMs}}{68\%} \times 40\% = 340 \text{ AUMs}$

$\frac{1120 \text{ AUMs} + 679 \text{ AUMs} + 340 \text{ AUMs}}{3} = 713 \text{ AUMs}$

The 40% Desired KMA Utilization, is the allowable use level for perennial grass species.

Use Pattern Mapping

1986 $\frac{1820 \text{ AUMs}}{70\%} \times 50\% = 1300 \text{ AUMs}$

1987 $\frac{1138 \text{ AUMs}}{70\%} \times 50\% = 812 \text{ AUMs}$

$\frac{1300 \text{ AUMs} + 812 \text{ AUMs}}{2} = 1056 \text{ AUMs}$

The 50% Desired KMA Utilization, is the utilization objective for wetland/riparian habitats.

KINNEY PASTURE

Key Management Areas

1987 $\frac{1138 \text{ AUMs}}{75\%} \times 40\% = 607 \text{ AUMs}$

1988 $\frac{628 \text{ AUMs}}{68\%} \times 40\% = 369 \text{ AUMs}$

1989 $\frac{1680 \text{ AUMs}}{70\%} \times 40\% = 960 \text{ AUMs}$

1991 $\frac{1100 \text{ AUMs}}{42\%} \times 40\% = 1048 \text{ AUMs}$

$\frac{607 \text{ AUMs} + 369 \text{ AUMs} + 960 \text{ AUMs} + 1048 \text{ AUMs}}{4} = 746 \text{ AUMs}$

The 40% Desired KMA Utilization, is the allowable use level for perennial grass species.

Use Pattern Mapping

1987 $\frac{1138 \text{ AUMs}}{70\%} \times 50\% = 812 \text{ AUMs}$

The 50% Desired KMA Utilization, is the utilization objective for plant species on wetland/riparian habitats.

DRY HILLS PASTURE

Key Management Areas

1984 $\frac{1473 \text{ C AUMs} + 63 \text{ H AUMs}}{58\%} \times 50\% = 1324 \text{ AUMs}$

1987 $\frac{1489 \text{ AUMS} + 12 \text{ H AUMs}}{52\%} \times 40\% = 1154 \text{ AUMs}$

$\frac{1324 \text{ AUMs} + 1154 \text{ AUMs}}{2} = 1239 \text{ AUMs}$

The 50% and 40% KMA Desired Utilization levels, are the allowable use levels for perennial grass species.

Use Pattern Mapping

1984 $\frac{1473 \text{ C AUMs} + 63 \text{ H AUMs}}{50\%} \times 50\% = 1536 \text{ AUMs}$

1987 $\frac{1489 \text{ C AUMs} + 12 \text{ H AUMs}}{70\%} \times 50\% = 1072 \text{ AUMs}$

$\frac{1536 \text{ AUMs} + 1072 \text{ AUMs}}{2} = 1304 \text{ AUMs}$

The 50% Desired KMA Utilization, is the allowable use level for perennial grass species.

$\frac{1239 \text{ AUMs} + 1304 \text{ AUMs}}{2} = 1271 \text{ AUMs}$ (No wetland/riparian habitats)

FIRST CREEK PASTURE

Key Management Areas

1987 $\frac{2730 \text{ C AUMs} + 8 \text{ H AUMs}}{53\%}$ x 50% = 2583 AUMs

1988 $\frac{197 \text{ C AUMs} + 10 \text{ H AUMs}}{50\%}$ x 40% = 166 AUMs

1989 $\frac{1428 \text{ C AUMs} + 9 \text{ H AUMs}}{56\%}$ x 50% = 1331 AUMs

1991 $\frac{1714 \text{ C AUMs} + 626 \text{ H AUMs}}{44\%}$ x 50% = 2659 AUMs

$\frac{2583 \text{ AUMs} + 166 \text{ AUMs} + 1331 \text{ AUMs} + 2659 \text{ AUMs}}{4}$ = 1685 AUMs

The 40% and 50% Desired KMA Utilization levels, are allowable use levels for perennial grass species.

Use Pattern Mapping

1985 $\frac{3008 \text{ C AUMs} + 371 \text{ H AUMs}}{70\%}$ x 50% = 2414 AUMs

1987 $\frac{2730 \text{ C AUMs} + 8 \text{ H AUMs}}{70\%}$ x 50% = 1955 AUMs

1988 $\frac{197 \text{ C AUMs} + 10 \text{ H AUMs}}{70\%}$ x 50% = 148 AUMs

$\frac{2414 \text{ AUMs} + 1955 \text{ AUMs} + 148 \text{ AUMs}}{3}$ = 1505 AUMs

The 50% Desired KMA Utilization, is the utilization objective for wetland/riparian habitats.

SNOWSTORM FLAT PASTURE

Key Management Areas

1986 $\frac{910 \text{ C AUMs} + 271 \text{ H AUMs}}{62\%} \times 50\% = 952 \text{ AUMs}$

1988 $\frac{479 \text{ AUMs}}{38\%} \times 50\% = 630 \text{ AUMs}$

$\frac{952 \text{ AUMs} + 630 \text{ AUMs}}{2} = 791 \text{ AUMs}$

The 50% Desired KMA Utilization level, is the allowable use level for perennial grass species.

Use Pattern Mapping

1986 $\frac{910 \text{ C AUMs} + 271 \text{ AUMs}}{70\%} \times 30\% = 506 \text{ AUMS}$

1988 $\frac{479 \text{ AUMs}}{70\%} \times 30\% = 205 \text{ AUMs}$

$\frac{506 \text{ AUMs} + 205 \text{ AUMs}}{2} = 356 \text{ AUMs}$

The 30% Desired KMA Utilization, is the utilization objective for Pole, Winters, Snowstorm, and First Creek.

Castle Ridge 1826 AUMs based on the 1978 Range Survey. Livestock utilization was not taken throughout the evaluation period, thus, monitoring data is not available to arrive at a Desired Stocking Rate.

C AUMs = Cows
H AUMs = Horses

Table 3. Key Management Area Objectives

KEY AREA NUMBER	KEY SPECIES 1	ALLOWABLE USE LEVELS 2	DESIRED ECOLOGICAL STATUS 3	INTERIM (5 YEARS) FREQUENCY TREND 4	INTERIM (5 YEARS) FREQUENCY TREND	SHORT TERM (10 YEARS) ECOLOGICAL STATUS OBJECTIVES 4	LONG TERM (35 YEARS) FREQUENCY TREND	LONG TERM (35 YEARS) ECOLOGICAL STATUS OBJECTIVES
0201	SIHY ARSP5	40 30	Late Seral	Static (if ORHY appears in study, reevaluate objectives.	Static	Maintain shrub and grass composition.	Static	Same as short term
0202	STTH2 SIHY	40 40	Late Seral	Static (If AGSP appears in study, reevaluate objectives.	Upward	Increase AGSP to 5% and STTH2 to 7%.	Upward	Increase AGSP to 10% and STTH2 to 12%. Maintain forb composition.
0203	STTH2 STTH2 STTH2	40 40 40	Late Seral	Static	Upward	Increase AGSP to 5% and STTH2 to 15%.	Upward	Increase AGSP to 10% and STTH2 to 20% composition.
0204	ORHY SIHY	50 40	Late Seral	Static	Upward	Increase ORHY TO 5%.	Upward (Reevaluate if STTH2 appears.)	Increase ORHY to 8%.
0205	SIHY	40	Utilization Study Only					

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.

Table 3. Key Management Area Objectives (Continued)

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 4	LONG TERM (35 YEARS) FREQUENCY TREND	LONG TERM (35 YEARS) ECOLOGICAL STATUS OBJECTIVES
0301	AGSP ELCI CREPIS	50 50 50	Late Seral	Static	Upward	Increase AGSP To 15% and ELCI to 8%. Maintain forb composition.	Static	Maintain grass and forb composition.
0302	AGSP CREPIS	50 50	Late Seral	Static	Static	Maintain species Composition and diversity (grasses and forbs).	Static forbs).	Maintain species composition and diversity (grasses and
0303	AGSP ORHY SIHY	50 50 40	Utilization Study Only					
0401	SIHY FEID SYOR	40 40 40	Late Seral	Static (If AGSP appears reevaluate objectives).	Upward	Increase FEID to 7% and ELCI to 8%. Maintain for composition.	Static	Maintain grass, forb and shrub diversity and composition.
0402	POTR5	40	Late Seral	Static	Upward	Late Seral	Static	Late Seral
0403	TRIFOL	50	Mid Seral	Static	Upward	Mid Seral	Static	Mid Seral

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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.

Table 3. Key Management Area Objectives (Continued)

KEY AREA NUMBER	KEY SPECIES 1	ALLOWABLE USE LEVELS 2	INTERIM (5 YEARS) DESIRED ECOLOGICAL STATUS 3	INTERIM (5 YEARS) FREQUENCY TREND 4	SHORT TERM (10 YEARS) FREQUENCY TREND	LONG TERM (35 YEARS) ECOLOGICAL STATUS OBJECTIVES 4	LONG TERM (35 YEARS) FREQUENCY TREND	LONG TERM (35 YEARS) ECOLOGICAL STATUS OBJECTIVES
0501	AGCR	50	Utilization Study Only					
0502	SIHY	40	Utilization Study Only					
0503	AGCR	50	Seeding	Static (maintain AGCR in good	Same as interim.	Maintain in good condition	Same as interim.	Maintain in good condition.
0601	SIHY FEID SENEC	40 40 50	Late Seral	Static	Upward	Maintain ELCI and perennial forbs. Increase FEID to 5%.	Upward	Maintain ELCI and perennial forbs. Increase FEID to 15%.
0602	POTR5	40	Late Seral	Static	Upward	Late Seral	Static	Late Seral
0603	CAREX PONE3	50 50	Mid Seral	Static	Upward	Mid Seral	Static	Mid Seral

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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.

Table 3. Key Management Area Objectives (Continued)

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	LONG TERM (35 YEARS) ECOLOGICAL STATUS OBJECTIVES 4	LONG TERM (35 YEARS) FREQUENCY TREND	LONG TERM (35 YEARS) ECOLOGICAL STATUS OBJECTIVES
0801	SIHY	40	Late Seral	Upward (Show increase in ORHY; if STTH2 appears. reevaluate.)	Same as interim.	Increase ORHY to 5% and increase perennial forbs.	Same as interim.	Increase ORHY to 10% and mountain forbs. (Mid Seral)
0802	ELCI	50	PNC	Upward (Show increase in ELCI; if AGSM appears, reevaluate objectives.)	Same as interim.	Increase ELCI to 40%.	Same as interim.	Increase ELCI to 45%.
0901	AGSP ELCI CREPIS	50 50 50	Late Seral	Upward (Show increase in AGSP).	Upward	Increase AGSP to 10%.	Upward	Increase AGSP to 15%.
0902	CAREX PONE3	50 50	Mid Seral	Static	Upward	Mid Seral	Static	Mid Seral

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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.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Winnemucca District Office
705 East 4th Street
Winnemucca, Nevada 89445

IN REPLY REFER TO:
4130, 4160
(NV-241.3)

May 19, 1994

CERTIFIED MAIL NO. Z773765496
RETURN RECEIPT REQUESTED

Nevada First Corporation
P.O. Box 490
Winnemucca, NV 89445

Proposed Multiple Use Decision
Bullhead Allotment

Dear Mr. Bengochea:

The record of Decision of the Paradise-Denio Environmental Impact Statement was issued on 09/18/81. The Paradise-Denio Management Framework Plan was issued on 07/09/82. These documents guide the management of public lands within the Paradise-Denio Resource Area and more specifically within the Bullhead Allotment. Monitoring data has been collected on this allotment and in accordance with Bureau policy and regulations, this data has been evaluated in order to determine progress in meeting management objectives for the Bullhead Allotment and to determine if management adjustments may be necessary to meet the management objectives.

The following are the multiple use management objectives under which grazing on the Bullhead Allotment will be monitored and evaluated.

1. Short Term

   a. The objective for utilization of key plant species (CAREX, JUNCUS, POA, ASPEN) in wetland riparian habitats is 50%. Utilization data will be collected at the mid point and at the end of the grazing period.

   b. The objective for utilization of key streambank riparian plant species (CAREX, JUNCUS, POA, SALIX, ASPEN, ROWO) on South Fork, Pole, First, Snowstorm, Winters Creek and Kelly Creek is 30%. Utilization data will be collected at the mid point and at the end of the grazing period.

   c. The objective for utilization of key upland plant species will be 50% for ORHY, AGSP, ELCI, CREPIS, AGCR, SENEC, TRIFO, PONE3, 40% for SIHY, STTH2, FEID, SYOR, POTR5 and 30% for ARSP5. Utilization data will be collected at the end of the grazing period.

d. Utilization of key upland browse species (snowberry, serviceberry, currant) is 50%. Utilization data will be collected at the end of the grazing period.

2. Long Term

a. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 5,990 AUMs.

b. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 1,029 AUMs for mule deer, 101 AUMs for pronghorn, and 190 AUMs for bighorn sheep.

1. Improve to and maintain 25,268 acres in Snowstorms DY-23, 35,359 acres in Snowstorms Dy-23 (Elko Co.), 8,256 acres in DY-23 (Crucial, Elko Co.), 1,130 acres in Snowstorms DS-2 and 6,522 acres in Snowstorms DS-2 (Elko Co.) in good to excellent mule deer habitat condition.

2. Improve to and maintain 50,137 acres in Snowstorms PY-10 (Elko Co.) 24,242 acres in Hot Springs PY-11 and 18,171 acres in Snowstorms PY-10 in fair or good pronghorn habitat condition.

3. Improve to and maintain 12,023 acres in Snowstorms BY-11 and 48,403 acres in Snowstorms BY-11 (Elko Co.) in good to excellent bighorn sheep habitat condition.

c. Improve or maintain suitable sage grouse strutting, nesting, brood rearing, and/or wintering habitat in good condition with the following conditions.

Strutting Habitat

1. Low sagebrush or brush free areas for strutting, and nearby areas of sagebrush having 20-50% canopy cover for loafing.

Nesting Habitat

1. Areas within 2 miles of strutting grounds
2. Sagebrush between 7 and 31 inches of height (optimum = 16 inches)
3. Sagebrush canopy coverage 20-30% (optimum = 27%)
4. Understory cover allows for concealment of the nest

Brood Rearing Habitat

1. Sagebrush canopy cover 10-21% (optimum = 14%)
2. High composition of forb species
3. Vigorous available meadow vegetation in late summer and fall

Winter Habitat

1. Greater than 20% sagebrush cover
2. Areas do not maintain high winter snow depth as a function of elevation or topography

d. Maintain and improve the free roaming behavior of wild horses by protecting and enhancing their home ranges.

1. Manage, maintain and improve public rangeland conditions to provide an initial level 1680 AUMs of forage on a sustained yield basis.

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

e. Improve to and maintain 245 acres of aspen habitat types to ensure good reproduction and maximize recruitment within the stand.

f. Improve to and maintain 544 acres of riparian and meadow habitat types to ensure species diversity and quality, and maximize reproduction and recruitment of woody riparian species.

g. Improve or maintain snowberry, serviceberry, and currant with good reproduction and maximize recruitment within the stand.

h. Improve to or maintain the following stream habitat conditions on South Fork Little Humboldt River, Pole, First, Snowstorm, Winters, Kelly, and Kinney Creeks from 59% on South Fork Little Humboldt, 56% on Pole Creek, 33% on First Creek, unknown % on Snowstorm, unknown % on Winters Creek, 57% on Kelly Creek and unknown % on Kinney Creek to an overall optimum of 60% or above.

1. Streambank cover 60% or above.
2. Streambank stability 60% or above,

i. Improve to or maintain the water quality of the South Fork of the Little Humboldt River to Class A Water Quality Standards and the following beneficial uses: livestock drinking water, cold water aquatic life, wading (water contact recreation) and wildlife propagation.

Improve to and maintain the water quality of Pole, First, Snowstorm, Winters, and Kelly Creeks to the state criteria set for the following beneficial uses: Livestock drinking water, cold water aquatic life, wading (water contact recreation) and wildlife propagation. Kinney Creek's water quality should meet state criteria for livestock drinking water and wildlife propagation.

Based upon the evaluation of monitoring data for the Bullhead Allotment, consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, consultation with the permittee and other affected interests, recommendations from my staff, and the Bullhead Allotment evaluation dated December 18, 1992, it is my proposed decision to:

CARRYING CAPACITY

The carrying capacity for livestock and wild horses is 7,670 AUMs. Of this total, 5,990 AUMs are designated for livestock, and 1,680 AUMs are designated for wild horses.

Rationale: This carrying capacity was calculated using monitoring data collected on the allotment from 1983-1991. Analysis of the monitoring data indicates there are areas of slight, light, moderate, heavy, and severe use throughout the allotment. In areas of heavy and severe use, the vegetative objectives are not being met. Therefore, an adjustment is needed in the authorized use by livestock and wild horse population to achieve a thriving natural ecological balance within the Bullhead Allotment.

WILDLIFE MANAGEMENT DECISION

Based upon the evaluation of monitoring data for the Bullhead Allotment, consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, consultation with the permittee and other affected interests and recommendations from my staff, it is my proposed decision for wildlife to continue with the reasonable numbers as outlined in the Land Use Plan and to manage the South Fork of the Little Humboldt River and Pole Creek as existing habitat for the recovery of Lahontan cutthroat trout.

RATIONALE:

The analysis of monitoring data indicates that the multiple-use objectives for the Bullhead Allotment are not being met. The analysis of utilization and use pattern mapping determined that livestock were the primary factor in the non-achievement of the multiple-use objectives in the summer pastures and that livestock and wild horses were the primary factors inhibiting achievement of the multiple-use objectives in the spring pastures. Analysis of the existing management of wildlife indicates that wildlife populations in the Bullhead Allotment are not contributing to the failure in meeting the multiple-use objectives. Therefore, a change in the existing wildlife populations or the existing wildlife management within the Bullhead Allotment is not warranted. Reasonable numbers for wildlife will remain as follows:

Mule Deer	Pronghorn Antelope	Bighorn Sheep
1029 AUMs	101 AUMs	190 AUMs

The South Fork of the Little Humboldt River and Pole Creek are existing habitat for Lahontan cutthroat trout and will be managed for the recovery of this species.

Authority: The authority for this decision is contained in Title 43 of the Code of Federal Regulations, which states in pertinent parts:

§1725.3-3(b) "Management of public lands for fish and wildlife development and utilization involves the protection, regulated use, and development of habitat on public lands and waters to obtain a sustained yield of fish and wildlife and provision and maintenance of public access to fish and wildlife resources."

If you wish to protest this wildlife management decision, in accordance with 43 CFR 4160.2, you are allowed fifteen (15) days from receipt of this notice within which to file such protest with the Paradise-Denio Resource Area Manager, Bureau of Land Management, Winnemucca District, 705 East Fourth St. Winnemucca, NV 89445. Subsequent to the fifteen day protest period, a final decision will be issued which will provide opportunity for appeal in accordance with 43 CFR 4160.4 and 43 CFR 4.470.

WILD HORSE MANAGEMENT DECISION

Based upon the evaluation of the monitoring data for the Bullhead Allotment, consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, consultation with the permittee and affected interests and recommendations of my staff, my proposed decision for wild horses is:

To establish an Appropriate Management Level (AML) for the Snowstorm Herd Management Area of 140 adult wild horses. The AML will be managed within the range of 90 to 140 adult wild horses.

To schedule a gather for the fall of 1994 to reduce the population of horses to the Appropriate Management Level if funding is available for such gather.

RATIONALE:

A distribution flight conducted with a fixed wing aircraft on October 7, 1993 counted 311 horses (255 adults 56 foals). Since this number was well above the numbers counted in 1992, a confirmation flight using a helicopter was made November 5, 1993. This flight counted 297 total horses (238/59). This analysis will use the figures from the 11/5/93 flight. The reasons for the difference with 1992 at this point is unknown; however it is unlikely that significant numbers of horses are migrating back and forth from Elko District to skew the figures. The only other possibility for migration is via Rodear Flat, but that has not been observed. Therefore the 1992 horse numbers are not 161 but something else. The 1992 numbers are estimated at 267, as follows:

238 adult horses (1993) ÷ .893 (avg. survival rate) = 267.
Of this, 19.8% are assumed to be foals (1993 foal crop, 59/297). So then,
267 x 0.198 = 214 adults (1992).

The next step is to take the average number of horses in each pasture for the 4 flights in 1992. The assumption is that although the numbers may be off, the proportion was reasonably accurate. The figures are:

	3/92	5/92	7/92	9/92	Ave.	% of ave.
First Creek	75	105	71	14	66	40.5%
Castle Rdg	9	8	10	78	26	15.9
Dry Hills	47	29	32	35	36	22.1
Kinney	51	23	0	15	22	13.5
Snowstorm Flt	3	4	26	17	13	8.0
Total	185	169	139	159	163	100.0

Multiplying the percentage in each pasture by the assumed number of adults in 1992, i.e. 214:

First Creek	.405 x 214 = 87
Castle Ridge	.159 x 214 = 34
Dry Hills	.221 x 214 = 47
Kinney	.135 x 214 = 29
Snowstorm Flat	.080 x 214 = 17

Use pattern mapping conducted November 13, 1992 showed areas of heavy use in eastern First Creek pasture. This was caused by horses and cattle, of which there were 966 in the pasture using 1185 AUMs (from actual use report). Horse use is computed using the average number of adults in the pasture and multiplying by 12: 87 x 12 = 1044 AUMs.

Therefore the heavy use was caused by 1044 AUMs of horse use and 1185 AUMs of cattle use; total of 2229 AUMs. The desired stocking rate (from AE) is 1505 AUMs. The difference is therefore 2229 - 1505 = 724 AUMs. Of this, 46.8% was caused by horses (1044/2229). Therefore horse AUMs above the DSR should be reduced 724 x .468 = 339 AUMs. This will support 339/12 = 28 horses, which is the number to be removed from the pasture.

No horses need be removed from Castle Ridge and Dry Hills pastures, since there is no excessive utilization. All horses should be removed from Kinney and Snowstorm Flat since these are summer pastures, for which the recommendation is to try to keep horses out.

Therefore the AML calculation by pasture is:

First Creek - 87-28	= 59 horses
Castle Ridge	= 34
Dry Hills	= 47
Total	140

The AML range would be 90-140. This range should be attainable within one gather.

Due to the large amount of private land within the summer pastures, and the subsequent greater probability to find wild horses on such land, it is recommended that the first priority in gather operations is to remove horses from these pastures. These pastures will remain within the HMA to preclude the necessity for removal of horses outside of established gather schedules.

Authority: The authority for this decision is contained in Sec. 3(a) and (b) of the Wild-Free-Roaming Horse and Burro Act (P.L. 92-195) as amended and in Title 43 of the Code of Federal Regulations, which states in pertinent parts:

> 4700.0-6(a) "Wild horses and burros shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat."
>
> 4710.4 "Management of wild horses and burros shall be undertaken with the objective of limiting the animals' distribution to herd areas. Management shall be at the minimum level necessary to attain the objectives identified in approved land use plans and herd management area plans."
>
> 4720.1 "Upon examination of current information and a determination by the authorized officer that an excess of wild horses or burros exists, the authorized officer shall remove the excess animals immediately..."
>
> 4770.3(c) "The authorized officer may place in full force and effect decisions to remove wild horses and burros from public and private lands if removal is required by applicable law or to preserve or maintain a thriving ecological balance and multiple use relationship. Full force and effect decisions shall take effect on the date specified, regardless of an appeal. Appeals and petitions for stay of decision shall be filed with the Interior Board of Land Appeals as specified in this part."

If you wish to protest this decision for wild horse management, in accordance with 43 CFR, you are allowed fifteen (15) days from receipt of this notice within which to file such protest with the Paradise-Denio Area Manager, Bureau of Land Management, Winnemucca District, 705 East Fourth St., Winnemucca, NV 89445. Subsequent to the fifteen day protest period, a final decision will be issued which will provide opportunity for appeal in accordance with 43 CFR 4160.4 and 43 CFR 4.470.

LIVESTOCK DECISION

Based upon the evaluation of monitoring data for the Bullhead Allotment, consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act, consultation with the permittee and other affected interests and recommendations from my staff, it is my proposed decision for livestock to change the management:

FROM (Description of existing use)

1. Grazing Preference (AUMs)

a.	Total Preference	19,283
b.	Suspended Preference	7,233
c.	Active Preference	12,050
d.	Initial stocking level	8,350
e.	Exchange of Use	1,051

2. Season of Use

Spring Use	04/01 to 06/30
Summer Use	07/01 to 09/30
Winter Use	10/01 to 12/15

3. Kind and Class of Livestock - Cattle, Cow/Calf

4. Percent Federal Range - 91%

5. Grazing System

Following was the interim grazing system (AMP) which was to be in affect until the essential projects were completed which at a minimum would make the system effective for the achievement of the outlined management objectives.

The interim grazing system divided the allotment into three use areas; spring, summer, and winter. The spring use areas were under a two pasture rest rotation grazing system while the summer use areas were under a three pasture rest rotation system. Winter use was to be in the Rabbit Pasture.

Spring Grazing

Treatment A 04/01 to 06/30
Treatment B Rest

Year	Dry Hills	First Creek
1	B	A
2	A	B

Summer Grazing

Treatment A	07/01 to 08/15
Treatment B	08/16 to 09/30
Treatment C	Rest

Year	Kinney	Kelly	Snowstorm Flat
1	B	C	A
2	C	A	B
3	A	B	C

Winter Grazing

Treatment A 10/01 to 12/15

Year	Rabbit
1	A
2	A

Deferred Grazing Schedule

Treatment A	10/01 to 12/15
Treatment B	04/01 to 05/30

Year	Seeding
1	A
2	B

TO: GRAZING SYSTEM TO BE IMPLEMENTED

1. Grazing Preference (AUMs)

   a. Total Preference 12,050

   b. Suspended Preference 6,060

   c. Active Preference 5,990

2. Season of Use

Early Spring Use	03/01 to 03/31
Spring Use	04/01 to 06/30
Summer Use	07/01 to 08/31
Winter Use	11/01 to 02/28

3. Kind and Class of Livestock - Cattle Cow/Calf

4. Percent Federal Range - 100%

5. Grazing System

The grazing system listed below is for the next evaluation period.

1. Grazing Preference Status (AUMs)

a. Total preference 12,050

b. Suspended preference 6,060

c. Active preference 5,990

2. Season of Use

Early Spring Use	03/01 to 03/31
Spring Use	04/01 to 06/30
Summer Use	07/01 to 08/31
Winter Use	11/01 to 02/28

3. Kind and Class of Livestock - Cattle, Cow/Calf

4. Percent Federal Range - 100%

5. Grazing System

The grazing system listed below is for the next evaluation period.

Early Spring Use (Each Year)

Pasture	Livestock #	Period of Use	AUMs
Castle Ridge	460	03/01 to 03/31	469

Spring Use

Year	Pasture	Livestock #	Period of Use	AUMs
1995	E. First Creek	328	04/01 to 06/30	980
	N. Snowstorm	132	04/01 to 06/30	395
1996	W. First Creek	328	04/01 to 06/30	980
	W. Kinney	136	04/01 to 06/30	406
1997	E. First Creek	328	04/01 to 06/30	980
	N. Snowstorm	132	04/01 to 06/30	395

Summer Use (Each Year)

Pasture	Livestock #	Period of Use	AUMs
Lower Kelly	234	07/01 to 08/31	476
Upper Kelly	518	07/01 to 08/31	1056
S. Snowstorm	194	07/01 to 08/31	395
E. Kinney	200	07/01 to 08/31	406

Winter Use (Each Year)

Pasture	Livestock #	Period of Use	AUMs
Dry Hills	194	11/01 to 02/28	767
Rabbit	265	11/01 to 02/28	1047

Rationale:

It has been determined through monitoring that heavy and severe use has occurred on wetland/riparian and streambank riparian habitats. By continuing with present management, these sensitive areas will continue to be degraded.

Due to the lack of adequate stock water on the uplands in the Castle Ridge Pasture, the present AMP spring grazing system has never been followed. Consistent patterns of rest-rotation and periods of use in other pastures has not been applied to the Bullhead Allotment throughout the evaluation period.

The spring pastures have been utilized from 04/01 to 06/30 in a two pasture rest-rotation. While rest was incorporated into this system, the patterns of rest have been irregular.

The summer pastures, which contain the majority of the riparian areas, have been utilized from 07/01 to 09/30. While Kinney and Snowstorm Flat Pastures have been consistently rested every third year, at a minimum, Kelly Burn Pasture has been grazed every year except one during the evaluation period.

Under the present system, utilization and distribution patterns are showing heavy use around wetland/riparian and streambank riparian habitats within the spring and summer pastures.

The selected management actions will reduce the active preference of livestock and also reduce wild horse numbers to a level that is compatible with meeting allotment specific objectives. Along with the reduction of livestock and wild horses, the summer season of use will be shortened by one month and Pole Creek will be fenced.

The management action will eliminate the present two pasture spring rest rotation system. Early spring use (03/01 to 03/31) will be made in the Castle Ridge Pasture every year. This pasture is short of late spring and summer water. Using this pasture in early spring will allow for better distribution of livestock on the uplands during the cool part of the year. Use in this pasture every year will not have an adverse impact on the vegetative resource because the vegetation has the complete growing season for regrowth which will allow the plants to store food reserves in their root system for the next growing season.

Spring use (04/01 to 06/30) will be made in the First Creek, North Snowstorm and West Kinney Pastures. In the Snowstorm Pasture, Winter's Creek Gorge splits the pasture. The northern portion is more suited for spring use. Using the northern part of this pasture during the spring will allow for better distribution of cattle on the uplands. Drift fences may have to be constructed along portions of Winter's Creek to ensure complete effectiveness in separating north and south. The livestock removal date of 06/30 will be beneficial to the streambank riparian habitats of First and Snowstorm Creeks because of the regrowth potential, which in turn will improve the water quality and fisheries of these habitats.

In the year that the North Snowstorm Pasture is being utilized, the West Kinney Pasture will be rested. This rest will allow for an increase in plant vigor and seedling establishment plus give the riparian areas a recovery period. The "rim" in Kinney Pasture splits the pasture. Small areas and gaps between rims may have to be fenced for complete effectiveness in separating east and west Kinney. The West Kinney Pasture is dominated by cheatgrass and livestock will maximize the use on the green, palatable vegetation at this time of year (04/01 to 06/30).

First Creek Pasture will continue to be used every year as a spring pasture. In the years that North Snowstorm Pasture is scheduled for use, the eastern half of First Creek Pasture will be used and in the years that West Kinney will be used, the western half of First Creek Pasture will be used. Riding of First Creek Pasture is essential to maintain the integrity of this system. This will require commitment by the livestock operator to ensure that the livestock are in the authorized areas.

The selected management action will also change the grazing system from the current AMP three pasture rest-rotation system on the summer pasture, to a four pasture grazing system. Under this system each pasture will be used every year from 07/01 to 08/31. Livestock numbers in each pasture will vary based on the Desired Stocking Rates per pasture. Allowable use levels of 30% for streambank riparian on Pole Creek and 50% for wetland/riparian habitats will be enforced for all summer pastures. These allowable use levels will dictate livestock removals. To determine removal dates from the summer pastures, mid-point utilization studies will be conducted by BLM specialists. Additional studies may be required before and after the mid-point inspection. When streambank riparian utilization levels on Pole Creek reach 25% or wetland/riparian utilization levels reach 45%, the livestock operator will be given a seven (7) day notice in which to remove livestock from the pasture and/or the allotment. If the use levels reach 25% or 45%, the livestock may

be moved to another pasture if the use levels are less than 20% on wetland/riparian habitats in the summer pasture that the livestock are to be moved to. If the use exceeds 20%, livestock will be removed from the allotment. No grazing will be authorized in the summer pastures after 08/31.

Allowable use levels on streambank riparian habitats for First, Snowstorm, and Winter's Creek will not be enforced because the public reaches of these habitats are inaccessible to livestock due to topography and/or dense stands of woody riparian vegetation. Although allowable use levels will not be enforced, these habitats will be monitored.

Winter use will be taken from 11/01 to 02/28 in the Dry Hills and Rabbit Pastures. The utilization will be taken when plants are dormant, thus the vegetative resource will not be adversely effected. The 02/28 removal date from these pastures will allow for growth of the vegetative resource during the spring and summer growing season.

Due to the impacts of mining, the Bullhead Seeding will be used as a holding facility to facilitate livestock movements to and from winter and spring use areas.

Interim System

The Bureau's strategic plan for wild horses will be implemented with the first capture scheduled for 1994. This will reduce the estimated population of 304 adults to 90 adults which will be within the selected management range for population of adult wild horses.

During the interim, forage will be allocated for the estimated population of wild horses. This forage will be made available by reducing the number of livestock using the First Creek and Snowstorm Flat Pastures. The interim grazing system that will be followed until the population of adult horses is reduced is as follows:

1. Grazing Preference Status (AUMs)

    a. Total preference 12,050

    b. Suspended preference 6,060

    c. Active preference 5,990

        1. Authorized Use 5,022

        2. Not Scheduled

            a. Unavailable to livestock due to wild horse use 968

2. Season of Use

Early Spring	03/01 to 03/31
Spring	04/01 to 06/30
Summer	07/01 to 08/31
Winter	11/01 to 02/28

3. Kind and Class of Livestock - Cattle, Cow/Calf

4. Percent Federal Range - 100%

5. Grazing System

Early Spring

Year	Pasture	Livestock #	Period of Use	AUMs
1994	Castle Ridge	460	03/01 to 03/31	469

Spring

1994	W. First Creek	0	No Livestock	0
	W. Kinney	136	04/01 to 06/30	406

Summer

1994	Lower Kelly	234	07/01 to 08/31	476
	Upper Kelly	518	07/01 to 08/31	1056
	S. Snowstorm	194	07/01 to 08/31	395
	E. Kinney	200	07/01 to 08/31	406

Winter

Pastures	Livestock #	Period of Use	AUMs
Dry Hills	194	11/01 to 02/28	767
Rabbit	265	11/01 to 02/28	1047

Terms and Conditions:

Salt and/or mineral blocks shall not be placed within one quarter (1/4) mile of springs, streams, meadows, riparian habitats or aspen stands.

You are required to perform normal maintenance on the range improvements as per your signed cooperative agreements and section 4 permits prior to livestock turn out.

Any livestock owned or controlled by the permittee must be eartagged.

The permittee must supply the BLM with a list of private eartags and numbers for the livestock that the permittee owns or controls. This list must be submitted prior to turnout along with copies of livestock use agreements.

Your certified actual use report by pasture is due 15 days after the end of the authorized grazing period.

Allowable use levels of 30% for streambank riparian on Pole Creek and 50% for wetland/riparian habitats will be enforced for all summer pastures. These allowable use levels will dictate livestock removals. To determine removal dates from the summer pastures, mid-point utilization studies will be conducted by BLM specialists. Additional studies may be required before and after the mid-point inspection. When streambank riparian utilization levels on Pole Creek reach 25% or wetland/riparian utilization levels reach 45%, the livestock operator will be given a seven (7) day notice in which to remove livestock from the pasture and/or allotment. If the use levels reach 25% or 45%, the livestock may be moved to another pasture if the use levels are less than 20% on wetland/riparian habitats in the summer pasture that the livestock are to be moved to. If the use exceeds 20%, livestock will be removed from the allotment. No grazing will be authorized after 08/31 in the summer pastures. Utilization data will be collected at the end of the grazing period in the spring and winter pastures.

The grazing authorization with the schedule of use outlined in the Proposed Decision will be the only approved use and all other schedules, flexibilities and terms and conditions addressed in the 1982 Coordinated Resource Management Plan and the 1985 Allotment Management Plan are suspended until the plans are revised.

Authority: The authority of this decision is contained in Title 43 of the Code of Federal Regulations, which states in pertinent parts:

4100.0-8 "The authorized officer shall manage livestock grazing on public lands under the principle of multiple use and sustained yield and in accordance with applicable land use plans. Land use plans shall establish allowable resource uses (either singly or in combination), related levels of production or use to be maintained, areas of use and resource condition goals and objectives to be obtained. The plans also set forth program constraints and general management practices needed to achieve management objectives. Livestock grazing activities and management actions approved by the authorized officer shall be in conformance with the land use plan as defined at 43 CFR 1601.0-5(b)."
4110.3 "The authorized officer shall periodically review the grazing preference specified in a grazing permit or lease and may make changes in the grazing preference status. These changes shall be supported by monitoring, as evidenced by rangeland studies conducted over time, unless the change is either specified in an applicable land use plan or necessary to manage, maintain or improve rangeland productivity".

4110.3-2(b) " When monitoring shows active use is causing an unacceptable level or pattern of utilization or exceeds the livestock carrying capacity as determined through monitoring, the authorized officer shall reduce active use if necessary to maintain or improve rangeland productivity, unless the authorized officer determines a change in management practices would achieve the management objectives".

4110.3-2(c) " Where active use is reduced it shall be held in suspension or nonuse for conservation/protection purposes, until the authorized officer determines that active use may resume"

4130.6-1(a) " The authorized officer shall specify the kind and number of livestock, the period(s) of use, the allotment(s) to be used, and the amount of use, in animal unit months, for every grazing permit or lease. The authorized livestock grazing use shall not exceed the livestock carrying capacity as determined through monitoring and adjusted as necessary under 4110.3-1 and 4110.3-2."

4130.6-2 "The authorized officer may specify in grazing permits and leases other terms and conditions which will assist in achieving management objectives, provide for proper range management or assist in the orderly administration of the public rangelands..."

4160.2 "Any applicant, permittee, lessee or other affected interests may protest the proposed decision under 4160.1 of this title in person or in writing to the authorized officer within 15 days after receipt of such decision."

If you wish to protest this decision for livestock management, in accordance with 43 CFR 4160.2, you are allowed fifteen (15) days from receipt of this notice within which to file such protest with the Paradise-Denio Resource Area Manager, Bureau of Land Management, Winnemucca District, 705 East Fourth Street, Winnemucca, NV 8445. Subsequent to the fifteen day protest period, a final decision will be issued which will provide opportunity for appeal in accordance with 43 CFR 4160.4 and 43 CFR 4.470.

FUTURE MONITORING AND GRAZING ADJUSTMENTS

The Paradise-Denio Resource Area will continue to monitor the Bullhead Allotment. The monitoring data will continue to be collected in the future to provide the necessary information for subsequent evaluations. These evaluations are necessary to determine if the allotment specific objectives are being met under the new grazing management strategy. In addition, these subsequent evaluations will determine if adjustments are required to meet the established allotment specific objectives.

The Bullhead Allotment is scheduled to be re-evaluated in FY 1997.

Sincerely yours,

Area Manager
Paradise-Denio Resource Area

certified cc:
Natural Resources Defense Council Z773765473
Sierra Club-Toiyabe Chapter Z773765474
Mr. Craig C. Downer Z773765475
The Wilderness Society Z773765476
NDOW - Fallon Z773765477
Mr. John Marvel Z773765478
Nevada Land Action Assoc. Z773765479
Nevada Farm Bureau Federation Z773765480
Mr. James Shepherd Z773765481
USFWS Z773765482
Claudia J. Richards Z773765483
Wild Horse Organ. Assist. Z773765484
Animal Protection Institute of America Z773765485
Commission for the Preservation of Wild Horses Z776765486
International Society for the Protection of Mustangs and Burros Z773765487
American Horse Protection Assn. Z773765488
U.S. Humane Society Z773765489
Humboldt County Commissioners Z773765490
NDOW - Winnemucca Z773765491
NDOW - Elko Z773765492
Mr. Charley Amos Z773765493
Mr. James Bonavia Z773765494
Terry Dailey, Area Manager, Elko Resource Area Z773765495
Mr. Dave Cassinelli Z773765497

5-27-94

BOB MILLER
Governor

STATE OF NEVADA

CATHERINE BARCOMB
Executive Director

COMMISSIONERS

Paula S. Askew, *Chairperson*
Carson City, Nevada

Steven Fulstone, *Vice Chairman*
Smith Valley, Nevada

Michael Jackson
Las Vegas, Nevada

Dan Keiserman
Las Vegas, Nevada

Dawn Lappin
Reno, Nevada

COMMISSION FOR THE PRESERVATION OF WILD HORSES
50 Freeport Boulevard, No. 2
Sparks, Nevada 89431
(702) 359-8768

May 27, 1994

Mr. Scott Billings
Paradise-Denio Resource Area
Bureau of Land Management
705 East Fourth Street
Winnemucca, Nevada 89445

SUBJECT: Proposed Multiple Use Decision - Bullhead Allotment

Dear Scott:

The Nevada Commission for the Preservation of Wild Horses formally protests the Proposed Multiple Use Decision - Bullhead Allotment - May 19, 1994. Based upon our review and interpretation of the Bullhead Allotment - Final Allotment Evaluation Summary - May 20, 1994, we find the following errors:

The appropriate management level for the Snowstorm Wild Horse Herd is not based upon rangeland monitoring data.

Intensive wild horse removals during 1983, 1984 and 1985 to meet the Humboldt Coordinated Resource Management Plan goal of 50 horses resulted in the removal of 883 wild horses from the Bullhead Allotment. Wild horse actual use data collected on the First Creek Pasture indicate horses were virtually removed from the pasture during 1987, 1988 and 1989. Horses did not appear on First Creek Pasture until 1990 (See Table 2. Bullhead Allotment Wild Horse Numbers by Pasture, 1983-1992). Wild horse survey data collected in 1992 clearly illustrates seasonal use of the First Creek Pasture by the Snowstorm Herd. During May 1992 the Bureau observed 105 adults and during September 1992 the Bureau observed 14 adults on the First Creek Pasture. These data cannot support the Wild Horse Management Decision that 40.5 percent of the Snowstorm Herd occupy the First Creek Pasture for 12 months.

The appropriate management level for the Snowstorm Herd was determined upon 1992 actual use data for wild horse and livestock. Wild horse actual use estimates are in error based upon the Bureau of Land Management's assumption that there is no season use or migration of the herd.

The appropriate management level for the Snowstorm Herd was determined by use of 1992 Use Pattern Mapping Data. These data are not found in the Bullhead Allotment - Final Allotment Evaluation Summary. In fact, the only use pattern mapping data presented are for 1985,1987,1988 and 1990. During these years, wild horse numbers were estimated to be only two head for 1987, 1988 and 1989. For those years of rangeland monitoring, the Bureau of Land Management could only find heavy and severe utilization of forage that was directly accountable to livestock actual use of the First Creek Pasture.

The appropriate management level for the Snowstorm Wild Horse Herd must be a fair proportion of the carrying capacity of the Bullhead Allotment.

In order to achieve a thriving natural ecological balance the appropriate management level must be determined by use of monitoring and actual use collected within the term of the allotment evaluation. Therefore, actual use data must be accurate and allocation of available forage must be proportional to each user. In the example of First Creek Pasture, we find the following:

Year	Cattle AUMS	Horse AUMs	Total AUMs
1985	3008	426	3434
1987	2730	* 12	2742
1988	271	* 12	283
1989	1482	* 12	1494
Average	1873	115	1988
Percent	94%	6%	

* Data indicate two horses using the First Creek Pasture for spring season(six months).

Therefore, the reduction in active use should be proportional to the amount of damage caused by each user. Based upon the data presented and analyzed in the allotment evaluation, the carrying capacity for the First Creek Pasture is 1505 AUMs. Any reduction in the existing wild horse herd should be limited to 6% of the necessary adjustment, unless all monitoring data are presented and analyzed in an allotment evaluation.

Scott Billing, Area Manager

In addition, you've made reference to the CRMP agreement as the starting base for the Land Use Plan numbers on wild horses. The 1989 IBLA Decision in reference to wild horses, negated those original numbers. Please correct the reference in your final document.

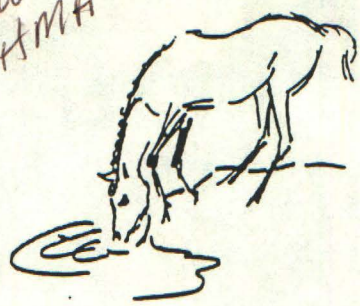
Sincerely,

Catherine Barcomb

Catherine Barcomb
Director

WHOA
WILD HORSE ORGANIZED ASSISTANCE
P.O. BOX 555
RENO, NEVADA 89504

Snowstorm HMA 5/27/94



. . . a note from

Dawn Y. Lappin

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Director