



✓ 9/24/97

United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Winnemucca Field Office  
5100 East Winnemucca Boulevard  
Winnemucca, Nevada 89445  
702-623-1500

In Reply Refer To:  
(NV-022.17)  
4400.3

September 24, 1997

CERTIFIED MAIL NO.Z 374 101 710  
RETURN RECEIPT REQUESTED

Mr. Stan Ceresola  
P.O Box  
Wadsworth, NV 89

**PROPOSED MULTIPLE USE DECISION  
RODEO CREEK ALLOTMENT**

Dear Mr. Stan Ceresola:

The Record of Decision for the Sonoma/Gerlach Environmental Impact Statement and the Management Framework Plan - Land Use Plan (LUP) - was issued September 9, 1982. These documents established the multiple use goals and objectives which guide management of the public lands in the Rodeo Creek Allotment.

In 1988, the Rodeo Creek Allotment was evaluated and as a result of that evaluation an Agreement was negotiated with the permittee which specified a grazing system, established a livestock grazing preference, and site specific objectives.

Since the 1988 Allotment Evaluation and Agreement, monitoring has been conducted to determine if livestock grazing, wild horse use, and wildlife use are within the parameters established in the LUP and the 1988 Livestock Use Agreement. The initial draft through conclusions was sent out May 21, 1993 with an initial meeting held at the Nevada State BLM Office on June 15, 1993 to go over the summary of data and conclusions and to begin writing technical recommendations. The meeting was attended by BLM personnel, the permittee, WHOA, and the Commission for the Preservation for Wild Horses. NDOW was unable to

attend, but sent written comments. A completed draft evaluation was sent out for review on July 26, 1993. Due to the comments received from NDOW, WHOA, and the Commission for the Preservation for Wild Horses on this draft evaluation, it was sent to the Nevada State Office for review. Comments were received back from the Nevada State Office on July 22, 1994. A second draft was sent out November 1, 1995 with a meeting following in the Nevada State Office on December 13, 1995. The permittee, NDOW, a representative from the Commission for the Preservation for Wild Horses, and BLM personnel attended the meeting. As agreed to at the December 13, 1995 meeting, 1989 through 1992 data was used to determine carrying capacity, but the 1993 through 1996 data was added to the document for comparison purposes. 1989 - 1992 data was used to determine carrying capacity because these three years reflect the management that was put into place through the 1988 Livestock Use Agreement. Management on the allotment has changed since 1992 and has been in an interim status until completion of the Final Re-Evaluation and issuance of the Multiple Use Decision.

The summary of conclusions is as follows:

Use exceeded 50% within some areas of the winter use area, but because use is made during plant dormancy, damage is not occurring to plant health. Furthermore, the winter use area is in a static to upward trend and is primarily in late seral condition.

The spring/summer use area had repeated areas of heavy use in areas with concentrated use by both wild horses and livestock. This area is predominately in mid seral condition.

Specific utilization monitoring was not done on riparian habitat. Heavy use did occur on upland areas adjacent to the riparian habitat, so in all likelihood riparian habitat received heavy use as well.

Bitterbrush and aspen utilization objectives are being met. The form class for bitterbrush is slightly hedged except for those favored plants on the sites which are hedged. Some bitterbrush sites within the allotment have more compact plants with less vigor because these sites have a lower growing potential for bitterbrush.

The mule deer habitat condition rating was good. The pronghorn habitat condition rating was fair. Comparing the current pronghorn habitat condition to what it would be at potential improved it slightly, but it remained in fair condition. The limiting factor for both mule deer and pronghorn was forage quality.

Based upon the data analysis, technical recommendations designed to attain resource objectives throughout the allotment were developed.

## Allotment Wide Multiple Use Objectives

### A. Standards of Rangeland Health

The following are the Standards of Rangeland Health as developed in consultation with the Sierra Front-Northwest Great Basin Resource Advisory Council, other interested publics and approved by the Secretary of the Interior on February 12, 1997. The terms and conditions of this livestock grazing permit must be in conformance with these approved Standards and Guidelines.

1. Soil processes will be appropriate to soil type, climate and land form.
2. Riparian/wetland systems are in properly functioning condition.
3. Water quality criteria in Nevada or California State Law shall be achieved or maintained.
4. Populations and communities of native plant species and habitats for native animal species are healthy, productive and diverse.
5. Habitat conditions meet the life cycle requirements of special status species.

The specific multiple use objectives for the Rodeo Creek Allotment are:

### B. Short Term

1. Utilization of key plants in wetland riparian habitat shall not exceed 50% except where adjusted by an approved activity plan. (WL-1.10)
2. Total utilization of antelope bitterbrush (PUTR2) shall not exceed 50% and 40% on quaking aspen (POTR5) except where adjusted by an approved activity plan. (WL-1.7 and WL-1.9)
3. Maintain an acceptable use level of 50% on the summer use area and 60% on the winter use area on the key forage species to provide a sustained yield.

### B. Long Term

1. To have functioning stream riparian areas by maintaining a static to upward trend on the streambank riparian areas by the next evaluation period (2004).

The following are the stream riparian habitats that will be monitored for this objective:

- a. Rattlesnake Creek
- b. Rodeo Creek
- c. Bull Creek
- d. Smith Canyon Creek
- e. Wild Horse Canyon Creek

- 2. To have functioning lentic (springs, seeps, and meadows) riparian habitat by maintaining a static to upward trend on the springs, seeps, and meadows by the next evaluation period (2004).

The following are the lentic (springs, seeps, and meadows) riparian habitats that will be monitored for this objective:

- a. the two headwaters meadows of Rodeo Creek
- b. spring complex meadow in the upper end of Trail Canyon.

Objectives 3 - 7 listed below will be requantified upon completion of baseline data to Desired Plant Community Objectives for wildlife, wild horses, and livestock. All interested publics will be invited and encouraged to participate in the writing of these objectives.

- 3. Protect sage grouse strutting grounds and nesting wintering habitat and improve brooding habitat by:
  - a. Following NDOW's guidelines for Vegetal Control Programs in Sage Grouse Habitat in Nevada.
  - b. Maintain sagebrush canopy cover at 30% in sage grouse nesting and wintering areas where sagebrush does not exceed (3) feet in height.

Use the criteria listed on pages 40 and 41 of the final Rodeo Creek Re-evaluation and the site potentials to establish desired plant community objectives for sage grouse.

- 4. Manage, maintain, and improve public rangeland habitat condition to provide forage on a sustained yield basis, with an initial forage demand for big game of 177 AUMs for mule deer, 137 AUMs for pronghorn, and 150 AUMs for bighorn sheep by:
  - a. Improve or maintain Fox Range DY-1 (16,224 acres) mule deer habitat condition to good condition.
  - b. Improve or maintain Fox Range AY-5 (38,100 acres) pronghorn habitat to good condition.
  - c. Improve or maintain Fox Range BY-3 (32,530 acres) potential California bighorn habitat to 75% of optimum.
  - d. Improve bitterbush from severely hedged form class to lightly hedged form class.



5. Manage, maintain, and improve rangeland conditions to provide forage on a sustained yield basis with an initial stocking level of 6,462 AUMs.
6. Improve range/ecological condition from poor to fair on 162,458 acres, fair to food on 27,076 acres, good to excellent on 1,934 acres.
7. Manage, maintain, and improve public rangeland conditions to provide an initial level of 4,020 AUMS of forage on a sustained yield basis for 335 wild horses in the Fox and Lake Range Herd Management Area.
8. Maintain and improve the free-roaming behavior of wild horses and burros by:
  - a. protecting their home range.
  - b. assuring free access to water

D. Desired Plant Community (DPC) Objectives

Desired Plant Community objectives will be completed once the baseline data is completed. The following are the locations for key areas where DPC objectives will be completed.

1. Winter Use Area

- a. Empire Key Area    024XY004    Silty 4-8" P.Z.
  - 1) To maintain a static to upward trend.
  - 2) Represents the northern half of the winter use area.
  - 3) Expect to see an increase in bottlebrush squirreltail and to maintain budsage at its current level.
  - 4) Continue to run quadrat frequency and establish a double sampling and ocular transect.
- b. Three Mile Canyon Key Area    024XY002    Loamy 4-6" P.Z.
  - 1) To maintain a static to upward trend.
  - 2) Represents the southern half of the winter use area.
  - 3) Expect to see an increase in perennial grasses (bottlebrush squirreltail, Indian ricegrass, and bluegrass) and to maintain budsage at its current level.
  - 4) Continue to run quadrat frequency and establish a double sampling and ocular transect.

2. Spring/Summer Use Area

- a. 023XY037    Clay Slope 8-12" P.Z.    within SWA F010

- 1) To maintain or improve the ecological condition of this site at mid seral.
  - 2) This is the dominant ecological site that represents the Spring/Summer Use Area (Fox Range). This area is within the potential yearlong bighorn sheep range (BY-3), mule deer yearlong range (DY-1), pronghorn yearlong range (AY-5). Wild horses use the area yearlong and livestock use the area during the summer months.
  - 3) Expect to see an increase in perennial grasses (bottlebrush squirreltail, bluebunch wheatgrass, Thurbers needlegrass, and bluegrass) and to maintain or increase forbs.
  - 4) Initiate a quadrat frequency transect, a double sampling transect along with an ocular transect and a photo point.
- b. 023XY039 Loamy Slope 10-14"P.Z. within SWA F031 or F012 in the Rattlesnake Canyon Area (utilization transect already established)
- 1) To maintain or improve the ecological condition of this site at mid seral.
  - 2) This is one of the two ecological sites that has the potential to have bitterbrush occurring on the site and bitterbrush is one of the key species identified on the allotment. This area is within the potential yearlong bighorn sheep range (BY-3), mule deer yearlong range (DY-1), pronghorn yearlong range (AY-5). Wild horses use the area yearlong and livestock use the area during the summer months.
  - 3) Expect to see bitterbrush maintained, the perennial grasses (bluebunch wheatgrass and Thurbers needlegrass) to increase, and the forbs maintained or increased on the site.
  - 4) Establish a macro-plot and conduct the appropriate amount of line intercept transects to determine cover.

### WILDLIFE MANAGEMENT

Based on the interpretation and analysis of the monitoring data, consultation with the interested public, and staff technical recommendations, no adjustments in wildlife use or numbers are necessary. Wildlife habitat will be managed as outlined in the Sonoma-Gerlach MFP III and in accordance with the short and long term objectives in this decision.

The draft re-evaluation was sent to interested parties. The permittee, NDOW, WHOA, and the Commission for the Preservation for Wild Horses submitted comments that were incorporated into the final re-evaluation document.

As a result of this process, my proposed decisions are:

## LIVESTOCK MANAGEMENT DECISION

### Carrying Capacity

The carrying capacity was determined using the potential stocking level calculation from BLM Technical Reference 4400-7. A weighted average utilization was calculated by use area using the moderate, heavy, and severe use classes. Moderate use was used because that is the desired utilization. Heavy and severe use classes were used because these are the two use classes that need to be reduced.

The winter and spring/summer use areas were determined by elevation, the vegetative communities, water availability, and distribution of animals.

On the winter use area, 60% desired average utilization by February 28 was used. The plants are dormant and this use will not effect the plant physiologically. This is also in conformance with the state's best management practices.

On the spring/summer use area, 50% desired average utilization by February 28 was used. The rationale for the 50% use level is to maintain or accelerate improvement in upland vegetation. 50% use on the grasses during the growing season does not hinder the plant physiologically and plant vigor should increase. Furthermore, a grass plant produces twice the volume of leaves that it needs to complete its growth functions and remain productive (vigor along with carbohydrate reserves are not depleted). Increased plant vigor means better protection to the soil surface and assures greater root volume.

The Land Use Plan ratio was then applied to the calculated potential actual use to determine the number of AUMs for livestock and wild horses. Calculations can be found in Appendix #2 of the Final Allotment Re-evaluation.

#### From:

Pasture	Numbers	Kind	Period of Use	Total # of AUMs of specified livestock grazing	Historical Suspended AUMs
Winter	485	cow/calf	11/01 - 04/30	2886	
Spring/ Summer	485	cow/calf	05/01 - 10/31	2934	
Total				5820	3516

To:

Pasture	Numbers	Kind	Season of Use	Total # of AUMs of specified livestock grazing	Historical Suspended AUMs
Winter	438	cow/calf	11/01 - 04/30	2608	
Summer	485*	cow/calf	05/01 - 10/31	2934	
Total				5542	3516

\* Until monitoring documents resource objectives are being met, livestock numbers on the spring/summer use area will remain the same.

**Rationale:** Based on monitoring data, areas within the winter use area were exceeding the utilization objective, so numbers were adjusted downward. The calculated potential actual use for the spring/summer use area resulted in a potential increase in livestock numbers. To accelerate improvement in plant vigor and health, the number of livestock will remain the same until monitoring data shows that upland and riparian utilization objectives are being met and the range is progressing toward the desired plant communities.

### Grazing System

**From:** Turnout is made in the winter use area of the Rodeo Creek Allotment. The winter use area includes the eastern portion of the Rodeo Creek Allotment and that area east of the Fox Range to include the San Emidio Desert, the Lake Range, and the southern portion of the Black Rock Desert.

For the period 05/01 - 05/30 cattle will utilize the spring use area which includes the foothills of the Fox Range along both the east and west sides.

On 06/01 cattle will be moved into the summer use area which includes the high country of the Fox Range and will remain on the Fox Range until 10/31.

On 11/01 cattle will be moved back to the winter use area as described above and will remain there until 04/30.

**To:** Alternative 3 from the Final Allotment Re-evaluation. Alternative 3 is as follows: Develop a grazing system that would defer grazing until after seedripe (bluebunch wheatgrass, Thurbers needlegrass, and bottlebrush squirreltail) on part of the spring/summer use areas.

Turnout will be made in the winter use area of the Rodeo Creek Allotment from 03/01 to 04/30. The winter use area would continue to include that area east of the Fox Range to include the San Emidio Desert, the Lake Range, and the southern portion of the Black Rock Desert.

In years one and two for the spring/summer use area, start on the north end of the Fox Range and use the area from Cottonwood Basin to Bull Basin from 05/01 to 07/15. From 07/15 to 10/30 the cows would use from Bull Basin south to the Pyramid Lake Indian Reservation and the Pole Canyon Allotment Boundary Fence.

In years three and four, the cows would use from the Pyramid Lake Indian Reservation and the Pole Canyon Allotment Boundary fence north to Bull Basin from 05/01 to 07/15. From 07/15 to 10/30 the cows would use from Bull Basin north to Cottonwood Basin.

This system would continue to alternate the use in the spring/summer use area between the north and south portions of the allotment as described above.

Drift of 20 head into the other use areas will be acceptable, since no fencing will be built. Due to lack of fences to control livestock movement, the permittee will be notified if more than 20 head drift into the other areas and given reasonable time to remove.

**Rationale:** This grazing system is a treatment alternative for areas that have had heavy use of key forage species, low vigor in key species, and an undesirable plant composition. It should allow attainment of the short term utilization objectives and long term vegetative objectives by:

- 1) Hasten natural revegetation by improving plant vigor and permitting desirable species to produce seed.
- 2) Improve plant cover and hydrologic cover conditions and reduce soil loss.
- 3) Enhance wildlife habitat.

### **Terms and Conditions**

In accordance with 43 CFR 4130.2(a), 4130.2(b), 4130.3, 4130.3-1(a), and 4130.3-2, a new 10 year permits will be issued to reflect the terms and conditions of this decision. The following terms and conditions will be incorporated into the permittee's term permit and their annual authorizations via the grazing bill:



Grazing use will be in accordance with this grazing decision.

Salt and/or mineral blocks shall not be placed within one quarter (1/4) mile of springs, streams, meadows, or aspen stands without first consulting BLM personnel.

The permittee is required to perform normal maintenance on the range improvement projects which have been assigned to the permittee for maintenance responsibility.

Actual use will be submitted within 15 days of livestock being removed from each use area.

"Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined at 43 CFR 10.2). Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer."

The terms and conditions of this permit must be in conformance with the Standards and Guidelines for the Sierra Front-Northwest Great Basin Resource Advisory Council Area, approved by the Secretary of the Interior on the February 12, 1997.

## AUTHORITY

The authority for this decision is contained in Title 43 of the Code of Federal Regulations; pertinent citations are below:

- 4100.0-8            **Land use plans** - 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            **Changes in permitted use**- The authorized officer shall periodically review the permitted use specified in a grazing permit or grazing lease and shall make changes in the permitted use as needed to manage, maintain, or improve rangeland productivity, to assist in restoring ecosystems to properly functioning condition, to conform with land use plans or activity plans, or to comply with the provisions of subpart 4180. These changes must be supported by monitoring, field observations, ecological site inventory or other data acceptable to the authorized officer.
- 4120.3-1(a)        **Conditions for range improvements** - Range improvements shall be installed, used, maintained, and/or modified on the public lands, or removed from these lands, in a manner consistent with multiple-use management.
- 4130.3-1(a)        **Mandatory terms and conditions** - 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 of the allotment.
- 4130.3-2            **Other terms and conditions** - The authorized officer may specify in grazing permits or 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.
- 4130.3-3            **Modifications of permits or leases** - Following consultation, cooperation, and coordination with the affected lessees or permittees, the State having lands or responsible for managing resources within the area, and the interested public, the authorized officer may modify terms and conditions of the permit or lease when the active grazing use or related management practices are not meeting the land use plan, allotment management objectives, or is not in conformance with the provisions of subpart 4180. To the extent practical, the authorized officer shall provide to affected permittees or lessees, States having lands or responsibility for managing resources within the affected area, and the interested public an opportunity to review, comment and give input during the preparation of reports that evaluate monitoring and other data that are used as a basis for making decisions to increase or decrease grazing use, or to change the terms and conditions of a permit or lease.

## WILD HORSE MANAGEMENT DECISION

Alternative 1 from the Rodeo Creek Final Allotment Re-Evaluation.

<u>Herd Management Area</u>	<u>75% of AML to AML</u>	<u>AUMS</u>
Fox and Lake Range		
Winter	23 to 31	276 to 372
Spring/Summer	130 to 173	1560 to 2076
TOTALS	153 to 204	1836 to 2448

This is based on gathering horses every three years. If gathering schedule changes these ranges may also change.

**Rationale:** Distribution and census data indicates that horses on the Fox and Lake Range are two distinct populations that have minimal interactions. The data also indicates that there has been a small yearlong resident population on the Lake Range, and that horses on the Fox Range stay within the livestock spring/summer use area and typically do not move off of the mountain onto the valley floor except for those years when extremely heavy snows occur. Since the Lake Range is contained within the livestock winter use area, and the Fox Range corresponds with the spring/summer livestock use area, calculation of carrying capacity and distribution of AUMS between livestock and wild horses is fairly straight forward. Once total carrying capacity was calculated for the winter and spring/summer livestock use areas, AUMS were then distributed to wild horses and livestock by using the ratios established in the LUP. This resulted in a total of 1,599 AUMs for wild horses in the livestock winter use area, and 2,076 AUMs in the Fox Range (spring/summer livestock use area) for wild horses. To ensure that adequate forage on a sustained yield basis is available for wild horses on the winter livestock use area, carrying capacity for the small yearlong resident population on the Lake Range was determined by using a 30% utilization level by November 1, which resulted in 372 AUMs (31 horses yearlong) for the small resident population. The remaining 1,227 AUMs available for wild horses in the livestock winter use area will not be made available to any other users, but will be held for those winters where snow forces the Fox Range horses from the spring/summer livestock use area onto the valley floor (winter livestock use area). Since horses remain on the Fox Range yearlong except when extremely heavy snow occurs, and to ensure resource objectives are met, the 2,076 AUMs were distributed for use over a 12 month period.

### AUTHORITY

The authority for this decision is contained in Sec. 3(a), 3(b)(1), and 3(b)(2) 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:

- 4700.0-6(a)            **Policy** - 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.
- 4710.3-1            **Herd Management Areas** - ...In delineating each herd management area, the authorized officer shall consider the appropriate management level for the herd, the habitat requirements of the animals, the relationships with other uses of the public and adjacent private lands, and the constraints contained in 4710.4.
- 4710.4            **Constraints on Management** - 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 areas plans.
- 4720.1            **Removal of Excess Animals from Public Lands** - 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...

## PROTEST PROCEDURES

Any applicant, permittee, lessee, or other interested may protest this proposed multiple-use decision under Section 43 CFR 4160.2, in person or in writing to:

Assistant District Manager, Renewable Resources  
Bureau of Land Management, Winnemucca District  
5100 East Winnemucca Blvd.  
Winnemucca, NV 89445

within 15 days after receipt of such decision. The protest, if filed, should clearly and concisely state the reason(s) as to why the proposed decision is in error.

Subsequent to the protest period, a final multiple-use decision will be issued specifying the appeal procedures.

## FUTURE MONITORING AND GRAZING ADJUSTMENT

The Winnemucca District of the Bureau of Land Management will continue to monitor the Rodeo Creek Allotment to provide the necessary information to determine if the allotment specific objectives are being met under the new grazing strategy. An annual meeting with NDOW, BLM, the permittee, and other interested publics will be held to analyze the previous year's monitoring data and current conditions in order to make recommendations and/or adjustments for the upcoming grazing year. The allotment is scheduled for re-evaluation in 2004.

Sincerely yours,



Colin P. Christensen, Assistant District Manager  
Winnemucca District

Enclosure

CC: Richard Heap, NDOW Z374101701  
Trout Unlimited, Sagebrush Chapter Z374101702  
David W. Armstrong, PCA Z374101703  
John Torvick Z374101704  
Cathy Barcomb, Commission for the Preservation of Wild Horses Z374101705

Dawn Lappin, WHOA           Z374101706  
Desert Bighorn Council       Z374101707  
RCI   Z374101708  
Rose Strickland, Sierra Club   Z374101709



9/24/97

I. INTRODUCTION

- A. Allotment Name Rodeo Creek  
Allotment Number 00129
- B. Permittee(s) Stan Ceresola
- C. Evaluation Period 1988-1996
- D. Selective Management Category I  
Priority 3
- E. Summary of the 1988 Allotment Evaluation Conclusions

- 1. Based on field observations it appears that the upland and wetland riparian utilization objectives are not being met.
- 2. Use pattern mapping on the winter range show that the objectives are being met except for White Sage Flat and Rodeo Creek Canyon.
- 3. Wild horse numbers are above AMLs.

F. Management Actions from Agreement or Decision

The Rodeo Creek Allotment had been traditionally licensed for cattle at a level of 835 animals during summer and then reduced to 150 animals during the winter season.

The Agreement For Implementation And Changes In Available Livestock Forage And Livestock Grazing Use Adjustments For The Rodeo Creek Allotment was signed September 15, 1988. The agreement changed the number of livestock for each use area within the allotment and added a spring use area to the already existing winter and summer use areas. The agreement provided for 485 cattle to be grazed in the mountain pasture which amounts to a reduction of 350 head for the summer season. The 485 cattle would then be moved into the lower winter pasture for the remainder of season. This reduction of 42% was designed to reduce the grazing use on the summer wildlife habitat and wet areas of the mountain pasture. The lower pasture would be used when vegetation is dormant and then allowed to grow during the summer months. The agreement resulted in a net decrease of livestock use by 10% or 646 AUMs for 5 years.

The 1988 Allotment Evaluation states, "No recommendations can be made based on existing data. However, the livestock permittee has recognized the imbalance between summer and winter use areas and will agree to the following modifications:

1. A five year reduction in the active preference from 6,462 AUMs to 5,816 AUMs and reduce livestock numbers in the summer country. The 10% reduction would total 646 AUMs. The yearlong stocking rate at 10% reduction would be 485 cattle. Livestock use would then maintain 485 cattle yearlong rather than changing numbers in the summer and winter use areas. The 485 cattle would be a reduction from past use in the summer country from 835 cattle. This would increase numbers in the winter country from the historical use of approximately 150. This management change would reduce stocking level in the summer country where a reduction is needed, but would increase use in the winter country where forage can withstand more grazing pressure.

2. Maintain the past winter and summer use areas and initiate use in the spring area. Make use as follows:



B. Wild Horse and Burro Use:

Recommended Wild Horse/ Burro Numbers from the Sonoma-Gerlach MFP-III

	<u>Wild Horse/ Burro NUMBER</u>	<u>WildHorse/Burro AUMs</u>
Fox and Lake HMA	334/1	4008/12

C. Wildlife Use:

1. Reasonable Numbers (from Sonoma- Gerlach MFP-III 1982)

Mule Deer - (Odocoileus hemionus) 177 AUMs  
Pronghorn - (Antilocapra americana) 137 AUMs  
Big Horn Sheep - (Ovis canadensis) 150 AUMs

2. Key or Critical Management Areas within the allotment.

No Habitat Management Plan currently exists for this area, but mule deer, pronghorn, potential California big horn sheep, and sage grouse habitat has been identified on the Fox Range portion of the Rodeo Creek Allotment in the Sonoma - Gerlach MFP-III. Maps of these areas can be found in the Winnemucca District Office.

III. ALLOTMENT PROFILE

A. Description

The allotment is located in northern Washoe County with the northern perimeter near Gerlach, Nevada and the southern end borders the Pyramid Lake Indian Reservation and the Pole Canyon Allotment.

The typical physiographic features of the allotment are the high elevation north-south trending Fox and Lake Ranges to the valley floors of the San Emidio, Black Rock and Smoke Creek deserts. The allotment is approximately 25 miles long in a north-south direction and 16 miles wide in a west-east direction.

Vegetation types in the allotment include those from the greasewood- saltbush flats to the sagebrush-Bluegrass-needlegrass vegetative types at the higher elevations.

B. Acreage

<u>Land Status</u>		<u>Other Land</u>	<u>Total</u>
<u>Public Land</u>			
193,402 (Acres)	97%	5,373 (Acres)	3% 198,775

C. Allotment objectives from the 1988 Evaluation

1. Short Term

a. Utilization of key plant species in 596 acres of wetland riparian habitat shall not exceed 50% except where adjusted by an approved activity plan. (WL-1.10)

b. Total utilization of antelope bitterbrush (PUTR2) shall not exceed 50% and 40% on quaking aspen (POTR5)

except where adjusted by an approved activity plan.  
(WL-1.7) and WL-1.9)

- c. Maintain an acceptable allowable use level on key forage species that will provide a sustained yield.

Key forage species are those whose use serves as an indicator to the degree of use of associated species; or those species which must, because of their importance, be considered in a management program.

2. Long Term

- a. Improve to and maintain the condition of 596 acres of wetland riparian habitat type to good or better.  
(WL-1.10)

- b. Protect sage grouse strutting grounds and nesting wintering habitat and improve brooding habitat by:  
(WL-1.11)

- 1) Following NDOW's guidelines for Vegetal Control Programs in Sage Grouse Habitat in Nevada.
- 2) Maintain sagebrush canopy at 30% in sage grouse nesting and wintering areas where sagebrush does not exceed (3) feet in height.

- c. Manage, maintain and improve public rangeland habitat condition to provide forage on a sustained yield basis, with an initial forage demand for big game of 177 AUMs for mule deer, 137 AUMs for pronghorn and 150 AUMs for bighorn sheep by:

- 1) Improving or maintaining Fox Range DY-1 (16,224 acres) mule deer habitat to good condition.
- 2) Improving or maintaining Fox Range AY-5 (38,100 acres) pronghorn habitat to good condition.
- 3) Improving or maintaining Fox Range BY-3 (32,530 acres) potential California bighorn habitat at 75% of optimum.
- 4) Improve bitterbrush from severely hedged form class to lightly hedged form class.

- d. Manage, maintain and improve rangeland conditions to provide forage on a sustained yield basis with an initial stocking level of 6,462 AUMs.

- e. Improve range/ecological condition 1/ from: poor to fair on 162,458 acres fair to good on 27,076 acres good to excellent on 1,934 acres.

- f. Manage, maintain and improve public rangeland conditions to provide an initial level of 4,020 AUMs of forage on a sustained yield basis for 335 (AMLs) 2/ wild horses in the Fox and Lake Range Herd Use Area.

1/ The range/ecological conditions in this document are forage condition that will be replaced with ecological status condition as information becomes available. The objective will be redefined/quantified to obtain a particular ecological status when site potential and identified uses are combined to meet vegetative objectives.

2/ AML refer to adult horses and burros (i.e. two years or older).

- g. Maintain and improve the free-roaming behavior of wild horses and burros by protecting and enhancing their home range.
- h. Maintain/Improve wild horse/burro habitat by assuring free access to water.

IV. MANAGEMENT EVALUATION

A. Purpose

The Rodeo Creek Allotment Re-evaluation will evaluate the actual use, climate, utilization, ecological site inventory, wild horse census and distribution data, and wildlife habitat data to determine the effectiveness of the present management on the Rodeo Creek Allotment. This re-evaluation addresses the 1988 Rodeo Creek evaluation and the 1988 livestock agreement to determine whether the allotment specific objectives have been met or not met and if the objectives are still appropriate. Those objectives that are carried forward will be requantified and management actions developed to ensure their achievement. Among the management actions to be developed will be to set the carrying capacity on a pasture by pasture basis and from there establish an Appropriate Management Level for wild horses and the appropriate livestock numbers, the allowable use levels, and a grazing system. The re-evaluation will be the basis for the Multiple Use Decision.

B. Summary of Studies Data

1. Actual Use

a. Livestock

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Table #1. Actual Use for the Rodeo Creek Allotment by Use Area.

Pasture	Grazing Year	Number of Livestock	Period of Use	AUMs
	1988			
Winter		485	03/28 - 04/30	542
Spring		485	05/01 - 05/31	494
Summer		485	06/01 - 10/31	2440
Winter		380	11/01 - 11/16	412
Winter		335	12/20 - 02/28	782
Allotment Yearly Total:				4925
	1989			
Winter		335	03/01 - 03/14	154
Winter		485	03/15 - 04/30	749
Spring		485	05/01 - 05/31	494
Summer		485	06/01 - 10/31	2440
Winter		485	11/01 - 02/28	1913
Allotment Yearly Total:				5750
	1990			
Winter		485	03/01 - 04/30	973



Spring		485	05/01 - 05/31	494
Summer		485	06/1 - 10/31	2440
Winter		485	11/01 - 02/28	1913
Allotment Yearly Total:				5820

	1991			
Winter		485	03/01 - 04/30	973
Spring		485	05/01 - 05/31	494
Summer		485	06/1 - 10/31	2440
Winter		485	11/01 - 02/28	1913
Allotment Yearly Total:				5820

	1992			
Winter		485	03/01 - 04/30	973
Spring		350	05/01 - 05/31	357
Summer		100	06/01 - 07/01 07/02 - 10/31	357 401
Winter		non-use	11/01 - 02/28	0
Allotment Yearly Total:				2088

	1993			
Winter		0	03/01 - 04/30	0
Summer		250	07/15 - 10/31	896
Winter		200	11/01 - 02/28	789
Allotment Yearly Total:				1685

	1994			
Winter		100	03/01 - 04/30	201
Spring/ Summer		100	05/01 - 09/05	1262
Winter		200	09/06 - 02/28	1157
Allotment Yearly Total:				2620

	1995			
Winter		200	03/01 - 04/30	401
Spring/ Summer		284	05/01 - 10/31	1718
Winter		284	11/01 - 02/28	1130
Allotment Yearly Total:				3249

	1996			
Winter		284	03/01 - 04/30	570
Spring/ Summer		284	05/01 - 10/31	1717
Winter		485	11/01 - 02/28	1913

=====

b. Wildlife Population Status and Trend

No site specific data has been collected by NDOW or Bureau biologists on the status of mule deer populations in this allotment. It is the opinion of

biologists from both agencies that there are low densities of mule deer in this allotment even during optimum years due to the potential of the allotment's vegetative communities. Declines of 50-75% in mule deer populations have been documented by NDOW throughout northwestern Nevada from the peak populations in the mid to late 1980's. It is believed that similar declines in the mule deer population has occurred in the allotment. At this time Bureau and NDOW biologists estimate the allotment mule deer population at between 100 and 150 yearlong animals.

The pronghorn antelope population is at a low density in the allotment and the count numbers for the 022 Management Unit would not be statistically valid to determine the trend for this area. The pronghorn antelope population trend probably follows the trend in the surrounding management areas. Populations were increasing in these areas up until the winter of 1992-93 when populations took slight losses due to drought induced poor forage conditions, competition with other ungulates and extreme snow depths. At this time estimates of the pronghorn population show a net increase in the allotment herd over the beginning of the evaluation period. Population estimates for pronghorn utilizing the allotment yearlong range between 125-150 head.

This area has been identified as potential bighorn sheep habitat, but no animals have been reintroduced.

c. Wild Horses and/or Burros

Table #2. Actual Use for the Fox and Lake HMA within the Rodeo Creek Allotment.

<u>Year</u>	<u># Horses/# Burros</u>	<u>AUMs</u>
1988*	492/1	5736/12*
1989	497/1	5964/12
1990	477/1	5724/12
1991**	529/1	6348/12
1992	526/1	6312/12
1993***	206/0	2468/ 0
1994	216/0	2592/ 0
1995****	224/0	1753/ 0
1996**	249/0	2988/ 0
1997*#*	355/0	1775/ 0

\* Actual use adjusted to reflect removal of 84 horses in December of 1988.

\*\* Not censused that year, so an increase of 11% from the previous year was used.

\*\*\* 206 horses is an average of the number of horses that used the Rodeo Creek portion of the Fox and Lake Range. Horses gathered during the emergency horse gather that were over 9 years of age were released from Palomino Valley back onto the herd management area in April and June bringing the total to 216 horses from June 16 on.

\*\*\*\* Actual use for 1995 only goes through October 24, 1995, when the last monitoring took place for 1995.

\*\*\* Censused August 8, 1997. The actual use was determined through the end of July. During the flight, 48 horses were seen moving between the reservation and public lands.

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**Evaluation of Table #2 Wild Horse Actual Use**

The relatively static population from 1988 to 1992 shown in Table 2 may be attributed to a combination of the following:

- movement of horses between the allotment and the Pyramid Lake Indian Reservation
- season that census flights were conducted (timing of census)
- periodic removal of horses from the Pyramid Lake Indian Reservation by Tribal members

Actual use is based on helicopter census which represents the best available data to determine actual use for wild horses. Except for 1991, 1992 and 1994, actual use was based on helicopter census. For 1991 and 1992 actual use was determined by applying an 11% increase to the previous years population. Actual use for 1994 was based on the 1993 census population. However, due to the extremely low 1993 reproductive rate (3.8%) an 11% increase was not applied to the 1993 population to determine 1994 actual use, since it appeared that recruitment was equal to death in the population. Actual use for 1988 was adjusted to reflect the removal of 84 horses, December 1988.

2. Precipitation

The following table describes the amount of annual, growing season, winter, and percent of normal precipitation recorded at the Gerlach NOAA weather station from 1989 through 1992.

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 Table #3. Precipitation Data

STATION	ELEVATION	ANNUAL NORM <sub>1</sub>	GROWING NORM <sub>2</sub>	WINTER NORM <sub>3</sub>		
Gerlach	3950"	7.93	3.52	3.29		
Year	Annual	% of Normal	Growing Season	% of Normal	Winter Precip.	% of Normal
1989	8.09	103	3.80	108	3.88	118
1990	10.15	130	6.28	178	3.41	104
1991	7.71	98	4.27	121	2.41	73
1992	5.46	70	2.99	85	1.88	57

- =====  
 1 Annual is October - September  
 2 Growing Season is March - August  
 3 Winter Precipitation is November - February

Climatological Data provided by the Western Regional Climate Center - Atmospheric Sciences Center, Desert Research Institute.

3. Utilization

Use Pattern Maps (UPM) were used to determine utilization zones and levels within each pasture. Key Forage Plant Utilization transects were completed to supplement use pattern maps and to differentiate and ascertain use zones and their levels. The data is used to document the effectiveness of management and forage demand. The procedures used to collect this data can be found in the Nevada Rangeland Monitoring Handbook and BLM Handbook 4400-3. Pre-livestock monitoring measures the amount of wild horse and wildlife use occurring before livestock are turned out. Post-livestock and total use monitoring measure combined utilization levels of all users.

Six use classes were used to monitor this allotment. The classes are: no apparent use (NAU) - [0%], slight - [1-20%], light - [21-40%], moderate - [41-60%], heavy - [61-80%], and severe [81-100%]. Barren was used to describe areas that were completely void of vegetation or had only a few annuals growing within the area.

UPM data has been conducted for the last six years from 1989 to 1995. During the summer and fall of 1990, six utilization cages were placed on the Fox Range by BLM personnel and the permittee. The cages were placed in areas that represent the major vegetative types of the Fox Range and in areas of concentrated use by wild horses and livestock. Monitoring conducted from 1993 to 1995 was done primarily at the cage locations and not full use pattern maps as had been done in the previous years.

Refer to the UPMs in the study files at the Sonoma Gerlach Resource Area.

a. Use Pattern Mapping

1) Winter Use Area

Table #4 Winter Use Area Use Pattern Mapping Acres and Percents by Use Class by Year

	1989		1990		1991		1992		1994	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
<b>WINTER USE AREA</b>										
No apparent use	13010	21	0	0	7327	0	0	0	0	0
Slight use	0	0	0	0	2959	7	9625	12	10672	100
Light use	8229	14	21275	24	15685	38	7327	10	0	0
Moderate use	3979	7	61363	68	17370	43	25844	33	0	0
Heavy use	35201	58	6845	7	4851	12	33607	44	0	0
Severe use	0	0	0	0	0	0	0	0	0	0
Barren	0	0	470	1	0	0	618	1	0	0
<b>TOTAL ACRES MAPPED</b>	<b>60419</b>		<b>89953</b>		<b>40865</b>		<b>77021</b>		<b>10672</b>	

\*\*\* 1995 - 1997 utilization data was collected at cage locations, see summaries below for that data.

a) 1989

1. May 8 Post-livestock

Heavy use occurred in the loamy 5-8", droughty loam 4-8", and silty

4-8" ecological sites where the availability of preferred forage was present. The lower productive sites (ie sodic terrace ecological sites) received less utilization due to the scarcity of the key grass species (Indian ricegrass - *Oryzopsis hymenoides* and bottlebrush squirreltail - *Sitanion hystrix*) in these ecological sites.

2. August 29 & 30 Pre-livestock

59% No Apparent Use; 34% Light Use;  
3% Moderate Use; 4% Heavy Use

Two areas of moderate use were found. One was at the north end of the Lake Range where the permittee hauls water to troughs. This was the only water on the Lake Range at the time of this mapping. The other area was on the sodic terrace between Bull Creek and Willow Creek. Two areas of heavy use occurred. The first area is around White Sage Flat Well and the second was at key area 0129-03 at Trail Canyon on a sodic terrace 6-8" site. The rest of the area had light to no apparent use. Utilization at Cottonwood Creek, the southwest part of the Lake Range, and the northeast portion of the Fox Range was primarily made by wild horses. The other use areas appeared to be mostly from cattle from use made earlier in the year.

b) 1990

May 3 & 4 Post-livestock

Heavy use was found in the vicinity of White Sage Flat Well extending northward approximately three miles. There was also an area approximately one mile wide beginning south of White Sage Flat Well to the allotment fence that was void of any vegetation except for scattered halogeton. Another area of heavy use was on the east side of the Lake Range in an old burn area where the only perennial grass growing was bottlebrush squirreltail - *Sitanion hystrix*. The rest of the winter use area had moderate use with two areas of light use.

c) 1991

1. April 29 & 30, May 1&2  
Post-livestock

Use measured on 90 production for the whole winter use area. Four areas of moderate use and three



areas of heavy use were found. The moderate use areas included: the area on the north end of the Lake Range where the permittee hauls water; the basin up in the Lake Range; a large area along the south end of the San Emidio Desert and up along the west side of the desert to Rodeo Creek; and on the west side of the Fox Range on the flats near the mouth of Smith Canyon. The basin up in the Lake Range had good grass production this year. The species found were Idaho Fescue - Festuca idahoensis, bottlebrush squirreltail - Sitanion hystrix, Indian ricegrass - Oryzopsis hymenoides, and bluegrass - Poa++. The use surrounding the San Emidio Desert was on bottlebrush squirreltail - Sitanion hystrix, Indian ricegrass - Oryzopsis hymenoides, winterfat - Eurotia lanata, and shadscale - Atriplex confertifolia. Most of the use on the west side of the Fox Range was made on the desert shrubs since the perennial grasses are naturally very sparse. The three heavy use areas included: up along the powerline road from the flats on the east side of the Lake Range up into the higher country; at the mouth of Three Mile Canyon; and on the flats on the west side of the Fox Range from south of Smith Canyon to Reynard. On the west side of the Fox Range, the wild horses have pawed at the shrubs to get to the grasses underneath. The rest of the area mapped had slight to light use. Most of the use on the west side of the Fox Range is from wild horses and the rest of the spring/ winter use areas is from both the wild horses and the livestock.

2. June 4 & 5 Post-livestock

Use measured on 91 production and only in the Lake Range. The use on current year's growth was light to no apparent use on the spring use area and the Lake Range. The Lake Range was utilized by wild horses during the winter (50-60%), stayed through the early spring, utilizing the first green up, and then moved out. There was evidence of current horse use (tracks, trails, manure, and sightings), but availability of water in the range limits their numbers in the warm months. No evidence of current livestock use. Use on the east side of the Fox Range ranged from no apparent use to light use (30-35% on basin wildrye - Elymus cinereus, bottlebrush squirreltail - Sitanion hystrix,

Thurber needlegrass - Stipa thurberana, and bluegrass - Poa++). On most of the mountain saddles large stud piles and trails heading in all directions were seen indicating horses use the entire area, but at a different time of the year than this mapping.

d. 1992

1. May 4-6 Post-livestock

Last years growth was monitored. A big difference in production from last year was noted. Unseasonably warm weather with temperatures in the 90's. Cows were kept on the southern part of the winter pasture until right before the cows were suppose to go onto the spring pasture. Heavy use occurred wherever bottlebrush squirreltail - Sitanion hystrix, Indian ricegrass - Oryzopsis hymenoides were present. The desert shrub communities (winterfat - Eurotia lanata, and shadscale - Atriplex confertifolia, and spiny hopsage - Grayia spinosa) had light to slight use generally. Two winterfat - Eurotia lanata sites, near the mouth of Three Mile Canyon and at a cage along the powerline north of Empire Farms, did have moderate use. A barren area around White Sage Flat Well exists. North of Cottonwood Creek had slight use on shadscale - Atriplex confertifolia, and spiny hopsage - Grayia spinosa. Fresh stud piles present and heavy trailing through the area to the standing water on the playa. No cow sign was seen.

2. October 5,6,19 and November 4  
Pre-livestock

Two large areas of moderate use occurred from Needle Rock on the flats along the highway north about fifteen miles. The key species was bottlebrush squirreltail - Sitanion hystrix. The other area of moderate use occurred on the flats north of the Lake Range. The severe use area was at White Sage Flat Well. This has been a high livestock concentration area in the past with water availability from the well and is also a gathering place for the permittee because corrals are located here. A barren area was also mapped. This is another high concentration area for both cows and wild horses because the permittee hauls water to troughs here. This

is one of two places water is available on the Lake Range.

e) 1993

October 21 Pre-livestock

Eight locations were monitored. No apparent use was found Trail Canyon, Three Mile Trend site, Whitesage Flat, Three Mile Canyon, Lake Range, and at the Empire trend site. Slight use was found on the flats North of Cottonwood Creek and Willow Creek.

f. 1994

April 26 & May 4 Post-livestock

No apparent use was found at the Three Mile trend site and Whitesage Flat. Slight use was found on the flats near Willow Creek and Three Mile Canyon. Light use was found at Little Rattlesnake. Moderate use was found at the Empire trend site, on the flats north of Cottonwood Basin, Manure Canyon, Eastside of Three Mile Canyon, Eastside of the Lake Range, and along the main Empire Farms Road.

g. 1995

May 2-4 Post-livestock

Due to the amount of current growth on the perennial grasses, it was not possible to do utilization monitoring on 1994 production. Use on current year's production was no apparent use on the flat north of Cottonwood, Trail Canyon, Three Mile Canyon, Three Mile trend site, Eastside of the Lake Range, and Manure Canyon. Slight use was found along the main road to Empire Farms and the flats near Willow Creek. Light use was found at the Empire trend site.

h. 1996

No data collected.

i. 1997

Moderate use was found from North Cabin north to Three Mile Canyon on bottlebrush squirreltail, Indian ricegrass, fourwing, and winterfat. The rest of the winter use area had slight to light use on bottlebrush squirreltail, Indian ricegrass, and winterfat. No apparent use was found on budsage throughout the use area.

2. Spring Use Area

Table #5 Spring Use Area Use Pattern Mapping Acres and Percentages by Use Class by Year.

	1989		1990		1991		1992	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
SPRING USE AREA								
No apparent use							4010	18
Slight use					7321	52	1540	7
Light use					6827	48	13483	62
Moderate use							0	0
Heavy use							2789	13
Severe use							0	0
Barren							0	0
TOTAL ACRES MAPPED					14158		77021	
ACTUAL USE							776	

a. 1989

November 8 Post-livestock

See summary under summer use area

b. 1990

The spring use area was mapped with the winter and summer use areas.

c. 1991

1) See summary of winter use area dated April 29- May 2.

2) June 4 & 5 Post-livestock

The use on current year's growth was light to no apparent use on the spring use area and the Lake Range. The Lake Range was utilized by wild horses during the winter (50-60%), stayed through the early spring, utilizing the first green up, and then moved out. There was evidence of current horse use (tracks, trails, manure, and sightings), but availability of water in the range limits their numbers in the warm months. No evidence of current livestock use. Use on the east side of the Fox Range ranged from no apparent use to light use (30-35% on basin wildrye - Elymus cinereus, bottlebrush squirreltail - Sitanion hystrix, Thurbers needlegrass - Stipa thurberana, and bluegrass -

Poa++). On most of the mountain saddles large stud piles and trails heading in all directions were seen indicating horses use the entire area, but at a different time of the year than this mapping.

d. 1992

1. April 20-23 Pre-livestock

Two areas of moderate use and one area of heavy use were found. Cottonwood basin had moderate use on Sandberg bluegrass - Poa secunda and slight use on bottlebrush squirreltail - Sitanion hystrix. Twenty-one horses were sighted in this area. The other area of moderate use was around Lost Creek on the west side of the Fox Range. Wild horses and cows were sighted using this area. This is one of the few places for the animals to water while using the flats. The area of heavy use was found two canyons north of Smith Canyon. The grass species were very sparse and when found were under the protection of the shrubs. Heavy use was on Nevada ephedra - Ephedra nevadensis, black greasewood - Sarcobatus vermiculatus, and Douglas rabbitbrush - Chrysothamnus viscidiflorus.

2. June 1 & 2 Post-livestock

On the east side of the Fox Range from Trail Canyon north, the use was slight to light on Sandberg bluegrass - Poa secunda and Thurber needlegrass - Stipa thurberana. The grass was sparse and showing the effect of the drought. On the west side of the Fox Range, the grass is once again sparse. The grasses being sparse however is a natural occurrence in these types of ecological sites. Use was made primarily on spiny hopsage - Grayia spinosa, rabbitbrush - Chrysothamnus viscidiflorus, and Nevada ephedra - Ephedra nevadensis. Very little leaf development on spiny hopsage - Grayia spinosa this year. The area from Lost Creek to Wild Horse Canyon was barren except for scattered black greasewood (Sarcobatus vermiculatus) plants, which were heavily utilized, and dried up tumbled mustard - Sisymbrium altissium. Water in Lost Creek and the surrounding canyons were only a trickle at the time of this mapping.

3. Summer Use Area

Table #6 Summer Use Area Use Pattern Mapping Acres and Percentages by Use Class by Year.

	1989		1990		1991		1992		1993		1995	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
SUMMER USE AREA												
No apparent use	2125	9	0	0	0	0	0	0	0	0	0	0
Slight use	0	0	0	0	0	0	754	2	18302	67	791	10
Light use	3360	15	5363	51	0	0	11861	28	3865	14	6144	76
Moderate use	11683	52	0	0	22717	99	10366	25	5132	19	1144	14
Heavy use	5287	24	5214	49	236	1	18657	45	0	0	0	0
Severe use	0	0	0	0	0	0	0	0	0	0	0	0
Barren	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL ACRES MAPPED	22455		10577		22953		41638		27299		8079	

1996 utilization data was collected at the cage locations and at Rattlesnake Canyon, see summaries below for this data.

a. 1989

November 8 Post-livestock

The heavy use areas included the lower reaches of Cottonwood Creek; the surrounding area at Bull Basin Spring; the mouth of Rattlesnake Canyon; and from Trail Canyon south to the road that goes over Sheep Pass. These areas are all associated with water. The moderate use areas included: the upper reaches of Cottonwood Creek; the foothills south of Cottonwood Creek; between Rattlesnake and Trail Canyon; and on the flats from Wild Horse Canyon north to about one mile south of Reynard.

b. 1990

1. May 30 Pre-livestock

Utilization on the west side of the Fox Range in the flats had light use overall except for one small area of moderate use near the mouth of Lost Creek going south to the next canyon. This is where the animals water. Most of the use is made on the desert shrub species (shadscale - Atriplex confertifolia, spiny hopsage - Grayia spinosa, lanceleaf rabbitbrush - Chrysothamnus viscidiflorus lanceolatus, green molly kochia - Kochia americana, littleleaf horsebrush - Tetradymia glabrata, and black greasewood -



Sarcobatus vermiculatus) which showed signs of severe hedging during the winter. The majority of use was made by wild horses. From Rodeo Creek to the head of Wild Horse Canyon the overall use was light with two small areas of moderate use north of Pah Rum Peak. Winter use on lanceleaf rabbitbrush - Chrysothamnus viscidiflorus lanceolatus was severe with all plants hedged into the old growth, no apparent use was found on the current year's production. A small quaking aspen - Populus tremuloides stand in Rodeo Creek appeared to be static to slightly improving trend with most age classes present. Above the quaking aspen - Populus tremuloides stand is a Saskatoon serviceberry - Amelanchier alnifolia stand, which appeared to be in good condition. The Cottonwood basin generally had light use with one wash having moderate use. Severe winter use was found on spiny hopsage - Grayia spinosa, Nevada ephedra - Ephedra nevadensis, and black greasewood - Sarcobatus vermiculatus.

2. November 6-9 Post-livestock

Heavy use areas included: the Juniper Flat area; the immediate vicinity of Mud Trough Spring; from Rodeo Creek south going into the Pole Canyon Allotment, from the mouth of Cottonwood Canyon east to the powerline; and along Smith Creek in Smith Canyon. Most of the grasses in the Juniper Flats area were found within the sagebrush cover with the ones in the open used heavily. Large interspaces occurred between the grass plants in the open. The heavy use that was found along Smith Creek and the adjacent springs is where the animals come to water. spiny hopsage - Grayia spinosa and black greasewood - Sarcobatus vermiculatus were severely hedged due to the drought conditions and harsh windblown sites on the upper ridges. A decadent antelope bitterbrush - Purshia tridentata stand was found west of Cottonwood and north of Smith Canyon. Use appeared to be heavy from Rodeo Creek south to the Pole Canyon Allotment on antelope bitterbrush - Purshia tridentata, snowberry - Symphoricarpos spp, and rabbitbrush - Chrysothamnus viscidiflorus.

c. 1991

May 15 & 16 Pre-livestock

On current year's production two areas of moderate use were found-the area from Rodeo Creek up to Pah Rum Peak had moderate use on bluegrass - Poa++ and area from Bull Basin Spring to Juniper Flats and over to Mud Trough Springs. All three of those areas have water available to livestock and wild horses. The area from Rodeo Creek to Bull Basin had light use. A map was done also on 1990 production with all heavy use except for from Bull Basin Spring to Coyote Creek which had light use.

d. 1992

1. April 6-9 Post-livestock

Use on 1991 forage production was monitored. Moderate use was found throughout the summer country with one area of heavy use. Juniper Flats is a highway of horse trails and is close to Juniper Flat Springs. The heavy use area was at Pah Rum Peak extending to Wild Horse Canyon Spring and on over to the saddle where the boundary fence between the Pole Canyon Allotment and the Rodeo Creek Allotment is located. snowberry - Symphoricarpos spp and Saskatoon serviceberry - Amelanchier alnifolia have had heavy use in the past from Rodeo Creek south going on into the Pole Canyon Allotment. At this time the snowberry - Symphoricarpos spp had moderate use and the scattered rabbitbrush - Chrysothamnus viscidiflorus had heavy use. 1992 production is behind what it was the same time in 1991.

2. June 2 & 4 Pre-livestock

The use was all moderate and heavy. The two moderate use areas were from Bull Basin Spring to Coyote Creek and an area south and west of Rodeo Creek. The rest of the area mapped had heavy use. No spring rains caused low grass production. Most of the grasses only grew 2" or less and then seeded out.

3. November 2-5 Post-livestock

Only 100 dry cows out of a possible 485 cow/calves were put onto the summer country of the Rodeo Creek Allotment this year due to the low forage production. The area

received very little snow this past winter and very little rain during the spring. The grass species present only grew 1/2- 2" leaf growth before seeding out this year. Cottonwood Basin to Willow Creek had light use on the grass species while the browse species, black greasewood - Sarcobatus vermiculatus and spiny hopsage - Gravia spinosa, had moderate to heavy use. Shadscale - Atriplex confertifolia had heavy use on select plants. Rabbitbrush - Chrysothamnus viscidiflorus had heavy to severe use and Tamarisk - Tamarix spp had moderate to heavy use. The antelope bitterbrush - Purshia tridentata in this area was decadent with low vigor. Slight use was found on it. Willow Creek to Bull Basin Spring had moderate use on bottlebrush squirreltail - Sitanion hystrix, heavy to severe use on rabbitbrush - Chrysothamnus viscidiflorus, and some of the Lahontan sagebrush - Artemisia spp had been hedged. From Bull Basin Spring south to the allotment fence heavy use was found on bottlebrush squirreltail - Sitanion hystrix, Thurber needlegrass - Stipa thurberana, and Sandberg bluegrass - Poa secunda. The rabbitbrush - Chrysothamnus viscidiflorus and snowberry - Symphoricarpos spp were heavily hedged. An area of moderate use was found also at Little Rattlesnake Canyon.

e. 1993

1. June 24-25 Pre-livestock

Six cage locations were inspected - Rodeo Creek, Pah Rum, Juniper Flats, Coyote Creek, Bull Basin, and Cottonwood Basin. Slight use was found at all six cage locations.

2. November 9-10 Post-livestock

Slight use was found at Rodeo Creek, Bull Basin, Cottonwood Basin, Smith Canyon, Willow Creek, and Rattlesnake Canyon. Light use was found at Juniper Flat. Moderate use was found at Pah Rum and Coyote Creek.

f. 1994

April 13-14 Pre-livestock

Slight use was found throughout all of the spring/summer use area.

g. 1995

1. May 2-4 Pre-livestock

Only a small area was monitored because the soil was too wet to get around in the high country. In Rodeo Creek no apparent use was found. Within the burn area perennial grasses and serviceberry were beginning to sprout. At the redwood trough within the burn area, the aspen seedlings were 2 to 3 feet tall. No apparent use was found at Bull Basin. Seedheads on bottlebrush squirreltail, Thurbers needlegrass, bluegrass, and bluebunch wheatgrass were remaining from last year.

2. October 24 Post-livestock

Slight use was found at Rattlesnake Canyon and Cottonwood Canyon. Light use was found at Juniper Flat, Coyote Creek, and Bull Basin. Moderate use was found at Rodeo Creek.

h. 1996

1. May 21-23 Pre-livestock

Key forage utilization transects were conducted at each of the six cages within the summer use area. Slight use was found on Thurbers needlegrass, bluegrass, bottlebrush squirreltail, and bluebunch wheatgrass. Slight use was also found at Rattlesnake and Little Rattlesnake Canyons. The meadow near PahRum was just beginning to grow at this time.

b. Bitterbrush Utilization Transect

Bitterbrush(PUTR2), desert peach (PRAN) and Thurbers needlegrass (STTH2) utilization was monitored in Rattlesnake Canyon in December of 1993, March and December of 1994, and April and December of 1995. Table #7 shows the results of the utilization monitoring.

=====  
Table #7. Rattlesnake Canyon Bitterbrush Utilization Transect

	PUTR2	PRAN	STTH2
December 1993	4.5%	6.0%	17.5%
March 1994	12.5%	4.5%	23.9%
December 1994	36.0%	6.0%	30.5%
April 1995	38.0%	5.0%	16.0%
December 1995	4.5%	0.5%	1.5%

=====

**Evaluation of Bitterbrush Utilization**

The utilization on bitterbrush at Rattlesnake Canyon has been below the objective of 50%.

4. Trend

Four trend locations exist in the winter livestock use area. Two of the sites are photo trend sites and were established in 1989 and photographed in 1992 for the second time. The photo plots are scheduled to be done again in 1997. The other two sites measure trend by the quadrat frequency method.

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Table #8. Frequency of Key Species

	<u>Years Read</u>	
	<u>1989</u>	<u>1992</u>
<u>Key Area #1</u>		
RC EMPIRE		
squirreltail	.5	1.0
Indian ricegrass	1.5	3.5
winterfat	48.0	46.0
shadscale	13.5	20.0
budsage	5.0	8.5
<u>Key Area #2</u>		
RC3MILE		
bluegrass	0.0	0.5
squirreltail	9.0	9.5
Indian ricegrass	1.0	2.0
shadscale	16.5	22.0
budsage	41.5	48.0

=====

**Evaluation of Frequency Data Table #6**

These two sites have a static to upward trend and are in late seral condition. The low spring moisture in 1992 was reflected in this monitoring by a decrease in the frequency of cheatgrass. Cheatgrass is not a key species, so was not listed on Table #6. Cheatgrass being an annual is dependent on spring moisture.

5. Ecological Site Inventory

An ecological status inventory was completed during the 1990 field season. The following lists the acres and percentage by seral stage for the allotment.

<u>Seral Stage</u>	<u>Acres</u>	<u>Percent</u>
Potential Natural Comm.	37,610	19%
Late	85,940	43%
Mid	65,525	33%
Early	5,236	3%
Unclassified*	4,401	2%

\* The unclassified acres equals the Juniper woodland site and is not classified for Ecological Condition, but rated as a woodland.

6. Wildlife Habitat

The key species identified for wildlife in the Rodeo Creek Allotment is bitterbrush. Only two ecological sites on the Rodeo Creek Allotment have the potential to have bitterbrush. One site is a 023XY039 Loamy 10-14" precipitation zone with big sagebrush and bluebunch wheatgrass as the dominate vegetation types. The site is found on side slopes of the lower mountains, hills, and plateaus between 4500' and 6500'. At the lower elevations the site is usually restricted to northern exposures. Bitterbrush, at potential, makes up 2-5% by weight of the total composition. The second ecological site is 23-20 Loamy 10-12" precipitation zone with big sagebrush and bluebunch wheatgrass as the dominate vegetation. The site is found on the upper piedmont slopes and hills between 5500 and 6500' elevation. Bitterbrush makes up 2-10% by weight of the total composition at potential. 5 percent of the Rodeo Creek Allotment is comprised of 23-39 ecological site and .4 percent of the allotment is a 23-20 ecological site. Bitterbrush does occur in trace amounts on adjacent ecological sites, mostly on steep side slopes of draws however.

Habitat condition was rated for mule deer using analysis procedures outlined in Nevada State Office Manual 6630.2. Two methods within the manual were used. The first method rated mule deer habitat on browse vigor, forage quality, cover, disturbance or interference and water distribution. A second method was used to emphasize only the vegetative component of the habitat.

Pronghorn antelope habitat was rated using draft guidelines in Nevada State Office Manual Supplement 6630.3. The rating is based on vegetation quality, quantity, height, and diversity; water availability and quantity; and limiting factors such as fences, snow depth, and habitat disturbance.

Ecological Site Inventory vegetation data was used for analysis of rating both species habitat conditions. Data was used from Site Write-up Area (SWA) F031 transect 1, which represents Ecological Site 023XY039 (loamy slope 10-14" p.z.) and SWA F010 transect 1, which represents Ecological Site 023XY037 (clay slopes 8-12" p.z.). Ecological Site 023XY037 dominates the majority of designated deer and pronghorn antelope yearlong habitat (DY-1 & AY-5) by making up 21% of the allotment and the 023XY039 was used because as stated above it is one of two ecological sites that has the potential to have bitterbrush. Habitat was rated using both current vegetation conditions and vegetation conditions at the Potential Natural Community (PNC).

Table #9 shows the habitat condition ratings for both mule deer and pronghorn antelope.



=====  
 Table #9 Habitat Condition Ratings for Mule Deer and Pronghorn Antelope  
 comparing existing vegetative conditions to PNC conditions.

		Range Site 023XY037	Range Site 023XY039
Mule Deer			
Current	(ALL)	69.6 (Good)	67.2 (Good)
	(Veg. only)	57.0 (Fair)	51.0 (Fair)
PNC	(ALL)	64.8 (Good)	64.8 (Good)
	(Veg. only)	45.0 (Poor)	45.0 (Poor)
Pronghorn Antelope			
Current		47.0 (Fair)	51.0 (Fair)
PNC		56.0 (Fair)	62.0 (Fair)

=====  
**Evaluation of Table #9 habitat Condition Ratings**

The comparison of the rating methods on mule deer habitat condition shows the vegetative component of the habitat, browse vigor and forage quality, are the limiting factors on both ecological sites. To a lesser extent the vertical cover component, another factor directly related to vegetation, is also a limiting factor. Analysis also indicates that as we progress farther towards PNC mule deer habitat condition will decrease on both ecological sites. This can be explained by the decrease in browse species production and an increase in perennial grasses in the climax community.

Vegetation appears to be the limiting factor for pronghorn antelope habitat condition in both ecological sites at present. The low rating is a result of a low percentage and diversity of forbs combined with a high percentage of shrubs in the community. As both ecological sites progress towards PNC the ratings for vegetation improve, but not enough to raise the condition from the fair to good class.

6a. Sage Grouse

The Western States Sage Grouse Committee presented a comprehensive guide to habitat requirements for sage grouse in their 1974 Guidelines for Habitat Protection in Sage Grouse Range (Report). In this report, habitat conditions observed most frequently, and which resulted in the highest success by sage grouse:

a. Strutting Habitat

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

b. 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 cover of 20-30% (optimum = 27%)

c. Brood Rearing

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

d. Winter habitat

- 1) Greater than 20% sagebrush canopy cover
- 2) Areas that do not maintain high winter snow depth due to either elevation or topography

In addition NDOW personnel cited various literature sources which indicated the importance of good understory growth beneath and surrounding the nest bush. Understory cover helps to conceal the nests from predation from the air and the ground and creates a microclimate around the nest where environmental conditions are more favorable.

Specific sage grouse habitat condition studies have not been established.

7. Riparian/Fisheries Habitat

a. Upland Riparian

The water inventory conducted during the summer of 1984 found 70 perennial springs, 186 intermittent springs, 1 perennial seep, 62 intermittent seeps, and 1 well. Since the inventory, a second well has been drilled. The focus of the inventory was on springs and seeps. Streams were not inventoried.

b. Streambank Riparian

The upper reaches of Rodeo Creek, Rattlesnake, and Bull Basin are intermittent streams with vegetative community types ranging from aspen stands to willow to carex/juncus to poa++ to basin big sagebrush to juniper dominated sites. Baseline data has not been collected for these streams.

A portion of the area identified as wetland riparian habitat in the special features habitat inventory is the lower reaches of Rodeo Creek, Rattlesnake, and Bull Basin which are ephemeral streams, except adjacent to springs and seeps. These systems have been flushed and are highly susceptible to flash flooding.

Wild Horse Canyon Creek is an aspen and willow dominated community types with intermingled areas of grass and grass-likes. Smith Canyon Creek is a series of spring complexes at the upper reaches with the Gravelly Fan ecological site at the lower reaches. Cottonwood Creek is a wash site with a spring coming in from a side draw.

The LUP did not designate any streams to manage for fisheries. No habitat inventories or stream surveys were done during the re-evaluation period.

Lotic or lentic functionality has not yet been completed on the Rodeo Creek Allotment.

8. Wild Horse and Burro Distribution

Distribution data collected during the evaluation period indicates that horses on the Fox Range and Lake Range are two distinct populations with minimal interaction. There is a seasonal movement of Fox Range and Lake Range horses to and from the Pyramid Lake Indian Reservation. During the evaluation period, movement of horses to and from the Pyramid Lake Indian Reservation was more apparent on the Lake Range than on the Fox Range. There is minimal movement of horses on the Fox Range between the Rodeo Creek and Pole Canyon Allotments through a gate at the head of Wild Horse Canyon when it has been open. Along the fans near the mouth of Wild Horse Canyon there were some horses moving freely between the two allotments from Lost Creek to Rough Canyon.

Wild horses on the Fox Range were found to be using the following four general areas in the winter, and two general areas in the summer:

a. Winter

1. Wild Horse Canyon to north of Smith Canyon, along the flats and toe slopes.
2. Trail Canyon to Rodeo Creek, in the foothills.
3. Rodeo Creek to north of Cottonwood Creek, in the low foothills and upper fans.
4. Valley floor south southwest of Empire.

b. Summer

1. Pah Rum Peak to Juniper Flat
2. Willow Creek to Cottonwood Basin.

Wild horses on the Lake Range were found to be using the area primarily during the winter months, with a few horses found there during the late fall and spring.

Appendix #1B contains a more detailed description of the seasonal distribution of wild horses within the allotment, and maps which depict the general seasonal use areas listed above.

9. Wild Horse and Burro Removal Data

84 Horses were removed from the Rodeo Creek Allotment in December of 1988.

303 Horses were removed from the Rodeo Creek Allotment in January of 1993. 63 animals were returned to the allotment on May 7, 1993. 32 studs and 9 mares were released just north of Willow Creek. 22 mares were also released just south of Cottonwood Canyon. Both groups of horses headed for the higher elevations after being released. Two mares with foals were released at Cottonwood Canyon on June 15, 1993.

10. Threatened/Endangered Species

No on the ground field observations have been conducted for sensitive/protected plant and animal species. One candidate species and the following BLM state sensitive species and USFWS species of concern may occur however in the area of the Rodeo Creek Allotment:

Candidate Species

**Amphibian**

spotted frog *Rana pretiosa*

BLM State Sensitive Species and/or USFWS Species of Concern

**Mammals**

pygmy rabbit	<i>Brachylagus idahoensis</i>
spotted bat	<i>Euderma maculatum</i>
small-footed myotis	<i>Myotis ciliolabrum</i>
fringed myotis	<i>Myotis thysanodes</i>
long-eared myotis	<i>Myotis evotis</i>
Pacific western big-eared bat	<i>Plecotus townsendii</i>

**Birds**

black tern	<i>Chlidonias niger</i>
white-faced ibis	<i>Plegadis chihi</i>
ferruginous hawk	<i>Buteo regalis</i>
western least bittern	<i>Ixobrychus exilis hesperis</i>
western sage grouse	<i>Centrocercus urophasianus</i>

## V. CONCLUSIONS

### A. Short Term

1. Utilization of key plant species in 596 acres of wetland riparian habitat shall not exceed 50% except where adjusted by an approved activity plan.  
(WL-1.10)

The exact location of the 596 acres of wetland riparian habitat is unknown. The conclusion is that the wetland riparian habitat acreage was an office calculation using the water inventory as a basis. Through field observations, it has been determined that approximately 65 acres of wetland riparian habitat exists on the Rodeo Creek Allotment. Heavy use did occur on areas within the uplands and those riparian habitats adjacent to the heavy use areas in all likelihood received heavy use as well.

2. Total utilization of antelope bitterbrush (PUTR2) shall not exceed 50% and 40% on quaking aspen (POTR5) except where adjusted by an approved activity plan.  
(WL-1.7) and WL-1.9)

This objective was met. The bitterbrush within the Rattlesnake study site shows primarily lightly hedged form class, with some moderate to heavy hedging on specific favored plants. Some bitterbrush sites within the allotment, outside the study area, show more compact plants with less vigor. This can probably be explained by a lower growing site potential for bitterbrush.

POTR5 - This objective was met. No apparent use was monitored on the aspen throughout the evaluation period.

3. Maintain an acceptable allowable use level on key forage species that will provide a sustained yield.

Key forage species are those whose use serves as an indicator to the degree of use of associated species; or those species which must, because of their importance, be considered in a management program.

#### a. Winter Use Area

This objective was met on 42%, 92%, 88% and 55% in 1989, 1990, 1991, and 1992 respectively. It was not met on 58%, 8%, 12%, and 44% of the use area in 1989, 1990, 1991, and 1992 respectively. The trend for the winter use area is static to upward based on the quadrat frequency monitoring and for the most part is in late seral. The use is occurring during the plant dormancy stage. The winter use area is therefore providing forage on a sustainable yield even with use above 50%, except for at the barren area adjacent to White Sage Well, which is providing annuals depending on the timing and amount of precipitation.

b. Spring Use Area

The spring use area has been use patterned mapped with the winter and/or summer use area each year except for in 1991 and 1992, where the mapping was done after the livestock use period. This objective was met in both of these two years. In 1992, however, it was not met on 13% of the spring use area. This can be explained by the below average spring moisture in 1992 which is critical for growth of perennial species.

c. Summer Use Area

This objective was met on 76%, 51%, 99% and 55% of the use area in 1989, 1990, 1991, and 1992 respectively. It was not met on 24%, 49%, 1%, and 45% of the use area in 1989, 1990, 1991, and 1992 respectively. The heavy use areas correspond to the areas of high wild horse and livestock concentrations.

B. Long Term

1. Improve to and maintain the condition of 596 acres of wetland riparian habitat type to good or better. (WL-1.10)

The exact location of the 596 acres are unknown. The conclusion is that the wetland riparian habitat acreage was an office calculation using the water inventory as a basis. Through field observations, it has been determined that approximately 65 acres of wetland riparian habitat exists on the Rodeo Creek Allotment. Where sediment has been deposited and with the low stream flows during the evaluation period, willow establishment has occurred on the lower reaches of Rodeo Creek. This would indicate an upward trend on the lower reaches. Conditions of the other riparian areas have not been monitored, but with the heavy use present, the wetland riparian habitat is probably in a static to downward trend.

2. Protect sage grouse strutting grounds and nesting wintering habitat and improve brooding habitat by: (WL-1.11)
  - a) Following NDOW's guidelines for Vegetal Control Programs in Sage Grouse Habitat in Nevada.
  - b) Maintain sagebrush canopy at 30% in sage grouse nesting and wintering areas where sagebrush does not exceed (3) feet in height.

This objective has been met. There were no vegetal manipulations as a result of new range improvement projects such as fencing, brush control, or pipelines or alterations to the vegetation by wildland fires.

Optimum sagebrush canopy coverage, as indicated in BLM Technical Note; "Habitat Requirements and Management Recommendations for Sage Grouse" (1979), for high quality nesting and brood rearing habitat, is approximately 30%. Based on professional observations, this recommended sagebrush canopy coverage is not present. Studies conducted on similar



ecological sites within the Winnemucca District were not capable of obtaining the recommended sagebrush canopy coverage for nesting and brood rearing habitat. Passey et al. (1982) in: *Relation Between Soil, Plant Communities, and Climate on Rangelands of the Intermountain West*, while working in the sagebrush ecoregion, found that vegetative canopy coverage under PNC conditions, in Wyoming big sagebrush communities, ranged from 8 to 24% with an average plant cover of 17%.

3. Manage, maintain and improve public rangeland habitat condition to provide forage on a sustained yield basis, with an initial forage demand for big game of 177 AUMs for mule deer, 137 AUMs for pronghorn and 150 AUMs for bighorn sheep by:

- a) Improving or maintaining Fox Range DY-1 (16,224 acres) mule deer habitat to good condition.

Met this objective because the habitat condition rating was good. When all factors of the habitat condition rating were analyzed, the rating came out as good for both ecological site 023XY037 and 023XY039.

The comparison of the rating methods on mule deer habitat condition shows the vegetative component of the habitat, browse vigor and forage quality, are the limiting factors on both ecological sites monitored. To a lesser extent the vertical cover component, another factor directly related to vegetation, is also a limiting factor. Analysis also indicates that as we progress farther towards PNC mule deer habitat condition will decrease on both ecological sites. This can be explained by the decrease in browse species production and an increase in perennial grasses in the climax community. Need to maintain a mid seral condition to have good mule deer habitat.

- b) Improving or maintaining Fox Range AY-5 (38,100 acres) pronghorn habitat to good condition.

The pronghorn habitat condition was determined to be fair. Vegetation appears to be the limiting factor for pronghorn antelope habitat condition in both ecological sites at present. The low rating is a result of a low percentage and diversity of forbs combined with a high percentage of shrubs in the community. As both ecological sites (023XY037 and 023XY039) progress towards PNC the ratings for vegetation improve, but not enough to raise the condition from the fair to good class.

- c) Improving or maintaining Fox Range BY-3 (32,530 acres) potential California bighorn habitat at 75% of optimum.

No rating has been done at this time.

- d) Improve bitterbrush from severely hedged form class to lightly hedged form class.

The bitterbrush within the Rattlesnake study site shows primarily lightly hedged form class, with some moderate to heavy hedging on specific favored plants. Some bitterbrush sites within the allotment outside the study area show more compact plants with less vigor and this can probably be explained by a lower growing site potential for bitterbrush.

4. Manage, maintain and improve rangeland conditions to provide forage on a sustained yield basis with an initial stocking level of 6,462 AUMs.

Did not meet initial stocking level of 6,462 AUMs. Only 5,820 AUMs were activated, as agreed to in the 1988 Livestock Agreement, from 1989 through 1991. In 1992, only 2,088 AUMs were activated due to low forage production that resulted from below average spring precipitation.

Met providing forage on a sustained yield basis on the winter use area. The area has a static to upward trend with late seral ecological status even with the heavy use that has occurred. This is probably due to the fact that the grazing is occurring while the plants are dormant. Refer to page 20 - Trend.

Did not meet the providing forage on a sustained yield basis on the summer use area. Areas within the summer country had heavy use, no residual vegetation to use as a reserve, low plant vigor, and are in mid seral condition. It is unknown however if a stocking level for livestock of 5,820 AUMs will provide forage on a sustained yield basis at this time since the BLM reduced cows through the 1988 Livestock Agreement, but did not reduce the wild horses to the initial stocking level as identified in the Land Use Plan.

5. Improve range/ecological condition 1/ from: poor to fair on 162,458 acres fair to good on 27,076 acres good to excellent on 1,934 acres.

1/ The range/ecological conditions in this document are forage condition that will be replaced with ecological status condition as information becomes available. The objective will be redefined/quantified to obtain a particular ecological status when site potential and identified uses are combined to meet vegetative objectives.

Unknown. The Ecological Site Inventory was not completed until 1990 and so the information was not available during the last evaluation to know what the starting point was to see if we are progressing. The trend on the winter use area is showing a static to upward trend indicating that the conditions on the winter use area are improving.

6. Manage, maintain and improve public rangeland conditions to provide an initial level of 4,020 AUMs of forage on a sustained yield basis for 335 (AMLs) wild horses in the Fox and Lake Range Herd Use Area.

Not Met. A review of wild horses census and distribution data, and use pattern mapping data found that areas of heavy use were associated with horse concentration areas, indicating that forage was not provided on a sustained basis. Consistent use above proper levels does not maintain or improve rangeland or ecological conditions. During the evaluation period the initial level of use by wild horses were exceeded by 140% to 160%.

7. Maintain and improve the free-roaming behavior of wild horses and burros by protecting and enhancing their home range.

Met. The free roaming behavior of wild horses within that area of the Fox & Lake Range HMA contained within the Rodeo Creek Allotment were maintained during the evaluation period. Census and distribution data indicates that horses have complete freedom of movement within the allotment, and that some horses are moving between the allotment and, the Pyramid Lake Indian Reservation and Pole Canyon Allotment. Water sources developed and maintained by the permittee have also maintained or improved the free roaming behavior by assuring a more stable supply of water within the HMA.

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

Met. Wild horses have free access to water sources on the Fox Range. With the exception of one spring, there are no perennial water sources on the Lake Range and limited potential for the development of additional water sources. Water sources maintained by the permittee have maintained or improved free access to water for wild horses. At this time the only water sources in the winter country are wells with submersible pumps or water hauled by the permittee. If the permittee does not use the allotment in the winter months, the only water available to horses would consist of storm water standing in depressions or on the Playa.

VI. TECHNICAL RECOMMENDATIONS

A. Technical Recommendations

1. Carrying Capacity

a. Explanation of how carrying capacity was determined.

The total carrying capacity was determined for the spring/summer and winter use areas using the potential stocking level calculation from BLM TR 4400-7. The potential stocking level is the level of use that could be achieved on a management unit, at the desired utilization figure, assuming utilization could be completely uniform. The potential stocking level calculation is:

$$\frac{\text{Actual Use}}{\text{Average/Weighted Average Utilization}} = \frac{\text{Potential Actual Use}}{\text{Desired Average Utilization}}$$

A weighted average utilization was calculated by use area using the moderate, heavy, and severe use classes. Moderate use was used because that is the desired utilization. Heavy and severe use classes were used because these are the two use classes that need to be reduced.

The two use areas were determined by elevation, the vegetative communities, water availability, and distribution of animals.

On the winter use area, 60% desired average utilization by February 28 was used. The plants are dormant and this use will not effect the plant physiologically.

On the spring/summer use areas, 50% desired average utilization by February 28 was used. The rationale for the 50% use level is to maintain or accelerate improvement in upland vegetation. 50% use on the grasses during the growing season does not hinder the plant physiologically and plant vigor should increase. Furthermore, a grass plant produces twice the volume of leaves that it needs to complete its growth functions and remain productive (vigor along with carbohydrate reserves are not depleted). Increased plant vigor means better protection to the soil surface and assures greater root volume.

The Land Use Plan ratio was then applied to the calculated potential actual use, the level of use required to achieve utilization uniformly over the pasture, to determine the number of AUMs for livestock and wild horses. Calculations can be found in APPENDIX #2.

1989 - 1992 data was used to determine carrying capacity because these 3 years reflect the management that was put into place through the 1988 Livestock Use Agreement. Management on the allotment has changed since 1992 and has been in an interim status until completion of this re-evaluation and multiple use decisionis final. 93 - 95 data was added for comparison purposes.

b. Land Use Plan Ratios and Actual Use throughout the Evaluation

Livestock Active Preference from LUP	Ratio from LUP (percent of total)	Wild Horse Initial Forage Demand from LUP	Ratio from LUP (percent of total)	Total AUMs	Ratio from LUP (percent of total)
6462	62	4020	38	10482	100

Use Area	Livestock AUMs	Wild Horses AUMs	Total AUMs	Proposed Livestock AUMs	Proposed Wild Horse AUMs	Total AUMs
<b>Winter</b>				2608	1599	4207
1989	2816	1277	4093			
1990	2886	1877	4763			
1991	2886	1153	4039			
1992	973*	1050	2023			
1993	789	397	1186			
1994	1358	72	1430			
1995	401	88	489			
<b>Spring/Summer</b>				3386**	2076	5462
1989	2934	4687	7621			
1990	2934	3848	6782			
1991	2934	5213	8147			
1992	1115*	3595	4710			
1993	896	2071	2967			
1994	1262	2520	3782			
1995	1718	1715	3433			

\* Livestock actual use AUMs goes through October 30, 1992. All livestock were removed at that time.

c. Livestock

Winter Use Area Livestock #'s = 438 cows  
 Summer Use Area Livestock #'s = 560 cows \*

Change From:

Pasture	Numbers	Kind	Period of Use	Total # of AUMs of specified livestock grazing	Historical Suspended
	485	cow/calf	03/01 - 02/28	5820	3516
Winter	485	cow/calf	11/01 - 04/30	2886	
Spring/Summer	485	cow/calf	05/01 - 10/31	2934	



Change To:

Pasture	Numbers	Kind	Period of Use	Total # of AUMs of specified livestock grazing	Historical Suspended
		cow/calf	03/01 - 02/28	5542	3516
Winter	438		11/01 - 04/30	2608	2608
Spring/ Summer	485**		05/01 - 10/31	2934	2934

\*\* Until monitoring documents resource objectives are being met, livestock numbers on the spring/summer use area will not be increased.

d. Wild Horses

The Strategic Plan for the Management of Wild Horses on the Public Lands was signed on June 6, 1992. This policy states that unadoptable wild horses will remain on the public lands, and that other methods such as fertility control may be utilized for population management. Removal of wildhorses will be in accordance with the current BLM policy.

(1) Alternative 1

Herd Management Area	Wild Horse/ Burro 75% of AML to AML	AUMS
Fox and Lake Range		
Winter	23 to 31	276 to 372
Spring/Summer	130 to 173	1560 to 2076
Totals	153 to 204	1836 to 2448

This is based on gathering horses every three years. If gathering schedule changes, the lower management ranges may also change.

**RATIONALE:** Distribution and census data indicates that horses on the Fox Range and Lake Range are two distinct populations that have minimal interactions. The data also indicates that there has been a small yearlong resident population on the Lake Range, and that horses on the Fox Range stay within the livestock spring/summer use area and typically do not move off of the mountain onto the valley floor except for those years when extremely heavy snows occur. Since the Lake Range is contained within the livestock winter use area, and the Fox Range corresponds with the livestock spring/summer area, calculation of carrying capacity and the distribution of AUMs between livestock and wild horses is fairly straight forward. Once total carrying capacity was calculated for the winter and spring/summer livestock use



areas, AUMs were then distributed to wild horses and livestock by using the ratios established in the LUP. This resulted in a total of 1,599 AUMs for wild horses in the livestock winter use area, and 2,076 AUMs in the Fox Range (spring/summer livestock use area) for wild horses. To ensure that adequate forage on a sustained yield basis is available for wild horses on the winter livestock use area, carrying capacity for the small yearlong resident population on the Lake Range was determined by using a 30% utilization level by November 1, which resulted in 372 AUMs (31 horses) for the small resident population. The remaining 1,227 AUMs available for wild horses in the livestock winter use area will not be made available to any other user, but will be held for those winters where snow forces the Fox Range horses from the spring/summer use area onto the valley floor (winter livestock use area). Since horses remain on the Fox Range yearlong except when extremely heavy snow occurs, and to ensure resource objectives are met, the 2,076 AUMs were distributed for use over 12 month period.

(2) Alternative 2 Spring/Summer Limiting Factor

<u>Herd Management Area</u>	<u>Wild Horse/ Burro 75% of AML to AML</u>	<u>AUMS</u>
Fox and Lake Range	130 to 173	1560 to 2076

This is based on gathering horses every three years. If gathering schedule changes, the lower mangement ranges may also change.

**RATIONALE:** Distribution and census data indicates that horses on the Fox Range and Lake Range are two distinct populations that have minimal interaction. Data also indicates that the limiting factor for wild horses on the Fox & Lake Range HMA contained within the allotment is the Fox Range. Horses remain on the Fox Range yearlong (spring/summer livestock use area), with seasonal movement consisting predominately of elevation and aspect changes, except for those years where extremely heavy snows temporarily force the animals onto the valley floor (livestock winter use area). As soon as the snow recedes, horses usually move back onto the Fox Range. By establishing the AML at 2,076 AUMs (173 horses) for that area of the Fox & Lake Range contained within the allotment, the AML would be based on the limiting factor within the HMA. To ensure that there is adequate forage for wild horses during those winters where heavy snows force the

animals from the Fox Range onto the valley floor, the 1,599 AUMs available for wild horses in the winter livestock use area will not be allocated to any other user.

Although there has been a small resident population of horses on the Lake Range, the majority of horses appear to be part of a transitory population that moves from the Pyramid Lake Indian Reservation onto the allotment in the fall and returns to the reservation in the spring. Since the 1971 Wild Free-Roaming Horse and Burro Act only applies to lands managed by BLM and the U.S. Forest Service, horses may be gathered at any time from the Pyramid Lake Indian Reservation. Given the apparent transitory nature of the majority of Lake Range wild horses and that the 1971 Wild Free-Roaming Horse and Burro Act does not apply to reservation lands, it is not possible to fully manage horses on the Lake Range. Even if the Reservation Boundary fence were reconstructed so horses would be held within the allotment, there is not sufficient water for more than a few horses, and there is only limited potential for developing additional water on the Lake Range.

## 2. Grazing System

- a. Alternative 1 - Continue with the existing grazing system to see how it works with the wild horse numbers at AML.

Turnout will be made in the winter use area of the Rodeo Creek Allotment. The winter use area includes the eastern portion of the Rodeo Creek Allotment and that area east of the Fox Range to include the San Emidio Desert, the Lake Range and the southern portion of the Black Rock Desert.

For the period 05/01 - 05/31 cattle will utilize the spring use area which includes the foothills of the Fox Range along both the east and west sides.

On 06/01 cattle will be moved into the summer use area which includes the high country of the Fox Range and will remain on the Fox Range until 10/31.

On 11/01 cattle will be moved back to the winter use area as described above and will remain until 04/30.

Drift of 20 head into other use areas will be accepted under this alternative because with no fencing drift will occur.

**RATIONALE:** Continue with the existing grazing system to see how it works with the allotment at the proper stocking level. This alternative outlines use areas and seasons of use for each use area based on the individual use areas' resource capabilities. Until this grazing strategy

was implemented most of the grazing occurred during the summer with no use areas. This strategy should help us to meet the short term utilization objectives and long term vegetative objectives.

- b. Alternative 2 - Develop a grazing system that would allow part of the spring use area (the critical growing time for the perennial plants) to be rested each year from livestock.

Turnout will be made in the winter use area of the Rodeo Creek Allotment. The winter use area would continue to include the eastern portion of the Rodeo Creek Allotment and that area east of the Fox Range to include the San Emidio Desert, the Lake Range and the southern portion of the Black Rock Desert.

For the period 05/01 - 06/30 cattle will utilize the spring use area which includes the foothills of the Fox Range along both the east and west sides. The Spring Use Area would be fenced into three areas. Two of the three areas will be used each year allowing the third area to be rested from livestock. One area would be used from 5/01 to 5/31. The second area would be used from 06/01 to 06/30. See attached map for use area delineations.

On 07/01 cattle will be moved onto the summer use area which includes the high country of the Fox Range and will remain on the Fox Range until 10/31.

On 11/01 cattle will be moved back to the winter use area as described above and will remain until 04/30.

**RATIONALE:** This grazing system is a more aggressive treatment alternative for areas that have had heavy use of key forage species, low vigor in key species, and an undesirable plant composition. It should allow us to meet our short term utilization objectives and long term vegetative objectives by:

- 1) Maintain or accelerate improvement in vegetation
- 2) Improve watershed.
- 3) Enhance wildlife habitat.

- c. Alternative 3 - Develop a grazing system that would defer grazing until after seedripeness (bluebunch wheatgrass, Thurbers needlegrass, and bottlebrush squirreltail) on part of the spring/summer use areas.

Turnout will be made in the winter use area of the Rodeo Creek Allotment. The winter use area would continue to include the eastern portion of the Rodeo Creek Allotment and that area east of the Fox Range to include the San Emidio Desert, the Lake Range and the southern portion of the Black Rock Desert.

In year one, start on the north end of Fox Range and use the area from Cottonwood Basin to Bull Basin from 5/01 to 7/15.

From 7/15 to 10/30 the cows would use from Bull Basin south to the Pyramid Lake Indian Reservation and the Pole Canyon Allotment boundary fence. In year two, the cows would use from the Pyramid Lake Indian Reservation and the Pole Canyon Allotment north to Bull Basin from 5/01 to 7/15.

From 7/15 to 10/30 the cows would use from Bull Basin north to Cottonwood Basin.

This system would continue to alternate the use in the spring/summer use area between the north and south portions of the allotment as described above.

Drift of 20 head into other use areas will be accepted under this alternative because with no fencing drift will occur. Due to lack of fences to control livestock movement, the permittee will be notified if more than 20 head drift into other areas and given reasonable time to remove.

**RATIONALE:** This grazing system is a treatment alternative for areas that have had heavy use of key forage species, low vigor in key species, and an undesirable plant composition. It should allow us to meet our short term utilization objectives and long term vegetative objectives by:

- 1) Hasten natural revegetation by improving plant vigor and permitting desirable species to produce seed.
- 2) Improve plant cover and hydrologic cover conditions and reduce soil loss.
- 3) Enhance wildlife habitat.

- d. Alternative 3a - Follow the grazing system outlined in alternative 3 with the following addition: if wild horses have not used all of their available AUMs on the winter use area, allow livestock to use part of those AUMs every third spring to allow for spring rest on the Fox Range (spring/summer use area) one in every three years. This would mean extending the use on the winter use area to July 15 from April 30 every third year.

**RATIONALE:** This grazing system is a treatment alternative for areas that have had heavy use of key forage species, low vigor in key species, and an undesirable plant composition. It should allow us to meet our short term utilization objectives and long term vegetative objectives by:

- 1) Hasten natural revegetation by improving plant vigor and permitting desirable species to produce seed.
- 2) Improve plant cover and hydrologic cover conditions and reduce soil loss.

3) Enhance wildlife habitat.

- e. Alternative 4 - Develop a grazing system that would have spring rest until after seed ripe on the Spring/Summer use area.

Turnout will be made in the winter use area of the Rodeo Creek Allotment. The winter use area would continue to include the eastern portion of the Rodeo Creek Allotment and that area east of the Fox Range to include the San Emidio Desert, the Lake Range and the southern portion of the Black Rock Desert.

For the period of 05/01 - 06/30 cattle would be removed from the allotment. On 07/01 cattle will be moved onto the spring/summer use area which includes the high country of the Fox Range and will remain on the Fox Range until 10/31.

On 11/01 cattle will be moved back to the winter use area as described above and will remain until 04/30.

**Rationale:** Grazing would be deferred through the critical grazing period in order to meet short term utilization objectives and long term vegetative objectives by:

- 1) hastening natural revegetation by improving plant vigor and permitting desirable species to produce seed,
- 2) providing a forage reserve for off-season or emergency use, and
- 3) improving plant cover and hydrologic cover conditions and reducing soil loss.

- f. Alternate 5 - Develop a grazing system allowing only winter-spring use by livestock. Livestock grazing would occur from November 1 through April 30. Due to the winter-spring weather and soil conditions in most years this would restrict livestock use to only the winter use area. With this alternative the livestock permitted use would

**change from:**

Pasture	Total # of AUMs of specified livestock grazing	Historical Suspended	Period of Use	Numbers	Kind
	5820	3516	03/01 - 02/28	485	
Winter	2886		11/01 - 04/30	485	cow/calf
Spring/Summer	2934		05/01 - 10/31	485	cow/calf



to:

Allotment	Total # of AUMs of specified livestock grazing	Historical Suspended	Period of Use	Numbers	Kind
Rodeo Creek	2608	3516	11/01 - 04/30	438	cow/calf

**Rationale:** Limit AUMs to only those calculated within the winter use area because this is where in most years livestock use will be limited to. Winter-spring grazing occurs during the dormant period for plant growth which would improve plant vigor, permit desirable species to produce seed, and improve plant cover as long as wild horses were kept at their appropriate management level. Typically an advantage for winter-spring livestock grazing is to remove livestock before they concentrate in riparian areas and cause resource damage to these areas. Due to the type of riparian areas and the topography that exists on the Fox Range, riparian areas would still be impacted within the Fox Range. In fact, the riparian areas may be impacted more because the existing water projects that the permittee maintains would no longer be maintained resulting in wild horses having to paw at the springs and seeps for water instead of drinking from a trough or water catchment.

B. Range Improvements

1. Two wells in the winter use area to better distribute the livestock and to provide water for the wild horses during the winter. The locations for these two wells approximately would be T.29N., R.23E., sec. 13 and T.30N., R.23E., sec. 9. **Rationale:** To better distribute the livestock and wild horse use in order to meet short term utilization objectives and long term vegetative objectives.
2. Separate the winter use area from the spring/summer use areas and build two fences that would divide the spring use area into three areas. The fencing would include off set gates that would be open during the time in which horses would need or want to travel between the winter use area and the spring use area. (This range improvement would only be necessary if alternative 2 was selected as preferred management action for the allotment. **Rationale:** To better distribute the livestock use in order to meet short term utilization objectives and long term vegetative objectives.
3. Riparian protection fences at the headwaters of Rodeo Creek. **Rationale:** to protect these two riparian areas in order to meet long term riparian condition and functionality objectives.
4. Jackass Spring protection fence and relocate the trough to the open area downhill and to the north of its existing location. **Rationale:** to protect this riparian area in order to meet long term riparian condition and functionality objectives.

C. Allotment Objectives

1. Standards of Rangeland Health



The following are the Standards of Rangeland health as developed in consultation with the Sierra Front-Northwest Great Basin Resource Advisory Council, other interested publics and approved by the Secretary of the Interior on February 12, 1997. The terms and conditions of this livestock grazing permit must be in conformance with these approved Standards and Guidelines.

- a. Soil processes will be appropriate to soil type, climate, and land form.
- b. Riparian/wetland systems are in properly functioning condition.
- c. Water quality criteria in Nevada or California State Law shall be achieved or maintained.
- d. Populations and communities of native plant species and habitats for native animal species are healthy, productive, and diverse.
- e. Habitat conditions meet the life cycle requirements of special status species.

2. Short Term Objectives

- a. Requantify short term objective #1.

**From:** Utilization of key plant species in 596 acres of wetland riparian habitat shall not exceed 50% except where adjusted by an approved activity plan. (WL-1.10)

**To:** Utilization of key plant species in wetland riparian and streambank habitat shall not exceed 50% except where adjusted by an approved activity plan. (WL-1.10)

This will be monitored at the habitats identified under Long Term a.

- b. Retain short term objective #2 as it is written.

Total utilization of antelope bitterbrush (PUTR2) shall not exceed 50% and 40% on quaking aspen (POTR5) except where adjusted by an approved activity plan. (WL-1.7) and WL-1.9)

- c. Requantify short term objective #3 to read:

Maintain an acceptable use level of 50% on the summer use area and 60% on the winter use area on the key forage species to provide a sustained yield.

3. Long Term Objectives

- a. Divide the existing long term objective #1 into 2 parts:

1. stream riparian

**Objective:** To have functioning stream riparian areas by maintaining a static or upward trend on the streambank riparian areas by the next evaluation period (2004).

**Monitoring:** Monitoring will include lotic functionality. Monitoring will be done on Rattlesnake Creek, Rodeo Creek, Bull Creek, Smith Canyon Creek, and Wild Horse Canyon Creek. A coverboard photo point will also be established on Wild Horse Canyon Creek.

2. Springs, seeps, and meadows

**Objective:** To have functioning lentic riparian areas by maintaining a static or upward trend on the springs, seeps, and meadows by the next evaluation period (2004).

**Monitoring:** will include lentic functionality. The following areas will be monitored: the two headwater meadows of Rodeo Creek and the meadow in the upper end of Trail Canyon.

As conflicts are identified take the appropriate management actions to protect these areas.

b. Requantify long term objective #3

**From:**

Protect sage grouse strutting grounds and nesting wintering habitat and improve brooding habitat by:  
(WL-1.11)

1. Following NDOW's guidelines for Vegetal Control Programs in Sage Grouse Habitat in Nevada.
2. Maintain sagebrush canopy at 30% in sage grouse nesting and wintering areas where sagebrush does not exceed (3) feet in height.

**To:** Desired Plant Community (DPC) Objectives will be written using the following criteria and the site potentials to establish the desired plant community.

i) Strutting Habitat

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

ii) Nesting Habitat

- a) Areas within 2 miles of strutting grounds.
- b) Sagebrush between 7 and 31 inches in height (optimum = 16 inches).
- c) Sagebrush canopy cover 15-30% (optimum = 27%).
- d) Understory cover adjacent to the sagebrush provides an average of 25-35 percent basal coverage and an average

- understory height of 7 to 10 inches.
- iii) Brood Rearing Habitat
    - a) Sagebrush canopy cover 10-21% (optimum = 14%)
    - b) High composition of forb species.
    - c) Vigorous available meadow vegetation in late summer and fall.
  - iv) Winter Habitat
    - a) Greater than 20% sagebrush canopy cover.
    - b) Areas that do not maintain high winter snow depth as a function of elevation or topography.

c. Requantify long term objective #3

**From:**

Manage, maintain and improve public rangeland habitat condition to provide forage on a sustained yield basis, with an initial forage demand for big game of 177 AUMs for mule deer, 137 AUMs for pronghorn and 150 AUMs for bighorn sheep by:

1. Improve or maintaining Fox Range DY-1 (16,224 acres) mule deer habitat to good condition.
2. Improving or maintaining Fox Range AY-5 (38,100 acres) pronghorn habitat to good condition.
3. Improving or maintaining Fox Range BY-3 (32,530 acres) potential California bighorn habitat at 75% of optimum.
4. Improve bitterbrush from severely hedged form class to lightly hedged form class.

**TO:** Desired Plant Community (DPC) Objectives. Refine Habitat Suitability Index (HSI) to adjust DPC objectives accordingly.

d. Requantify long term objective #4

**From:**

Manage, maintain and improve rangeland conditions to provide forage on a sustained yield basis with an initial stocking level of 6,462 AUMs.

**To:** Desired Plant Community Objectives.

e. Requantify long term objective #5

**From:**

Improve range/ecological condition 1/ from: poor to fair on 162,458 acres fair to good on 27,076 acres good to excellent on 1,934 acres.

**To:** Desired Plant Community Objectives.

f. Requantify long term objective #6

**From:**

Manage, maintain and improve public rangeland conditions to provide an initial level of 4,020 AUMs of forage on a sustained yield basis for 335 (AMLs) wild horses in the Fox and Lake Range Herd Use Area.

1/ The range/ecological conditions in this document are forage condition that will be replaced with ecological status condition as information becomes available. The objective will be redefined/quantified to obtain a particular ecological status when site potential and identified uses are combined to meet vegetative objectives.

**To:** Desired Plant Community Objectives.

g. Requantify long term objectives #7 and #8 to:

Maintain and improve the free-roaming behavior of wild horses and burros by:

1. protecting their home range
2. assuring free access to water

3. Requantified Desired Plant Community Objectives

a. Winter Use Area

1. Empire Key Area 024XY004 (Silty 04-08")
  - a. To maintain a static to upward trend.
  - b. Represents the northern half of the winter use area.
  - c. This objective will be quantified once baseline data is collected. Expect to see an increase in SIHY and to maintain ARSP5 at its current level.
  - d. Continue to run quadrat frequency and establish a double sampling and ocular transect.
2. Three Mile Canyon Key Area 024XY002 (Loamy 05-08")
  - a. To maintain a static to upward trend.
  - b. Represents the southern half of the winter use area.
  - c. This objective will be quantified once baseline data is collected. Expect to see an increase in the perennial grasses (SIHY, ORHY, and POA++) and to maintain ARSP5 at its current level.

- d. Continue to run quadrat frequency and establish a double sampling and ocular transect.
- b. Spring/Summer Use Area
    - 1. 023XY037 (Clay Slope 08-12") within SWA F010
      - a. To maintain or improve the ecological condition of this site at mid seral.
      - b. This is the dominant ecological site that represents the Spring/Summer Use Area (Fox Range). This area is within the potential yearlong bighorn sheep range (BY-3), mule deer yearlong range (DY-1), pronghorn yearlong range (AY-5), the wild horses use the area yearlong, and livestock use the area during the summer months.
      - c. After baseline data is collected, quantify objective. Expect to see an increase in perennial grasses and to maintain or increase forbs.
      - d. Initiate a quadrat frequency transect and a double sampling transect along with an ocular transect and photo point.
    - 2. 023XY039 (Loamy Slope 10-14") within SWA F031 or F012 In the Rattlesnake Canyon area.
      - a. To maintain or improve the ecological condition of this site at mid seral.
      - b. This is one of the two ecological sites that has the potential to have bitterbrush occurring on the site and bitterbrush is one of the identified key species on the allotment. This area is within the potential yearlong bighorn sheep range (BY-3), mule deer yearlong range (DY-1), pronghorn yearlong range (AY-5), the wild horses use the area yearlong, and livestock use the area during the summer months.
      - c. After baseline data is collected, quantify the objective. Expect to see bitterbrush maintained, the perennial grasses increased, and the forbs maintained or increases on the site.
      - d. Establish a macro-plot and conduct the appropriate amount of line intercept transects to determine cover.

Desired Plant Community Objectives will be quantified once the key areas are selected and baseline data is collected in 1997.

#### D. Monitoring

##### 1. Wildlife

- a. Monitor utilization levels on PUTR2 and POTR to see if short term utilization levels are being met.

Monitor the PUTR2 utilization in the spring prior to livestock turnout and in the fall after the livestock

grazing season in order to determine when the use is occurring on the PUTR2.

Monitor the POTR utilization at the end of livestock grazing season.

- b. 1999 Complete Habitat Suitability Index ratings on the Fox Range for potential bighorn sheep yearlong BY-1.

2. Riparian Monitoring

- a. 1997-99 Conduct lentic and lotic functionality on the identified riparian areas.
- b. 1998-99 Establish coverboard and photo point studies on Wild Horse Canyon Creek.
- c. Conduct key forage utilization transects at the identified riparian habitats.

3. Wild horse and Burro Monitoring

Continue collecting Wild horse/ Burros census and seasonal distribution data to determine population trends (reproductive rate, recruitment rate, etc.) and seasonal use areas. Wild horse/ Burros monitoring should be conducted on alternate years as follows:

1. Census every three years in July. (First year) Start census flights in July of 1997.
2. Aerial distribution mapping every three years with flights conducted in January and July. (second year - 1998)
3. Conduct on the ground distribution mapping in July and October every three years to supplement aerial distribution mapping, and provide more specific population information on band size and composition. (Third year - 1999)

E. Set Schedule for Next Evaluation

The next evaluation is to be conducted in 2004. A monitoring summary report will be written annually. The report will be sent to all interested publics for the Rodeo Creek Allotment. Annual adjustments may be made in order to resolve a resource conflict.

**IX. CONSULTATION AND COOPERATION**

The following individuals and groups were mailed copies of the draft re-evaluation:

Intermountain Federal Land Bank Assoc.  
Cathy Barcomb, Commission for the Preservation of Wild Horses  
Richard Heap, Department of Wildlife, State of Nevada  
Mike Dobel, Department of Wildlife, State of Nevada  
John Torvick  
Trout Unlimited  
Dawn Lappin, Wild Horse Organized Assistance  
Stan Ceresola

The following individuals and groups provided comments on the first and second drafts, which were incorporated into this final allotment re-evaluation:

Cathy Barcomb, Commission for the Preservation of Wild Horses  
Nevada Department of Wildlife  
Dawn Lappin, Wild Horse Organized Assistance



**X. SELECTED MANAGEMENT ACTIONS**

Incorporate the Technical Recommendation for the allotment objectives (pages 39-44), the range improvements (page 39) and the monitoring for wildlife, wild horses, and rangeland as outlined in the evaluation. Implement livestock grazing system alternative 3 and alternative 1 for the establishment of the appropriate management level for wild horses.

**Rationale:** Monitoring data shows that on the spring/summer use area that there are areas of heavy use and that the area is predominately in mid seral condition. Livestock grazing system alternative 3 allows for deferment on half of the spring/summer use area which should hasten the natural revegetation, improve plant vigor, permit desirable species to produce seed, and improves plant cover. Alternative 1 for establishing the wild horse appropriate management level was selected because monitoring indicates that wild horses make limited use yearlong on the winter use area and this alternative recognizes that fact. It also recognizes the need to have available forage on the winter use area for those years that snow forces the horses to come down onto the flats. Those AUMs are not being made available to any other user because the weather/climate cannot be predicted to know in advance if those AUMs are available for use. The range improvements recommended will help with the distribution of animals and attainment of resource objectives.

**XI. FUTURE MONITORING AND GRAZING ADJUSTMENTS**

The Winnemucca District of the Bureau of Land Management will continue to monitor the Rodeo Creek Allotment to provide the necessary information to determine if the allotment specific objectives are being met under the new carrying capacity and grazing system. An annual meeting with NDOW, BLM, the permittee, and other interested publics will be held to analyze the previous years monitoring data and current conditions in order to make recommendations and/or adjustments for the upcoming grazing year. The allotment is scheduled for re-evaluation in 2004.

**XII. NEPA REVIEW**

The selected management actions for grazing in the Rodeo Creek Allotment conforms with the environmental analysis of grazing impacts described in the Final Sonoma-Gerlach Environmental Impact Statement dated September 9, 1982.

The EIS and NEPA Compliance Record are on file in the Winnemucca District Office, located at 5100 E. Winnemucca Blvd., Winnemucca, NV, 89445.

## APPENDIX #1A METHODS OF WILD HORSE DISTRIBUTION FLIGHTS

Data on the distribution of wild horses has been collected from the ground and by aircraft (helicopter and fixed-wing) since 1988. Distribution of horses in the allotment appears to be primarily affected by weather conditions and forage availability. During the period covered by this evaluation there was very little snow pack on the mountains, which allowed the horses to occupy all habitats from the lower to the higher elevations yearlong. However few horses were found on the valley floor of the San Emidio Desert.

When collecting distribution data by fixed-wing aircraft the objective is to identify those areas that wild horses are utilizing at that point in time, not to obtain a count as accurate as a helicopter census. The entire HMA is flown in a transect pattern with the flight lines ranging from 1/2 mile to 2 miles apart depending on visibility and flight conditions. In steep mountainous country the straight line transects are modified to follow the topography of the area to ensure complete coverage. Aircraft altitude ranged from approximately 300 to 600 feet above ground level, depending on visibility and local flight conditions.

During the evaluation period data was collected from different fixed-wing aircraft: Maule M-5 Cessna 206, and Cessna 210. In addition to the fixed wing distribution data, each helicopter census provides distribution information on wild horses. When utilizing the Cessna there were two observers on board, one individual recorded flight lines, animal locations, and the number of animals (adults and foals) seen at each location while the other individual did the counting. In areas of high concentrations a total count of all bands was recorded on the map rather than each individual band.

When conducting a flight using the Maule there were two observers on board; an observer and pilot. Distribution data collected by the Maule is stored in an on-board computer system. As horses were seen, the observers would call out the number of adults and foals to the pilot who would enter the data into the on-board computer system. The computer records the number of horses seen, the location of the animals by latitude and longitude using a global positioning system, and any remarks the observer may want to record for a specific sighting. Once the flight is completed, the results are printed and transferred by hand to a HMA map. This system does not record the general flight path as is done with the Cessna. Again, in areas of high concentrations a total count of all bands is recorded in the computer system.

## APPENDIX #1B WILD HORSE DISTRIBUTION SUMMARY

The distribution of horses on the Fox Range appears to be primarily affected by forage availability and precipitation (i.e. snow depth). In the winter horses typically are found on south/southeast aspects at lower elevations where snow depth is least and tends to melt relatively fast. There were few horses found to be using the valley floor to any extent. Mild winter weather conditions with minimal snow pack during the evaluation period allowed horses to remain at all elevations throughout the year until the winter of 1992/1993, when poor forage availability combined with heavy snow conditions forced most, but not all of the horses to the flats of the San Emidio Desert. The following four general winter concentration area's, as shown on the attached map, were identified:

1. Wild Horse Canyon to north of Smith Canyon, along the flats and toe slope.
2. Trail Canyon to Rodeo Creek, in the foothills.
3. Rodeo Creek to north of Cottonwood Creek, in the low foothills and upper fans.
4. Valley floor south southwest of Empire.

During the winter months there were some horses that appeared to have moved south from Trail Canyon to the adjacent low foothills on the Pyramid Lake Indian Reservation, and horses moved from the Cottonwood Creek Area, to the valley floor south southwest of Empire. There may be some interaction of Fox Range and Lake Range Horses in the vicinity of White Sage Well at this time.

In early spring, horses were found at all elevations but the majority were found to be distributed fairly even on the middle third of the slope on the Fox Range. There were a few found around White Sage Flat and on the upper fans in the vicinity of Cottonwood Creek. As spring progresses there is a steady movement up the mountain to higher elevations. There appears to be some movement of horses from the Pyramid Lake Indian Reservation back onto the Fox Range in the vicinity of Pah Rum Peak at this time. During the spring horses will move immediately to upper elevations when light winter precipitation results in limited plant growth.

During the summer months horses are found at all elevations on the Fox Range but tend to be concentrated at higher elevations, as shown on the attached maps, in the following two general locations:

1. Pah Rum Peak to Juniper Flat
2. Willow Creek to Cottonwood Basin

There are a few horses found year long north of Cottonwood Creek.

In the fall horses were found to be distributed throughout the Fox Range but tend to concentrate along the top of the mountain in the two general summer concentration areas. It appears that a few horses move from the Pah Rum Peak Area onto the Pyramid Lake Indian Reservation at this time. In 1992, the number of horses found on the flats southwest of Empire were nearly double the number found in previous years.

Distribution of horses on the Lake Range appears to be primarily affected by water availability, the number of horses on the Pyramid Lake Indian Reservation, and by the removal of horses from the Reservation by Tribal members. During the winter, horses were found to be using the length of the Lake Range, and White Sage Flat south east from White Sage Well, as shown on the attached map. In the spring horses were found from Three Mile Canyon, south to the Reservation boundary fence. By summer, a few horses remain on the Lake Range in the vicinity of Manure Canyon but the majority have moved from the allotment onto the Pyramid Lake Indian Reservation. During the fall, horses begin to move back onto the Lake Range from the Reservation.

Distribution data collected since the January 1993 removal indicates that horses on the Fox Range are using the same general areas identified prior to the removal. On the Lake Range there has been a steady decrease in horses since the removal. In April 1993 there were 55 horses found on the Lake Range, however since this time the number of horses found has varied from 0 to 8. It appears that many of the horses found in April 1993 were subsequently captured by tribal members moved onto the Pyramid Lake Indian Reservation and did not return to the Fox and Lake Herd Management Area.

**APPENDIX #1C    DISTRIBUTION FLIGHTS**

Rodeo Creek Distribution

<u>Date</u>	<u># Horses</u>	<u># Burros</u>	<u>Aircraft</u>
10/88*	492		Bell 47G3B-1
7/89*	497		Bell 47G3B-S (Soloy)
2/90	267		Cessna 206
9/90*	477	1	Hughes 500D
1/91	301		Cessna 210
7/91	286		Maule M-5
3/92	329	1	Cessna 210
5/92	282		Maule M-5
7/92	288		Maule M-5
9/92		1	Maule M-6
10/92*	525	1	Hiller II-E (Soloy)
1/93	298	1	Maule MX-5
4/93*	149		Bell 47G3B-S
10/93	82		Cessna 210T
4/94	28		Cessna 210T
6/94	116		Husky A-1
6/95*	224		Bell 47G3B-S

\* Census Flights

October 1988 Census

During this census, horses were distributed along the higher elevations of the Fox Range from Cottonwood Creek to Trail Canyon, and from Juniper Flat to Wild Horse Canyon. Horses were scattered from Three-mile Canyon to Manure Canyon on the Lake Range.

July 1989 Census

The horses were found at the higher elevations throughout the Fox Range. The area of highest concentration was from Juniper Flat to Wild Horse Canyon and from north Juniper Flat to Cottonwood Creek. The majority of the horses, on the Lake Range, were found slightly north of Manure Canyon in the higher elevations.

February 1990 Distribution

This distribution flight found the horses scattered throughout all elevations. The highest concentrations, on the Fox Range, were distributed from Juniper Flat to Trail Canyon, and on the flats from Smith Canyon to Wild Horse Canyon. The horses on the Lake Range were concentrated from Three-mile Canyon north, and around Manure Canyon.

September 1990 Census

Most horses were observed in the higher elevations with a few animals in the foothills and flats. There was a high concentration of horses, in the Fox Range, from Juniper Flat to Pah-Rum Peak and in Rattlesnake Canyon. A lower concentration of animals existed from Cottonwood Creek to Rodeo Creek. On the Lake Range, the horses were found at all elevations between Three-mile Canyon and Manure Canyon. The burro was at the mouth of San Emidio Canyon.

In addition to census on the HMA, a census was conducted on the Pyramid Lake Indian Reservation at the same time. After completing the census maps were provided to the Bureau of Indian Affairs. There were 387 horses found on reservation lands, south of the HMA. The largest concentration of horses were on the Lake Range in the area bounded by Tohakum Peak - Sweetwater Canyon-San Emidio Canyon.

January 1991 Distribution



Horses were distributed fairly evenly throughout the high and low elevations. Areas of high concentration, on the Fox Range, were between Bull Basin and Trail Canyon, from Cottonwood Creek to Coyote Creek, and along the west side of the range on the flats. Horses on the Lake Range were scattered evenly throughout the range.

#### July 1991 Distribution

Horses were observed in both the lower and higher elevations. The highest concentrations, on the Fox Range, were from Juniper Flat to Wild Horse Canyon, south of Smith Canyon, and on the flats from Reynard to Wild Horse Canyon. The horses on the Lake Range were found north of Manure Canyon.

#### March 1992 Distribution

The horses were mainly distributed in the lower elevations. The highest concentrations were found along the both sides of the Fox Range; from Cottonwood Creek to Coyote Creek, from Smith Canyon to Juniper Flat, and from Bull Basin to Rattlesnake Canyon which had the highest density. On the Lake Range, horses were scattered in the lower elevations, around White Sage Flat. The burro was located west of Three-mile well.

#### May 1992 Distribution

The horses observed were at the higher elevations in the Fox Range. The heaviest concentration of animals were distributed from Juniper Flat to Pah-Rum Peak. No horses were observed on the Lake Range within the HMA boundary.

#### July 1992 Distribution

Observation found the horses scattered throughout the high and low elevations. Major areas of concentration were north of Pah-Rum Peak, between Bull Basin and Rodeo Creek, and between Rattlesnake Canyon and the Reservation Boundary. The Lake Range horses were distributed from Three-mile Canyon south to Manure Canyon.

#### September 1992 Distribution

On this flight the horses were found at the lower elevations. The burro was observed north of Three Mile Canyon on the Lake Range.

#### October 1992 Census

Horses were distributed throughout all elevations, on both the Fox and the Lake Ranges. Areas of high concentration were Smith Canyon, from Juniper Flat to Wild Horse Canyon, and from Coyote Creek to Trail Canyon. The burro was located in Rattlesnake Canyon on the Fox Range. On the Lake Range, most of the horses were concentrated from Three Mile Canyon south to the Reservation boundary.

#### January 93 Distribution

Heavy snow on the Fox Range forced the majority of horses down to the valley floor of the allotment. Horses were concentrated in the following areas; San Emido Desert in the vicinity of White Sage Well, valley floor south southwest of Empire, and on the flats/toe slope from Wild Horse Canyon to Smith Canyon. There were no horses found above 5,500 feet.

On the Lake Range horses were concentrated north of Three Mile Canyon on both the east and west side of the mountain in the vicinity of the powerline.

#### April 93 Census

Horses were primarily found at mid to upper elevations on the Fox Range at two locations. The largest number of animals were found from the Pyramid Lake



Indian Reservation boundary fence north to Rodeo Creek. The other concentration was at upper elevations from Willow Creek north to Cottonwood Creek. There were no horses found on the San Emidio Desert.

On the Lake Range there were 55 horses found from Three Mile Canyon south to the Pyramid Lake Indian Reservation boundary fence.

#### October 93 Distribution

Horses were scattered at all elevations on the Fox Range, with the majority of animals found from the Pyramid Lake Indian Reservation boundary fence north to Juniper Flat. There were a few horses found on mid slopes from Coyote Creek, north.

On the Lake Range there were 4 adult horses just north of the Pyramid Lake Indian Reservation boundary fence. There were 2 adults and 1 foal seen on the reservation, near the boundary fence.

#### April 94 Distribution

There were few horses observed during the flight. However by comparing on the ground observations collected 5 days prior to the flight and horses observed during the flight it appears that horses were concentrated at upper elevations of the Rodeo Creek watershed. The remainder of the horses were scattered along the top of the Fox Range.

There were 2 adult horses found on top of the Lake Range, approximately 1.5 miles north of the Pyramid Lake Indian Reservation boundary fence.

#### June 94 Distribution

Horses were concentrated around the upper watershed of Rodeo Creek, and from Juniper Flat north to Smith Canyon along the top of the Fox Range. The concentration areas generally correspond to the Rodeo, Cottonwood and Johnson Fires that occurred on July 16, 1994.

There were no horses observed on the Lake Range.

#### August 95 Census

Horses were concentrated primarily in the Bull Basin/Rodeo Creek drainages, and south of Smith Canyon to higher elevations. Two adult horses were found on the flats between Cottonwood Creek and Highway 447. Approximately 50 horses were found in the area burned by the Rodeo, Cottonwood and Johnson fires.

On the Lake Range two groups of horses were found along the east side of the range on the toe slopes. A group of 2 adults and 1 foal were found just west of Falcon Hill, and a group of 4 adults and 1 foal were found north of Manure Canyon.

An additional 92 horses were found on the Pyramid Lake Indian Reservation within 2 miles of the boundary fence. It is highly likely that many of these horses spend part of the year within the Fox and Lake Range HAM, with the majority of animals moving between reservation lands and the Pole Canyon Allotment. Some of these horses may move between reservation lands and the Rodeo Creek Allotment in the vicinity of Summit Spring and at a gate on the road to Pah Rum Peak.

**APPENDIX #2 CALCULATIONS**

I. Winter Use Area

<u>POST-LIVESTOCK WINTER USE AREA</u>		<u>PRE-LIVESTOCK WINTER USE AREA</u>	
<u>YEAR</u>	<u>AUMs</u>	<u>YEAR</u>	<u>AUMs</u>
1989	2760	1989	206
1990	4804	1990	
1991	5292	1991	
1992	3972	1992	296
1994	1896		
<b>AVERAGE</b>	<b>3745</b>	<b>AVERAGE</b>	<b>251</b>

A. May 8-11, 1989 post-livestock

1. weighted average utilization

$$\frac{(3979 \text{ acres} \times .5) + (35,201 \text{ acres} \times .7)}{39,180 \text{ acres}} = .68$$

2. potential stocking level

a) actual use

1) livestock = 2097 AUMs

2) wild horses = 1032 AUMs

b) potential stocking level

$$\frac{2097 \text{ livestock AUMs} + 1032 \text{ W. Horse AUMs}}{.68} = X$$

.6

$$\begin{aligned} .68X &= 1877 \\ X &= 2760 \text{ AUMs} \end{aligned}$$

B. August 29, 1989 pre-livestock

1. weighted average utilization

$$\frac{(1623 \text{ acres} \times .5) + (2463 \text{ acres} \times .7)}{4086 \text{ Acres}} = .62$$

2. potential stocking level

a) actual use

$$\frac{(94 \text{ W. Horses})(61 \text{ days})}{30.41666} = 188 \text{ AUMs}$$

$$\frac{(60 \text{ W. Horses})(121 \text{ days})}{30.41666} = 239 \text{ AUMs}$$

b) potential stocking level

$$427 \text{ W. Horse AUMs} = X$$

$$.62X = 128$$

$$X = 206 \text{ AUMs}$$

- C. May 3-4, 1990 post-livestock
1. weighted average utilization
 
$$\frac{(61,363 \text{ acres} \times .5) + (6845 \text{ acres} \times .7)}{68,208 \text{ Acres}} = .52$$
  2. potential stocking level
    - a) actual use
      - 1) livestock = 2886 AUMs
      - 2) wild horses = 1277 AUMs
    - b) potential stocking level
 
$$\frac{2886 \text{ livestock AUMs} + 1277 \text{ W. Horse AUMs}}{.52} = X$$

$$.52X = 2498$$

$$X = 4804 \text{ AUMs}$$

- D. April 29 - May 2, 1991 post-livestock
1. weighted average utilization
 
$$\frac{(17,370 \text{ acres} \times .5) + (4851 \text{ acres} \times .7)}{22,221 \text{ Acres}} = .54$$
  2. potential stocking level
    - a) actual use
      - 1) livestock = 2886 AUMs
      - 2) wild horses = 1877 AUMs
    - b) potential stocking level
 
$$\frac{2886 \text{ livestock AUMs} + 1877 \text{ W. Horse AUMs}}{.54} = X$$

$$.54X = 2858$$

$$X = 5292 \text{ AUMs}$$

- E. May 4-6, 1992 post-livestock
1. weighted average utilization
 
$$\frac{(25,844 \text{ acres} \times .5) + (33,607 \text{ acres} \times .7)}{59,451 \text{ Acres}} = .61$$
  2. potential stocking level
    - a) actual use
      - 1) livestock = 2886 AUMs
      - 2) wild horses = 1153 AUMs

b) potential stocking level

$$\frac{2886 \text{ livestock AUMs} + 1153 \text{ W. Horse AUMs}}{.61} = \frac{X}{.6}$$

$$\begin{aligned} .61X &= 2423 \\ X &= 3972 \text{ AUMs} \end{aligned}$$

F. October 5-6, 19 & Nov 4, 1992 pre-livestock

1. weighted average utilization

$$\frac{(16,408 \text{ acres} \times .5) + (49 \text{ acres} \times .9)}{16,457 \text{ Acres}} = .5$$

2. potential stocking level

a) actual use

$$\text{wild horse AUMs} = 493 \text{ AUMs}$$

b) potential stocking level

$$\frac{493 \text{ W. Horse AUMs}}{.5} = \frac{X}{.3}$$

$$\begin{aligned} .5X &= 148 \\ X &= 296 \text{ AUMs} \end{aligned}$$

G. April 26 - May 4, 1994 post-livestock

1. weighted average utilization

$$\frac{(30271 * .5)}{30271} = .5$$

2. potential stocking level

a) actual use

- 1) livestock AUMs = 1558
- 2) wild horse AUMs = 22

b) potential stocking level calc.

$$\frac{(1558 \text{ livestock AUMs} + 22 \text{ W. Horse AUMs})}{.5} = \frac{X}{.6}$$

$$.5x = 948$$

$$x = 1896$$

**AVERAGE = 3745**

Livestock (62%) = 2322  
W. Horses (38%) = 1423

$$\frac{(\text{Livestock \#}'s)(181 \text{ days})}{30.41666} = 2322 \quad (\text{W. Horse \#}'s)(12 \text{ months}) = 1423$$

Livestock #'s = 401 cows                      W. Horse #'s = 119 W. Horses

30% use before November 1 (pre-livestock)

$$\frac{(\text{W. Horse \#}'s)(245 \text{ days})}{30.41666} = 251$$

W. Horse #'s = 31 W. Horses

II. Spring / Summer Use Areas

<u>POST-LIVESTOCK SUMMER USE AREA</u>		<u>PRE-LIVESTOCK SUMMER USE AREA</u>	
<u>YEAR</u>	<u>AUMs</u>	<u>YEAR</u>	<u>AUMs</u>
1989	5702	1989	
1990	4269	1990	350
1991	8140	1991	290
1992	3738	1992	421
1993	2046		
1995	3006		
<b>AVERAGE</b>	<b>4484</b>	<b>AVERAGE</b>	<b>354</b>

A. November 8, 1989 post-livestock

1. weighted average utilization

$$\frac{(11,683 \text{ acres} \times .5) + (5287 \text{ acres} \times .7)}{16,970} = .56$$

2. potential stocking level

a) actual use

1) livestock = 2934 AUMs

2) wild horses = 3452 AUMs

b) potential stocking level

$$\frac{2934 \text{ livestock AUMs} + 3452 \text{ W. Horse AUMs}}{.56} = \frac{X}{.5}$$

$$.56X = 3193$$
$$X = 5702 \text{ AUMs}$$

B. May 21,22,24, 1990pre-livestock

1. weighted average utilization

$$\frac{197 \text{ acres} \times .5}{197 \text{ acres}} = .5$$

2. potential stocking level

a) actual use

$$\frac{(301 \text{ W. Horses})(61 \text{ days})}{30.41666} = 604 \text{ AUMs}$$

$$\frac{(396 \text{ W. Horses})(21 \text{ days})}{30.41666} = 273 \text{ AUMs}$$

b) potential stocking level

$$\frac{877 \text{ W. Horse AUMs}}{.50} = \frac{X}{.2}$$

$$.50X = 175$$
$$X = 350 \text{ AUMs}$$

C. November 6-9, 1990 post-livestock

1. weighted average utilization

$$\frac{(5214 \text{ acres} \times .7)}{5214 \text{ Acres}} = .7$$

2. potential stocking level

a) actual use

1) livestock = 2934 AUMs

2) wild horses = 3042 AUMs

b) potential stocking level

$$\frac{2934 \text{ livestock AUMs} + 3042 \text{ W. Horse AUMs}}{.7} = \frac{X}{.5}$$

$$.7X = 2988$$
$$X = 4269 \text{ AUMs}$$

D. May 15-16, 1991 pre-livestock

1. weighted average utilization

$$\frac{(4601 \text{ acres} \times .5)}{4601 \text{ Acres}} = .5$$

2. potential stocking level

a) actual use

$$\frac{(238 \text{ W. Horses})(61 \text{ days})}{30.41666} = 477 \text{ AUMs}$$

$$\frac{(508 \text{ W. Horses})(15 \text{ days})}{30.41666} = 250 \text{ AUMs}$$

b) potential stocking level

$$\frac{727 \text{ W. Horse AUMs}}{.5} = \frac{X}{.2}$$

$$.5X = 145$$
$$X = 290 \text{ AUMs}$$

E. April 6-9, 1992 post-livestock

1. weighted average utilization

$$\frac{(22,717 \text{ acres} \times .5) + (236 \text{ acres} \times .7)}{22,953 \text{ Acres}} = .5$$

2. potential stocking level



- a) actual use
  - 1) livestock = 2934 AUMs
  - 2) wild horses = 5205 AUMs
- b) potential stocking level
 
$$\frac{2934 \text{ livestock AUMs} + 5205 \text{ W. Horse AUMs}}{.5} = \frac{X}{.5}$$

$$.5X = 4070$$

$$X = 8140 \text{ AUMs}$$

- F. June 2&4, 1992 pre-livestock
  - 1. weighted average utilization
 
$$\frac{(1089 \text{ acres} \times .5) + (4232 \text{ acres} \times .7)}{5321 \text{ Acres}} = .66$$
  - 2. potential stocking level
    - a) actual use
 
$$\frac{(419 \text{ W. Horses}) (61 \text{ days})}{30.41666} = 840$$

$$\frac{(525 \text{ W. Horses}) (32 \text{ days})}{30.41666} = 552$$
    - b) potential stocking level
 
$$\frac{1392 \text{ W. Horse AUMs}}{.66} = \frac{X}{.2}$$

$$.66X = 278$$

$$X = 421 \text{ AUMs}$$

- G. November 2-5, 1992 post-livestock
  - 1. weighted average utilization
 
$$\frac{(10,366 \text{ acres} \times .5) + (18,657 \text{ acres} \times .7)}{29,023 \text{ Acres}} = .63$$
  - 2. potential stocking level
    - a) actual use
      - 1) livestock = 1115 AUMs
      - 2) wild horses = 3595 AUMs
    - b) potential stocking level
 
$$\frac{1115 \text{ livestock AUMs} + 3595 \text{ W. Horse AUMs}}{.63} = \frac{X}{.5}$$

$$.63X = 2355$$

$$X = 3738 \text{ AUMs}$$

H. November 9-10, 1993 post-livestock

1. weighted average utilization

$$\frac{(5132 * .5)}{5132} = .5$$

2. potential stocking level

- a) actual use

- 1) 896 livestock AUMs

- 2) 1150 wild horse AUMs

- b) potential stocking level calc.

$$\frac{(896 \text{ livestock AUMs} + 1150 \text{ W. Horse AUMs})}{.5} = \frac{x}{.5}$$

$$.5x = 1023$$
$$x = 2046 \text{ AUMs}$$

- I. October 24, 1995 post-livestock

1. weighted average utilization

$$\frac{(1144 * .5)}{1144} = .5$$

2. potential stocking level

- a) actual use

- 1) 1718 livestock AUMs

- 2) 1288 wild horse AUMs

- b) potential stocking level calc.

$$\frac{(1718 \text{ livestock AUMs} + 1288 \text{ W. Horse AUMs})}{.5} = \frac{x}{.5}$$

$$.5x = 1503$$
$$x = 3006 \text{ AUMs}$$

**AVERAGE = 4484**

Livestock (62%) = 2780

W. Horses (38%) = 1704

$$\frac{(\text{Livestock #'s})(184 \text{ days})}{30.41666} = 3386$$

$$(\text{W. Horse #'s})(12 \text{ months}) = 2076$$

Livestock #'s = 460 cows

W. Horse #'s = 142 W. Horses



**COMMISSION FOR THE  
PRESERVATION OF WILD HORSES**

1105 Terminal Way  
Suite 209  
Reno, Nevada 89502  
(702) 688-2626

October 15, 1997

Mr. Colin Christensen  
Renewable Resources  
Bureau of Land Management  
5100 East Winnemucca Blvd.  
Winnemucca, Nevada 89445

Subject: Fox and Lake HMA - Rodeo Creek Allotment

Dear Mr. Christensen;

The Commission for the Preservation of Wild Horses has had many concerns with the past and present management practices on the Rodeo Creek Allotment. Failure to complete an allotment evaluation in 1990, prolonged drought and the winter of 1993 lead to the near loss of all wild horses on the Fox and Lake Ranges.

Procedural errors in estimating actual use of wild horses, averaging utilization data and allocation of forage are and have been major issues of disagreement with the Sonoma-Gerlach Resource Area. Regardless of the issues and new changes in management, these issues were not addressed in this allotment evaluation or proposed decision.

We object to the proposed decision's appropriate management levels. We would have appreciated better coordination and a longer opportunity to comment on these documents. It is obvious that the 14 day protest period is in your advantage.

Pete, these issues have been debated with the District for over seven years. As you are aware, we have agreed with procedures and results of the same process executed in other allotments in the Winnemucca District. We invite you to resolve these differences and gain our support for these decisions. Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Catherine Barcomb".

CATHERINE BARCOMB  
Administrator