

12/16/91

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT

CARSON CITY DISTRICT OFFICE
1535 HOT SPRINGS RD., STE. 300
CARSON CITY, NV 89706-0638



IN REPLY REFER TO:

4700
(NV-03480)

DEC 16 1991

Jan 16

Commission For The Preservation Of Wild Horses
Stewart Facility
Capitol Complex
Carson City, NV 89710

Dear Ms. Barcomb

Thank you for your comments concerning the Draft Horse Mountain Herd Management Area Plan (HMAP). After careful consideration of the comments and a review of our land use planning objectives, our decision is to implement the proposed actions contained in the final document.

Each of your comments concerning the management of wild horses will be addressed as they appeared in your letter dated July 8, 1991.

We believe that the objectives are stated clearly on pages 10, 11 and 12 of the final HMAP and that the method of allocating forage between wild horses and livestock is also stated clearly on pages 27 and 28.

Currently overgrazing is a problem on the Horse Mountain Allotment and both wild horses and livestock are contributing to this situation. The permittee has agreed to improve the distribution of his livestock by placing more temporary water hauls and increasing efforts of physically moving the livestock out of areas receiving heavy and severe use.

Because of our monitoring studies prior to livestock turnout, and at the beginning of the growing season, after livestock are removed we know the amount of forage being removed by wild horses and the combination of wild horses and livestock. However, we do not know what affect the increased effort by the permittee will have on the utilization in the dual use areas. Therefore, we do not have enough data to reduce livestock AUMs at this time. Prior to any wild horse or livestock adjustments a multiple use decision will be issued.

Concern 1: As stated previously, we have detailed how we propose to proportion available forage on pages 27 and 28. As stated on page 27, the proportions are based on the Lahontan Resource Management Plan (1985) which analyzed the impacts of grazing livestock and managing wild horses in the Horse Mountain Herd Management Area (HMA). The Resource Management Plan went through the public review process and it is the document that guides the management of public lands within the Lahontan Resource Area.

Concern 2: As stated previously we do not have sufficient data at this time to make livestock adjustments.

Concern 3: As stated previously we have the monitoring data from wild horse use, however, we need to wait and see how the changes being implemented by the permittee will affect the livestock use on the allotment.

Concern 4: The HMA boundary was not incorrectly delineated. The wild horses in this area have always used the Truckee Carson Irrigation drain and waters provided by the permittee. The Irrigation drain is on land not administered by the BLM and some of the permittee maintained waters are on areas outside of the HMA.

Concern 5: Horse use is not evenly distributed. The majority of the use occurs on the Horse Mountain Allotment. However, the horses that use the Desert Mountain Allotment must cross the Horse Mountain Allotment to water.

Sincerely yours,

Karl S. Kipping, Acting

James W. Elliott
District Manager

1 Enclosure:

1. Final Horse Mountain Herd Management Area Plan and EA. 29pp.

HORSE MOUNTAIN HMAP

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I. Resource and Background Information

A. Introduction

This plan presents management direction for the Horse Mountain Herd Management Area (HMA).

B. Background and History

The Horse Mountain HMA is located approximately 18 miles south of Fallon, Nevada. The area is flat and rolling in the northern portion to steep and rocky in the southern portion. The elevation varies from 3920 feet to 6404 feet. Portions of the HMA boundaries are formed by existing fences (map 1).

It is generally accepted that wild horses within the HMA originated from ranch stock that were turned out in the area.

An Interim Herd Management Area Plan for this herd area was prepared and approved in June of 1977. The primary objective of that plan was to reduce the wild horse population to a level of 27 head as an interim measure until land use planning and proper stocking rates were finalized. Partial implementation of the reduction was begun in the fall of 1977 with 8 head being captured. The full implementation was halted due to a lawsuit brought against the BLM.

The predominant vegetation consists of both Bailey and black greasewood (Sarcobatus baileyi & vermiculatus), shadscale (Atriplex confertifolia), fourwing saltbrush (Atriplex canescens), Indian ricegrass (Oryzopsis hymenoides) and Sandberg bluegrass (Poa secunda).

The HMA contains approximately 52,422 acres of public and private land. Less than 1% of the HMA is within the Cleaver Peak Grazing Allotment. There is no record of wild horses occurring within the Cleaver Peak Allotment. Approximately 56% of Desert Mountain Allotment occurs within the HMA and approximately 59% of the Horse Mountain Grazing Allotment occurs within the HMA.

The HMA includes the entire herd area, that area delineated as the wild horse habitat after (1975) passage of the Wild Horse and Burro Act, P.L. 92-195 (map 1 & 2).

C. Land Use Plan Objectives and Constraints

The Lahontan Resource Management Plan (RMP; Nov. 8, 1984) is the land use plan which provides the general guidance as to the management of the HMA. The RMP states that the Herd Management Area Plan (HMAP) would be the document that guides management of wild horses in HMAs.

The following decisions from the RMP affect the Horse Mountain HMA:

- a. Maintain sound thriving populations of wild horses within HMAs.
- b. An HMAP will be developed for Horse Mountain HMA.
- c. Initially manage for a population level of 63 wild horses.
- d. Future adjustments in livestock and wild horses will be based on analysis of data from monitoring studies and consultation with interested parties.
- e. Develop waters for wild horses.
- f. Fences within wild horse herd areas will be located to minimize interference with normal distribution and movement of wild horses. Selected portions of new fences constructed in these areas would be flagged or otherwise marked for one year after construction to make them more visible to the wild horses.
- g. Watershed management plans will be developed through consultation with interested parties and will be coordinated with livestock, wildlife and WH&B management plans. The goals of watershed management plans are to reduce accelerated soil erosion on public lands.
- h. Maintain or improve the condition of public lands so as to enhance productivity for wildlife. Manage wildlife habitat to achieve a long-term goal of reasonable numbers of big game animals.
- i. Improve the condition and productivity of public rangelands to enhance livestock grazing. Limit utilization levels to 55% and improve trend.
- j. Provide for proper utilization within key areas, achieve better livestock distribution to obtain more uniform utilization, and provide for an increase in available forage and water for livestock, wild horses and wildlife.

D. Other Activity Plans, Issues and Constraints

Existing Activity Plans have stated objectives and constraints which relate to the HMA, and are summarized below.

1. Allotment Management Plan:

There are no allotment management plans for either Horse Mountain or Desert Mountain allotments. A allotment evaluation has been prepared for the Horse Mountain Allotment and a allotment evaluation is scheduled for Desert Mountain Allotment in 1991.

2. Wildlife Habitat Management Plan:

The Desert Mountain Wildlife Habitat Management Plan (HMP) was prepared for this area in 1983. The area was rated as high potential as chukar habitat. The objectives of the HMP and this plan do not conflict, as there are no conflicts between the animals if the total utilization on key grass species is kept at 55% or less.

E. Wild Horses

a. Population

At the present time, the wild horses have virtually unrestricted movement within the HMA and the majority of both allotments. The wild horses are using areas outside of the HMA, as part of their home range. This is due to a lack of available water, forage and space within the HMA.

The latest census was conducted in April, 1989, and resulted in a total of 167 wild horses counted in and out of the HMA, a total of 71 wild horses within the Desert Mountain Allotment and 64 wild horses within the Horse Mountain Allotment. Thirty two wild horses were also counted outside of the HMA. All of the wild horses in the Desert Mountain Allotment must cross the Horse Mountain Allotment to obtain water, thus, the majority of the horse use takes place within the Horse Mountain Allotment portion of the HMA.

An estimated 27 wild horses occupied the HMA in 1971, after the passage of the Wild Horse and Burro Act.

A summary of the population data is as follows:

<u>Census</u> <u>Date</u>	<u># of Horses Counted</u>
1973	35
1975	50
1982	63
1984	62
1986	124
1987	114
1988	131
1989	167

All censuses were conducted with rotary wing aircraft.

b. Habitat Evaluation

There is no naturally occurring water within the HMA. The wild horses utilize livestock waters (well & troughs) and an irrigation ditch owned and operated by the Truckee-Carson Irrigation District. This ditch is the major source of water to the wild horses and

becomes especially important in the summer when livestock waters are not available.

F. Livestock Use

The HMA lies within two grazing allotments. The Horse Mountain Allotment is grazed by livestock from 1 November - 31 March, 3,000 AUMs are allocated for livestock. The Desert Mountain Allotment is grazed from 1 November - 31 March, 840 AUMs are allocated for livestock. Recently the permittees in both allotments have not taken full preference due to the current vegetation condition.

G. Wildlife Use

The HMA includes habitat for chukar partridge, mule deer, cotton tail rabbits and many other species.

There are no known threatened or endangered animal species within the HMA.

H. Soils and Vegetation

Two major range sites (009 & 018) dominate the HMA and are described below:

Sandy 5-8" precipitation zone. (027 x 009N)

1. Associated species: Indian ricegrass and fourwing saltbush.
2. Occurs on sand sheets of lower piedmont slopes and alluvial plains on all exposures. Slopes range from 0 to 15%, but slope gradients of 2 to 8% are most typical. Elevations are 3500 to 4500 feet.
3. Soils are typically deep sands of mixed origin. These soils have rapid infiltration and percolation rates, low available water capacity and are excessively drained with low to no runoff. Potential for sheet and rill erosion is slight, but wind erosion potential is high.
4. Annual production in normal years is 450 lb./acre.

Gravelly Loam 4-8" precipitin zone. (027 x 018)

1. Associated species: Bailey greasewood, shadscale and Indian ricegrass.
2. Occurs on piedmont slopes. Slopes range from 0 to 30%, but slope gradients of 2 to 15% are most typical. Elevations are 3400 to 5000 feet.

3. Soils of this site are typically shallow to a soil layer restrictive to root development. These soils are well drained.

4. Annual production in normal years is 250 lbs./acre.

The ecological status of the HMA (1982) is as follows:

% Ecological Condition

<u>Allotment</u>	<u>Early Seral</u>	<u>Mid Seral</u>	<u>Late Seral</u>	<u>PNC*</u>	<u>Trend</u>
Horse Mt.	2	51	47	0	Static
Desert Mt.	1	47	52	0	Upward

*Potential Natural Community (PNC)

The selection of studies methodology and key area/key species to which these studies are correlated was made in accordance with procedures established in Nevada Rangeland Monitoring Handbook (NRMH) and the District's Monitoring Plan. There are two key areas within the HMA. However, these key areas are not representative of wild horse use because of their location. Two key areas will be established during the summer of 1991. The key areas will be selected based on distance from water, will typically receive moderate to heavy use, exhibit moderate potential and fair ecological condition, provide a significant amount of the available forage and a likely indicator of any change of vegetation quality or quantity.

Utilization studies and use pattern mapping completed in 1991 documented that 13,803 acres used exclusively by wild horses incurred overutilization during the grazing season. In addition 14,171 acres in the dual use area (wild horse & livestock) were also over utilized during the grazing season. The grass species cannot be maintained at this current use level.

A frequency transect on the key areas will be established and read in 1991 and on five year intervals thereafter.

Use Periods and Types of Animals

Cattle - November 1, - March 31,
Wild horse - Year long
Deer - Year long

All utilization studies were conducted using the Key Forage Plant Method. Proper use is 55% or less on perennial grasses (key species) and 45% on shrubs as recommended in the Nevada Rangeland Monitoring Handbook.

There are no known threatened or endangered plants within the HMA.

I. Recreation

Chukar hunting is the major form of recreational activity taking place within the HMA. Most of this occurs during the fall and early winter. Due to the rugged terrain and lack of roads it is felt that observation of wild horses is minimal.

Approximately once a year, a portion of the area is used for a 4WD race. This may include as many as 150 vehicles.

Access to the HMA is limited to 3 dirt roads requiring 4 wheel drive vehicles. Because of the rugged terrain and more accessible HMAs, the potential for increased visitation would probably not increase from directional or interpretive signing.

J. Water and Riparian

There is no naturally occurring water, or riparian areas within the HMA.

K. Other Activities

There is an active gravel quarry within the HMA, however, its activities are not thought to adversely impact the wild horses.

L. Issue and Problem Summary

Significant problem with the HMA.

Vegetation is being over utilized and if continued will lead to a degraded range which will not be in a state of thriving ecological balance. Prior to livestock turnout the vegetation use has already reached unacceptable levels. There is insufficient data at this time to determine if livestock numbers also need to be adjusted. However, there is a strong indication that the present 3,000 AUMs of active preference in the Horse Mountain Allotment under current management practices will result in unacceptable vegetative use. An Allotment Evaluation was completed for the Horse Mountain Allotment in January, 1991. The Allotment Evaluation made the following recommendations:

1. That livestock be removed regardless of the remaining time licensed when utilization of key species reaches 55%.
2. That water haul areas or other additional water sources be established to improve livestock distribution.

3. Change the season of use in the spring to allow plants to mature and set seed. Recommend season of use from November 1 to March 15.

4. Maintain utilization not to exceed 55% on identified key species.

5. Continue with monitoring studies and re-evaluate the Horse Mountain Allotment in 1993.

II. Objectives and Management Methods

A. Animal Objectives

Objective 1

Maintain the wild horses in good or excellent physical condition.

Management Method

Provide an adequate amount of forage for the individual horses in the population by adjusting the population of wild horses to a level in balance with the forage productivity of the habitat within the HMA (Habitat Objective 1). Based on the analysis of monitoring data under Habitat Objective 1. Providing a proper amount of forage per animal will allow the animals to maintain themselves in a healthy condition, better able to withstand environmental fluctuations.

Objective 2

Maintain the free-roaming nature of the wild horses.

Management Method

All projects proposed on BLM administered land within the HMA will be carefully evaluated through an environmental assessment process as to their effect on free-roaming behavior and movement of wild horses. Any projects creating adverse impacts upon wild horses that cannot be mitigated will not be allowed.

Objective 3

Maintain the wild horses within the HMA.

Management Method

Improve the habitat within the HMA and identify key habitat areas within the HMA through monitoring efforts. Maintain the fences along the boundary.

During periodic population reductions, horses gathered from outside of the HMA will not be released back into the HMA because they will return to the area from which they were removed (Waring 1979). Any wild horses located outside of the HMA will receive priority for removal.

Objective 4

Minimize the adverse effects of gathers to both the individual wild horses and the population.

Management Method

Using a variation below the maximum herd size indicated from analysis of monitoring data (95; appendix 1) will increase the time interval between captures, thereby, reducing stress, injuries and deaths associated with capture operations.

Wild horses have a average rate of increase of between 14% and 24% annually (Garrott, 1990). The current rate of increase in the Horse Mountain HMA is unknown. However, since there is adequate feed, the rate of increase is probably close to 24% annually. By reducing the population of wild horses within the HMA to a point below the maximum number of wild horses that the habitat can support (95) and allowing the population to build back up to the maximum level the next removal could be delayed for 4 years. The number of wild horses would not exceed at 95 and would help achieve Habitat Objective 1.

If wild horses were only reduced to 95 gathers would need to be conducted on a yearly basis which would lead to frequent band disturbances and other forms of adverse stress. Also yearly gathers would not be physically or fiscally feasible.

B. Habitat Objectives

Objective

Allow no more than 55% utilization on key plant grass (Indian ricegrass) species and 40% (bottlebrush squirreltail and blue grass) on interim grass species and 45% on browse yearlong.

Management Method

As stated earlier (vegetation section) the present stocking rate over the entire heavy use areas needs to be adjusted downward. Based on current data as analyzed in appendix 1, an adjustment of the population to a maximum 95 wild horses (1,128 AUMs) within the HMA is required.

III. Management Evaluation and Revision

A. Animal Studies

The studies described below are designed to monitor the attainment of the specific management objectives developed for this HMA.

1. Actual Use

Need: It is necessary to continue collecting data on the number and kinds (wild horses, wildlife and livestock) of animals which are utilizing the forage within the HMA in order to make quantifiable decisions with regard to wild horse and cattle numbers and season of use.

Method: Helicopter censusing will be the method used to estimate wild horse population estimates in conjunction with on the ground identification of individual animals. Censuses will be conducted during late June, July, August or September to include and identify young. These censuses will occur at 3 year intervals or less. Actual use by wild horses will be derived from population estimates.

2. Demography

Need: Data is needed on the foaling rate of mares and the survival rate of foals in order to determine the rate of increase.

Method: Capture data, ground and aerial observations will provide baseline data. This will aid in determining if a healthy population exists.

B. Habitat Studies

1. Utilization

Implementation of habitat objective 1 will require a reduction of utilization to 55% or less on key grass species (Indian rice grass and needlegrass; level recommended in the Nevada Rangeland Monitoring Handbook), and to 40% on bottlebrush squirreltail (Carson City District Master Proper Use Factor Table).

Need: To determine the amount of use (degree of utilization) occurring to the available forage by wild horses, livestock and wildlife.

Method: Utilization studies will be conducted prior to cattle turnout November 1, in dual use portion of the HMA. In addition to this, utilization data will be collected on the entire HMA at the end of each livestock grazing season (March 31). All utilization studies will be done using the Key Forage Plant Method. Each point where a utilization transect is run will be considered a study area

and the location will be shown on the appropriate topographic map. (Outlined in BLM Handbook TR4/ 400-3 p. 11). Use pattern maps will then be constructed from these studies.

2. Use-Pattern Mapping

Need: To show relative areas and intensity of utilization and to aid in the identification of key areas.

Method: Use-pattern mapping the zones of utilization HMA wide (Nevada Rangeland Monitoring Handbook).

3. Trend

Need: Trend refers to the direction of change of ecological condition. It indicates whether the rangeland is moving toward or away from its potential or toward or away from specific management objectives.

Method: Key areas will be established and read in the summer of 1991 and read every 5 years thereafter.

4. Ecological Status

Need: Ecological status is determined by the present state of the vegetation and soil production of an ecological site in relation to the potential natural community for that site. Ecological range condition will be measured for each key area following MH 4400-1 guidelines (Soil Conservation Service National Range Handbook) to assure progress towards the desired seral stages.

Method: Once key species are identified a key area condition transect will be done. Key area condition transects will be re-evaluated upon measurement of a statistically significant change in frequency data. These results will be evaluated to determine change in frequency data (trend). These results will be evaluated to determine if the appropriate objectives have been realized. (Refer to Nevada Rangeland Monitoring Handbook p. 13).

5. Climate

Need: To fully analyze utilization and distribution data, climatological data is necessary.

Method: Climatological data will be collected from representative weather stations summarized by the National Weather Service. Climatological data will be used in conjunction with ecological trend and condition studies.

C. Evaluation

All adjustments in livestock and wild horse use in the Horse Mountain HMA will be based on rangeland monitoring. Monitoring information will be collected and evaluated on a yearly basis in accordance with the Nevada Rangeland and Monitoring Task Force Recommendations.

Utilization results and use pattern maps will be analyzed to determine if Habitat Objective 1 is being achieved. Actual use will be used in conjunction with utilization data in revision of the numbers in the plan. Horse and cattle numbers may be adjusted either \pm as utilization results indicate. Cattle adjustments will be based upon monitoring as described in the Horse Mountain Allotment Evaluation of 1991.

Adjustments of wild horse will be based on the results of utilization studies (III. B. 1.) with the objective of limiting total vegetation use within the HMA to 55 percent or less on key species and 40 percent on interim species (bottle brush squirreltail and poa).

Monitoring information will be collected in 1991 and 1992 with an analysis of the data completed in 1992. Based on this evaluation, adjustments in wild horse use if needed to meet allotment objectives, including utilization levels, will be implemented by March of 1993, subsequent evaluations will be completed every three years thereafter.

The formula for calculating proper use

$$\frac{\text{Actual use (AUMs)}}{\text{Average/Weighted Average Utilization}} = \frac{\text{Potential Actual Use (AUMs)}}{\text{Desired Average Utilization}}$$

will be used to base adjustments on. When total utilization increases above 55 percent on key species and 40 percent on interim species, a gather will be conducted to bring the wild horse population to a level consistent with management objectives (see also II., A., objective 4.). Also when utilization in the dual use areas increases above those levels identified in appendix 1 in the Horse Mt. Allotment portion of the HMA and in the Desert Mt. portion of the HMA by November 1, a reduction in wild horse numbers may be necessary (appendix 1).

Horses that have established home ranges outside of the HMA will be removed as soon as is practical.

Results of the soil monitoring studies will also be used as an indication of Habitat Objective 1 being met.

Helicopter censuses will be key to identifying the need for removals in accordance with Animal Objective 1.

The young/adult ratios may indicate that removals need not be as frequent as estimated or they may indicate that removals need to be conducted more often.

Animal distribution and use pattern mapping will be used to reevaluate important water sources.

All the above evaluations of population data will be analyzed as recommended in Nevada State Office Manual Supplement 4730.

The entire plan will be evaluated in 1996 to determine if objectives are being attained.

Modification

This plan may be modified if data from studies and experience indicate that changes are desirable.

IV. Funding

All actions undertaken pursuant to this plan are contingent upon available funding and manpower.

Horse Mountain Herd Management Area Plan

A. INTRODUCTION AND PURPOSE

The purpose of this Herd Management Area Plan (HMAP) is to maintain both a healthy wild horse population and the range in a thriving natural ecological balance and multiple use relationship preventing deterioration of the vegetation community in the Horse Mountain HMA. This proposal is in conformance with the Lahontan Resource Management Plan (RMP).

Relationship to Other Environmental Documents

This EA is tiered to the Lahontan RMP Environmental Impact Statement (EIS) which analyzed the general ecological impacts of managing rangelands in the Lahontan area under a program including the monitoring and adjustment of wild horses and livestock. This EA is a project specific refinement of the EIS focused on the management of wild horses in the Horse Mountain HMA. The decisions regarding overall rangeland management analyzed in the Lahontan RMP/EIS will not be changed by the Lahontan HMAP. These documents are available for public review at the Carson City District Office.

B. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES1. Proposed Action

The purpose of the proposed action is to achieve a thriving natural ecological balance between the vegetative community, wild horses, wildlife and livestock and maintain the wild horse population in a healthy state. The specific objectives and management methods are described in the Objectives and Management methods section of the HMAP. They include removing wild horses to obtain a thriving natural ecological balance between the vegetative community, wild horses, wildlife and livestock within the HMA.

2. No Action Alternative

The no action alternative would not include any of the objectives and management actions. The wild horses would not be maintained at a level compatible with their environment, they would continue to increase. As the wild horse numbers increase the degradation of vegetation would be accelerated. Eventually most of the desirable plants would be lost from the HMA and surrounding area.

C. AFFECTED ENVIRONMENT

The affected environment is described in sections E - K in the HMAP.

D. ENVIRONMENTAL IMPACTS

1. Proposed Action

Reducing the wild horse population to a level that the vegetation within the HMA can support would benefit both the wild horses and wildlife within the HMA and at the same time meet the management objectives of the RMP (improve ecological condition). By improving the vegetation all species of wildlife will benefit including mule deer, and many non-game species. It is anticipated that after the reduction the utilization will decrease to 55% on key species.

Unavoidable impacts in the form of injuries to the horses may occur during the removal process. Death loss is not expected to exceed 2% of the horses captured at the trap site. Potential injuries and fatalities can be limited through strict enforcement of contract specifications for safety and humane treatment of animals. BLM representatives would be monitoring the contractor's activities at all times during removal to ensure compliance with specifications and humane treatment of animals.

Some stress to the horses would be associated with the helicopter herding operations, however, after adoption, the horses would become accustomed to captivity and all but a very small percent would receive proper care.

Garrott (1990) looked at rates of increase in wild horse herds and concluded that the lowest rate of increase is between 14 -15% annually, and in areas where sufficient forage is available, rates of increase can approach 23 -24% annually.

From analysis of data it was determined that 95 wild horses are the maximum that the HMA can support (appendix 1) while maintaining an ecological balance between vegetation, wild horses, wildlife and livestock. In order to minimize the stresses and disruption of band structures the population of wild horses will be reduced below 95 and allowed to increase back up to 95.

Small localized areas within the vicinity of trap sites and holding facilities would receive trampling and the subsequent loss of vegetation. However, overall the vegetative resource would improve due to the reduction in grazing pressure. Forage availability should increase and utilization levels decrease.

No impacts would occur to cultural resources, as the trap sites would be cleared prior to construction.

Removal of wild horses will prevent deterioration of the range due to the wild horse overpopulation. By removing the excess wild horses the remaining population will allow for a thriving ecological balance between wild horses, wildlife, livestock and vegetation.

2. No Action

Habitat improvement would not be realized with this alternative. The frequency of key species would decline. The animals would continue to search for food and further degrade their habitat, thereby reducing the carrying capacity of the area which would eventually lead to unacceptable adverse physiological stress and degraded vegetation condition. However, before the wild horses disappear the deer and many other species of wildlife would have died or dispersed to areas outside to the HMA and allotment. The HMA would be "home" to just a few wild horses, reducing the chances for the public to observe wild horses. The few wild horses left would be in poor condition thus, viewing of these wild horses would be a negative experience for most people.

Over utilization within and outside of the HMA would continue to occur and as the range further deteriorates the carrying capacity of the HMA and allotments would be reduced. The objective of limiting utilization to 55 percent or less would never be met. Downward trend would occur, and ecological condition would decline. In the long-term, the excessive utilization would eliminate nearly all the forage plant species. Attainment of RMP objectives would not be met.

Further deterioration of the range would occur and the area would not be in a state of thriving natural ecological balance between wild horses, wildlife, vegetation and livestock.

Physical condition of wild horses would decline. The wild horses would not be maintained within the HMA thus causing considerable conflicts with livestock operations and traffic on the highway.

E. Coordination and Consultation

This environmental assessment and HMAP has been sent to the following persons, groups and government agencies for review and comment.

American Bashkir Curley Register
American Horse Protection Association
American Humane Association
American Wild Mustang & Burro Foundation
Animal Protection Institute
Barbara Eustis Cross
Carson City District Grazing Advisory Board
Commission for the Preservation of Wild Horses
Compassion for Animals
Craig C. Downer
Dave Stanley
Debra Allard
Fund for Animals
Human Society of Southern Nevada
International Society for the Protection of Wild Horses and Burros
Kathy McCovey

Nan Sherwood
National Mustang Association
National Wild Horse Association
Nevada Cattlemen's Association
Nevada Department of Wildlife
Nevada Federation of Animal Protection Organization
Nevada Humane Society
Nevada Land Action Association
Nevada State Clearinghouse
Nevada State Division of Agriculture
Rebecca Kunow
Resource Concepts
Rolling "A" Ranch
Save the Mustangs
Sierra Club
The Nature Conservancy
U.S. Fish and Wildlife Service
U.S. Humane Society
United States Wild Horse and Burro Foundation
Wild Horse Organized Assistance

VI. List of Preparers

Prepared by:

John Axtell
John Axtell
Wild Horse and Burro Specialist
Lahontan Resource Area

15 Jul 91
Date

Reviewed by:

James M. Gianola
James M. Gianola
District Wild Horse and Burro Specialist
Carson City District

8-21-91
Date

David Loomis
David Loomis
Environmental Coordinator
Carson City District

8-19-91
Date

James M. Gianola (acting)
Carl Kipping
Assistant District Manager for Resources
Carson City District

12-09-91
Date

VII. FINDING OF NO SIGNIFICANT IMPACT AND RECORD OF DECISION

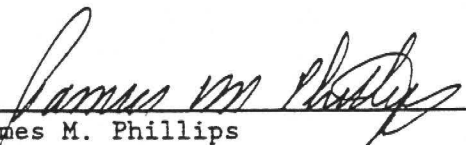
Decision: It is our decision to implement the Horse Mountain HMAP which will:

1. proportion the available forage between wild horses and livestock through the use of monitoring data,
2. limit utilization of the key species to 55%,
3. improve habitat for wild horses and wildlife,
4. establish studies to assure that Land Use Plan objectives are being met,

Finding of No Significant Impacts: Based on the analysis of potential environmental impacts contained in the attached environmental assessment, we have determined that impacts are not expected to be significant and an environmental impact statement is not required.

Rational for decision: The decision to implement the Horse Mountain HMAP is in conformance with the Lahontan RMP, approved in 1985, and will restore the range to a thriving natural ecological balance and prevent a deterioration of the range, in accordance with Sec. 3(b) of the Wild Free-Roaming Horses and Burros Act, as amended, 16 U.S.C. 1333(b) (1989). This will result in reduced soil erosion and improve the physical condition of wild horses.

Recommended for Approval by:

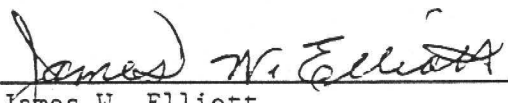


James M. Phillips
Area Manager
Lahontan Resource Area

12/11/91

Date

Approved by:



James W. Elliott
District Manager
Carson City District

12/12/91

Date

Garrott, R. 1990. Demography of Feral Horse Population in the Western United States, PhD. Thesis Univ. Minn. 130pp

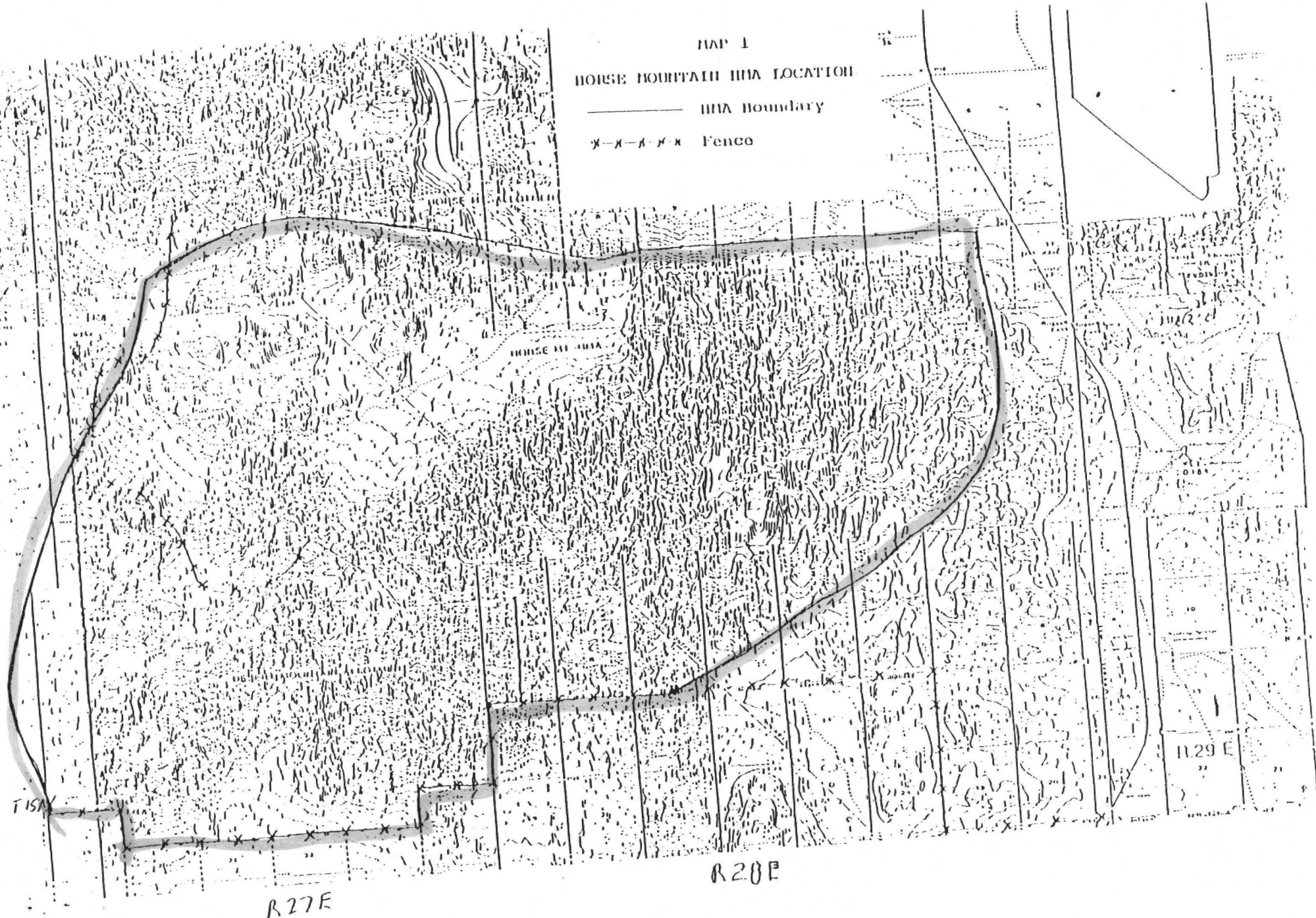
Waring, G.H. 1979. Behavioral adaptation as a Factor in the Management of Feral Equids in Symposium on the Ecology and Behavior of Wild and Feral Equids, Univ. of Wyoming Laramie pp. 85-92.

MAP 1

HORSE MOUNTAIN IHA LOCATION

———— IHA Boundary

x-x-x-x-x Fence



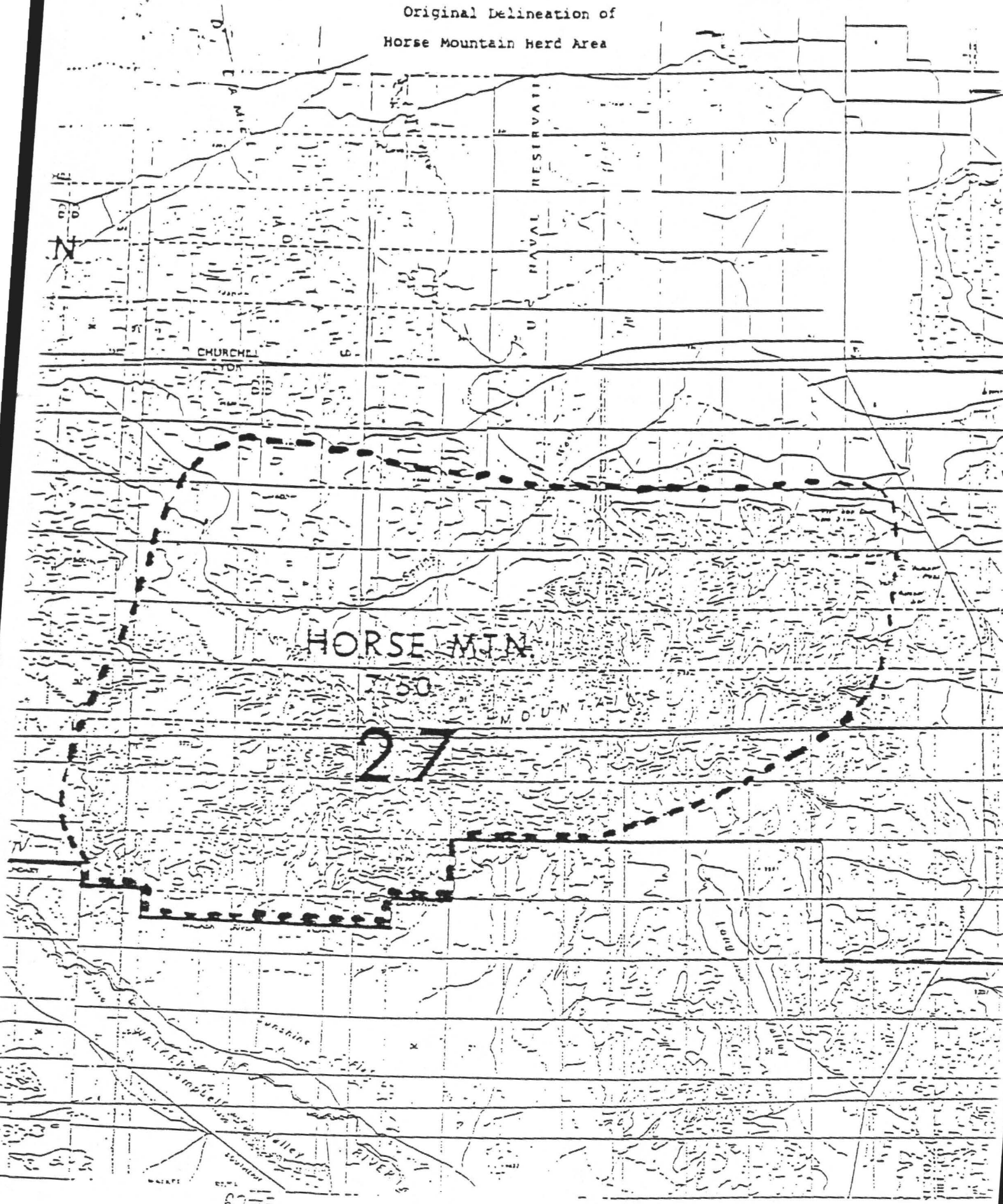
R27E

R28E

R29E





T15A

Original Delineation of
Horse Mountain Herd Area







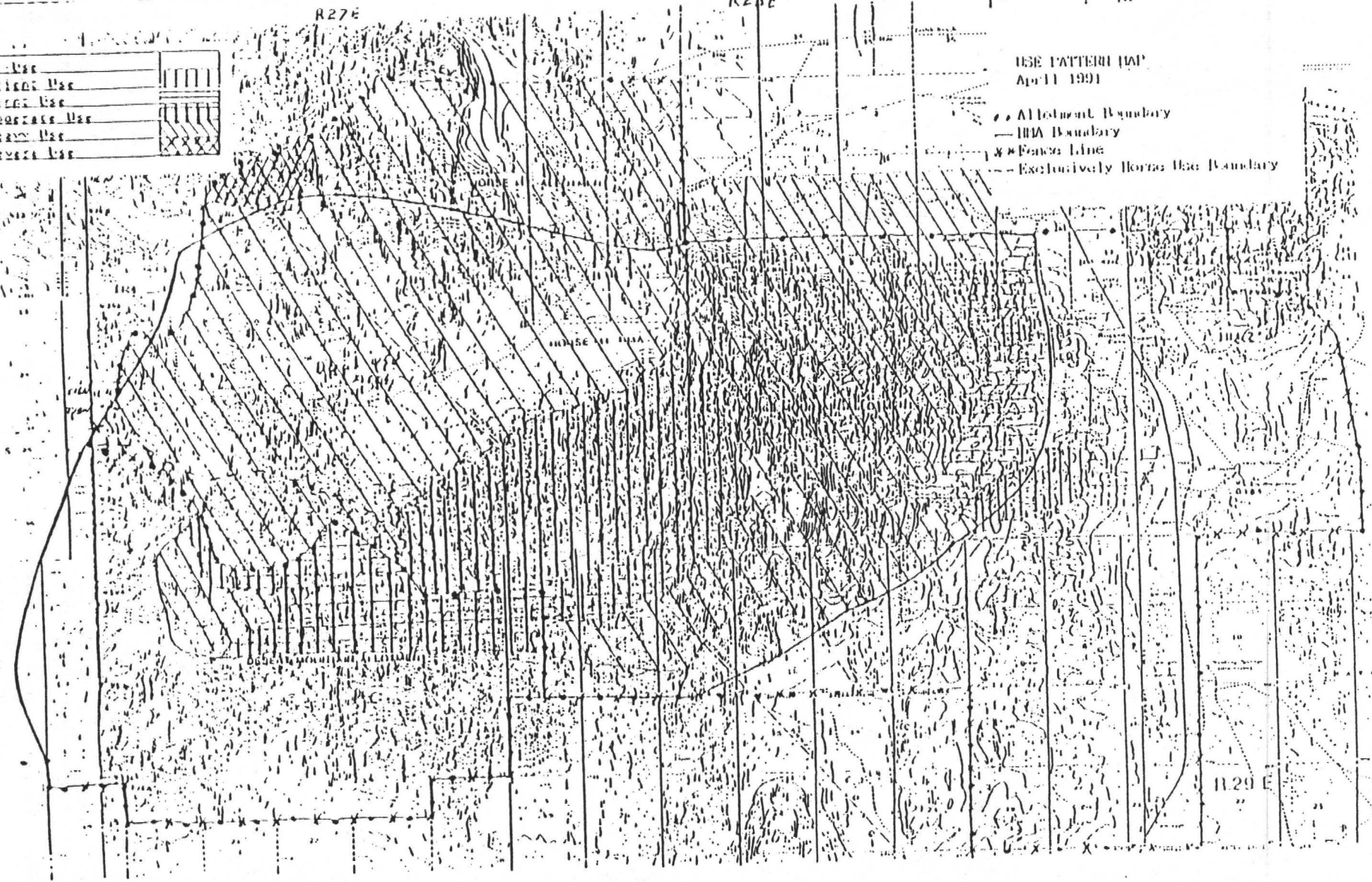
R27E

R28E

Light Use	
Medium Use	
Heavy Use	
Severe Use	

USE PATTERN MAP
April 1991

-  Allotment Boundary
-  IHA Boundary
-  Fence Line
-  Exclusively Horse Use Boundary



R29E

APPENDIX 1

Horse Mountain Allotment:

In the 1985 Lahontan Resource Management Plan (RMP) a management level of 67 (756 AUMs) wild horses was established for the Horse Mountain HMA. Thus 47 (564 AUMs) wild horses were located within the Horse Mountain Allotment portion of the Horse Mountain HMA. At that time 1,770 AUMs were allocated for livestock use within the HMA portion of the Horse Mountain Allotment. Therefore, all horse/livestock grazing adjustment will be based on this ratio. Thus 24% of the forage available for grazing (13% of actual use) will be reserved for wild horses within the dual use area of the Horse Mountain Allotment portion of the HMA. To accomplish this wild horse use must be limited to 8% by 1 November in the above mentioned area (see fig. 1).

Fig. 1

Actual use in the dual use area of the Horse Mt. Allotment portion of the Horse Mt. HMA.

Horse Use Only							Horse & Cattle					
APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	
7 Months							5 Months					
<----- 8% Horse Use ----->							<-42% Cattle Use ->					42% Cattle
							<--5% Horse Use -->					13% Horse
							8%					55% 55% Total Use

Desert Mountain Allotment:

In the 1985 RMP a management level of 16 (192 AUMs) wild horses was established for the Desert Mountain Allotment portion of the Horse Mountain HMA. At that time 470 AUMs were allocated for livestock use within the Desert Mountain Allotment portion of the HMA. Therefore, all horse/livestock grazing adjustment will be based on this ratio. Thus 30% of the forage available for grazing (17% of actual use) will be reserved for wild horses within the dual use area of the Desert Mountain Allotment portion of the HMA. To accomplish this wild horse use must be limited to 10% by 1 November in the above mention area (see fig. 2).

Fig. 2

Actual use in the dual use area of the Desert Mt. Allotment portion of the Horse Mt. HMA.

Horse Use Only							Horse & Cattle					
APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	
7 Months							5 Months					
<----- 10% Horse Use ----->							<-38% Cattle Use ->					38% Cattle
							<--7% Horse Use -->					13% Horse
							10%					55% 55% Total Use

In order to meet both the HMA and (RMP) objectives, adjustments in wild horses both inside and outside of the HMA are required. Current vegetation monitoring indicates that the HMA will support approximately 1,056 AUMs of wild horse use taken yearlong. Therefore, to properly manage the vegetative resource the wild horses will be adjusted to a maximum population of 95. Further monitoring data will be collected and analyzed, after the population is adjusted, to determine if this adjusted population level will be established as a new Appropriate Management Level (AML) for the HMA.

Based on a census conducted in April, 1989 it was determined that 135 wild horses occupy the HMA and that an additional 32 wild horses occupy areas outside of the HMA. Therefore, to properly manage the vegetative resource the wild horses will be adjusted to a point below 95 animals and allowed to increase to 95 animals within the HMA. The 32 wild horses outside of the HMA will be removed. Further monitoring data will be collected and analyzed, after the population is adjusted, to determine if this adjusted population level will be established as a new Appropriate Management Level (AML) for the HMA.

Determination of wild horse numbers to be in balance with the habitat limitations:

By November 1 the dual use portion of the Horse Mountain HMA contains:

2,026 acres in the moderate use condition, 56% use,
11,471 acres in the light use condition, 35% use.

These acreages are in the wild horse/livestock dual use area. To meet management objectives the use in this area must not exceed 8% by November 1.

Using the accepted formula for making grazing animal adjustments it is determined that 32 wild horses need to be removed from the dual use area within the HMA.

$$\frac{\text{Actual use (AUMs)}}{\text{Average/Weighted Average Utilization}} = \frac{\text{Potential Actual Use (AUMs)}}{\text{Desired Average Utilization}}$$

The Dual use area encompasses approximately 30% of the HMA, therefore, approximately 41 (135 * .30) head of wild horses utilize this area.

Moderate Use Area, encompasses approximately 15% of the dual use area or 43 (7 months * 41 head * 15%) horse AUMs by November 1.

$$\frac{43 \text{ AUMs}}{56\%} - \frac{x}{8\%} = 6 \text{ AUMs}$$

Light Use Area, encompasses approximately 85% of the dual use area or 244 (7 months * 41 head * 85%) horse AUMs by November 1.

$$\frac{244 \text{ AUMs}}{35\%} - \frac{x}{8\%} = 55 \text{ AUMs}$$

Total allowable AUMs by November 1, in the dual use area is 61 (55 + 6), 287 were used, therefore, 226 AUMs need to be reduced by November 1, this equates to 32 wild horses (226/7 = 32). The dual use area can support a maximum of 9 (61/7) wild horses.

The rest of the HMA which receives wild horse use is not currently utilized by livestock, therefore, at this time all of the available forage in this area may be consumed by wild horses. However, 13,803 acres in this area are in the heavy use category, therefore, a reduction of wild horses use is also required in this area.

The remainder of the wild horse use (95 head; 1,128 AUMs) within the HMA occurs in this area. The average year end use on this 13,803 acres (53% of the area used exclusively by wild horses) of heavy use was 65%. Approximately 50 head (600 AUMs) of wild horses caused this overuse. The area will support a maximum of 42 head.

$$\frac{600}{65} - \frac{x}{55} = 508 \text{ AUMs} / 12 = 42 \text{ head}$$

Currently the entire HMA can support a maximum of 95 wild horses, 9 in the dual use area and 86 (42 in the area currently receiving heavy use, 44 in the remaining area) in the area used exclusively by wild horses.

During the 90-91 grazing year the Horse Mountain permittee removed his cattle early which decreased the utilization and allowed for crucial early growth of key forage plants. Current data suggests that a thriving ecological balance can be obtained with a new AML of 95 wild horses and a decrease in livestock use.