6/30/93

United States Department of the Interior

TAKE PRIDE IN AMERICA

BUREAU OF LAND MANAGEMENT
Carson City District Office
1535 Hot Springs Rd., Ste. 300
Carson City, NV 89706-0638

IN REPLY REFER TO:

4400
(NV03580)

JUN 30 1993

Dear Interested Party:

Enclosed for your review is a copy of the Cedar Mountain Allotment Evaluation. Any comments should be addressed to this office prior to July 26, 1993.

One of the objectives of the Bureau of Land Management's Strategic Plan for Management of Wild Horses and Burros on Public Lands is to establish initial Appropriate Management Levels (AMLs) for all herd areas by 1995. In order to establish an AML for wild horses in the Pilot Mountain Herd Management Area (HMA), it is necessary to evaluate resource management within all the allotments included within the HMA. One of these is the Cedar Mountain Allotment, to which the enclosed evaluation is addressed.

Sincerely,

Steve Weiss ACTING

John Matthiessen
Area Manager
Walker Resource Area

Changed from winter use to year round use w/out EA

1 Enclosure:
1. Cedar Mountain Allotment Evaluation

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

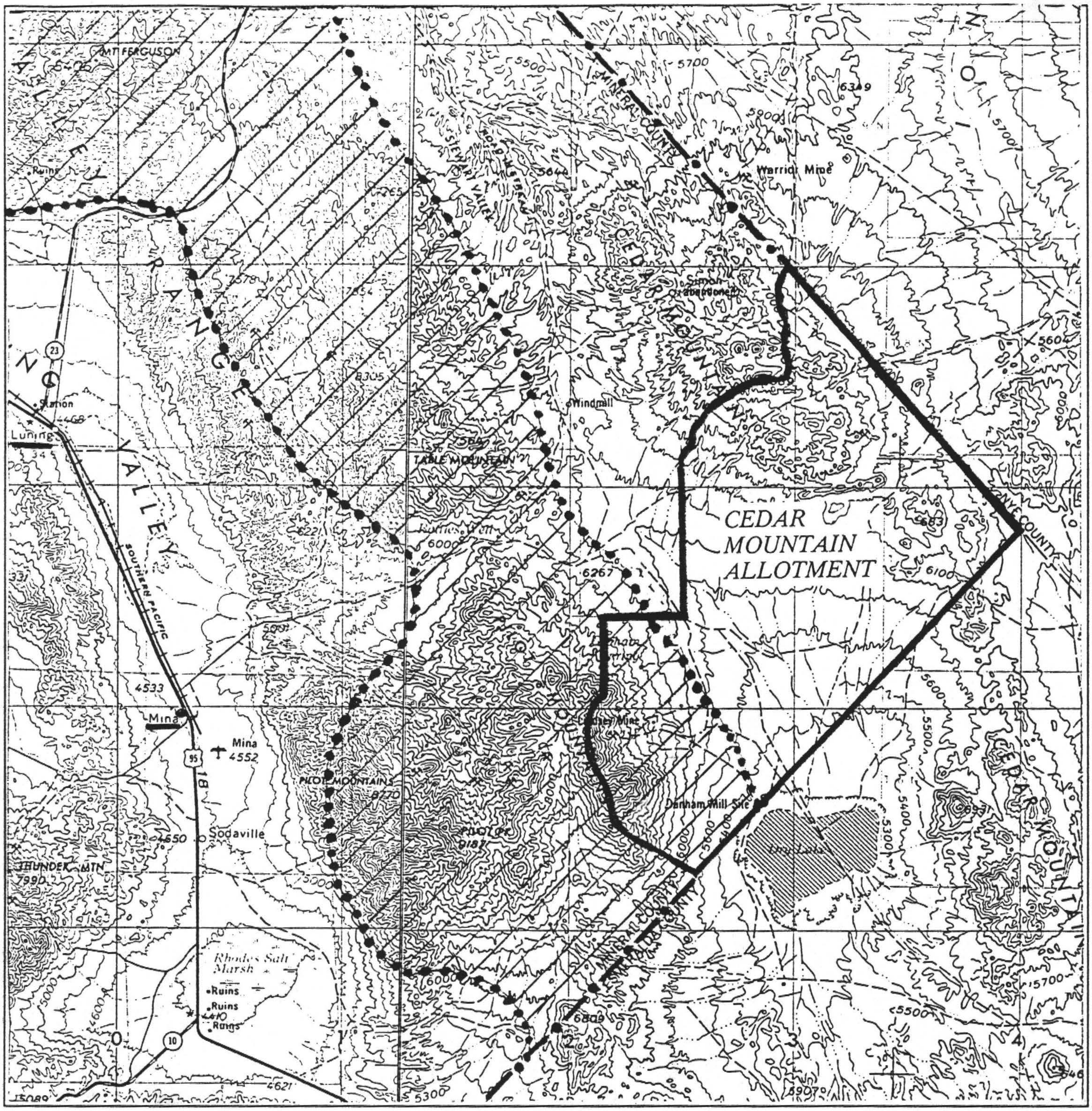
Carson City District Office
1535 Hot Springs Road, Suite 300
Carson City, Nevada 89706-0638

% reduction from RMP ?
% of livestock
% of h/d

CEDAR MOUNTAIN ALLOTMENT EVALUATION

June 28, 1993

backwards on AML
not = AML for HMA as in RPS
then % division for h/d
YES = set AML by allot's
therefore establishing
TOTAL AML for HMA



Map No. 1: Cedar Mountain Allotment

Pilot Mountain Herd Management Area

District Boundary

Allotment Boundary

Scale = 1 : 250,000

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CEDAR MOUNTAIN ALLOTMENT EVALUATION

I. Introduction

A. Purpose

One of the objectives of the Bureau of Land Management's Strategic Plan for Management of Wild Horses and Burros on Public Lands is to establish initial Appropriate Management Levels (AMLs) for all herd areas by 1995. In order to establish an AML for wild horses in the Pilot Mountain Herd Management Area (HMA), it is necessary to evaluate resource management within all the allotments included within the HMA. One of these is the Cedar Mountain Allotment, to which this evaluation is addressed.

Specifically, the purpose of the allotment evaluation process is to determine if the current grazing practices are consistent with the attainment of the Walker Resource Management Plan (RMP) and allotment specific objectives for the Cedar Mountain Allotment. If current grazing practices are not consistent with the attainment of these objectives, then appropriate changes in management needed to meet these objectives will be identified, and appropriate change in management implemented.

B. Allotment Name and Number: Cedar Mountain (03515)

C. Permittee: Tony and Jerrie Tipton into holistic mgt

D. Evaluation Period: 1989[1] to 1992

E. Selective Management Category: "M"

II. Initial Stocking Rate

A. Livestock Use

1. Preference

Preference (AUMs)			Kind of Live-stock	Period of Use	Percent Federal Range Use
Active	Suspended	Total			
925	0	925	Cattle	11/01 - 03/31	100%

2. Other Information

a. Historical Use

Prior to 1982, the permittees that grazed livestock in the Cedar Mountain Allotment were licensed by the Battle Mountain District, although Carson City District maintained all other management responsibilities. In 1982 licensing responsibility was returned to Carson City District.

Also prior to 1982, Cedar Mountain had been a sheep allotment. A District Manager's decision was issued on November 18, 1983, which converted sheep to cattle use and established the season of use as November 1 to March 31. The Decision also stated that use would be authorized as temporary and nonrenewable due

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[1]Date that the district boundary fences were completed in the Cedar Mountain Allotment.

to the unfenced nature of much of the allotment. With the construction of two boundary fences in 1988 and 1989, the possibility of livestock drift was reduced and the permittee was issued a long term permit.

b. Permittee's Current Operation

Mr. and Mrs. Tipton also graze livestock on BLM and Forest Service lands near Austin, Nevada where they have implemented an intensive grazing management system. This system incorporates movable water troughs and mineral supplements in order to control livestock distribution within the allotment.

This system was initiated in the Cedar Mountain Allotment in December, 1992. Therefore all the monitoring data addressed in Section IV was collected prior to the initiation of intensive livestock management in Cedar Mountain Allotment.

B. Wild Horse and Burro Use

1. Herd Management Areas (HMAs) in Allotment

Approximately 11,885 acres of the Pilot Mountain HMA overlaps the Cedar Mountain Allotment. This acreage accounts for approximately 19% of the Cedar Mountain Allotment which comprises about 62,611 acres of public land. The boundary runs along the upper alluvial fans of the Pilot Mountains and encompasses the southwestern portion of the allotment (refer to Map Nos. 1 and 4).

2. Appropriate Management Level (AML)

The Walker RMP established an interim management level of 397 head of wild horses in the entire Pilot Mountain Herd Area. The management level for the Cedar Mountain Allotment will be determined through the analysis of monitoring data in this evaluation.

C. Wildlife Use

1. Mule Deer (*Odocoileus hemionus*)

a. Existing Numbers

The existing number as published in the Walker RMP is 24 deer yearlong in Cedar Mountain Allotment. This is derived from information provided prior to 1986.

b. Key and Crucial Areas

No key or crucial habitat has been identified in the Cedar Mountain Allotment. Approximately 8,616 acres of yearlong habitat exist within in the Cedar Mountains and Pilot Mountains (refer to Map 2). This is approximately 14% of total acreage in the allotment.

2. Other Species

Although the RMP and Rangeland Program Summary (RPS) did not identify an allocation for pronghorn, it is likely that small numbers of pronghorn are occasionally making use of the allotment.

This is the result of recent releases of pronghorn into Ione Valley of Nye County and Calvada Flat of Mineral County.

Other wildlife species include chukar partridge (*Alectoris chukar*), raptors, cottontails (*Sylvilagus nuttallii*), jack rabbits (*Lepus californicus*), and various small birds, mammals, and reptiles.

III. Allotment Profile

A. Description

Cedar Mountain Allotment is located totally within Mineral County, Nevada, approximately 11 miles due east of Mina. The Esmeralda and Nye County lines form the Eastern boundary of the allotment, which is also the boundary between Carson City and Battle Mountain Districts (refer also to Map Nos. 1 and 2).

Topography varies from gently sloping alluvial fans in Monte Cristo Valley to rugged mountains slopes in the Pilot and Cedar Mountains. Elevation varies from a low point of approximately 4,900 feet to a high point of approximately 8,960 feet.

Approximately 86% of the allotment boundary is fenced. The unfenced portion is along the ridge of the Pilot Mountains, which incorporates steep topography that acts to restrict cattle movement, but does not restrict wild horse movement within the HMA. Range Improvement Projects are shown below. Refer to Map No. 2 for locations.

Project Name	Project Number	Year *1	Type of Agreement	Maintenance Responsibility
Cedar Mtn. Fence	545077	1964	Cooperative	Jack Estill etal
Cedar Spring	546232	1986	Cooperative	T. & J. Tipton
Humdinger Spring	546235	1955	None	None
Nye - Mineral Boundary Fence	546348	1988	Cooperative	T. & J. Tipton
Kibby Flat Fence *2	594897	1989	Cooperative	R.O. Ranch

*1 Year project was constructed or last reconstructed.
*2 Battle Mountain District.

In addition to the water sources mentioned above, two developed water sources are located in the Pilot Mountains. The source for Bettles Ranch Spring is fenced and water is piped into the adjacent Pilot - Table Mountain Allotment (i.e., no troughs in Cedar Mountain). The source for the neighboring Graham Spring is also fenced, however water is allowed to flow outside the exclosure for use by wild horses.

B. Acreage

Cedar Mountain Allotment contains 62,611 acres of public land and approximately 80 acres of deeded land (62,691 acres total). The deeded land is derived from patented mining claims and is not controlled by the permittee.

C. Allotment Specific Objectives

1. Walker Resource Management Plan (RMP) - Record of Decision issued June 6, 1986

a. Short Term

1) Initially authorize livestock use at the three year use level [0 AUMs as per the Walker RMP and EIS][2]. There will be no initial change of active preference.

2) Initially manage wild horses and burros in current herd areas at present estimated population levels.

b. Long Term

1) Develop and implement four Herd Management Area Plans (HMAPs) for wild horses and burros [one of these as shown on HMAP map is Pilot Mountain HMA].

2) Manage wildlife habitat for a long term goal of providing forage for reasonable numbers of big game [30 mule deer, 0 antelope and bighorn sheep as per Walker RMP and EIS].

2. Walker Rangeland Program Summary (RPS) - released November, 1989

a. Short Term

1) Maintain existing frequency of key species on key areas. Initially provide 925 AUMs of livestock forage. Maintain an acceptable use level of key species on key areas [initially 60%].

2) Initially provide approximately 240 AUMs of forage for wild horses which is prorated demand based on an estimate of 5% of the herd area being in the Cedar Mountain allotment.

b. Long Term

1) Maintain habitat in fair to good condition to support a population of 30 mule deer yearlong (90 AUMs).

2) Maintain or improve upland riparian ecological sites to late seral stage.

3) Maintain or improve wild horse habitat consistent with wildlife and livestock objectives. Maintain or improve free-roaming behavior of wild horses by protecting or enhancing the Herd Area. Maintain or improve wild horse habitat by assuring that all waters remain open to use by wild horses.

3. Mina Habitat Management Plan (1988)

a. Short Term

None relating to Cedar Mountain Allotment.

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[2]Walker Resource Management Plan and Environmental Impact Statement, submitted for public review in January, 1985.

b. Long Term

1) Maintain a good habitat condition class rating, as outlined in Manual 6630, in key use areas to support a reasonable population level of 30 mule deer in Cedar Mountain Allotment.

4. Threatened and Endangered Species

No threatened or endangered plants or animals have been documented within the Cedar Mountain Allotment. Candidate animal species[3] that may occur in the allotment include the loggerhead shrike (*Lanius ludovicianus*) and Fletcher dark kangaroo mouse (*Microdipodops megacephalus nasutus*). Since the loggerhead shrike is fairly common throughout the Resource Area and occurs in a variety of habitats, the possibility that it occurs in the Cedar Mountain Allotment is high.

The nearest known location for the Fletcher dark kangaroo mouse is in the Lucky Boy Pass area of the Wassuk Range, approximately 60 miles to the west of the allotment. In general, the vegetative communities are similar in that they are dominated by sagebrush and utah juniper (although there is no pinyon in Cedar Mountain Allotment). The distance and disjunct nature of the two habitats however, significantly lessens the likelihood that this species occurs in the allotment. This belief is supported by the lack of documented observations spreading out from the known sites for the Fletcher dark kangaroo mouse.

No candidate plant species have been documented in the allotment or vicinity. The possibility of such occurrences is slight.

D. Key Species Identification

1. Uplands

Indian ricegrass (*Oryzopsis hymenoides*) and galleta (*Hilaria jamesii*).

2. Riparian

Coyote willow (*Salix exigua*), yellow willow (*Salix lutea*), meadow grasses and grass-like: including Nevada bluegrass (*Poa nevadensis*), sedges (*Carex* sp.), rushes (*Juncus* sp.), tufted hairgrass (*Deschampsia caespitosa*), spikerush (*Eleocharis* sp.).

IV. Management Evaluation

A. Actual Use

Authorized livestock use is shown below. All use is from cattle. Prior to the construction of fences along the Mineral County Line (1988 and 1989), a considerable amount of livestock drift probably occurred from the adjacent allotments. In May, 1992, due to the inability to identify unauthorized cattle, impoundment notices were posted and permittees in the vicinity were contacted of pending impoundment of the unauthorized livestock. The cattle were removed shortly thereafter. Also shown is the wild horse use in Cedar

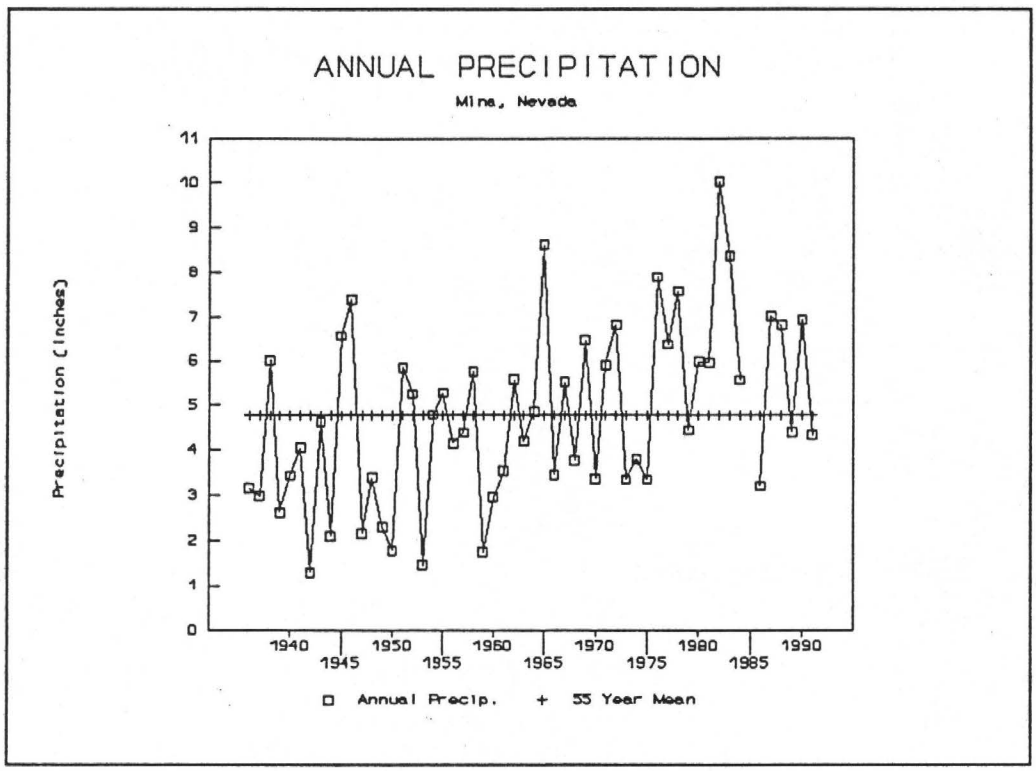
[3]Candidate, Category 2 species: species in which the currently existing information indicates that listing may be warranted, but for which substantial biological information to support a listing is lacking.

Mountain Allotment. This is based on the actual number of head counted during BLM censuses.

Year, or Grazing Season	Cattle Grazing			Wild Horses	
	Permittee	AUMs	Use Period	Number	AUMs
1988	William Card	0	N/A		
1989	William Card	921	10/01/89 - 03/31/90	26	312
1990	William Card	0	N/A		
1991	William Card	0	N/A	39	468
1992	T.& J.Tipton	905	12/01/92 - 01/31/93	78	936

B. Precipitation

The annual precipitation shown below is from Mina, Nevada, which is the closest station with consistent and reliable data. It is located approximately eleven miles west of Cedar Mountain Allotment at 4550 feet elevation. The fifty-five year mean and median annual precipitation is calculated as 4.78 inches and 4.54 inches respectively.

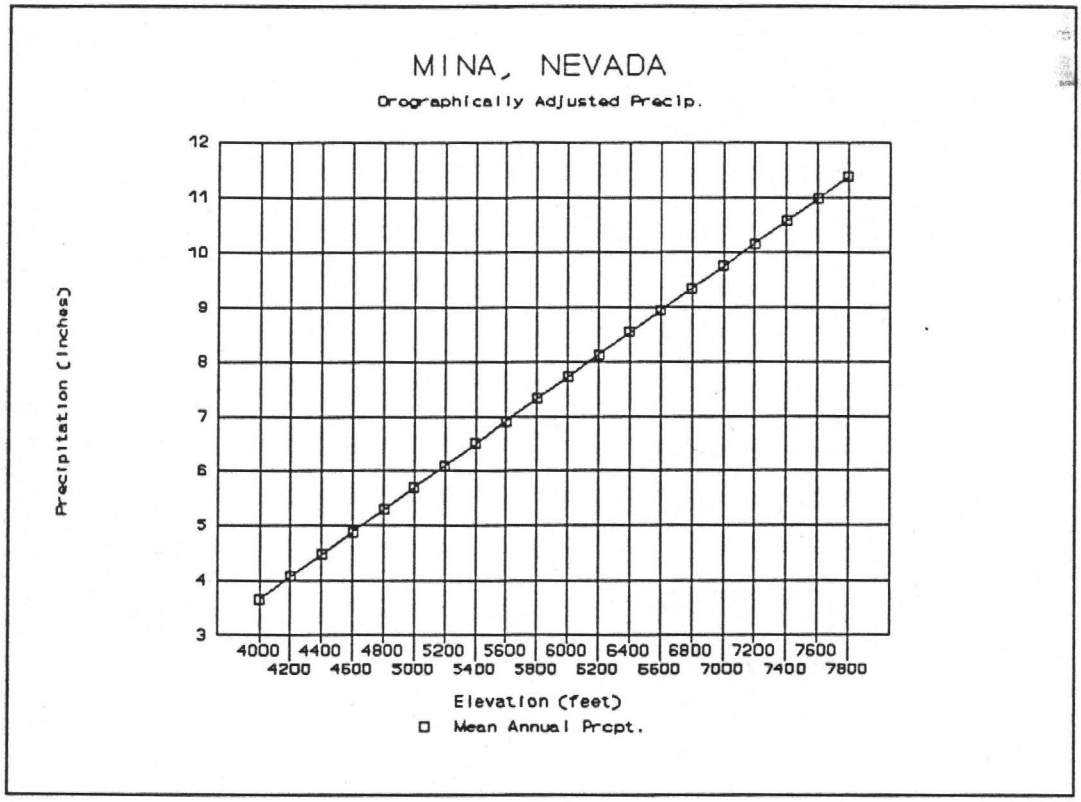


Note that the Mina Station is at a lower elevation than the major ecological sites in the allotment (refer to Appendix I). Due to the effects of orographic lifting[4], the Cedar Mountain Allotment will have a higher annual precipitation than Mina. This effect was documented

[4]Orographic lifting: changes associated with the increase in elevation due to the presence of mountains.

throughout the state in the *Nevada Watershed Studies (1963 to 1980)*[5]. The closest recording site is north of Eastgate, Nevada. Although this site is over 60 miles north of Cedar Mountain Allotment, weather patterns are similar. The graph shown below is an estimate based on linear regression calculations of Eastgate data applied to the 55-year mean annual precipitation for Mina, Nevada. As an example, the long term average precipitation at 6,600 feet elevation will be approximately 9 inches per year. Consequently, vegetation found in the 9 inch precipitation zone should be present at that elevation.

Also note that precipitation may vary between Mina and the Cedar Mountain Allotment during any year due to slight differences in storm patterns. An example of this would be a summer convection storm that rains on the east slope of the Pilot Mountain (thus, Cedar Mountain Allotment), but misses Mina completely.



C. Utilization

1. Key Area (CM01, refer to Map 2)

Date	Key Species	% Utilization & Class	Kind of Animal
04/18/90	Indian ricegrass	27.5% - Light	Wild Horses & Cattle
10/15/92	Indian ricegrass galleta	84% - Severe 21.5% - Light	Wild Horses
03/10/93	Indian ricegrass galleta	86% - Severe 30.15% - Light	Wild Horses & Cattle

[5]Houng-Ming Joung, John H. Trimmer, Richard Jewell (1983). BLM Nevada State Office Technical Publication BLMNVPT830014340.

2. Use Pattern Mapping

Use pattern mapping was completed for two years during the evaluation period (1990 and 1992). This data is summarized below. "%" refers to percentage of allotment in the specific utilization class. The results are also shown on Map Nos. 3 to 6.

Year	Utilization Classes												% Heavy and Severe Use
	No Use		Slight		Light		Moderate		Heavy		Severe		
	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	
1990	2,134	3	0		26,780	43	15,610	25	12,274	20	5,893	9	29
1992	23,579	38	4,278	7	8,143	13	0		16,960	27	9,731	15	42

Additional field observations are presented below.

a) The 1990 data included both authorized cattle and wild horse use. Based on the presence or absence of animal sign[6], use inside the HMA was exclusively from wild horses (refer to Map No. 4). Heavy and severe use in Monte Cristo Valley, which lies outside the HMA, was from both authorized livestock and wild horses.

b) The 1992 data was completed prior to the authorized cattle entering the allotment. Based the presence or absence of animal sign, light use in the northern portion of the allotment is attributed mostly to unauthorized cattle, probably from Nye County (discussed on page 5). Also based on the presence or absence of animal sign, the heavy and severe use in Monte Cristo Valley from Key Area CM01 south (including the HMA) was exclusively from wild horses. The heavy and severe use north of the key area was from both wild horses and unauthorized cattle. This is shown on Map No. 6 and compared in the following table.

Kind of Animal(s)	Acres Heavy & Severe Use	Percent of Total Heavy and Severe use
Wild Horses only	24,282	91 %
Wild Horses and Unauthorized Cattle.	2,409	9 %

c) Based on above, most of the increase of heavy and severe use between 1990 and 1992 was attributed to wild horses.

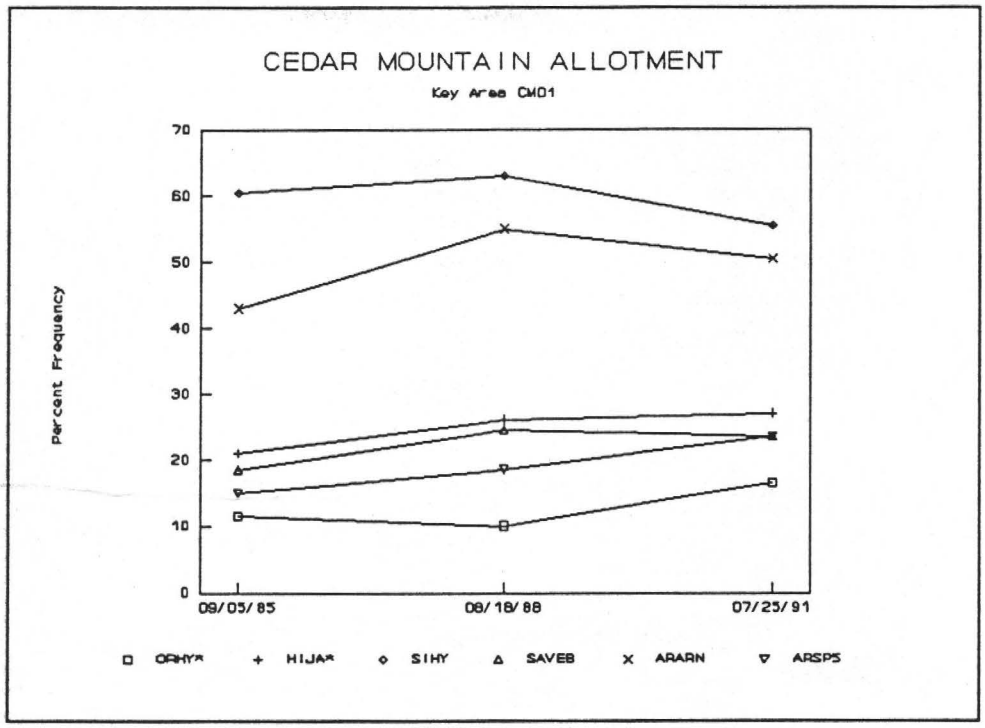
d) Substantial nonuse recorded in 1992 was due to the mapping occurring prior to livestock being authorized to graze.

D. Trend

One key area (CM01) has been established in the allotment. Results are shown below. "*" indicates plant is a key species. Plant codes are identified as follows (refer also to Appendix I): ORHY* = Indian ricegrass (a key species), HIJA* = galleta grass (a key species),

[6]Animal sign incudes hoof prints, fecal droppings, and the animals themselves.

SIHY = bottlebrush squirreltail, SAVEB = Bailey greasewood, ARARN = black sagebrush, ARSP5 = bud sagebrush.



In analyzing the effects of grazing to trend, it is important to know the relation of the plants' growth cycles and the current grazing schedules. This is shown in Appendix III.

E. Range Survey Data

At the time of the range survey (1952), the area that would eventually become the Cedar Mountain Allotment was included in the old Finger Rock Grazing Unit. The range survey for the Cedar Mountain portion of the Fingerrock Unit showed 2,944 AUMs were available for winter sheep grazing. Note that this information is for historical interest only.

F. Ecological Status

An Order 3 soil survey has been performed throughout the allotment. Ecological sites were identified, however ecological status was not determined. A summary of this data is presented in Appendix I. The ecological status on the key area was recorded as late seral (65% Potential Native Community). Observations by the interdisciplinary team indicate that most of the allotment is also in late seral stage.

The exception is in the vicinity of Humdinger and Cedar Springs, which, due to the lack of perennial grasses, is probably in mid-seral stage. A distinct fence-line contrast has formed in this area between Cedar Mountain and Pilot Mountain Allotments (the area immediately west of Cedar Mountain has received very little historical use). This probably was the result of drift livestock from the east (Nye and Esmeralda Counties) concentrating in the Cedar Mountains prior to the construction of the district boundary fences in 1988 and 1989.

G. Wildlife Habitat

Because of the small number of deer, the lack of critical deer summer and winter range, and the fact that deer yearlong range only comprises 14% of the allotment, neither the Bureau nor the Nevada Department of Wildlife has attempted to determine the population status of specific changes in habitat suitability for deer. the basic rangeland habitat data, which has been previously discussed, is being used to monitor gross changes that may affect the deer population.

H. Riparian Habitat

Riparian vegetation associated with permanent and ephemeral springs can be divided into two major categories based on geographic location, values, and major impacts. Locations of the sites mentioned below are shown on Map No. 2.

Cedar Mountains. Springs include Cedar Spring (perennial), Humdinger Spring (perennial), and Douglas Spring (ephemeral). Cedar Springs source is fenced and a willow stand near Humdinger Spring is fenced. All these sources are important to wildlife and as a hauling source for livestock. Observations in 1991 and 1992 indicated that the riparian habitat outside the fenced sources had received severe use and hoof damage from unauthorized livestock and, to a lesser extent, wild horses.

Pilot Mountains. Graham and Bettles Ranch Springs are sources for a pipeline supplying water to the adjacent Pilot-Table Mountain Allotment. The source of both springs are protected. Other water sources include Gunmetal Mine Spring (perennial), Desert Sheeite Mine Spring (perennial), and Good Hope Mine Spring (low producing, probably ephemeral). All these sources are important to wild horses and wildlife.

Observations in 1991 indicate that all unprotected springs and riparian habitat outside the fenced springs are receiving severe grazing use and hoof damage from wild horses. Note that habitat associated with the three "Mine" springs has been severely altered by historical mining excavations. However, there is a distinct possibility that the surface water may be the result of this mining activity. Therefore, the original potential native community (PNC) may not be attainable nor applicable to the "Mine" springs. Although the spring source for Desert Sheeite has been altered, stands of yellow willows located farther up the drainages have not (no perennial water though).

I. Wild Horse Habitat

The ecological status within the Pilot Mountain HMA is estimated as late seral in that portion that overlaps the Cedar Mountain Allotment. As shown in the use pattern mapping, utilization levels by wild horses are heavy and severe in this area. The heavy and severe utilization by wild horses is also occurring outside the HMA. If this continues, the ecological status will probably move toward an earlier successional stage.

IV. Conclusions

The accomplishment of the objectives shown in Section III C (Page 4) are discussed below. Objectives have been grouped due to similarities.

A. Authorizing Livestock Use

Initially authorize livestock use at the three year use level [0 AUMs as per the Walker RMP and EIS]. There will be no initial change of active preference. RMP Objective a. 1.

Since nonuse was initially authorized in 1986, 1987, and 1988, this objective has been met. At the time of the RMP (1986), the unfenced nature of the district boundary made grazing cattle difficult without excessive drift into adjacent allotments. The two district boundary fences constructed in 1987 and 1988 resolved this. In addition, the burden of hauling water made the allotment unattractive to some permittees. However this is not a problem to the Tiptons', whose grazing scheme is based on water hauling to control livestock movement. Therefore, due to the elimination of the factors restricting livestock grazing, it is not appropriate that the three year average during the time of the grazing EIS continue to be used as a measure of authorization.

B. Utilization, Trend and Condition

RPS Objective a. 1. can be analyzed in three parts.

1) Maintain existing frequency of key species on key areas.

Since the frequency of Indian ricegrass and galleta shows a static to slight increase between 1985 and 1991, the first portion of this objective has been met. Note that the last reading of frequency was in 1991 as per Resource Area scheduling, which means that the effects of severe use levels recorded in 1992 have not been documented. Also note that since livestock grazing occurs during the dormant periods of the key species (refer to Appendix III), it is anticipated that livestock utilization will not have a negative impact to trend.

2) Initially provide 925 AUMs of livestock forage.

As addressed in A, above, the limiting factors for grazing have previously been a lack of fences and perennial water, not available forage. The availability of livestock forage will be determined through monitoring as the permittees initiate their system in the Cedar Mountain Allotment.

3) Maintain an acceptable use level on key areas on key species [initially 60%].

Utilization levels in 1992 exceeded 60% (i.e. were greater than the "moderate" utilization class), therefore the above objective was not met. Although some of this use was from trespass livestock, the majority of the heavy and severe use was from wild horses (refer to the table and accompanying explanation on page 8).

Wild horse utilization occurs yearlong, causing stress to key plant species during their critical growth stages (refer to Appendix III). Since livestock are authorized to graze during the dormant stages, cattle grazing will not have as negative an impact to the health of the plants. Because of this, the use levels suggested in the *Nevada*

Rangeland Monitoring Handbook[7] varied based on grazing season. The allowable use level (AUL) in the above objective is based on fall and winter grazing of perennial grasses (*NRMH*, page 23), which is appropriate for livestock. However, the AUL for wild horses should be based on yearlong use (55% as per *NRMH* guidelines).

As shown in the 1992 use pattern mapping (page 8), utilization by wild horses exceed the 60% AUL prior to livestock entering the allotment (i.e., no allowable forage for livestock in the HMA and vicinity). The stocking rate necessary to achieve the desired utilization as calculated in Appendix II is 283 AUMs for the HMA portion of the Cedar Mountain Allotment and 1,320 AUMs for the portion outside the HMA.

C. Wild Horses

Develop and implement four Herd Management Area Plans (HMAPs) for wild horses and burros [one of these as shown on HMAP map is Pilot Mountain HMA]. RMP Objective b. 1).

This evaluation is one of the first steps in developing an HMAP for the Pilot Mountain HMA.

Initially manage wild horses and burros in current herd areas at present estimated population levels. RMP Objective a. 2).

Initially provide approximately 240 AUMs of forage for wild horses which is prorated demand based on an estimate of 5% of the herd area being in Cedar Mountain Allotment. RPS Objective a. 2).

The numbers presented in the RPS (240 AUMs, which equates to 20 horses yearlong) are based on the estimated percentage of the HMA that occurs in the Cedar Mountain Allotment, not on monitoring and inventory data.[8] The potential stocking level based on use pattern mapping data is calculated in Appendix II. An assumption presented in these calculations is that by preventing the placement of water troughs and mineral supplements within the HMA, the HMA would be grazed primarily by wild horses and the area outside would be grazed primarily by cattle. This resulted in 283 AUMs for wild horses inside the HMA and 1,320 AUMs for cattle outside the HMA. Note that the calculated stocking level for outside the HMA is greater than the active preference for the entire allotment (925 AUMs).

Maintain or improve wild horse habitat consistent with wildlife and livestock objectives. Maintain or improve free-roaming behavior of wild horses by protecting or enhancing the Herd Area. Maintain or improve wild horse habitat by assuring that all waters remain open to use by wild horses. RPS Objective b. 3).

In order to maintain or improve wild horse habitat, it is necessary to maintain utilization in the HMA at or below the AUL. Therefore, this portion of the objective has not been met. This point is addressed in the previous sections. No fences have been constructed to impede the free roaming nature of the wild horses (the allotment boundary fence constructed in 1988 ends at the HMA boundary), therefore the second portion of the objective has been met. The only spring source protection constructed in the HMA after the RMP was at Graham Spring. Although the source is protected, water is allowed to flow outside the

[7] Nevada Rangeland Monitoring Handbook (September, 1984), hence forth referred to as NRMH.

[8] The Interior Board of Land Appeals (IBLA) has ruled that these numbers are not valid unless they are based on resource data (re., consolidated IBLA 89-285 and 89-286).

exclosure. Therefore the last portion of the above objective has been met.

D. Wildlife Habitat

Manage wildlife habitat for a long term goal of providing forage for reasonable numbers of big game [30 mule deer, 0 antelope and bighorn sheep as per Walker RMP and EIS]. RMP Objective b. 2).

Maintain a good habitat condition class rating, as outlined in Manual 6630, in key use areas to support a reasonable population level of 30 mule deer in Cedar Mountain Allotment. Mina HMP Objective b. 1)

Maintain habitat in fair to good condition to support a population of 30 mule deer yearlong (90 AUMs). RPS Objective 1).

Adequate data does not exist to document whether sufficient forage is available to support reasonable numbers of mule deer. Therefore, the status of the objective is unknown. Considering the size of the allotment, the type of habitat selected by mule deer (significant topographic relief), and the small AUM demand for mule deer (90 AUMs) it is reasonable to assume that the forage is available. It must be remembered though that the mule deer range in the Cedar Mountain Allotment occurs in two distinct units. The portion in the Cedar Mountains can be assumed to have more available forage for mule deer than that portion associated with the Pilot Mountains. This is true because of the absence of wild horses and significant non-use by the permittees. Competition for available forage and water is much more significant in the Pilot Mountain portion, due primarily to year round use by wild horses.

A benefit to mule deer and all wildlife species, is that some of the springs, and a portion of their associated riparian areas, are protected by exclosures. Wildlife is capable of accessing these areas to drink and feed. Essentially all of the springs occur within mule deer habitat or nearby. The degraded nature of the riparian areas lying outside of the exclosures results in a negative impact to wildlife, particularly prey species which may become more vulnerable to predators as they attempt to cross the barren areas.

It is clear that a decline in condition would be harmful in terms of pronghorn establishing themselves in the allotment. A continued heavy and severe use by wild horses in the black sagebrush dominated ecological sites of Monte Cristo Valley could pose a conflict to future pronghorn habitat. As the number of pronghorn observations increase in the Cedar Mountain Allotment, both the Nevada Department of Wildlife and the BLM will be able to gain an understanding of how the pronghorn choose to use the allotment.

E. Riparian Areas

Maintain or improve upland riparian ecological sites to late seral stage. RPS Objective, b. 2).

Based on the degradation to unprotected sites by wild horses and unauthorized livestock, this objective is not being met. The unauthorized livestock were removed after impoundment notices were issued. The overuse by wild horses in the Pilot Mountains is part of a larger problem addressed in B and C, above.

The permittees have proposed fencing the springs and associated riparian areas. These would become riparian pastures and be managed separately in accordance to specific riparian objectives established

for each area. Otherwise, these springs are more "attractive nuisances" to their grazing management (i.e., the perennial waters will attract the cattle away from the moveable troughs and make control more difficult), and fencing them out should help control livestock distribution. This may be acceptable in the Cedar Mountains, however the allotment objectives require that all waters be left open to wild horse access in the Pilot Mountain HMA (refer to C, above).

Note that this objective may not be applicable to the "Mine" springs in the Pilot Mountains (see page 10). Due to the soil disturbance of these areas by historic mining activities, late seral ecological status may not be obtainable in a human lifetime. Also, there is a distinct possibility that these springs may be the result of the mining activities (eg, there may not be surface water at the Desert Sheeite Spring if someone had not dug a pit down to the water table). However, it is appropriate to maintain a sufficient quality and quantity of water for wild horses and wildlife no matter what seral stage the associated vegetation may be in.

F. Threatened and Endangered Species

As stated in Section III C 4 (see page 5), it is likely that the loggerhead shrike occurs in the Cedar Mountain Allotment, although the possibility of the Fletcher dark footed kangaroo mouse occurring is very slight. Presumably, impacts that cause a move toward earlier successional stages will result in a negative impact to the species. The major negative impacts during the period of this evaluation have been overutilization by wild horses and trespass livestock as discussed in previous sections. Resolution of these problems, as described, should eliminate any significant negative impacts to these species. The new, intensive grazing program is not expected to result in a significant negative impacts to candidate species, and may, in fact, benefit habitat conditions for such species.

V. Technical Recommendations

In order to meet the allotment objectives for the Cedar Mountain Allotment, the following recommendations are presented.

A. The maximum allowable use by wild horses in the Cedar Mountain Allotment portion of the Pilot Mountain Herd Management Area (HMA) will not exceed 283 AUMs.

B. Incorporate as a stipulation to the permittees' permit and license that no water troughs and mineral supplements will be placed in the Pilot Mountain HMA.

C. Maintain the current active preference for livestock. Maintain the current season of use for livestock (11/01 to 03/31) since it does not fall within the growth period of key plant species.

D. Establish an Allowable Use Level (AUL) of 55% on key species in the Pilot Mountain HMA, which sustains yearlong use.

E. Retain the 60% AUL for cattle grazing in fall and winter in the remainder of the Cedar Mountain Allotment.

APPENDIX I
Ecological Sites in the Cedar Mountain Allotment

1	2	3	4			5		6	7	8
Ecological Site Number	Site Name	Habitat Type	Yield (lb/ac)			% Ground Cover(Basal & Crown)		Elevation (feet)	Acres In Allotment	% of Allot.
			Fav.	Nor.	Unf.	Min.	Max.			
029XY014NV	Shlw.Calcareous Slope 8–12"PZ	ARARN/ORHY–STCO4	350	200	75	15	20	5200–7500	15,275.08	24.40
029XY036NV	Cobbly Loam 5–8" PZ	MESP2/ORHY	400	300	100	4	12	4400–6500	10,874.16	17.37
029XY017NV	Loamy 5–8" PZ	ATCO–ARSP5/ORHY	500	350	150	15	25	4400–6500	7,074.00	11.30
029XY008NV	Shlw.Calcareous Loam 8–12"PZ	ARARN/ORHY	700	500	250	15	25	5200–7500	5,496.48	8.78
029XY081NV	Shlw.Calcareous Hill 10–14"PZ	JUOS/ARARN/ORHY	500	350	200	10	20	5200–7500	4287.39	6.85
029XY037NV	Cobbly Slope 5–8"PZ	MESP2/HIJA–STIPA	300	200	100	8	15	4400–6500	3,656.95	5.84
029XY041NV	Dry Wash	CHNA2–ATCA2/ORHY	500	300	100	8	12	3000–5200	3,160.87	5.05
029XY033NV	Sodic Hill 3–5" PZ	ATCO/ORHY	100	50	25	2	5	3000–5500	2,316.57	3.70
ROCK	Rock Outcrop	Barren							2,196.39	3.51
028BY011NV	Shlw.Calcareous Loam 8–10"PZ	ARARN/ORHY–STCO4	800	600	400	15	20	5000–7000	1,930.21	3.08
027XY043NV	Coarse Gravelly Loam 3–5" PZ	ATCO–LYCO2–SAVEB/ORHY	350	200	100	10	15	3400–4300	1,121.52	1.79
029XY006NV	Loamy 8–10" PZ	ARTRW/ORHY–STCO4	800	600	300	15	25	5200–7500	1,083.86	1.73
027XY008NV	Droughty Loam 8–10" PZ	ARTRW–GRSP/ORHY	700	500	300	20	30	4500–5000	770.79	1.23
027XY029NV	Gravelly Fan 8–10" PZ	ARTR2–GRSP/ORHY–ELCI2	800	500	300	10	20	4500–6000	707.76	1.13
029XY010NV	Loamy Slope 8–10" PZ	ARTRW/ORHY–STCO4	500	350	250	15	25	5200–7500	635.08	1.01
029XY020NV	Silty 5–8" PZ	EULA5/ORHY–SIHY	500	350	200	10	20	4400–6500	527.97	0.84
027XY007NV	Loamy Slope 8–10" PZ	ARTRW/STTH2	700	500	300	15	20	5000–6500	476.44	0.76
029XY049NV	Sandy Loam 8–12" PZ	ARTRW/ORHY–STSP3	1100	800	500	15	25	5200–7500	451.28	0.72
029XY032NV	Sodic Loam 3–5" PZ	ATCO/ORHY	200	125	75		10	3000–5500	245.28	0.39
027XY065NV	Granitic Slope 8–10" PZ	ARTRW/STSP3	600	500	300	25	40	5000–7000	86.56	0.14
BADLANDS	Badlands	Barren							75.40	0.12
027XY061NV	Shlw.Calcareous Slope 8–10"PZ	ARARN/STSP3–ORHY	400	200	100	5	15	5000–6500	69.20	0.11
029XY022NV	Sodic Hill 5–8" PZ	ATCO/HIJA–ORHY	400	250	100	10	30	4400–6500	65.10	0.10
027XY036NV	Dry Sodic Terrace	SAVE4/ORHY	200	100	50	5	10	3400–4400	21.08	0.03
027XY018NV	Gravelly Loam 4–8" PZ	ATCO–SAVEB/ORHY	450	250	100	10	20	3400–5000	5.58	0.01

TOTAL = 62,611.00 Acres

Explanation of Data in Appendix I

Column Number	Description
1	Ecological Site Number. This number can be used to reference a site to the Soil Conservation Service Site Descriptions for Major Land Resource Area (MLRA) numbers 027, 028 and 029. All data used in this appendix except columns 7 and 8 are derived from these descriptions.
2	Ecological Site Name. "PZ" means Precipitation Zone and is measure in inches.
3	Habitat Type. These are the major plant species found in the Potential Natural Community (PNC). Plant codes are identified below.

Plant Code	Scientific Name	Common Name
ARARN	*Artemisia arbuscula nova*	black sagebrush
ARSP5	*Artemisia spinescens*	bud sagebrush
ARTR2	*Artemisia tridentata*	big sagebrush
ARTRW	*Artemisia tridentata wyomingensis*	wyoming big sagebrush
ATCA2	*Atriplex canescens*	fourwing saltbush
ATCO	*Atriplex confertifolia*	shadscale
CHNA2	*Chrysothamnus nauseosus*	rubber rabbitbrush
ELCI2	*Elymus cinereus*	Great Basin wildrye
EULA5	*Eurotia lanata*	winterfat, white sage
GRSP	*Grayia spinosa*	spiny hopsage
HIJA	*Hilaria jamesii*	galleta
JUOS	*Juniperus osteosperma*	Utah Juniper
LYCO2	*Lycium cooperi*	Cooper wolfberry
MESP2	*Menodora spinescens*	spiny menodora
ORHY	*Oryzopsis hymenoides*	Indian ricegrass
SAVE4	*Sarcobatus vermiculatus*	black greasewood
SAVEB	*Sarcobatus vermiculatus baileyi*	Bailey greasewood
SIHY	*Sitanion hystrix*	bottlebrush squirreltail
STCO4	*Stipa comata*	needle-and-thread
STIPA	*Stipa sp*	needlegrass
STSP3	*Stipa speciosa*	desert needlegrass
STTH2	*Stipa thurberiana*	Thurbers needlegrass

4	Yield, measured in pounds per acre. This is the amount live matter that will be produced during a growing season. The three figures are for favorable, normal and unfavorable years.
5	Estimated percent ground cover; minimum and maximum.
6	Elevation range where the specific ecological site may be found
7	Total acres in the Cedar Mountain Allotment covered by the specific ecological site.
8	Percentage of the Cedar Mountain Allotment covered by the specific ecological site.

Appendix II
Cedar Mountain Allotment
Wild Horse AUM Calculations

Shown below are the series of calculations used to derive the potential AUMs for horses in the Pilot Mountain HMA portion of the Cedar Mountain Allotment. An assumption presented in these calculations is that by preventing the placement of water troughs and mineral supplements within the HMA, the HMA would be grazed primarily by wild horses and the area outside would be grazed primarily by cattle.

A. Use Pattern Mapping Data. Acreages shown below are taken from the 10/15/92 to 10/28/92 use pattern mapping. Although the "No Use" category is shown to account for the total acreage in the allotment, this acreage was not used in calculations relating to wild horses. Being free-roaming creatures of habit, the wild horses did not use these portions of the allotment due to topographical and/or environmental restrictions. Therefore, these areas are considered to be ungrazable by wild horses.

This data was collected prior to authorized livestock entering the allotment. Based on the presence or absence of animal sign[1], the use inside the HMA was exclusively from wild horses. The use in the northern portion of the allotment was from both wild horses and unauthorized livestock (refer to Map No. 6). Only the portion of each utilization class that can be attributed exclusively to wild horses is used in calculating the Weighted Acres, which will be used later in this Appendix.

The Utilization Class Midpoint values (y) are from the six utilization classes for herbaceous vegetation as described in BLM Technical Reference TR 4400-3[2].

Utilization Class	(y) Class Mid-Point	A. Cedar Mountain Allotment			B. Inside HMA	
		Acres in Allot. by Class	(x) Acres Exclusively from Horses	(x * y) Weighted Acres	(x) Acres in Allot. by Class	(x * y) Weighted Acres
Slight	13%	4,278	3,177	413	0	0
Light	30%	8,143	0	0	239	72
Moderate	50%	0	0	0	0	0
Heavy	70%	16,960	16,960	11,872	5,091	3,564
Severe	90%	9,731	7,322	6,590	5,088	4,579
TOTALs		39,112	27,459	18,875	10,418	8,215
No Use		23,579			1,467	
Totals		62,691			11,885	

[1]Animal sign includes hoof prints, fecal droppings, and the animals.

[2]Utilization Studies (1984). Pages 12 & 59.

B. Average Utilization Inside the HMA. The source for the weighted average formula used below is from the BLM Technical Reference TR 4400-7[3].

$$\text{Average Utilization} = \frac{\Sigma \text{ (Acres per Util. Class X Class Mid-Point)}}{\Sigma \text{ Acres}}$$

$$\text{Average Utilization} = \frac{\Sigma (x * y)}{\Sigma (x)} = \frac{8,214.6}{10,418} = 78.85\%$$

C. Wild Horse Actual Use in HMA. 78 head of wild horses were counted in the Cedar Mountain Allotment in 1992. Based on yearlong grazing, wild horse actual use for the allotment is calculated as follows:

78 Head of wild horses X 12 months = 936 AUMs

Although at the time of the census the horses were inside the HMA, the use pattern mapping data showed that a significant amount of wild horse use had previously been made outside the HMA. As evidenced on Map No. 5, the utilization levels by wild horses inside the HMA is different from levels recorded outside the HMA. Therefore the Weighted Acres from the table on page II-1 is used to determine the proportion of actual use made inside the HMA (i.e., acres weighted by use pattern mapping data).

$$\text{Allotment Actual Use} \times \frac{\text{Weighted Acres in HMA}}{\text{Weighted Acres in Allotment}} = \text{AUMs Inside HMA}$$

$$936 \text{ AUMs} \times \frac{8,215 \text{ Acres}}{18,875 \text{ Acres}} = \textbf{407 AUMs Inside HMA}$$

D. Desired Utilization in HMA. The Walker RPS showed 60% as acceptable use level on key areas, which is consistent with the fall and winter allowable use level (AUL) suggested for perennial grasses in the *Nevada Rangeland Monitoring Handbook* (September, 1984), page 23. This figure was used in the RPS in relation to cattle, which grazes during the dormancy period of key plant species. However, since the calculations contained in this appendix are based on yearlong use of the allotment (i.e., during critical growth stages of plant species), it is more appropriate to use the yearlong AUL for perennial grasses (55%).

E. Potential Actual Use (AUMs) Calculation for HMA. The potential actual use (i.e., potential stocking level) of wild horses necessary to bring the average utilization down to 55% is calculated below. The source of this formula is TR 4400-7, Appendix 2, pages 54 - 56.

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

$$\frac{407 \text{ AUMs (from C, above)}}{79\% \text{ (from B, above)}} = \frac{\text{Potential Actual Use}}{55\% \text{ (from D, above)}}$$

283 AUMs = Potential Actual Use

[3] Rangeland Monitoring Analysis, Interpretation, and Evaluation (November, 1985) Appendix 1, page 52 & 53.

F. Potential Number of Head. The potential stocking level as calculated above for the Pilot Mountain HMA portion of the Cedar Mountain Allotment is 283 AUMs. Since this is for yearlong use, the potential number of head needed to bring the utilization level down to 55% is calculated as follows:

$$\frac{283 \text{ AUMs}}{12 \text{ Months}} = \text{Potential Number of Head}$$

24 Head of Wild Horses = Potential Number of Head

G. Estimated Potential Stocking Level Outside HMA. The calculation below assumes that the remainder of the allotment will be grazed by cattle. Therefore, areas of "no use" as shown in the use pattern mapping data can be grazed through water hauling, mineral block placement, electric fencing, and other forms of livestock management not allowed in the HMA.

$$\frac{283 \text{ AUMs inside HMA}}{11{,}885 \text{ Acres inside HMA}} = \frac{\text{Potential Use Outside HMA}}{50{,}806 \text{ Acres outside HMA}}$$

1,210 AUMs = Potential Use Outside HMA

Since cattle are authorized during the dormant stages of key plant species, it is appropriate to apply the 60% AUL from the Walker RPS (refer to Section D., above). Since the AUMs from inside the HMA are based on a 55% AUL, the following conversion is necessary.

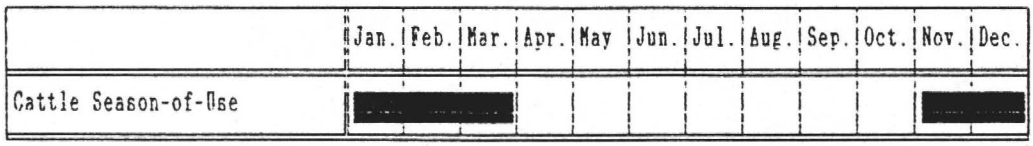
$$1{,}210 \text{ AUMs} \times \frac{60\% \text{ AUL}}{55\% \text{ AUL}} = \text{Potential Use Outside HMA}$$

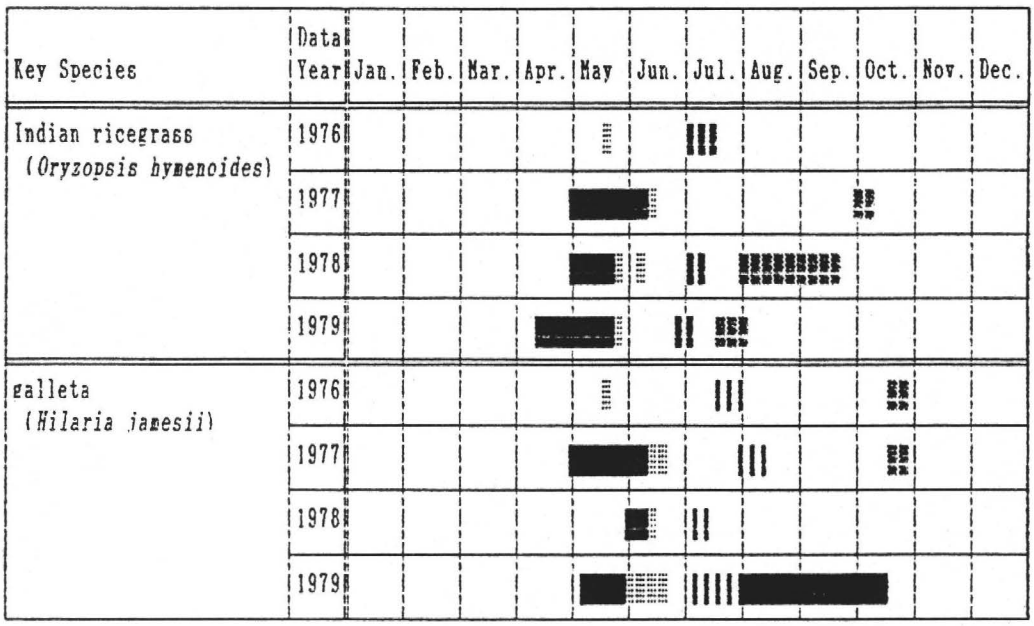
1,320 AUMs = Potential Use Outside HMA

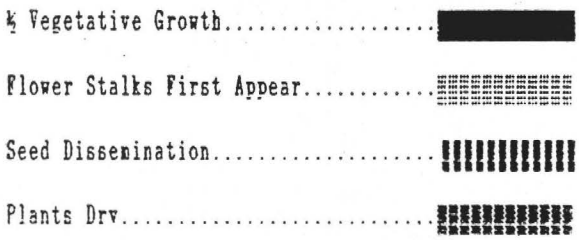
APPENDIX III

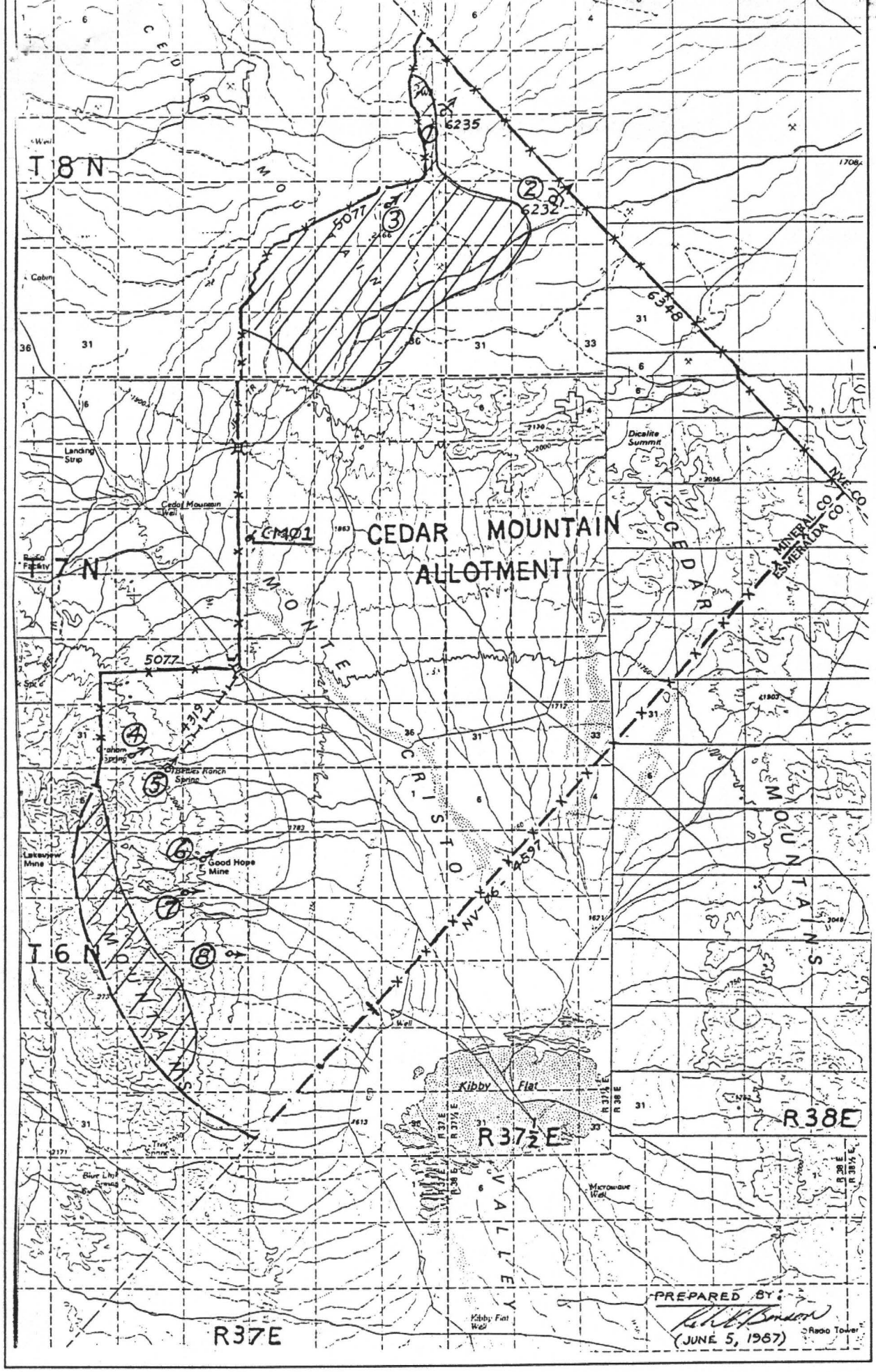
Growth Stages of Key Plant Species

Shown below is the plant phenology data for the key species in the Cedar Mountain Allotment. The current livestock season of use is also shown for comparison. Note that wild horses graze the allotment yearlong. The source of the vegetation data is *Nevada Rangeland Phenology* (BLM, 1979). Data is from the Tonopah Resource Area, which is the closest source with representative vegetation types.









MAP NO. 2
Cedar Mountain
Allotment

LEGEND

- Spring
- Spring Development
- Pipeline
- Fence & Cattleguard
- Key Area
- Mule deer Year-long Range

Range Improvement Projects

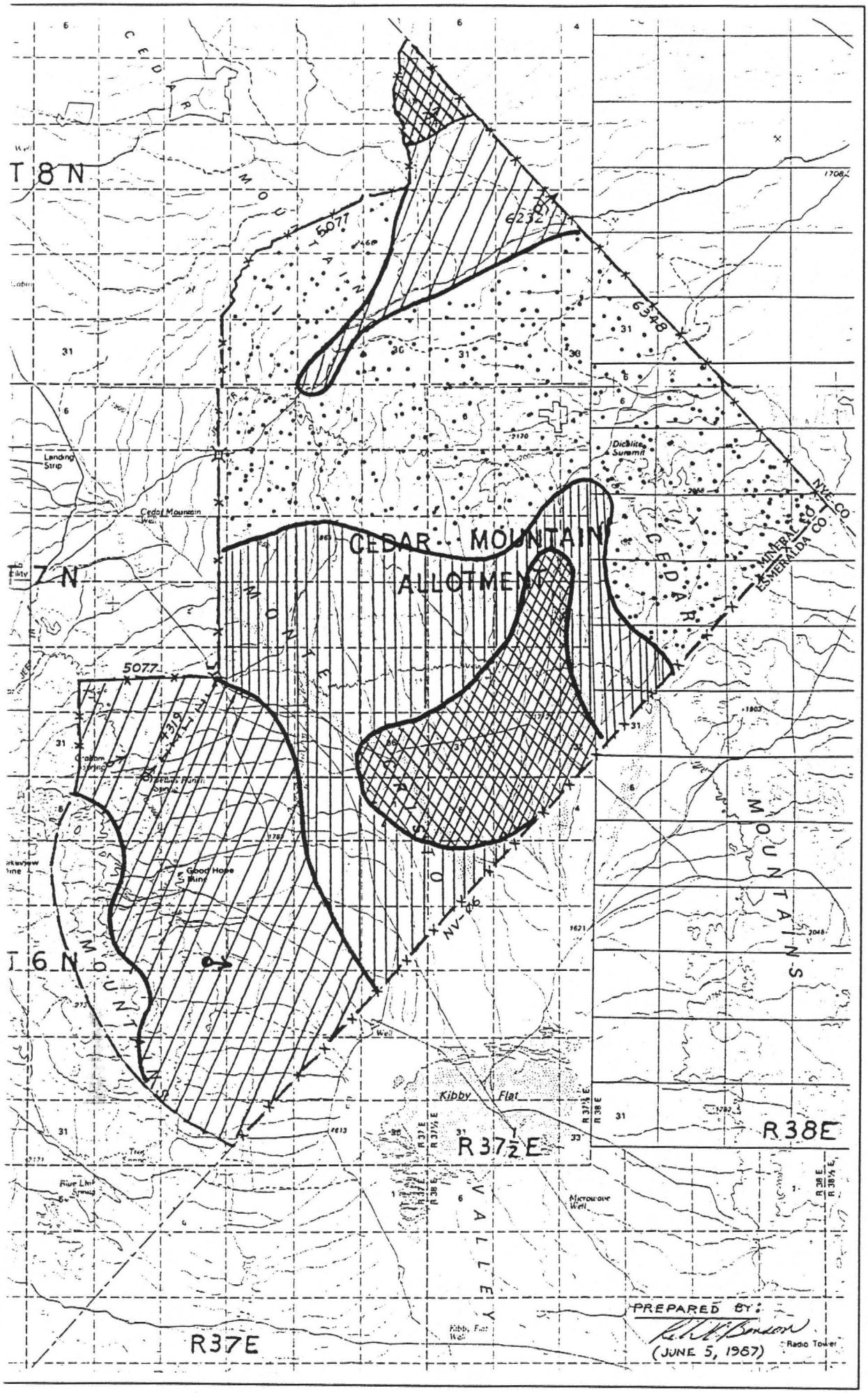
5077 - Cedar Mountain Fence
6232 - Cedar Spring
6235 - Humdinger Spr.
6348 - Nye - Mineral Fence

4897 - Kibby Flat F. (Battle Mtn. Dist.)

Water Sources/ Riparian Areas

1 - Humdinger Spring
2 - Cedar Spring
3 - Douglas Spring
4 - Graham Spring
5 - Bettles Ranch Spr
6 - Good Hope Mine Sp
7 - Gunmetal Mine Spr
8 - Desert Sheeite Mine Spring

Approximate Scale:
½ in = 1 Mile



MAP NO. 3
04/12/90 Use
Pattern Mapping

Utilization Class

No Use

SL Slight

Light

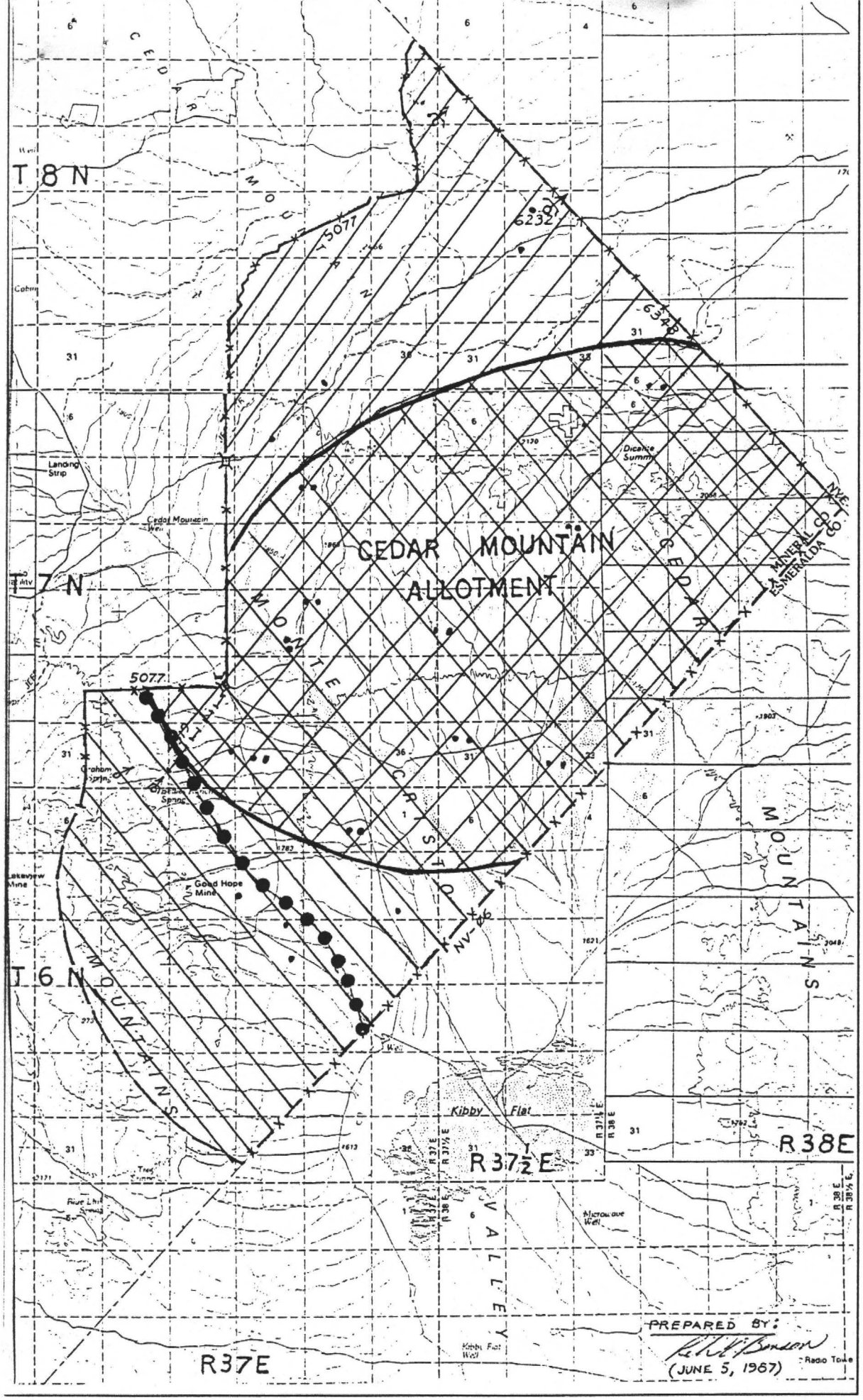
Moderate

Heavy

Severe

Approximate Scale

½ in = 1 Mile



MAP NO. 4
04/12/90 Animal Distribution

The information depicted on this map was collected during the 1990 use pattern mapping (Map No. 3). This is based strictly on the presence or absence of animals or animal sign.

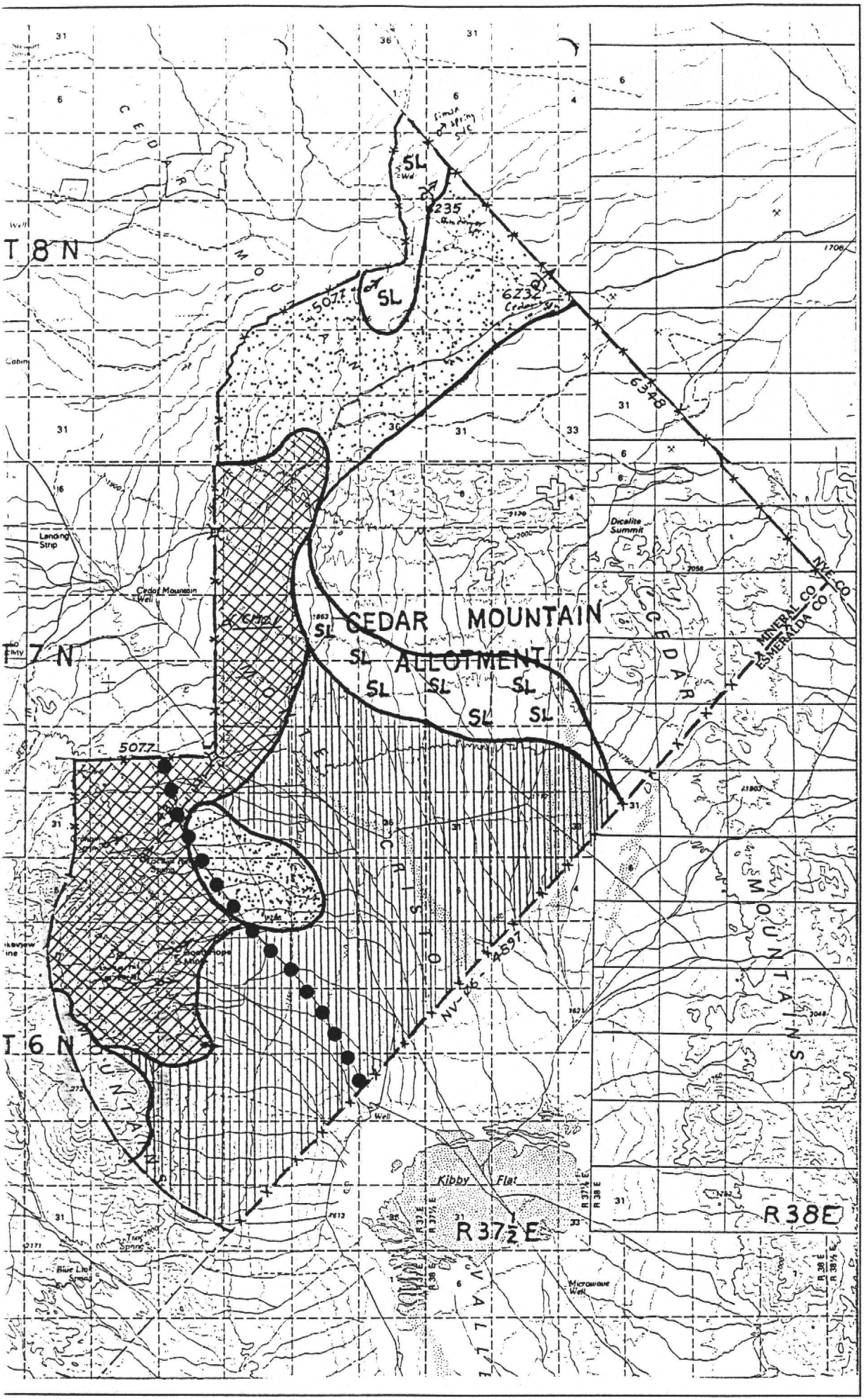
Cattle

Wild Horses

Overlap

HMA Boundary

Approx. Scale:
in = 1 Mile



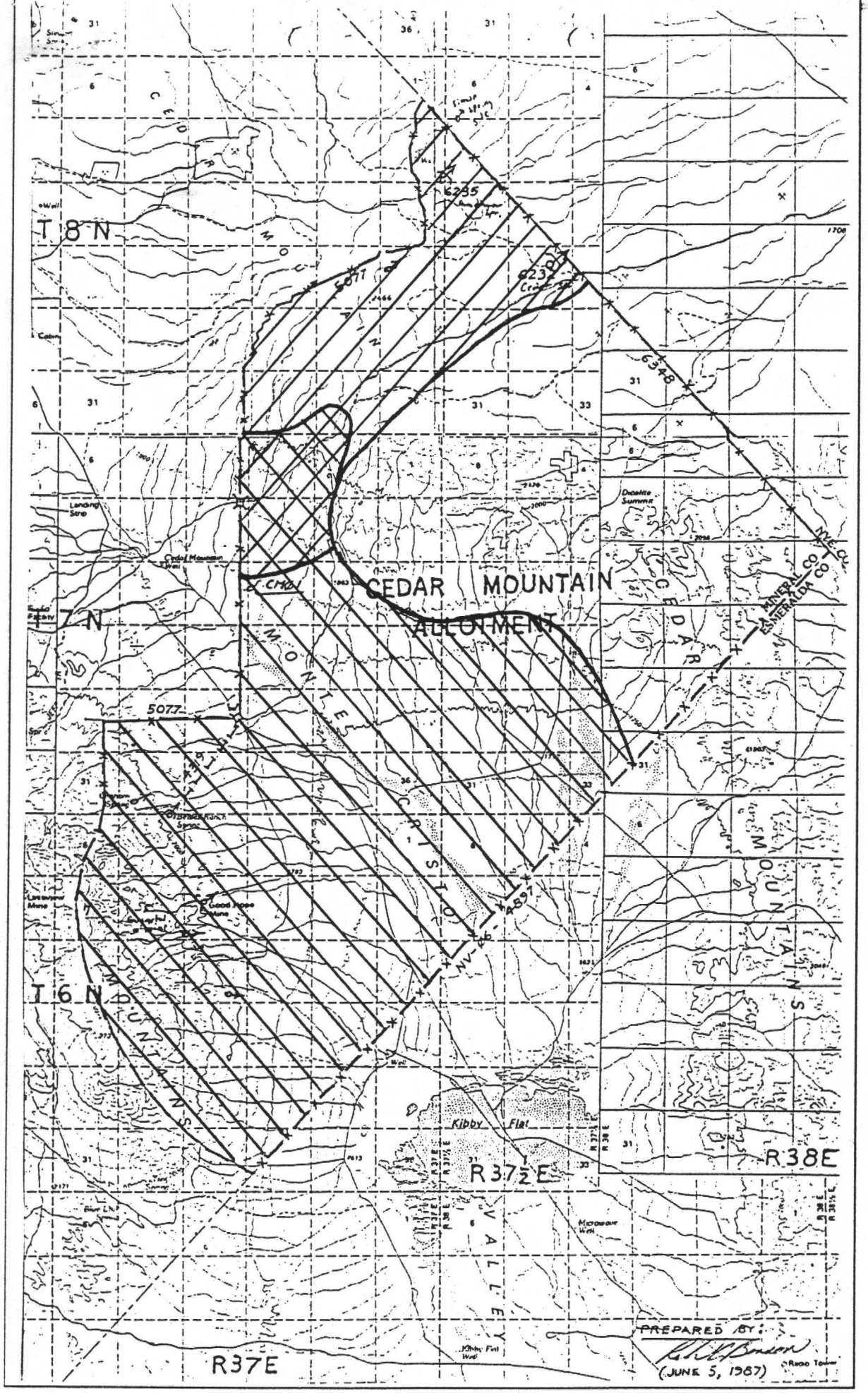
MAP NO. 5
10/15/92
to 10/28/92 Use
Pattern Mapping

Utilization Classes

- No Use
- Slight (SL)
- Light
- Moderate
- Heavy
- Severe

HMA Boundary

Approx. Scale:
½ in = 1 Mile



MAP NO. 6
10/15/92 to
10/28/92 Animal
Distribution

The information depicted on this map was collected during the 1992 use pattern mapping (Map No. 5). This is based strictly on the presence or absence of animals or animal sign.

Un-authorized Cattle

Wild Horses

Overlap

HMA Boundary

Approx. Scale:
in = 1 Mile

7/22/93

STATE OF NEVADA
DEPARTMENT OF WILDLIFE
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BOB MILLER
Governor

WILLIAM A. MOLINI
Director

July 22, 1993

Mr. John Matthiessen
Resource Area Manager
Bureau of Land Management
1535 Hot Springs Road, Suite 300
Carson City, Nevada 89701

Re: Cedar Mountain Allotment Evaluation

Dear John:

Our agency has received and reviewed the Cedar Mountain Allotment Evaluation. This allotment was not allocated forage for livestock in the land use plan and is not an "I" allotment of the Walker Resource Area. We feel that the purpose of the evaluation is well described by the author and significantly differs from the stated purpose of the Pilot-Table Mountain Allotment Evaluation.

SPECIFIC COMMENTS

Page 1, Livestock Use

Livestock season of use may conflict with the phenological requirements of the key species. The permittee's use and intention to use the allotment as a winter range has potential to meet land use plan objectives. We encourage the District to take the necessary measures to re-authorize grazing and list the terms and conditions in the multiple use decision for livestock.

Page 2, Appropriate Management Levels for Wild Horses

We agree that wild horse numbers must be determined by monitoring data collected on this allotment.

Page 5, Key Species

We agree that riparian species must be included.

Page 8, Use Pattern Mapping

Data indicate that 42 percent of the monitored acres of the allotment received heavy to severe utilization of key species. These data show that forage production and ungulate use are not uniform on the Cedar Mountain Allotment; therefore, Technical Manual 4400-3 does not allow for weight averaging utilization data for "actual utilization". Appendix II computations for wild horse animal unit months are in error.

Page 11, Conclusions

Monitoring data indicated that wild horses exceeded the land use plan allowable use limit or utilization rate of 55 percent prior to livestock. We are confused how the District authorized livestock use on an allotment without allocated AUMs and when the annual available forage had been exhausted by wild horses. It is also our understanding that AUMs cannot be retired unless specifically identified in the land use plan. Activation of these AUMs would require a land use amendment.

It would appear that the permittee's intention is to use this allotment within the constraints of the land use plan objectives. Water hauls and limited winter use has potential to meet the land use plan objectives. Data found in the Pilot-Table Mountain and Cedar Mountain Allotment Evaluations indicate that Indian ricegrass is declining and increasing in frequency on these allotments, respectively. The observed fence line contrast is the difference between livestock grazing practices. As suggested in our comments on Pilot-Table Mountain Allotment Evaluation, the season of use for livestock may in conflict with the phenology of key species. Livestock grazing in March on the Cedar Mountain Allotment could reverse the upward trend in Indian ricegrass.

Page 12, Wild Horses

As previously discussed, we disagree with the District's assumptions concerning weight averaging for determining carrying capacity for wild horses.

Page 13, Wildlife Habitat

We agree that riparian habitat conclusions. Bureau of Land Management policies reinforce the District's conclusion regarding priority.

Page 14, Technical Recommendations

We suggest that livestock use or reclassification of livestock be better addressed. A land use amendment may be necessary to re-activate retired AUMs.

Season of use for livestock may require an adjustment to avoid grazing Indian ricegrass during March.

Allowable use levels were established in the land use plan and implemented by the Walker Resource Area Range Program Summary at 55 percent overall utilization.

Please consider our comments and concerns in the final allotment evaluation and multiple use decision for Cedar Mountain Allotment.

Sincerely,

WILLIAM A. MOLINI, DIRECTOR

Roy Leach
Acting Region I Manager
Region I

REL:rl/

CC: Habitat, Reno
Craig Mortimore

est. 1993

ATTACHMENTS AND ERRATA TO CEDAR MOUNTAIN ALLOTMENT EVALUATION

Please add the attached Sections VII and VIII to your copy of the Cedar Mountain Allotment Evaluation. Place these sections immediately after Technical Recommendations (page 14). In addition, the following corrections should be made:

Table of Contents, page iii. Conclusions should be section "V" instead of section "IV".

Table of Contents, page iii. Technical Recommendations should be section "VI" instead of section "V".

Table of Contents, page iii. Add the following after Technical Recommendations:

Page 11. Conclusions should be section "V" instead of section "IV".

Page 14. Technical Recommendations should be section "VI" instead of section "V".

Note that these corrections do not change the context of this evaluation.

PROPOSED MULTIPLE USE DECISION
CEDAR MOUNTAIN ALLOTMENT

The Record of Decision for the Walker Environmental Impact Statement and the Resource Management Plan (RMP) was issued on June 6, 1986. These documents established the multiple use goals and objectives which guide management of public land in the Cedar Mountain Allotment. The Mina Habitat Management Plan (HMP), issued in 1988, established objectives and goals that encompassed an area including the Cedar Mountain Allotment. The Walker Rangeland Program Summary (RPS), issued in November, 1989, identified allotment objectives specific to the Cedar Mountain Allotment.

As identified in the Walker RMP, Mina HMP, and Walker RPS, monitoring has been conducted on the Cedar Mountain Allotment to determine if existing multiple uses for the allotment were consistent with the attainment of the objectives established by the RMP. Since 1985, monitoring data has been collected and during the past year, this data has been analyzed through the allotment evaluation process to determine what changes in existing management are required in order to meet specific multiple use objectives for this allotment.

Through the consultation, coordination and cooperation (CCC) process, input from the permittee and other interested parties has been considered. Based on the evaluation of the monitoring data, technical recommendations contained within the allotment evaluation, and input through the CCC process, my proposed decision is presented below.

CEDAR MOUNTAIN ALLOTMENT
LIVESTOCK GRAZING MANAGEMENT DECISION

Decisions relating to the grazing of livestock on public land in the Cedar Mountain Allotment are as follows:

A. In accordance with 43 CFR §4130.6-1(a), maintain the current active preference for cattle (925 AUMs) and the current season of use for livestock (11/01 to 03/31).

B. In accordance with 43 CFR §4130.6-2, the following stipulation will be included on the grazing permit and grazing authorization:

No water troughs or feed supplements will be placed in the Pilot Mountain Herd Management Area.

RATIONALE

The analysis of monitoring data presented in the Cedar Mountain Allotment Evaluation resulted in an estimated stocking level, outside the Pilot Mountain HMA, of 1,320 AUMs (Appendix II, Section G, page II-3). The intensive management system adopted by the permittee incorporating moveable water troughs and feed supplements will allow for proper livestock distribution. Therefore, the current preference of 925 AUMs will not exceed the carrying capacity of the allotment. The current season of use for livestock grazing does not fall within the growth period of key species and therefore should not be changed.

In order to reduce conflict between livestock and wild horses, no water troughs or feed supplements for cattle will be allowed inside the Pilot Mountain HMA.

Authority:

The authority for these decisions is contained in Title 43 Code of Federal Regulations (CFR) Subpart 4100, which states in pertinent part:

§4100.0-8 "The authorized officer shall manage livestock grazing on the 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)."

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

§4130.6-2 "The authorized officer may specify in grazing permits or leases other terms and conditions which will assist in achieving management objectives, provide for proper rangeland management or assist in the orderly administration of the public rangelands. These may include but are not limited to:

(c) Authorization to use, and directions for placement of supplemental feed, including salt, for improved livestock and rangeland management on the public lands;..."

Protest

In accordance with 43 CFR §4160.2, if you wish to protest this proposed decision, you are allowed 15 days from the receipt of this decision to file such protest with the Walker Resource Area Manager, 1535 Hot Springs Rd., Suite 300, Carson City, NV 89706-0638. The protest should state the reasons, clearly and concisely, why you think the decision is in error.

CEDAR MOUNTAIN ALLOTMENT
WILD HORSE MANAGEMENT DECISION

Decisions relating to wild horses managed within the Cedar Mountain Allotment are as follows:

A. In accordance to 43 CFR §4700.0-6(a), the potential stocking level for wild horses in the portion of the Pilot Mountain Herd Management (HMA) Area located within the Cedar Mountain Allotment is 283 AUMs.

B. The Appropriate Management Level (AML) for the entire Pilot Mountain HMA is 346 head of wild horses.

C. In accordance with 43 CFR §4700.0-6(a), the allowable use level (AUL) will be 55% on key species in the portion of the Pilot Mountain HMA located within the Cedar Mountain Allotment, which sustains yearlong use by wild horses.

Rationale

The analysis of available monitoring data presented in the Cedar Mountain Allotment Evaluation indicates that a thriving natural ecological balance will be achieved by allowing no more than 283 AUMs of use by wild horses in this portion of the HMA (Conclusions section, pages 11 to 14, and Appendix II). Therefore, the potential stocking level for wild horses is 283 AUMs.

Portions of this allotment and two other allotments constitute the Pilot Mountain HMA. The totals of the potential stocking levels for the three allotments is as follows:

Cedar Mountain Allotment	283 AUMs
Gillis Mountain Allotment	240 AUMs
Pilot Table Mountain Allotment	3,630 AUMs
TOTAL	4,153 AUMs

Based on yearlong (i.e. 12 months) use of the HMA by wild horses, 346 head of wild horses will use 4,153 AUMs. Therefore the AML for the entire HMA is 346 head.

The current AUL for the Cedar Mountain Allotment as shown in the Rangeland Program Summary (RPS) was established based on fall and winter grazing by livestock. Since wild horses graze yearlong, including the growth stages of key species, it is appropriate that the AUL be changed to reflect the yearlong allowable use levels (i.e., 55%).

Authority

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

§4700.0-6 (a) "Wild horses and burros shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat."

§4710.3-1 "Herd management areas shall be established for the maintenance of wild horse and burro

herds. 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 relationship with other uses of the public and adjacent private lands, and the constraints contained in §4710.4..."

PROTEST

Although 43 CFR §4770.3 allows for an appeal with no mention of a protest, for the purpose of consistency the multiple use decision will be initially sent as a "Proposed" decision. If you wish to protest this proposed decision, you are allowed 15 days from the receipt of this decision to file such protest with the Walker Resource Area Manager, 1535 Hot Springs Rd., Suite 300, Carson City, NV 89706-0638. The protest should state the reasons, clearly and concisely, why you think the decision is in error.

J. Matthiessen

John Matthiessen, Area Manager
Walker Resource Area

VII. Consultations

The Cedar Mountain Evaluation was sent out for public review on June 30, 1993. Fifteen copies were sent to the Nevada State Clearinghouse for distribution among state agencies. In addition, the following were sent copies of the evaluation:

Tony and Jerrie Tipton	Natural Resources Defence Council
Sierra Club, Toiyabe Chapter	The Nature Conservancy
Nevada Cattlemen's Assoc.	Nevada Woolgrowers Assoc.
Resource Concepts Inc.	The Wildlife Society-Nevada Chapter
Nevada Wildlife Federation	Wild Horse Organized Assistance
Animal Protection Institute	Claudia J. Richards
Susan Alden	Anne Earle
The Mule Deer Foundation	Vanessa Kelling
U.S. Fish & Wildlife Service	Senator Richard Bryan
Senator Harry Reid	Congresswoman Barbara Vucanovich

International Society for the Protection of Mustangs and Burros
Carson City District Grazing Advisory Board

Comments were received from Tony Tipton, the Nevada Department of Wildlife (NDOW), and the Commission for the Preservation of Wild Horses (Commission). Mr. Tipton complimented the quality of the work that went into the evaluation. He also included information on wild horse numbers and their activities based on observations during the winter. This information did not affect any of the conclusions made in the evaluation.

NDOW and Commission comments are addressed below. Some comments have been grouped due to their similarities.

NEVADA DEPARTMENT OF WILDLIFE

Comment: This allotment was not allocated forage for livestock in the land use plan and is not an "I" allotment of the Walker Resource Area.

"We suggest that livestock use or reclassification of livestock be better addressed. A land use amendment may be necessary to reactivate retired AUMs."

Response: As stated in the Introduction (page 1) of the evaluation, Cedar Mountain is an "M" allotment. It is being evaluated because it includes a portion of the Pilot Mountain HMA. The Strategic Plan for Management of Wild Horses and Burros on Public Lands requires that AMLs be established for all herd areas by 1995. In response to this, all allotments containing wild horses were scheduled for evaluation prior to 1995.

The Walker Resource Management Plan (RMP) did not allocate forage. The RMP and Environmental Impact Statement (EIS) showed that Cedar Mountain Allotment had an Active Grazing Preference of 925 AUMs (RMP & EIS, table 3-3). The Record of Decision (ROD) for the Walker RMP neither cancelled nor adjusted these AUMs. The ROD also stated:

Initially, authorize livestock use at the three year average licensed use level of 36,962 AUMs[1]. There will be no initial change in active preference.

The three year average licensed use for the Cedar Mountain Allotment as shown in the RMP and EIS was 0 AUMs, which was a result of voluntary nonuse. As stated under the Conclusion section of the evaluation, licensed use was *initially* authorized at the three year average level in accordance with the Walker RMP.

Comments: "Livestock season of use may conflict with the phenological requirements of the key species".

"As suggested in our comments on Pilot-Table Mountain Allotment Evaluation, the season of use for livestock may in [sic] conflict with the phenology of key species. Livestock grazing in March could reverse the upward trend in Indian ricegrass."

"Season of use for livestock may require an adjustment to avoid grazing Indian ricegrass during March".

Response: Appendix III (Growth Stages of Key Species) of the evaluation which is referenced at least three times explains that livestock graze during the dormant season for key plant species and therefore pose no conflict during the critical growth stages.

Note that although phenology data has been collected in the Walker Resource Area, this data was from an area with significantly different ecological sites than those found in Cedar Mountain Allotment. Therefore, data was used from the adjacent Tonopah Resource Area, which had similar sites.

Comment: "Data indicate that 42 percent of the monitored acres of the allotment received heavy to severe utilization of key species. These data show that forage production and ungulate use are not uniform on the Cedar Mountain Allotment; therefore, Technical Manual 4400-3 does not allow for weight averaging [sic] utilization data for "actual utilization". Appendix II computations for wild horse animal unit months are in error."

"As stated previously, we disagree with the District's assumptions concerning weight averaging for determining carrying capacity of wild horses."

Response: As cited in the evaluation, the formula for the weighted average calculations used in Appendix II, section B was derived from BLM Technical Reference TR 4400-7 (*Rangeland Monitoring Analysis, Interpretation and Evaluation*), not from TR 4400-3. TR 4400-3 (*Utilization Studies*) was cited as the source for the Utilization Class Midpoint values used in the weighted average calculations. Nowhere in Appendix II was an "actual utilization" figure either calculated or required. The reviewer may have meant "Average Utilization", which was calculated in section B (page II-2) and

[1]This is the total three year average licensed use for all the allotments in the Walker and Mina Planning Units. Cedar Mountain Allotment is in the Mina Planning Unit.

used in the Potential Actual Use calculation (section E, page II-2). Assuming this, TR 4400-7 states in relation to data uniformity in weighted average calculations (emphasis added):

> **Where production levels are fairly uniform (or if production levels are unknown) and utilization patterns have been mapped, the weighted average utilization may be calculated on the basis of acreages found in each utilization zone.**

Although ecological sites were identified during the soil survey, ecological status and current forage production were not determined. Since the production levels are unknown, the use of the weighted average formula is appropriate in accordance with TR 4400-7. Therefore, the Potential Actual Use (i.e., potential stocking level) as calculated in Appendix II is the best approximation using the most current data available and as determined in accordance with Bureau approved procedures.

Comment: "Monitoring data indicated that wild horses exceeded the land use plan allowable use limit or utilization rate of 55 percent prior to livestock. We are confused how the District authorized livestock use on an allotment without allocated AUMs and when the annual forage had been exhausted by wild horses. It is also our understanding that AUMs cannot be retired unless specifically identified in the land use plan. Activation of these AUMs require a land use amendment."

Response: As stated in the response to NDOW's first comment (Page 15), the grazing preference in Cedar Mountain Allotment was never "retired". Use pattern mapping (Map 5 of the evaluation) shows areas of heavy and severe utilization. It also shows areas of light use, slight use and no use. No evidence exists that "annual forage had been exhausted" at any time during the monitoring period.

Comment: "Allowable use levels were established in the land use plan and implemented by the Walker Resource Area Range Program Summary at 55 percent overall utilization".

Response: The Walker RPS states in relation to livestock in Cedar Mountain Allotment "Maintain an acceptable use level on key species.4/" The footnote states "Initial allowable use level will generally be 60%". Therefore, the acceptable (i.e., allowable) use level for livestock in the Cedar Mountain Allotment as described in the Walker RPS is 60%, not 55%.

THE COMMISSION FOR THE PRESERVATION OF WILD HORSES

The Commission combined its comments for the Cedar Mountain, Gillis Mountain, and Pilot-Table Mountain Evaluations. The first three of the following comments were directed as general comments applicable to more than one allotment.

Comment: "We are confused as to the procedure to follow in these allotment evaluations. You request response to these documents by July 26, 1993, however, the Pilot Table Mountain Evaluation was issued as a "draft" evaluation and for Gillis and Cedar Mountain Allotments they are not sent as draft documents. They are issued

inconsistent with each other. Please explain how the three evaluations will be further evaluated. Are all these drafts and a final will be issued, or is one a draft and the others are finals? Since it is not explained, please provide the appropriate information."

Response: During the "in-house" review, an evaluation is circulated within the office as a "draft". Once all input has been consolidated into one document, the document becomes *the* evaluation for the specific allotment to which it pertains. The "draft" on the Pilot-Table Mountain Allotment Evaluation should have been deleted prior to being distributed for public review. However, in the event that additional information is received, especially information that may affect the conclusions, the evaluation may be revised to include such data, then resubmitted for public review. Even if a new or revised evaluation is not produced, the authorized officer will review public comments before proceeding with any agency actions. Therefore, the difference between a "draft" or a final evaluation is not particularly significant. The important point is that a reviewer make comments within the allotted time and provide data or information not addressed in the evaluation.

Comment: "In general from all allotments evaluated, we feel that appropriate management levels have been erroneously set. The mandate of the IBLA ruling is that BLM is to do the monitoring, evaluate the data, remove the offending horses if it is determined they are causing resource damage, and set management levels in a multiple use concept that will protect the habitat as well as keep the horses in a thriving natural ecological balance. By determining that according to the percentage of acreage an allotment is to the herd area, you have allocated your AMLs."

This comment doesn't reflect the pertinent information presented in the subject evaluations. Two key parts of an evaluation are Section V, "Conclusions", and Section VI, "Technical Recommendations" since they analyze management in relation to meeting allotment objectives and describe proposed or future actions. Sections V and VI of each of the subject evaluations specifically avoids prorating wild horse numbers based on the "percentage of acreage an allotment is to the herd area". The evaluations reference the "initial" management levels for wild horses under Section III, "Allotment Profile" as a short term objective. These initial management levels were the ratio between the existing (in 1986) horse population and the percent of the allotment in the HMA and were presented in the Walker RPS as such. The evaluations, however, concentrate on monitoring data and analysis of this data in order to determine the potential stocking level for wild horses.

The AML for the Pilot Mountain HMA is derived from the potential stocking level presented in each allotment evaluation. This information is provided in Sections V and VI (and the referenced Appendix) of each evaluation.

Comment "You must first, evaluate the individual allotment, determining exact carrying capacity for livestock and wild horses using use pattern mapping, census, and distribution information, and then set your AML. After determining that allotment specific AML, you need to then evaluate other individual allotments within the HMA boundaries. After setting AML on all the individual allotments, the total of all the AMLs will determine the AML for the HMA. Also this will dictate that the total AML

for the HMA must be considered whenever a removal is considered taking into consideration movement of horses within the HMA. This would prohibit the removal of animals just because seasonally they have moved from one allotment to another during seasonal movement. You have not allowed for any movement within these allotments. In your final, please evaluate the distribution of animals and state that you will allow for their movement within their HMA without threat of removal. Wild horses cannot be allocated percentages of their HMA to strictly be adhered to as livestock would be issued use on a pasture by pasture basis. As an example, you have provided for 'AUMs of forage for wild horses which is the prorated demand based on an estimate of 90% of the herd management area in the allotment.' How have you determined that 90% of the herd use this area of the HMA specifically and never move?"

Response: The basic premise of this comment appears to be that movement of wild horses within the Pilot Mountain HMA must be recognized and considered as decisions for each of the subject allotments are developed. The comment also suggests that movement of wild horses between these allotments was not given due consideration because an AML has not been established for each of the allotments that comprise the HMA. This is an interesting comment because it focuses on a key question that Walker Resource Area staff asked during preparation of the subject evaluations; namely, how to meet the requirements of the allotment evaluation process while still recognizing the mandate to manage wild horses within the HMA, not within each allotment. To avoid "mini-management" of three separate AMLs within an unfenced HMA, it was decided that the three evaluations should not set an "AML" for each allotment but should, instead, set forth a potential stocking level for each segment of the HMA based on monitoring data and then define an AML for the combined potential stocking levels of the allotments.

By defining a potential stocking level for each portion of the HMA in lieu of an "AML" for each allotment, provision is made for movement of horses within the HMA since utilization by wild horses is based on the availability of forage, not on a predetermined number of horses for an allotment. For example, a potential stocking level of 283 AUMs in the Cedar Mountain Allotment will provide for 24 horses for 12 months or 48 horses for 6 months or a number of combinations. Setting an "AML" for an unfenced portion of the HMA, as this comment suggests, would create the very situation that everyone agrees should be avoided because any "AML" (whether 24 or 48 or "x") established for the allotment could be exceeded seasonally as wild horses move within the HMA even though the AML for the HMA itself would not be exceeded.

This comment includes an excerpted quote relative to having prorated wild horse demand based on an estimate of the percent of the HMA in the allotment. This partial quote apparently comes from Section III of the Pilot-Table Mountain Allotment evaluation. The complete statement is found under the heading "Allotment Specific Objectives - Short Term" (Section II B.1.a.) as follows:

> **Initially provide for approximately 3,408 AUMs of forage for wild horses which is prorated demand based on an estimate of 90% of the herd management area in the allotment.**

This is not, however, what is recommended as continued management for the allotment. Section VI (Technical Recommendations) of the Pilot-Table Mountain

Allotment evaluation presents the potential stocking level for the portion of the HMA within the allotment as 3,630 AUMs. The analysis and calculations for this is presented in Appendix C of the evaluation. (The Pilot-Table Mountain Allotment evaluation did refer to this potential stocking level as an "AML" but this was not intended and has been corrected as shown on the Pilot-Table Mountain Allotment Evaluation "Attachments and Errata" page.) The evaluations for the other two allotments that encompass the Pilot Mountain HMA provide potential stocking levels for wild horses in the same manner.

Comment: "According to your documentation, you state that horse use is heavy and severe in this allotment at [sic] that the AUL has already been exceeded by horse use. How then, could you authorize livestock use on an area that is already overutilized by horses prior to establishing and obtaining an AML? You are authorizing livestock use without available AUM's and exceeding the carrying capacity which is a violation of BLM policy and law."

Response: This is the same comment made by NDOW; consequently the same answer applies (see page 17).

Comment: "We understand that the Tipton's have shown to be responsible permittees and have done well in others [sic] areas that they lease. However, the AUM's had previously been retired for livestock and it is our understanding that AUM's cannot be retired unless specifically identified in the Land Use Plan. We recommend an amendment to the LUP for activation of these retired AUM's."

Response: As stated in the response to NDOW's first comment (page 15) the grazing preference in Cedar Mountain Allotment was never "retired".

Comment: "It is also our understanding that you have changed the season of use from winter to year round without reference to an EA. We would recommend completion of an EA as soon as practical to analyze the consequences of changing that season of use. The EA should have been completed prior to the change."

Response: There is no reference in the evaluation to support the impression that the season of use in the Cedar Mountain Allotment has been changed from winter to year round. Section II A 1 (page 1) states that the current season of use is 11/01 to 03/31. Section IV A (pages 5 & 6), states that livestock have been authorized in the past to graze between 10/01 and 03/31. Technical Recommendation C (page 14) states:

> **Maintain the current season of use for livestock (11/01 to 03/31) since it does not fall within the growth period of key species.**

Comment: "We are not arguing that wild horses have caused damage in some areas, and that management of wild horse and burro populations require removal at times to achieve AML. However, these documents seem to have been completed with the main intent of removing horses to meet allotment specific objectives without any reductions to livestock. The math has been worked to accomplish those goals."

Response: This comment suggests that the analysis of monitoring data has been intentionally manipulated in order to justify removal of wild horses. This suggestion is certainly unwarranted; it is also presented without supporting rationale or analysis. Consequently, there is no basis on which to respond to this comment.

VIII. Management Action Selected

All management actions stated under Section VI, Technical Recommendations (page 14), are incorporated into the Proposed Multiple Use Decision for the Cedar Mountain Allotment.

7/1/93

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

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

4400
(NV03580)

JUL 01 1993

Dear Interested Party:

Enclosed for your review is a copy of the Gillis Mountain Allotment Evaluation. Any comments should be addressed to this office prior to July 26, 1993.

One of the objectives of the Bureau of Land Management's Strategic Plan for Management of Wild Horses and Burros on Public Lands is to establish initial Appropriate Management Levels (AMLs) for all herd areas by 1995. In order to establish an AML for wild horses in the Pilot Mountain Herd Management Area (HMA), it is necessary to evaluate resource management within all the allotments included within the HMA. One of these is the Gillis Mountain Allotment, to which the enclosed evaluation is addressed.

Sincerely,

Steve Weiss ACTING

John Matthiessen
Area Manager
Walker Resource Area

1 Enclosure:
1. Gillis Mountain Allotment Evaluation

Pilot Mtn HMA

B. 1 ~~6%~~.
Gills Allot is 6% of Pilot HMA pg 4

V C pg 12
5% ?

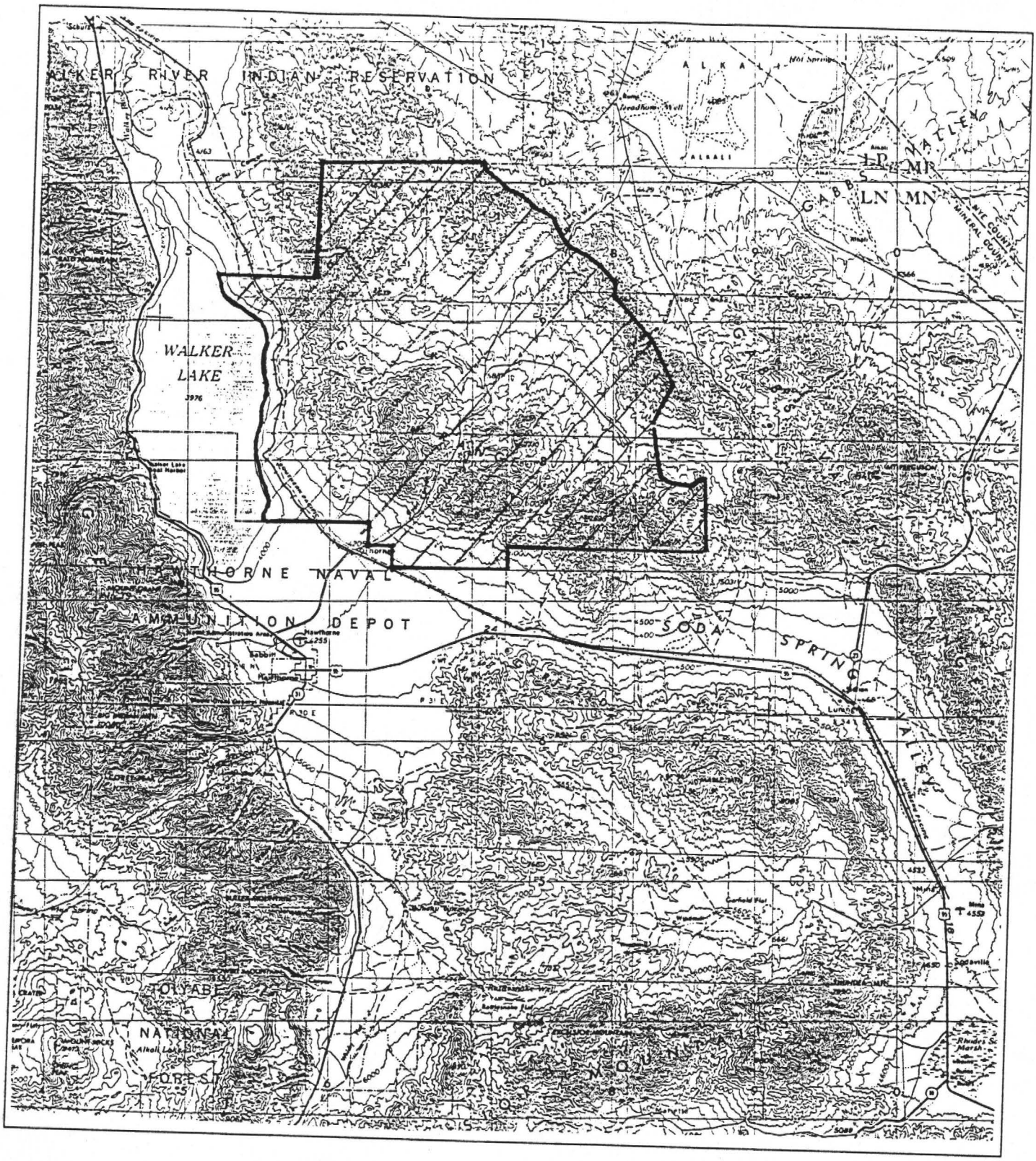
no perm. reliable water

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carson City District Office
1535 Hot Springs Road, Suite 300
Carson City, Nevada 89706-0638

GILLIS MOUNTAIN ALLOTMENT EVALUATION

June 30, 1993



Map No. 1: Gillis Mountain Allotment

1 Inch = Approx. 6 Miles

Table of Contents

GILLIS MOUNTAIN ALLOTMENT EVALUATION

I. Introduction

A. Purpose

One of the objectives of the Bureau of Land Management's Strategic Plan for Management of Wild Horses and Burros on Public Lands is to establish initial Appropriate Management Levels (AMLs) for all herd areas by 1995. In order to establish an AML for wild horses in the Pilot Mountain Herd Management Area (HMA), it is necessary to evaluate resource management within all the allotments included within the HMA. One of these is the Gillis Mountain Allotment, to which this evaluation is addressed.

Specifically, the purpose of the allotment evaluation process is to determine if the current grazing practices are consistent with the attainment of the Walker Resource Management Plan (RMP) and allotment specific objectives for the Gillis Mountain Allotment. If current grazing practices are not consistent with the attainment of these objectives, then appropriate changes in management needed to meet these objectives will be identified, and appropriate change in management implemented.

B. Allotment Name and Number: Gillis Mountain (03536)

C. Permittee: William A. Card

D. Evaluation Period: 1990 to Present

E. Selective Management Category: "M"

II. Initial Stocking Rate

A. Livestock Use

1. Preference

Preference			Kind of Livestock	Period of Use	Percent Federal Range Use
Active	Suspended	Total			
1,924	0	1,924	Cattle	10/01 -03/31	100

2. Other Information

a. Historical Use

In 1955, the federal range demand was established in the area that would become the Gillis Mountain Allotment based on the following schedule:

4,000 sheep from 01/01 to 03/31 @ 100% PL = 2,400 AUMs

In 1960, the Gillis Mountain Allotment was established and preference was adjuDIcated at 2,400 AUMs. In 1982, the following grazing schedule was established in the Gillis Mountain Allotment due to a transfer of privileges:

4,000 Sheep from 12/01 to 02/28 @ 100% PL = 2,400 AUMs

In 1988, the allotment boundary was amended to exclude a buffer zone to prevent interaction between bighorn (*Ovis canadensis nelsonii*) and domestic sheep. This reduced the preference to 1,924 AUMs. Since there was no perennial water sources in the allotment, use was dependent primarily of winter snow melt and water hauling. Consequently, very little historical use had occurred in the allotment prior to 1990.

In 1990, William A. Card applied for transfer of privileges. Since Mr. Card also requested certain changes in management of the allotment, Environmental Assessment (EA) No. 91010 was prepared and the Area Manager's Final Decision dated September 19, 1991 was rendered approving the following:

1) Change the kind of livestock from sheep to cattle.

2) Change the season of use to 10/01 through 03/31.

3) Adjust the Allotment boundary to reincorporate the bighorn sheep buffer zone removed from the allotment in 1988[1].

Mr. Card was also granted approval to drill a well to serve as a water hauling source. Since cattle had never been authorized to graze the allotment and the because of unfenced nature of much of the allotment boundary, the permit was issued for two years pending analysis of use pattern mapping.

b. Permittee's Current Operation

A history of nonuse prior to Mr. Card obtaining the Gillis Mountain permit had resulted in a decadent condition of key forage grasses and shrub species. Grass species such as Indian ricegrass (*Oryzopsis hymenoides*), needle-and-thread (*Stipa comata*), and desert needlegrass (*Stipa speciosa*) were low in vigor and productivity due to a buildup of dead material in the crowns. Shrub species such as four-wing saltbush (*Atriplex canescens*) and winterfat (*Eurotia lanata*)[2] contained many dead stems, but produced very little spring and summer growth. In order to remove this buildup of dead matter and stimulate growth in these

[1]By changing the kind of livestock, the danger of disease transmittal from domestic sheep was removed.

[2]This plant species is also commonly referred to as white sage.

plants, Mr. Card was allowed to implement an intensive management system and was authorized temporary and nonrenewable (TNR) grazing past his normal off-date in 1992. This was addressed in Environmental Assessment (EA) No. 92025 which established the following mitigating measures:

1) No grazing will occur after March 31 in the portion of the Gillis Mountain Allotment within the Pilot Mountain HMA, or on the winterfat stands in Win Wan Valley.

2) In the future, grazing should occur in the winterfat areas between October and February.

3) After March 31, the allotment will be examined by Bureau Personnel every two weeks. If it is determined that adverse impacts are occurring, the permittee must remove all livestock within one week of being contacted. Possible adverse effects include a) cattle returning to previously grazed areas to eat fresh regrowth, or b) wild horses being drawn outside the HMA to the movable water troughs.

4) Mr. Card must document the location of water troughs and when they were moved.

The intensive grazing management system that has been implemented by Mr. Card incorporates movable water troughs and mineral supplements in order to distribute livestock use within the allotment. Mr. Card moves the troughs after his livestock have utilized most of the readily available forage in the vicinity (generally, two weeks or sooner).

If implemented properly, the intensive management system adopted by Mr. Card will significantly reduce the amount of time that livestock are allowed to graze any portion of the allotment. Prior to this system, Mr. Card would be allowed to graze the entire allotment from 10/01 to 03/31 (six months). Under the intensive management system, individual areas will be grazed for up to two weeks during the year and be rested for approximately 50 weeks (i.e., reducing a six-month season of use to up two weeks). Once troughs are moved, cattle will be prevented from returning to the same specific area during the year and feeding on previously grazed plants. By nature of the grazing system and in accordance to standard operating procedures for the district, Mr. Card will not place troughs in the same specific location every year. The success of this system is extremely dependent on the permittee, who must be constantly vigilant to prevent livestock from returning to previously grazed areas..

Because of these factors, utilization levels are not as important as the duration and the prevention of animals from returning to previously grazed plants. It is very important to remember that this last point applies to

intensive management as described above and *not to more conventional forms of livestock management.*

B. Wild Horse and Burro Use

1. Herd Management Areas (HMAs) in Allotment

Approximately 9,900 acres of the Pilot Mountain HMA overlaps the Gillis Mountain Allotment. This acreage accounts for approximately 6% of the Gillis Mountain Allotment. The HMA boundary runs along the upper fans located in the northeastern portion of the allotment (refer to Map No. 2).

2. Appropriate Management Levels (AML)

The Walker RMP established an interim management level of 397 head of wild horses in the Pilot Mountain Herd Area. The AML will be determined through the analysis of monitoring data.

C. Wildlife Use

1. Mule Deer (*Odocoileus hemionus*)

The Walker RMP did not provided for mule deer in the Gillis Mountain Allotment. However, we recognize that there are some resident deer in the Gillis Range and that there is some interaction between deer in this range and those in the Gabbs Valley Range.

2. Bighorn Sheep (*Ovis canadensis nelsonii*)

a. Existing Numbers

Twenty-three desert bighorn sheep were introduced in Wildhorse Canyon on October 30, 1988. The population was augmented with 3 ewes on July 8, 1989. Although reproduction has been confirmed, no specific information is available as to the present population.

b. Key and Crucial Areas

No key or crucial bighorn habitat was identified in the Walker RMP for the Gillis Mountain Allotment, primarily due to the allotment being grazed by domestic sheep at that time. However, it is recognized that bighorn sheep will frequently occur in the Gillis Mountain Allotment.

3. Other Species

Pronghorn (*Antilocapra americana*) were introduced in Sunrise Basin (Pilot-Table Mountain Allotment) and have occasionally been observed in Win Wan Valley (Gillis Mountain Allotment). Other wildlife species include chukar partridge (*Alectoris chukar*), raptors, cottontails (*Sylvilagus nuttallii*), jack rabbits (*Lepus californicus*), and various small birds, mammals, and reptiles.

III. Allotment Profile

A. Description

The Gillis Mountain Allotment is located totally within Mineral County, Nevada, directly north of the Hawthorne Naval Ammunitions Depot. Walker Lake forms the western boundary and the Walker River Indian Reservation forms the northern boundary (refer to Map No. 1). Topography varies from gently sloping alluvial fans in Win Wan Valley and Buckley Flat to rugged mountains slopes in the Gillis Mountains. Elevation varies from a low point of approximately 4100 feet to a high point of approximately 7900 feet.

A drift fence is located on a portion of the eastern allotment boundary across Win Wan Flat (between Gillis Mountain and Pilot Mountain Allotments). Two other drift fences that are located on the northern boundary were constructed by the Walker River Indian Reservation. Refer to Map No. 2 for locations of projects.

Project Name	Project Number	Year *1	Type of Agreement	Maintenance Responsibility
Win Wan Fence	545084	1964	Cooperative	William Card
Gillis Mtn. Guzzler	546076	1979	None	BLM
Gillis Guzzler	546310	1984	None	BLM
Nugent Wash Well #2	546646	1991	RI Permit	William Card
*1 year project was constructed or last reconstructed				

No perennial springs are located in the allotment. Wild Horse Spring has been developed for wildlife purposes, however it dried up in 1992. The Nugent Wash Well No. 2 has been the main source of water for the permittee, who hauls water throughout the allotment. Walker Lake may be too alkaline for livestock watering purposes (especially the southern end).

B. Acreage

Gillis Mountain Allotment contains approximately 160,300 acres of public land and approximately 240 acres of deeded land. The deeded land is derived primarily from patented mining claims and is not controlled by the permittee.

C. Allotment Specific Objectives

1. Walker Resource Management Plan (RMP) - Record of Decision issued June 6, 1986

   a. Short Term

      1) Initially authorize livestock use at the three year average licensed use level [1,484 AUMs as per the Walker RMP and EIS][3]. There will be no initial change of active preference.

[3]Walker Resource Management Plan and Environmental Impact Statement.

2) Initially manage wild horses and burros at present estimated population levels.

b. Long Term

1) Develop and implement a Herd Management Area Plan (HMAP) for wild horses in the Pilot Mountain HMA.

2. Walker Rangeland Program Summary (RPS) - released November, 1989

a. Short Term

1) Maintain static trend. Initially provide 1924 AUMs of livestock forage. Monitor under existing management, i.e., non-use by livestock. Maintain an acceptable use level of key species on key areas [initially 60%].

2) Initially provide approximately 240 AUMs of forage for wild horses which is prorated demand based on an estimate of 5% of the herd area being in the Gillis Mountain allotment.

b. Long Term

1) Maintain existing habitat conditions.

2) Maintain or improve wild horse habitat consistent with wildlife and livestock objectives. Maintain or improve free-roaming behavior of wild horses by protecting or enhancing the Herd Area. Maintain or improve wild horse habitat by assuring that all waters remain open to use by wild horses.

3. Threatened and Endangered Species

No threatened or endangered plants or animals have been documented within the Gillis Mountain Allotment. Candidate animal species[4] that may occur in the allotment include the loggerhead shrike (*Lanius ludovicianus*) and Fletcher dark kangaroo mouse (*Microdipodops megacephalus nasutus*). Since the loggerhead shrike is fairly common throughout the Resource Area and occurs in a variety of habitats, the possibility that it occurs in the Gillis Mountain Allotment is high.

The nearest known location for the Fletcher dark kangaroo mouse is in the Lucky Boy Pass area of the Wassuk Range, approximately 11 miles to the southwest of the allotment. In general, the vegetative communities are similar in that they are dominated by sagebrush (*Artemisia* sp.), utah juniper (*Juniperus osteosperma*), and pinyon pine (*Pinus monophylla*). The disjunct nature of the two habitats however, significantly lessens the likelihood that this species occurs in the

[4]Candidate, Category 2 species: species in which the currently existing information indicates that listing may be warranted, but for which substantial biological information to support a listing is lacking.

allotment. This belief is supported by the lack of documented observations spreading out from the known sites for the Fletcher dark kangaroo mouse.

Oryctes nevadensis is the only candidate, category 2 plant species found in the allotment. It has been located in the vicinity of Wild Horse Canyon and the site of Thorne. The plant is generally associated with sandy slopes, foothills and dunes. It is associated with shadscale (*Atriplex confertifolia*), four-wing saltbush, and greasewood (*Sarcobatus vermiculatus*). Potential threats include off-road vehicles and early summer grazing.[5]

D Key Species Identification

1. Uplands

Indian ricegrass (*Oryzopsis hymenoides*), bud-sagebrush (*Artemisia spinescens*), winterfat (*Eurotia lanata*).

2. Riparian Species

Coyote willow (*Salix exigua*), meadow grasses and grass-like: including Nevada bluegrass (*Poa nevadensis*), sedges (*Carex* sp.), rushes (*Juncus* sp.), tufted hairgrass (*Deschampsia caespitosa*), spikerush (*Eleocharis* sp.).

IV. Management Evaluation

A. Actual Use

Prior to 1990, very little livestock use had been made in the Gillis Mountain Allotment due primarily to a lack of perennial waters. During the 1990/1991 grazing season, Mr. Card grazed at full preference. In 1992, the Gillis Mountain Allotment was grazed under a special temporary and nonrenewable authorization based on the direct effects of animal impacts to the rangeland pursuant to the restrictions resulting from the EA (refer to page no. 2). Although Mr. Card was allowed to graze yearlong under this special authorization in 1992, he was required to remove his livestock in June, 1993. This was due to water troughs not being moved soon enough and/or far enough apart, therefore livestock were returning to previously grazed plants.

During the last aerial census, conducted on July 22, 1992, seventeen (17) wild horses were counted in the Gillis Mountain Allotment portion of the Pilot Mountain HMA.

B. Precipitation

The annual precipitation shown in the below graph is from Hawthorne and Mina, Nevada. Hawthorne is the closest station, however the

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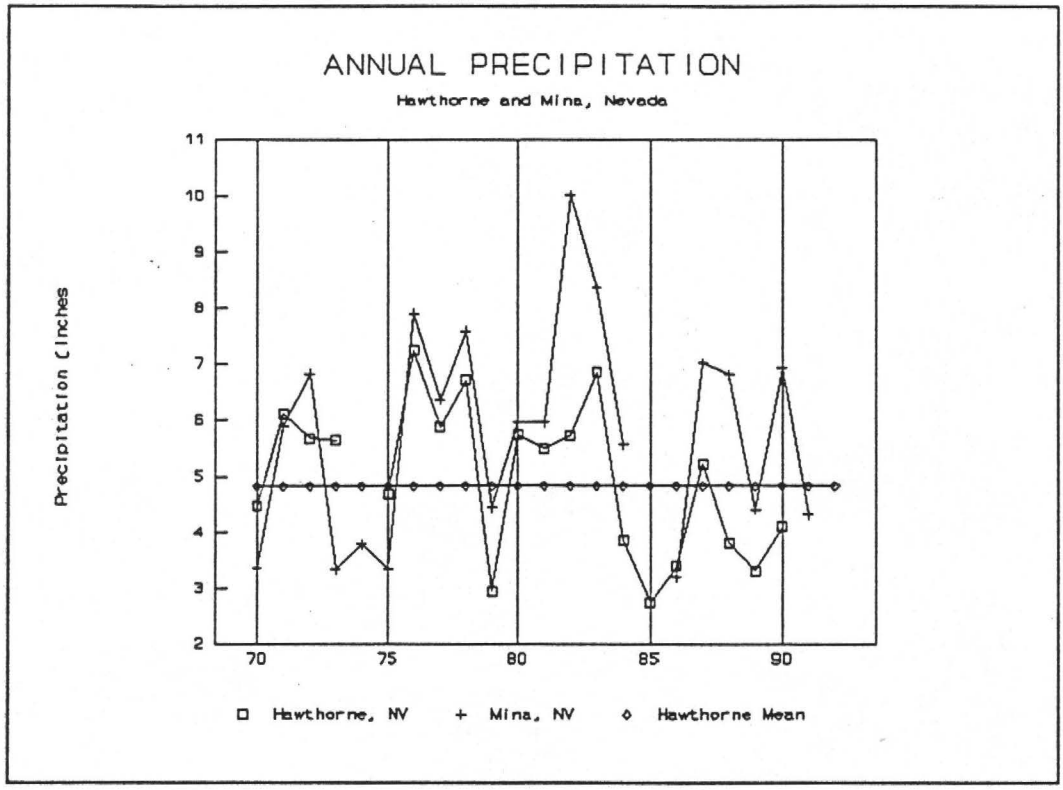
[5]Mozingo, Hugh N. and Margaret Williams (1980) Threatened and Endangered Plants of Nevada. Publ. by the US Fish and Wildlife Service and BLM. Page 237.

station has ceased collecting data since September, 1991. Mina has more consistent and reliable data. Basic information about the stations are shown in the following table.

Station	Elevation (feet)	Years of Complete Data	Annual Precipitation (Inches)	
			Mean	Median
Hawthorne	4220	42	4.91	5.09
Mina	4550	55	4.78	4.54



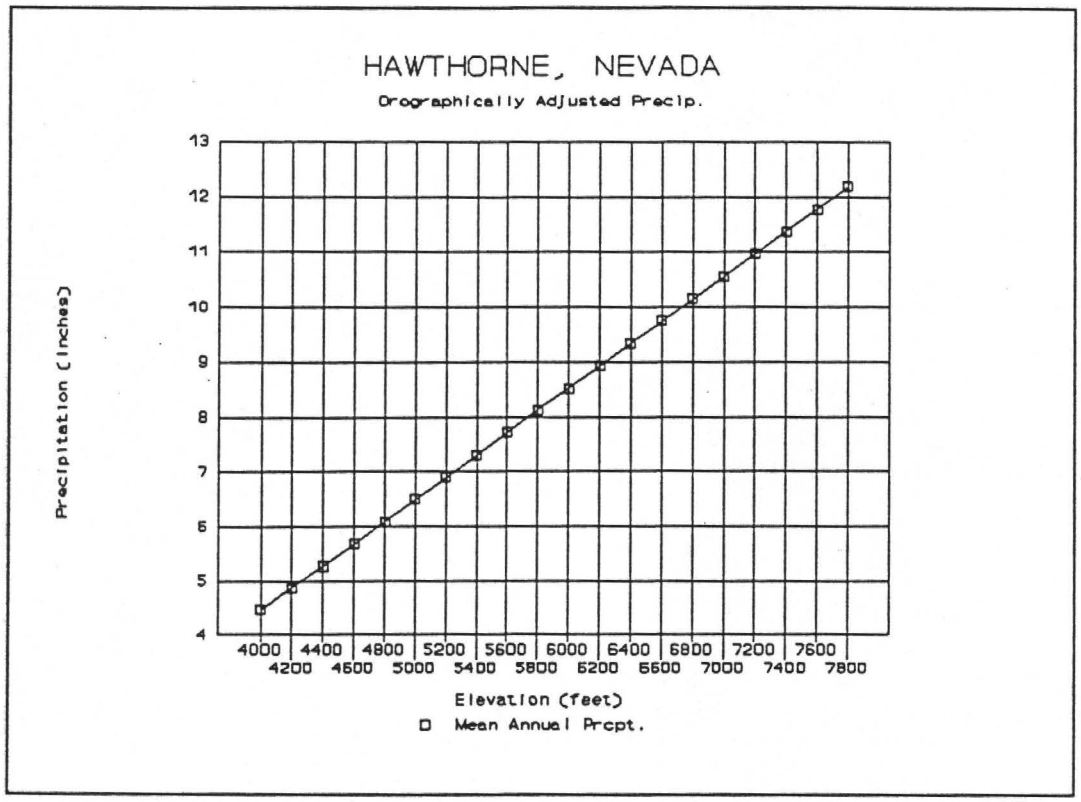
Note that both stations are at a lower elevation than many of the ecological sites in the allotment (refer to Appendix I). Due to the effects of orographic lifting[6], much of the Gillis Mountain Allotment will have a higher annual precipitation than Hawthorne or Mina. This effect was documented throughout the state in the *Nevada Watershed Studies (1963 to 1980)*[7]. The closest recording site is north of Eastgate, Nevada. Although this site is over 60 miles north of Gillis Mountain Allotment, weather patterns are similar.

[6]Orographic lifting: changes associated with the increase in elevation due to the presence of mountains.

[7]Houng-Ming Joung, John H. Trimmer, Richard Jewell (1983). BLM Nevada State Office Technical Publication BLMNVPT830014340.

The graph shown below is an estimate based on linear regression calculations of Eastgate data applied to the 42-year mean annual precipitation for Mina, Nevada. As an example, the long term average precipitation at 6,200 feet elevation will be approximately 9 inches per year. Consequently, vegetation found in the 9 inch precipitation zone should be present at that elevation.

Also note that precipitation data shown here may vary from the Gillis Mountain Allotment during any year due to slight differences in storm patterns. An example of this would be a summer convection storm that rains on Win Wan Valley (thus, Gillis Mountain Allotment), but misses Mina and Hawthorne completely.



C. Utilization

Use pattern mapping was completed in the Pilot Mountain HMA portion of Gillis Mountain Allotment on October 14, 1992. Only slight use was recorded inside the HMA. In 1992, the cattle worked their way around Buckley Flat and south along the upper fans and mountains in the Gillis Range. The grazing was able to remove much of the dead material from decadent plants (refer to page no. 2), especially in Buckley and Win Wan Flats. It will probably take another circuit of this area before enough of the dead material is removed to increase the vigor of these plants. Some organic matter was worked into the soil, which will increase the moisture holding capacity of the soil and promote seedling establishment. During the winter, the cattle moved from Win Wan Flat to the mountains in the vicinity of Paymaster Canyon, working their way along the south facing alluvial

fans toward Thorne. At the time of their removal in June, the cattle were on the alluvial fans northwest of Thorne.

D. Trend

Two key areas (refer to Map No. 2) with frequency transects were established in 1990 and 1991 in the allotment. Since frequency transects are only read every three years in the Walker Resource Area[8], only the baseline data has been collected. To detect more rapid changes, photo studies have been established in 1992 throughout the allotment. The apparent trend is estimated to be downward due to a lack of vigor and death of shrubs and perennial grasses as discussed on page 2, not from utilization by either domestic livestock or wild horses.

E. Range Survey Data

During the range adjudication of 1960, preference was established at 2,400 AUMs even though the survey showed 5,500 AUMs were available for sheep (3,212 AUMs for cattle). This capacity was computed on approximately 85,700 acres with 74,600 acres allotted no capacity primarily due to lack of water.

This data is presented for historical purposes only. In reality, the grazing capacity of the Gillis Mountain Allotment will be determined through monitoring and is controlled by such factors as when the allotment is grazed and how the livestock are managed.

F. Ecological Status

An Order 3 soil survey for Mineral County, which includes the Gillis Mountain Allotment, was published and issued in 1991. Ecological sites were identified, however ecological status was not determined. Appendix I shows the sites identified for the Gillis Mountain Allotment. Most of these sites are estimated to be in late seral condition.

G. Wildlife Habitat

Because of the small number of deer, and the absence of critical deer summer and winter range, neither the Bureau nor the Nevada Department of Wildlife has attempted to determine the population status or specific changes in habitat suitability for deer. The basic rangeland habitat data, which has been previously discussed, is being used to monitor gross changes that may affect the deer population.

H. Riparian Habitat

[8]Quadrat frequency data will detect major changes in trend, but only after several years. The three year scheduling is an attempt to coordinate this factor with the Resource Area's limited staff.

Some riparian vegetation is associated with Wild Horse Spring, however, based on observations in October, 1992, very little use was occurring from wild horse or livestock.

I. Wild Horse Habitat

The ecological status within the Pilot Mountain HMA is estimated as late seral. The major limiting factor for wild horse distribution is a lack of perennial water sources, which are all located within the adjacent Pilot Mountain Allotment.

V. Conclusions

The accomplishment of the objectives shown in Section III C (Page 5) are discussed below. Objectives have been grouped due to similarities.

A. Authorizing Livestock Use

Initially authorize livestock use at the three year average use level [1,484 AUMs as per the Walker RMP and EIS]. There will be no initial change of active preference. RMP Objective a. 1.

Since nonuse was initially authorized in 1986 to 1990, this objective was not met. At the time of RMP (1986), sheep grazing was dependant upon snow melt and water hauling. This made the allotment unattractive to some permittees. However this is not a problem to Mr. Card, whose grazing scheme is based on water hauling to control livestock movement. In addition, the permittee has been operating under a special temporary and nonrenewable authorization designed to increase vigor of range plants and increase seedling production. Therefore, it is not appropriate that the three year average during the time of the grazing EIS continue to be used as the standard for authorization.

B. Utilization, Trend and Condition

RPS Objective a. 1. can be analyzed in three parts.

1) Maintain static trend.

Since the frequency transects have been run only once, it is not known whether the first portion of this objective has been met. It is anticipated that the intensive grazing management currently underway in the Gillis Mountain Allotment will have a positive effect on rangeland trend.

2) Initially provide 1924 AUMs of livestock forage.

As addressed in A, above, the limiting factor for grazing have previously been a lack perennial water, not available forage. Since management in the short term is designed to prevent a downward trend through intensive livestock management, the maximum potential stocking level for livestock will probably not be determined for at least another two years.

3) Maintain an acceptable use level on key areas on key species [initially 60%].

Since the main goal was to remove the accumulation of dead material, and since the permittee was using an intensive management system, utilization levels by cattle in 1992 exceeded 60% on perennial grasses in a few locations. Note that this occurred only in the portion of the allotment outside the Pilot Mountain HMA (i.e. cattle were kept out of the HMA). The reasons for this is explained in more detail on page 2 (Current Operation).

Although this objective was not met, the higher utilization levels were necessary to prevent a downward trend and therefore meet the other allotment objectives.

As shown in the 1992 use pattern mapping, utilization by wild horses in the Pilot Mountain HMA portion of the Gillis Mountain Allotment was slight (i.e. less than 20%).

C. Wild Horses

Develop and implement a Herd Management Area Plan (HMAP) for wild horses in the Pilot Mountain HMA. RMP Objective b. 1).

This evaluation is one of the steps in developing an HMAP for the Pilot Mountain HMA.

Initially manage wild horses and burros at present estimated population levels. RMP Objective a. 2).

Initially provide approximately 240 AUMs of forage for wild horses which is prorated demand based on an estimate of 5% of the herd area being in Gillis Mountain Allotment. RPS Objective a. 2).

The lack of perennial water sources are the limiting factor, therefore the current population of 17 head (204 AUMs) appear to be in an ecological balance with their environment. This portion of the HMA receives incidental use based on the time of year and availability of intermittent water sources. This type of incidental use will require continued monitoring to insure that yearlong utilization levels are equal or are less than the 55% for grazing by wild horses[9].

The initial determination of allowing 240 AUMs of forage for wild horses as stated in the RPS will meet the objective of 55%. Therefore wild horses will be allowed to graze 240 AUMs in the Gillis Mountain Allotment portion of the Pilot Mountain HMA.

Maintain or improve wild horse habitat consistent with wildlife and livestock objectives. Maintain or improve free-roaming behavior of wild horses by protecting or enhancing the Herd Area. Maintain or improve wild horse habitat by assuring that all waters remain open to use by wild horses. RPS Objective b. 3).

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[9]The 60% allowable use level in the RPS is based on fall and winter use levels as described in Nevada Rangeland Monitoring Handbook (1984), which may be appropriate for cattle under conventional grazing management during the dormant season of forage species. However, since wild horses use the allotment yearlong, the yearlong use level (55%) is more appropriate here.

The main limiting factor for wild horses in the Gillis Mountain Allotment is no perennial water sources, not inadequate forage. No fences have been constructed to impede the free roaming nature of the wild horses (the allotment boundary fence constructed in 1988 ends at the HMA boundary), therefore the second portion of the objective has been met. Since there are no reliable natural waters in the allotment, protection of water sources is a moot issue.

D. Wildlife Habitat

Maintain existing habitat conditions. RPS Objective b. 1)

Adequate data does not exist to document the current trend. Therefore, the status of the objective is unknown. Considering the size of the allotment, the type of habitat selected by mule deer (significant topographic relief), and the small AUM demand for mule deer it is reasonable to assume that the forage is available.

As the number of animal observations increase in the Gillis Mountain Allotment, both the Nevada Department of Wildlife and the BLM will be able to gain an understanding of how the pronghorn and bighorn sheep choose to use the allotment. It is believed that the intensive livestock operation that the permittee is initiating will be beneficial for the habitat. Current water distribution is likely to be a limiting factor for most species of wildlife, and they are not likely to benefit significantly from the water hauling that will occur for the livestock operation.

E. Threatened and Endangered Species

As stated in Section III C 4 (see page 6), it is likely that the loggerhead shrike occurs in the Cedar Mountain Allotment, although the possibility of the Fletcher dark footed kangaroo mouse occurring is very slight. We are making the assumption that impacts that cause a move toward earlier successional stages will result in a negative impact to the species. The new, intensive grazing program is not expected to result in a significant negative impacts to candidate animal species, and will likely benefit habitat conditions for such species.

Based on potential the threats listed in *Threatened and Endangered Plants of Nevada* there may be a conflict with early summer grazing in the Wild Horse Canyon and Thorne vicinity. Note that the lands surrounding Thorne are lands controlled by the Hawthorne Naval Ammunitions Depot (public lands administered by the BLM are located further up the alluvial fan).

VI. Technical Recommendations

In order to meet allotment objectives for the Gillis Mountain Allotment, the following recommendations are presented.

A. Allow for 240 AUMs of wild horse use in the portion of the Pilot Mountain HMA in the Gillis Mountain Allotment.

B. Establish an Allowable Use Level (AUL) of 55% for key species in the Pilot Mountain Herd Management Area.

c. Incorporate as a stipulation to the permittees' permit and license that no water troughs or mineral supplements will be placed in the Pilot Mountain HMA.

APPENDIX I
Ecological Sites of the Gillis Mountain Allotment

1	2	3	4			5		6	7	8
Ecological Site Number	Ecological Site Name	Habitat Type	Yield (lb/ac)			% Ground Cover (Basal & Crown)		Elevation Range (feet)	Acres In Allotment	% of Allot.
			Fav.	Nor.	Unf.	Min.	Max.			
029XY014NV	Shlw.Calcareous Slope 8–12"PZ	ARARN/ORHY	350	200	75	15	20	5200 – 7500	21,973.37	13.42
029XY033NV	Sodic Hill 3–5" PZ	ATCO/ORHY	100	50	25	2	5	3000 – 5500	21,826.06	13.33
029XY017NV	Loamy 5–8" PZ	ATCO–ARSP5/ORHY	500	350	150	15	25	4400 – 6500	15,040.65	9.18
029XY036NV	Cobbly Loam 5–8" PZ	MESP2/ORHY	400	300	100	4	12	4400 – 6500	11,994.36	7.32
029XY022NV	Sodic Hill 5–8" PZ	ATCO/HIJA–ORHY	400	250	100	10	30	4400 – 6500	11,809.15	7.21
027XY060NV	Sandy 3–5" PZ	ATCA2/ORHY	450	250	100	15	25	5000 – 6500	7,731.60	4.72
027XY018NV	Gravelly Loam 4–8" PZ	ATCO–SAVEB/ORHY	400	250	100	10	20	3400 – 5000	7696.68	4.70
ROCK	Rock Outcrops	Barren							7,440.11	4.54
029XY032NV	Sodic Loam 3–5" PZ	ATCO/ORHY	200	125	75		10	3000 – 5500	7,083.88	4.33
029XY041NV	Dry Wash	CHNA2–ATCA2/ORHY	500	300	100	8	12	3000 – 5200	5,972.72	3.65
BEACH	Beach	NO STABLE COMMUNITY							5,881.88	3.59
029XY049NV	Sandy Loam 8–12" PZ	ARTRW/ORHY–STSP3	1100	800	500	15	25	5200 – 7500	5,429.98	3.32
027XY007NV	Loamy Slope 8–10" PZ	ARTRW/STTH2	700	500	300	15	20	5000–6500	4,777.24	2.92
029XY037NV	Cobbly Slope 5–8" PZ	MESP2/HIJA–STIPA	300	200	100	8	15	4400 – 6500	4,442.64	2.71
027XY065NV	Granitic Slope 8–10" PZ	ARTRW/STSP3	600	500	300	25	40	5000 – 7000	4,436.00	2.71
027XY043NV	Coarse Gravelly Loam 3–5" PZ	ATCO–LYCO2–SAVEB/ORHY	350	200	100	10	15	3400 – 4300	3,461.54	2.11
029XY006NV	Loamy 8–10" PZ	ARTRW/ORHY–STCO4	800	600	300	15	25	5200 – 7500	2,696.72	1.65
027XY061NV	Shlw.Calcareous Slope 8–10"PZ	ARARN/STSP3–ORHY	400	200	100	5	15	5000 – 6500	1,943.62	1.19
029XY046NV	Sandy Loam 5–8" PZ	ATCA2–EULA5/ORHY	500	400	300	15	25	4400 – 6500	1,490.15	0.91
029XY010NV	Loamy Slope 8–10" PZ	ARTRW/ORHY–STCO4	500	350	250	15	25	5200 – 7500	1,481.19	0.90
027XY029NV	Gravelly Fan 8–10" PZ	ARTR2–GRSP/ORHY–ELCI2	800	500	300	10	20	4500 – 6000	1,274.84	0.78
027XY009NV	Sandy 5–8" PZ	ATCA2/ORHY	700	450	250	10	25	3500 – 4500	1,097.41	0.67
027XY027NV	Barren Gravelly Slope 4–8"PZ	ATCO/ORHY	200	100	50		10	4000 – 5500	807.15	0.49
029XY009NV	Upland Wash	ARTR2–PRFA–CHNA2/ POSE–ORHY	1000	700	500	20	35	3000 – 7500	782.24	0.48
027XY022NV	Valley Wash 4–8" PZ	NO STABLE COMMUNITY	400	200	50	5	20	3400 – 5000	757.25	0.46
027XY019NV	Stony Slope 4–8" PZ	ATCO–SAVEB/ORHY	300	175	50	10	20	4500 – 6000	678.16	0.41
029XY020NV	Silty 5–8" PZ	EULA5/ORHY–SIHY	500	350	200	10	20	4400 – 6500	649.98	0.40

1	2	3	4			5		6	7	8
Ecological Site Number	Ecological Site Name	Habitat Type	Yield (lb/ac) Fav.	Nor.	Unf.	% Ground Cover (Basal & Crown) Min.	Max.	Elevation Range	Acres In Allotment	% of Allot.
027XY044NV	Saline Flat	ATTO/ELCI2	600	400	200	5	15	3400 – 5500	592.96	0.36
027XY008NV	Droughty Loam 8–10" PZ	ARTRW/STTH2	700	500	300	20	30	4500 – 5000	380.25	0.23
029XY081NV	Shlw.Calcareous Hill 10–14"PZ	JUOS/ARARN/ORHY	500	350	200	10	20	5200 – 7500	374.58	0.23
027XY006NV	Saline Bottom	SAVE4/ELCI2	2000	1500	1000	25	40	3500 – 5500	325.35	0.20
029XY040NV	Limestone Hill	CEIN7–ARARN/STCO4	600	450	300	10	20	3000 – 5200	253.94	0.16
027XY025NV	Sodic Flat	SAVE4/DISPS2	500	350	200	5	25	3300 – 4000	233.31	0.14
027XY015NV	Stony Loam 4–8" PZ	SAVEB–ATCO/ORHY	500	350	200	10	20	4200 – 5500	152.54	0.09
027XY041NV	Deep Sodic Fan	ATTO/ELCI2	1500	100	600	20	30	4000 – 5000	145.75	0.09
027XY023NV	Dunes 4–8" PZ	TECO2–ATCA2/ORHY	700	500	300	5	23	3400 – 5000	139.57	0.09
027XY017NV	South Slope 4–8" PZ	ATCO/STSP3	400	200	100	5	15	4500 – 5500	98.00	0.06
027XY036NV	Dry Sodic Terrace	SAVE4/ORHY	200	100	50	5	10	3400 – 4400	89.24	0.05
029XY016NV	Loamy Upland 5–8" PZ	GRSP–EPNE/ORHY	1000	700	500	20	35	4400 – 6500	78.84	0.05
028BY011NV	Shlw.Calcareous Loam 8–10"PZ	ARARN/ORHY–STCO4	800	600	400	15	20	5000 – 7000	74.18	0.05
029XY002NV	Saline Meadow	SPAI–DISPS2–JUBA	3300	2200	1000	35	50	3000 – 7500	52.92	0.03
027XY016NV	Sodic Dunes	SAVE4/ORHY	500	300	150	10	20	3400 – 5500	51.51	0.03
DUNES	Dunes	Barren							30.65	0.02
BADLANDS	Badlands	Barren							20.24	0.01
PLAYAS	Playas	Barren							10.60	0.01

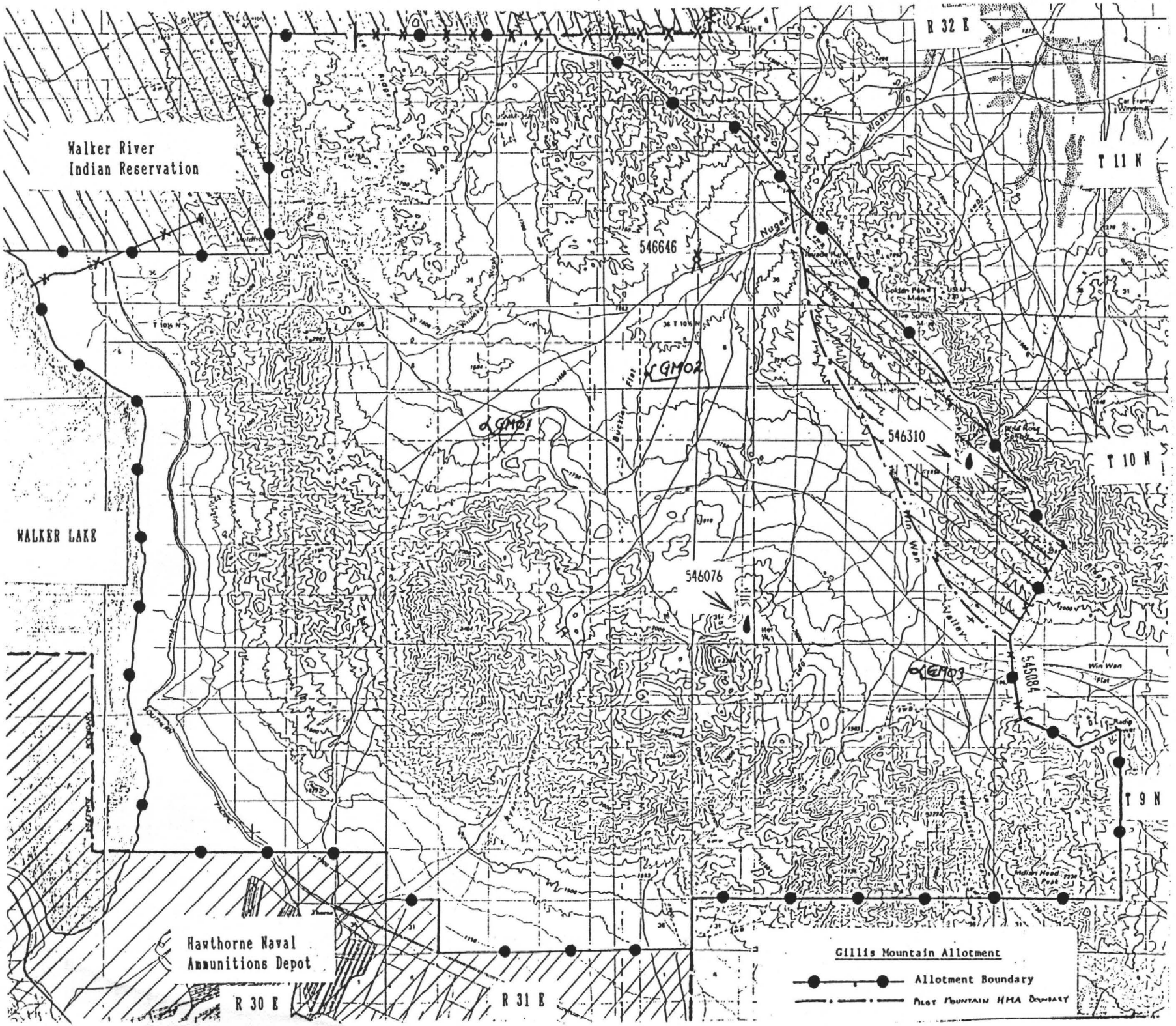
TOTAL = 163,761 Acres

Explanation of Data in Appendix I

Column Number	Description
1	Ecological Site Number. This number can be used to reference a site to the Soil Conservation Service Site Descriptions for Major Land Resource Area (MLRA) numbers 027, 028 and 029. All data used in this appendix except columns 6 and 7 are derived from these descriptions.
2	Ecological Site Name. "PZ" means Precipitation Zone and is measure in inches.
3	Habitat Type. These are the major plant species found in the Potential Natural Community (PNC). Plant codes are identified below.

Plant Code	Scientific Name	Common Name
ARARN	*Artemisia arbuscula nova*	black sagebrush
ARSP5	*Artemisia spinescens*	bud sagebrush
ARTR2	*Artemisia tridentata*	big sagebrush
ARTRW	*Artemisia tridentata wyomingensis*	wyoming big sagebrush
ATCA2	*Atriplex canescens*	fourwing saltbush
ATCO	*Atriplex confertifolia*	shadscale
ATTO	*Atriplex torreyi*	Torrey quailbush
CEIN7	*Cercocarpus intricatus*	littleleaf mountain-mahogany
CHNA2	*Chrysothamnus nauseosus*	rubber rabbitbrush
DISPS2	*Distichlis spicata stricta*	inland saltgrass
ELCI2	*Elymus cinereus*	Great Basin wildrye
EPNE	*Ephedra nevadensis*	Nevada ephedra
EULA5	*Eurotia lanata*	winterfat, white sage
GRSP	*Grayia spinosa*	spiny hopsage
HIJA	*Hilaria jamesii*	galleta
JUBA	*Juncus balticus*	baltic rush, wiregrass
JUOS	*Juniperus osteosperma*	Utah Juniper
LYCO2	*Lycium cooperi*	Cooper wolfberry
MESP2	*Menodora spinescens*	spiny menodora
ORHY	*Oryzopsis hymenoides*	Indian ricegrass
POSE	*Poa secunda*	Sandberg bluegrass
PRFA	*Prunus fasciculata*	desert almond
SAVE4	*Sarcobatus vermiculatus*	black greasewood
SAVEB	*Sarcobatus vermiculatus baileyi*	Bailey greasewood
SIHY	*Sitanion hystrix*	bottlebrush squirreltail
SPAI	*Sporobolus airoides*	alkali sacaton

Column Number	Description
4 (Cont.)	Plant Code / Scientific Name / Common Name STCO4 — *Stipa comata* — needle–and–thread STIPA — *Stipa sp* — needlegrass STSP3 — *Stipa speciosa* — desert needlegrass STTH2 — *Stipa thurberiana* — Thurbers needlegrass TECO2 — *Tetradymia comosa* — hairy horsebrush
4	Yield, measured in pounds per acre. This is the amount live matter that will be produced during a growing season. The three figures are for favorable, normal and unfavorable years.
5	Estimated percent ground cover; minimum and maximum.
6	Aproximate elevation range in feet at which a site may occur.
7	Total acres in the Gillis Mountain Allotment covered by the specific ecological site.
8	Percentage of the Gillis Mountain Allotment covered by the specific ecological site.



MAP NO. 2
GILLIS MOUNTAIN ALLOTME

PILOT MOUNTAIN HERD
MANAGEMENT AREA (HMA)

and

RANGE IMPROVEMENT PROJEC

LEGEND

- Fence
- Windmill
- Guzzler
- Key Area
- HMA

545084 - Win Wan Fence
546076 - Gillis Mtn. Guzzle
546310 - Gillis Guzzler
546646 - Nugent Wash Well

Approx. Scale:
1 Inch = 2½ Miles

ATTACHMENTS AND ERRATA TO GILLIS MOUNTAIN ALLOTMENT EVALUATION

Please add the attached Sections VII and VIII to your copy of the Gillis Mountain Allotment Evaluation. Place these sections immediately after Technical Recommendations (page 13). In addition, the following corrections should be made:

Table of Contents, page iii. Add the following after Technical Recommendations:

Section III C 3 (Threatened an Endangered Species), Page 7. No *Oryctes nevadensis* plants have been found in the vicinity of Wild Horse Canyon. However, the second location in the vicinity of Thorne is correct. The second paragraph should be modified to read as follows.

> *Oryctes nevadensis* **is the only candidate, category 2 plant species found in the allotment. It has been observed in the vicinity of Thorne...**

Section V E (Threatened and Endangered Species), Page 13. The first sentence should read as follows:

> **As stated in Section III C 3 (see page 6), it is likely that the loggerhead shrike occurs in the Gillis Mountain Allotment, although the possibility of the Fletcher dark footed mouse occurring is very slight.**

Note that these corrections do not change the context of this evaluation.

VII. Consultations

The Gillis Mountain Evaluation was sent out for public review on July 1, 1993. Fifteen copies were sent to the Nevada State Clearinghouse for distribution between state agencies. In addition, the following were sent copies of the evaluation:

William A. Card	Natural Resources Defence Council
Sierra Club, Toiyabe Chapter	The Nature Conservancy
Nevada Cattlemen's Assoc.	Nevada Woolgrowers Assoc.
Resource Concepts Inc.	The Wildlife Society-Nevada Chapter
Nevada Wildlife Federation	Wild Horse Organized Assistance
Animal Protection Institute	Claudia J. Richards
Susan Alden	Anne Earle
The Mule Deer Foundation	Vanessa Kelling
U.S. Fish & Wildlife Service	Senator Richard Bryan
Senator Harry Reid	Congresswoman Barbara Vucanovich

International Society for the Protection of Mustangs and Burros
Carson City District Grazing Advisory Board

Comments were received from the Nevada Department of Wildlife (NDOW), the Commission for the Preservation of Wild Horses (Commission) and the Fish and Wildlife Service. These comments are addressed below.

FISH AND WILDLIFE SERVICE

The Fish and Wildlife Service confirmed the existence of Nevada oryctes (*Oryctes nevadensis*) in the Gillis Mountain Allotment. This species is a category 2 plant species addressed in the Threatened and Endangered Species sections of the evaluation (refer to Section III C 3 on page 6, and Section V E on page 13). The Service also provided the following comments.

Comments "As described in the allotment evaluation document, two populations of *O. nevadensis* are known to occur in the Gillis Mountain Allotment, one north of the townsite of Thorne, and the other in the vicinity of Wild Horse Canyon. We are aware of the Thorne site population, however, our records do not substantiate the Wild Horse Canyon populations. We are interested in obtaining any information you may have on this population."

Response: The Fish and Wildlife Service has identified an error in the evaluation. The population described as being in the vicinity of Wild Horse Canyon, was in reality, documented by the Nevada Natural Heritage Program to be several miles north of the allotment. This population was found at T. 11 N., R. 29 E., Section 2, which is in the vicinity of Gillis Canyon on the Walker River Reservation.

Reexamination of the locations of Nevada oryctes indicates that the only known occurrence in the Gillis Mountain Allotment is the Thorne population.

Comment: "Because of the sensitivity of *O. nevadensis* to grazing, we recommend that the populations occurring within the Gillis Mountain allotment be monitored on a

periodic basis and that conservation measures be implemented as needed to protect the species from grazing effects. Such measures will reduce the likelihood that *O. nevadensis* would need to be listed under the Endangered Species Act in the future".

Response: We agree. Based on the threats listed in *Threatened and Endangered Plants of Nevada* (Mozingo, 1980), there may be a conflict with early summer grazing in the vicinity of Thorne. It should be noted that the lands surrounding Thorne are controlled by the Hawthorne Army Ammunition Plant and that public lands are higher on the alluvial fans. However, in the event we decide to again authorize the special grazing treatment described in the evaluation, the permittee will not be allowed to graze cattle on public lands located on the alluvial fans north of Thorne between March 1 and July 15. Based on the major phenology stages of *Sphaeralcea ambigua* from the salt desert vegetation types at Tonopah[1], this time period tends to cover the critical growing stages of most forb species in the vicinity. This also includes the period of major spring precipitation events as determined through analysis of Hawthorne precipitation data.

NEVADA DEPARTMENT OF WILDLIFE

Comment: "This allotment was historically a winter sheep allotment that proposed a threat to the re-establishment of Desert bighorn sheep within the allotment. A manager's decision to allow for converting the allotment from domestic sheep to cattle resolved this potential conflict in 1990. According to the environmental assessment for the manager's decision, the conversion allowing only winter cattle grazing was supported by avoiding grazing of key species during the critical growing season.

We assume that the lack of livestock grazing resulted in late seral stage vegetation prior to the conversion to cattle. It appears that the District's authorization to allow yearlong grazing on the Gillis Mountain Allotment to retard the seral stage was contrary to the Manager's Decision 1990 [sic]. This action should require a land use plan amendment."

Response: When the allotment was converted from sheep to cattle in 1990, it was understood that the permittee would graze cattle under the traditional systems used in other allotments. Accordingly, the winter season of use was retained.

However, a history of nonuse prior to the conversion had resulted in a decadent condition for key forage grasses and shrub species. Perennial grasses were low in vigor and productivity due to a buildup of dead material in the crowns. Important shrub species contained many dead stems, but produced little spring growth. Because of these factors, the apparent trend was estimated to be downward.

The intensive management system described in detail under "Permittee's Current Operation" (pages 2 to 5 of the evaluation) afforded an excellent opportunity to

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[1] Data from BLM, 1979, Nevada Rangeland Phenology. Major phenology stages include when growth starts (early March) up to when seed dissemination starts (mid July). This is the nearest data collected in similar vegetation types as those found north of Thorne.

remove the buildup of dead material and stimulate growth of important forage plants. The environmental assessment was prepared and several stipulations were added to the permittee's grazing authorization. As long as the permittee operated under the management constraints placed on his authorization, he would be allowed to continue grazing. Although he grazed yearlong in 1992, he was requested to remove his livestock in 1993 due to non compliance with these terms and conditions. Note that the above points are discussed in greater detail throughout the evaluation.

The evaluation states that based on the nature of the grazing system and on the standard operating procedures (SOPs) for the district, Mr. Card would not be allowed to place troughs in the same specific location every year. The actual constraint on the grazing authorization is derived from Environment Assessment No. 92025 (Proposed Action) as follows:

> **Each specific trough location grazed during the critical growth period (March 15 to June 30) will be rested for two consecutive growing seasons.**

This requirement was imposed in accordance with Treatment 1 from the Walker Management Decision Summary, page 12 (i.e., in accordance to the RMP using additional phenology data to establish the specific dates). Therefore grazing is in compliance with the RMP and an amendment is not required.

This special grazing treatment may again be authorized as temporary and nonrenewable grazing as long as it would benefit the rangeland. However, it is not our proposal nor intention to change to a year round season of use in the Gillis Mountain Allotment.

THE COMMISSION FOR THE PRESERVATION OF WILD HORSES

The Commission combined its comments for the Gillis Mountain, Cedar Mountain, and Pilot-Table Mountain Evaluations. The first three of the following comments were directed as general comments applicable to more than one allotment.

Comment: "We are confused as to the procedure to follow in these allotment evaluations. You request response to these documents by July 26, 1993, however, the Pilot Table Mountain Evaluation was issued as a "draft" evaluation and for Gillis and Cedar Mountain Allotments they are not sent as draft documents. They are issued inconsistent with each other. Please explain how the three evaluations will be further evaluated. Are all these drafts and a final will be issued, or is one a draft and the others are finals? Since it is not explained, please provide the appropriate information."

Response: During the "in-house" review, an evaluation is circulated within the office as a "draft". Once all input has been consolidated into one document, the document becomes *the* evaluation for the specific allotment to which it pertains. The "draft" on the Pilot-Table Mountain Allotment Evaluation should have been deleted prior to being distributed for public review. However, in the event that additional information is received, especially information that may affect the conclusions, the evaluation may be revised to include such data, then resubmitted for public review. Even if a new

or revised evaluation is not produced, the authorized officer will review public comments before proceeding with any agency actions. Therefore, the difference between a "draft" or a final evaluation is not particularly significant. The important point is that a reviewer make comments within the allotted time and provide data or information not addressed in the evaluation.

Comment: "In general from all allotments evaluated, we feel that appropriate management levels have been erroneously set. The mandate of the IBLA ruling is that BLM is to do the monitoring, evaluate the data, remove the offending horses if it is determined they are causing resource damage, and set management levels in a multiple use concept that will protect the habitat as well as keep the horses in a thriving natural ecological balance. By determining that according to the percentage of acreage an allotment is to the herd area, you have allocated your AMLs."

This comment doesn't reflect the pertinent information presented in the subject evaluations. Two key parts of an evaluation are Section V, "Conclusions", and Section VI, "Technical Recommendations" since they analyze management in relation to meeting allotment objectives and describe proposed or future actions. Sections V and VI of each of the subject evaluations specifically avoids prorating wild horse numbers based on the "percentage of acreage an allotment is to the herd area". The evaluations reference the "initial" management levels for wild horses under Section III, "Allotment Profile" as a short term objective. These initial management levels were the ratio between the existing (in 1986) horse population and the percent of the allotment in the HMA and were presented in the Walker RPS as such. The evaluations, however, concentrate on monitoring data and analysis of this data in order to determine the potential stocking level for wild horses.

The AML for the Pilot Mountain HMA is derived from the potential stocking level presented in each allotment evaluation. This information is provided in Sections V and VI (and the referenced Appendix) of each evaluation.

Comment "You must first, evaluate the individual allotment, determining exact carrying capacity for livestock and wild horses using use pattern mapping, census, and distribution information, and then set your AML. After determining that allotment specific AML, you need to then evaluate other individual allotments within the HMA boundaries. After setting AML on all the individual allotments, the total of all the AMLs will determine the AML for the HMA. Also this will dictate that the total AML for the HMA must be considered whenever a removal is considered taking into consideration movement of horses within the HMA. This would prohibit the removal of animals just because seasonally they have moved from one allotment to another during seasonal movement. You have not allowed for any movement within these allotments. In your final, please evaluate the distribution of animals and state that you will allow for their movement within their HMA without threat of removal. Wild horses cannot be allocated percentages of their HMA to strictly be adhered to as livestock would be issued use on a pasture by pasture basis. As an example, you have provided for 'AUMs of forage for wild horses which is the prorated demand based on an estimate of 90% of the herd management area in the allotment.' How have you determined that 90% of the herd use this area of the HMA specifically and never move?"

Response: The basic premise of this comment appears to be that movement of wild horses within the Pilot Mountain HMA must be recognized and considered as decisions for each of the subject allotments are developed. The comment also suggests that movement of wild horses between these allotments was not given due consideration because an AML has not been established for each of the allotments that comprise the HMA. This is an interesting comment because it focuses on a key question that Walker Resource Area staff asked during preparation of the subject evaluations; namely, how to meet the requirements of the allotment evaluation process while still recognizing the mandate to manage wild horses within the HMA, not within each allotment. To avoid "mini-management" of three separate AMLs within an unfenced HMA, it was decided that the three evaluations should not set an "AML" for each allotment but should, instead, set forth a potential stocking level for each segment of the HMA based on monitoring data and then define an AML for the combined potential stocking levels of the allotments.

By defining a potential stocking level for each portion of the HMA in lieu of an "AML" for each allotment, provision is made for movement of horses within the HMA since utilization by wild horses is based on the availability of forage, not on a predetermined number of horses for an allotment. For example, a potential stocking level of 283 AUMs in the Cedar Mountain Allotment will provide for 24 horses for 12 months or 48 horses for 6 months or a number of combinations. Setting an "AML" for an unfenced portion of the HMA, as this comment suggests, would create the very situation that everyone agrees should be avoided because any "AML" (whether 24 or 48 or "x") established for the allotment could be exceeded seasonally as wild horses move within the HMA even though the AML for the HMA itself would not be exceeded.

This comment includes an excerpted quote relative to having prorated wild horse demand based on an estimate of the percent of the HMA in the allotment. This partial quote apparently comes from Section III of the Pilot-Table Mountain Allotment evaluation. The complete statement is found under the heading "Allotment Specific Objectives - Short Term" (Section II B.1.a.) as follows:

> **Initially provide for approximately 3,408 AUMs of forage for wild horses which is prorated demand based on an estimate of 90% of the herd management area in the allotment.**

This is not, however, what is recommended as continued management for the allotment. Section VI (Technical Recommendations) of the Pilot-Table Mountain Allotment evaluation presents the potential stocking level for the portion of the HMA within the allotment as 3,630 AUMs. The analysis and calculations for this is presented in Appendix C of the evaluation. (The Pilot-Table Mountain Allotment evaluation did refer to this potential stocking level as an "AML" but this was not intended and has been corrected as shown on the Pilot-Table Mountain Allotment Evaluation "Attachments and Errata" page.) The evaluations for the other two allotments that encompass the Pilot Mountain HMA provide potential stocking levels for wild horses in the same manner.

Comment: "43 CFR 4710.4 states that "management of wild horses and burros shall be undertaken with the objectives of limiting the animals to herd areas." How can horses utilize their entire area when there is no water. The incidental horse use on

the Gillis Mountain Allotment appears to be from snow melt and at other times of the year they are forced from this area of the HMA. It would be the mandate of the BLM to provide waters in this area that would allow for usage of the entire HMA by wild horses and also help with better distribution."

Response: No BLM policy, including the above quotation from 43 CFR§4710.4, mandates that wild horses must exist throughout every portion of an HMA year-round. There are only intermittent water sources in the portion of the Pilot Mountain HMA located in the Gillis Mountain Allotment. Consequently, wild horses will use the area on an intermittent basis.

Comment: "This evaluation points out the errors of the District in adhering to the land use plan. Your District has changed the kind and season of use on this allotment contrary to the land use plan and without appropriate documentation. We suggest that you address this and also consider amending the LUP.

Response: The Walker RMP does not preclude changes in kind of livestock nor seasons of use. The response to a similar comment from NDOW (page 15) addresses this.

Comment: "We are not arguing that wild horses have caused damage in some areas, and that management of wild horse and burro populations require removal at times to achieve AML. However, these documents seem to have been completed with the main intent of removing horses to meet allotment specific objectives without any reductions to livestock. The math has been worked to accomplish those goals."

Response: This comment suggests that the analysis of monitoring data has been intentionally manipulated in order to justify removal of wild horses. This suggestion is certainly unwarranted; it is also presented without supporting rationale or analysis. Consequently, there is no basis on which to respond to this comment.

VIII. Management Action Selected

All management actions stated under Section VI, Technical Recommendations (page 14), are incorporated into the Proposed Multiple Use Decision for the Gillis Mountain Allotment.

In addition, grazing will not be allowed on public lands in the vicinity of Thorne between March 1 and July 15. This is based on additional research resulting from comments made by the U.S. Fish and Wildlife Service (refer to Section VII, pages 14 and 15).

PROPOSED MULTIPLE USE DECISION
GILLIS MOUNTAIN ALLOTMENT

The Record of Decision for the Walker Environmental Impact Statement and the Resource Management Plan (RMP) was issued on June 6, 1986. These documents established the multiple use goals and objectives which guide management of the public lands in the Gillis Mountain Allotment. The Walker Rangeland Program Summary (RPS), issued in November, 1989, identified allotment objectives specific to the Gillis Mountain Allotment.

As identified in the Walker RMP and Walker RPS, monitoring has been conducted on the Gillis Mountain Allotment to determine if existing multiple uses for the allotment were consistent with the attainment of the objectives established by the RMP. Since 1990, monitoring data has been collected and during the past year, this data has been analyzed through the allotment evaluation process to determine what changes in existing management are required in order to meet specific multiple use objectives for this allotment.

Through the consultation, coordination and cooperation (CCC) process, input from the permittee and other interested parties has been considered. Based on the evaluation of the monitoring data, technical recommendations contained within the allotment evaluation, and input through the CCC process, my proposed decision is presented below.

GILLIS MOUNTAIN ALLOTMENT
LIVESTOCK GRAZING MANAGEMENT DECISION

Decisions relating to the grazing of livestock on public land in Gillis Mountain Allotment are as follows:

A. In accordance with 43 CFR §4130.6-1(a), maintain the current active preference for cattle (1,924 AUMs) and the current season of use for livestock (10/01 to 03/31).

B. In accordance with 43 CFR §4130.6-2, the following stipulation will be included on the grazing permit and grazing authorization:

No water troughs or feed supplements will be placed in the Pilot Mountain Herd Management Area.

C. In the event that the special temporary and non renewable grazing treatment is authorized in the Gillis Mountain Allotment, as described and under the constraints stated in the Gillis Mountain Allotment Evaluation (Section II A 2 b, pages 2 to 4) and in Environmental Assessment (EA) NV-030-92025, no grazing will be allowed on the alluvial fans north of the Thorne site between the dates March 1 and July 15.

RATIONALE

To date, monitoring data supports the Proposed Decision of August 2, 1991.[1] Therefore, the preference and season of use addressed in the 1991 decision should remain in effect. The special grazing treatment for vegetation in the Gillis Mountain Allotment was not intended to change the season of use to yearlong

[1] Since no protests or appeals were received, this Decision became final on September 19, 1991.

grazing. The treatment may be re-authorized in the future, but only as long as it serves to benefit the range. In such a case, the constraints described in EA No. NV-030-920925 would be in place and enforced.

In order to reduce conflict between livestock and wild horses, no water troughs and feed supplements for cattle should be allowed inside the Pilot Mountain HMA.

In accordance with BLM Manual 6840, the BLM must ensure that actions on public lands do not contribute to Special Status Species being listed under the provisions of the Endangered Species Act. It was concluded in the allotment evaluation that a threat to *Oryctes nevadensis* (a Category 2, Candidate plant species) exists with early summer grazing. Based on further research in response to public comments, it was concluded that by restricting grazing between March 1 and July 15, the critical growth stages of *O. nevadensis* will be avoided. The only known occurrence of *O. nevadensis* in the Gillis Mountain Allotment is north of Thorne. Therefore grazing will not be allowed between March 1 and July 15 in this area.

Authority:

The authority for these decisions are contained in Title 43 Code of Federal Regulations (CFR) Subpart 4100, which state in pertinent part:

§4100.0-8 "The authorized officer shall manage livestock grazing on the 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)."

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

§4130.6-2 "The authorized officer may specify in grazing permits or leases other terms and conditions which will assist in achieving management objectives, provide for proper rangeland management or assist in the orderly administration of the public rangelands. These may include but are not limited to:

(c) Authorization to use, and directions for placement of supplemental feed, including salt, for improved livestock and rangeland management on the public lands;..."

The BLM Manual 6840, as revised, states in pertinent part:

.06 "C. Candidate Species (Categories 1 and 2). The BLM shall carry out management, consistent with the principles of multiple use, for the conservation of candidate species and their habitats and shall ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as T/E..."

Protest/Appeal

In accordance with 43 CFR §4160.2, if you wish to protest this proposed decision, you are allowed 15 days form the receipt of this decision to file such protest with the Walker Resource Area Manager, 1535 Hot Springs Rd., Suite 300, Carson City, NV 89706-0638. The protest should state the reasons, clearly and concisely, why you think the decision is in error.

GILLIS MOUNTAIN ALLOTMENT
WILD HORSE MANAGEMENT DECISION

Decisions relating to wild horses managed within the Gillis Mountain Allotment are as follows:

A. In accordance with 43 CFR §4700.0-6(a), the potential stocking level for wild horses in the portion of the Pilot Mountain Herd Management Area (HMA) located within the Gillis Mountain Allotment is 240 AUMs.

B. The Appropriate Management Level (AML) for the entire Pilot Mountain HMA is 346 head of wild horses.

C. In accordance with 43 CFR §4700.0-6(a), the allowable use level (AUL) will be 55% on key species in the Pilot Mountain HMA, which sustains yearlong growth.

Rationale

The analysis of available monitoring data presented in the Gillis Mountain Allotment Evaluation indicates that a thriving natural ecological balance will be achieved by allowing no more than 240 AUMs of use by wild horses in this portion of the HMA (Conclusions section, pages 11 to 13). Therefore, the potential stocking level for wild horses is 240 AUMs.

Portions of this allotment and two other allotments constitute the Pilot Mountain HMA. The totals of the potential stocking levels for the three allotments is as follows:

Cedar Mountain Allotment	283 AUMs
Gillis Mountain Allotment	240 AUMs
Pilot Table Mountain Allotment	3,630 AUMs
TOTAL	4,153 AUMs

Based on yearlong (i.e. 12 months) use of the HMA by wild horses, 346 head of wild horses will use 4,153 AUMs. Therefore the AML for the entire HMA is 346 head.

The current AUL for the Gillis Mountain Allotment as shown in the Rangeland Program Summary (RPS) was established based on fall and winter grazing by livestock. Since wild horses graze yearlong and therefore during the growth stages of key species, it is appropriate that the AUL be changed to reflect the yearlong use levels (i.e., 55%).

Authority

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

§4700.0-6 (a) "Wild horses and burros shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat."

§4710.3-1 "Herd management areas shall be established for the maintenance of wild horse and burro herds. 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 relationship with other uses of the public and adjacent private lands, and the constraints contained in §4710.4..."

PROTEST/APPEAL

Although 43 CFR §4770.3 allows for an appeal with no mention of a protest, for the purpose of consistency the multiple use decision will be initially sent as a "Proposed" decision. If you wish to protest this proposed decision, you are allowed 15 days form the receipt of this decision to file such protest with the Walker Resource Area Manager, 1535 Hot Springs Rd., Suite 300, Carson City, NV 89706-0638. The protest should state the reasons, clearly and concisely, why you think the decision is in error.

John Matthiessen, Area Manager
Walker Resource Area

BOB MILLER
Governor

STATE OF NEVADA

CATHERINE BARCOMB
Executive Director

COMMISSIONERS

Dan Keiserman, *Chairman*
Las Vegas, Nevada

Michael Kirk, D.V.M., *Vice Chairman*
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Paula S. Askew
Carson City, Nevada

Steven Fulstone
Smith Valley, Nevada

Dawn Lappin
Reno, Nevada

COMMISSION FOR THE PRESERVATION OF WILD HORSES
Stewart Facility
Capitol Complex
Carson City, Nevada 89710
(702) 687-5589

July 26, 1993

Mr. John Matthiessen, Area Manager
Walker Resource Area
BLM-Carson City District Office
1535 Hot Springs Road, Ste. 300
Carson City, Nevada 89701

Dear Mr. Matthiessen,

Thank you for the opportunity to review and comment on the allotment evaluations for the Cedar Mountain, Gillis, and Pilot-Table Mountain Allotment Evaluations.

We are confused as to the procedure to follow in these allotment evaluations. You request response to these documents by July 26, 1993, however, the Pilot-Table Mountain Evaluation was issued as a "draft" evaluation and for Gillis and Cedar Mountain Allotments they are not sent as draft documents. They are issued inconsistent with each other. Please explain how the three evaluations will be further evaluated. Are all of these drafts and a final will be issued, or is one a draft and the others are finals? Since it is not explained, please provide the appropriate information.

In general from all allotments evaluated, we feel that appropriate management levels have been erroneously set. The mandate of the IBLA ruling is that the BLM is to do the monitoring, evaluate that data, remove the offending horses if it is determined they are causing resource damage, and set management levels in a multiple use concept that will protect the habitat as well as keep the horses in a thriving natural ecological balance. By determining that according to the percentage of acreage an allotment is to the herd area, you have allocated your AML's.

You must first, evaluate the individual allotment, determining exact carrying capacity for livestock and wild horses using use pattern mapping, census, and distribution information, and then set your AML. After determining that allotment specific AML, you need to then evaluate other individual allotments within the HMA boundaries. After setting AML on all of the individual allotments, the total of all the AMLs will determine the AML for the HMA. Also this will dictate that the total AML for the HMA must be considered whenever a removal is considered taking into consideration movement of horses within the HMA. This would prohibit the removal of

animals just because seasonally they have moved from one allotment to another during seasonal movement. You have not allowed for any movement within these allotments. In your final, please evaluate the distribution of animals and state that you will allow for their movement within their HMA without the threat of removal. Wild horses cannot be allocated percentages of their HMA to strictly be adhered to as livestock would be issued use on a pasture by pasture basis. As an example, you have provided for "AUMs of forage for wild horses which is the prorated demand based on an estimate of 90% of the herd management area in the allotment." How have you determined that 90% of the herd use this area of the HMA specifically and never move?

Pilot-Table Mountain Allotment Draft Evaluation

The data presented in this evaluation clearly indicates significant problems with livestock grazing. Carrying capacities are not computed for livestock, However, wild horses are reduced significantly to meet the 55% utilization of key species. The adjustment of wild horses to appropriate management levels is based upon the assumption that the current livestock grazing system and stocking rate is meeting all allotment objectives, the conclusion of this evaluation finds this assumption is incorrect. As stipulated in the AMP and stated in this evaluation, the permittee must remove his cattle within 7 days, when monitoring data finds 55% utilization is being approached. You provide no data that this term and condition was enforced or proposes any intention to enforce it.

Why is it that your document has identified that in order to meet Land Use Plan Objectives, changes in existing management were and are necessary. You have identified that livestock stocking and management is not working, however, livestock is not changing and horses are to be reduced.

You have identified that water is a limiting factor and that you recommended in your RMP (1984), Management Decisions Summary(1986), Mina HMP(1988), RPS(1989), and revised AMP(1990), that long term objectives were to "develop seven (7) water sources for wild horses and burros." Even in the technical recommendations of this document we see that water developments are recommended. This goes back to initially 1984, when and where do you proposed to do these development and will they ever be done or will they stay as permanent recommendations and never be accomplished?

You have also recommended completing an HMAP. Has that been initiated and when can we expect completion? You have a HMAP but are not following those terms.

You are also proposing a 44 mile fence project and a 12 mile fence project bisecting the HMA at least three times. How can you maintain the free roaming behavior of the horses with all of this fencing?

In conclusion, we recommend that the final evaluation, (since this was issued as a draft evaluation), evaluate all allotment management objectives. Livestock carrying capacity must be determined with existing use pattern mapping data without weight averaging. Completion of all range improvement projects must be scheduled. Prior to all range improvement projects being completed, the interim livestock grazing system must be strictly enforced and meet the utilization limits established in the land use plan.

Gillis Mountain Allotment Evaluation

43 CFR 4710.4 states that "management of wild horses and burros shall be undertaken with the objectives of limiting the animals to herd areas." How can horses utilize their entire area when there is no water. The incidental horse use on the Gillis Mountain Allotment appears to be from snowmelt and at other times of the year they are forced from this area of the HMA. It would be the mandate of the BLM to provide waters in this area that would allow for usage of the entire HMA by wild horses and also help with better distribution of the herd.

This evaluation points out the errors of the District in adhering to the land use plan. Your District has changed the kind and season of use on this allotment contrary to the land use plan and without appropriate documentation. We suggest that you address this and also consider amending the LUP.

Cedar Mountain Allotment Evaluation

According to your documentation, you state that horse use is heavy and severe in this allotment at that the AUL has already been exceeded by horse use. How then, could you authorize livestock use on an area that is already overutilized by horses prior to establishing and obtaining AML? You are authorizing livestock use without available AUM's and exceeding carrying capacity which is a violation of BLM policy and law.

We understand that the Tipton's have shown to be responsible permittees and have done well in others areas that they lease. However, the AUM's had previously been retired for livestock and it is our understanding that AUM's cannot be retired unless specifically identified in the Land Use Plan. We recommend an amendment to the LUP for activation of these retired AUM's.

It is also our understanding that you have changed the season of use from winter to year round without reference to an EA. We would recommend completion of an EA as soon as practical to analyze the consequences of changing that season of use. The EA should have been completed prior to the change.

Conclusion

We are not arguing that wild horses have caused damage in some areas, and that management of wild horse and burro populations requires removal at times to achieve AML. However, these documents

seem to have been completed with the main intent of removing horses to meet allotment specific objectives without any reductions to livestock. The math has been worked to accomplish those goals.

Please consider our comments and concerns prior to issuing a final or Multiple Use Decision. We look forward to reviewing those documents when issued. If you have any questions, please feel free to call.

Sincerely,

CATHERINE BARCOMB
Executive Director

7/22/93

STATE OF NEVADA
DEPARTMENT OF WILDLIFE
1100 Valley Road
P.O. Box 10678
Reno, Nevada 89520-0022
(702) 688-1500
Fax (702) 688-1595

BOB MILLER
Governor

WILLIAM A. MOLINI
Director

July 22, 1993

Mr. John Matthiessen
Walker Resource Area Manager
Bureau of Land Management
1535 Hot Springs Road, Suite 300
Carson City, Nevada 89701

Dear John:

Our agency has received and reviewed the Gillis Mountain Allotment Evaluation. This allotment was historically a winter sheep allotment that proposed a threat to the re-establishment of Desert bighorn sheep within the allotment. A manager's decision to allow for converting the allotment from domestic sheep to cattle resolved this potential conflict in 1990. According to the environmental assessment for the manager's decision, the conversion allowing only winter cattle grazing was supported by avoiding grazing of key species during the critical growing season.

We assume that the lack of livestock grazing resulted in late seral stage vegetation prior to the conversion to cattle. It appears that the District's authorization to allow yearlong grazing on the Gillis Mountain Allotment to retard the seral stage was contrary to the Manager's Decision 1990. This action should require a land use plan amendment.

We suggest the allotment evaluation address this concern prior to issuance of a multiple use decision for livestock.

Sincerely,

WILLIAM A. MOLINI, DIRECTOR

Roy Leach
Acting Region I Manager
Region I

m 6/1993

PILOT-TABLE MOUNTAIN ALLOTMENT
DRAFT EVALUATION

CARSON CITY DISTRICT OFFICE
1535 HOT SPRING ROAD
SUITE 300
CARSON CITY, NEVADA 89706

WALKER RESOURCE AREA
JUNE, 1993

Table of Contents

I. Introduction

The purpose of the allotment evaluation process is to determine if the current grazing practices are consistent with attainment of Land Use Plan (LUP) and allotment specific objectives for the Pilot-Table Mountain Allotment (03574). If current grazing practices are not consistent with the attainment of these objectives, then appropriate changes in management will be identified and implemented. Furthermore, the evaluation can determine if Land Use Planning Objectives are reasonable and attainable. The allotment is classified as category I, priority 1. The evaluation period is from 1985 to 1992.

II. Initial Stocking Level

What category allotment?

A. Livestock Use

1. Preference

PERMITTEE	PREFERENCE (AUMS) ACTIVE SUSP. TOTAL	CLASS OF LIVESTOCK	PERIOD OF USE	%PL*
ESTILL, JACK	7,900 285 8,185	CATTLE	04/01 TO 10/31 SUMMER USE PERIOD	100
		CATTLE	11/01 TO 03/31 WINTER USE PERIOD	100
		HORSE [1]	YEAR ROUND	

[1] Exchange of Use (30 AUMs)
* Percent Public Land Use

2. Other Information

The Pilot/Table Mountain Allotment is located southeast of Hawthorne, Nevada. It includes both the Gabbs Valley Range and the Pilot Mountains. Generally speaking, highway 95 is the western boundary and portions of the Esmeralda/ Mineral County and Nye/Mineral County lines are the southern and eastern allotment boundaries respectively (refer to the large scale map accompanying this evaluation).

Prior to 1982, the Pilot-Table Mountain allotment was two separate allotments. The Pilot Mountain allotment was originally adjudicated for 9,360 AUMs, 780 cattle yearlong. In 1962 the AUMs were reduced to 7,200, still remaining a yearlong operation. The Pilot Mountain allotment has always been a water based allotment.

The Table Mountain allotment was a land based, sheep allotment prior to 1975. It was adjudicated for 4,500 sheep for six weeks during the winter, for a total of 1,350 AUMs. In 1975, the Pilot permittee purchased the Table Mountain base property. It was converted to water base and cattle yearlong. As a result of the change of livestock and season of use, the AUMs were reduced to 985. With the increase in wild horses in the allotment, 285 AUMs were put into suspended non-use further reducing the active preference to 700 AUMs. In 1982 the two allotments were administratively combined making the total active preference 7,900 AUMs.

The Pilot-Table Mountain allotment was grazed yearlong at full numbers (7,900 AUMs) until 1983 when the present permittee, Jack Estill, acquired the grazing privileges. During the evaluation period, livestock use has averaged 59% of active preference (excluding exchange

of use).

The winter use period is the primary season of use. At the conclusion of the winter season, cattle are shipped from the allotment on or about the last of March of each year.

There are no fenced pastures within the allotment. It is divided into two winter pastures, the Gabbs and Pilot pastures. They are separated by State Route 361. In addition two summer pastures are contained within the winter use areas (Refer to Map No. 1, Appendix A).

Acreage and land status are shown below. This is the largest allotment within the Walker Resource Area.

ACREAGE BY LAND STATUS		
PUBLIC	PRIVATE	TOTAL
12,449	15,220	527,669

A list of existing range improvements can be found in Appendix B, Table 1. A corresponding map can be found on Map No. 2, Appendix A.

B. Wild Horse and Burro Use

1. Management Levels

The **initial management level** identified in the Walker Resource Management Plan, Management Decisions Summary (1986) is 397 head for the Pilot Mountain Herd Management Area. This figure included wild horses found in the Dunlap Herd Management Area located within the Battle Mountain District, Tonopah Resource Area. Of these 397 wild horses, approximately 284 head are located within the allotment. This equates to 3,408 AUMs of forage which is a prorated demand based on an estimate of 90% of the herd management area within this allotment as identified in the Rangeland Program Summary, (1989).

2. Herd Management Area within the Allotment.

The Pilot-Table Mountain Allotment contains the majority of the Pilot Mountain Herd Management Area (HMA). The HMA extends outside the allotment on both the north and south sides (Refer to Map 3, Appendix A). Primary areas of concentration are: (1) The southern end of the allotment in the vicinity of Blue Link/Betty/Troy/Summit and Upper Summit springs, and; (2) in the Gabbs Valley Range from Mt. Ferguson northward to Poinsettia spring and westward to Win Wan Flat.

C. Wildlife Use

1. Mule Deer (*Odocoileus hemionus*). Refer to Map 4 in Appendix A for locations of resident herds.

a. Existing Numbers

Existing demand for mule deer is taken from the Walker Resource Management Plan (1984). The 1990 data is NDOW's most current estimate for the entire allotment.

MOUNTAIN RANGE	SEASON OF USE	EXISTING DEMAND NOS.	AUMS	DEMAND AS OF 1990 NOS.	AUMS
GABBS VALLEY	YEARLONG*	88	264		
PILOT MTNS.	YEARLONG*	158	473		
TABLE MTNS.	YEARLONG*	60	180		
CEDAR MTNS.	YEARLONG*	34	102		
TOTALS		340	1,019	339	1,017

* Denotes a resident herd of Mule Deer.

b. Key and Crucial Areas

Springs in the allotment considered to be important are Cornelius, Big, Warner Corral, Sheep and McGregor (Refer to 4.b.2 for legal descriptions).

2. Antelope (*Antilocapra americana*). Refer to Map 4 in Appendix A for the existing herd area.

a. Existing Numbers

The Nevada Department of Wildlife released twenty head of antelope in Sunrise Flat/Calvada Flat in December of 1989. This herd was augmented in December of 1990 with thirty head. This equates to a yearly demand 120 AUM's.

An additional 50 antelope are scheduled to be released in the summer/fall of 1993.

b. Key and Crucial Areas

None have been identified. Special management consideration is given to Sunrise Flat.

3. Bighorn Sheep (*Ovis canadensis*). Refer to Map 4 in Appendix A for locations of resident herds and proposed release sites.

a. Existing Numbers

MOUNTAIN RANGE	SEASON OF USE	EXISTING DEMAND 1984 NOS.	AUMS	DEMAND AS OF 1990 NOS.	AUMS
PILOT MTNS.	YEARLONG*	22	53	116[1]	278[1]

*Denotes resident herd of bighorn sheep.

[1]Pilot mountain contains 78 animals (187 AUMs). Wildhorse Canyon contains 38 animals (91 AUMs) as per NDOW's 1990 information.

The most current information doesn't provide a breakdown for the location of bighorn sheep. However, a total of 170 sheep have been counted from the Esmeralda County line to Wildhorse Canyon. This results in a yearly demand of 408 AUM's.

Mt. Ferguson was scheduled for release of bighorn in June/July of 1992. However due to the extended drought, animals were not available for transplant. The release is now scheduled for the summer/fall of 1993.

b. Key and Crucial Areas

Springs in the allotment which are considered crucial to herd survival and expansion include Telephone Canyon, Solomon, Upper Solomon, Pine Tree, and Little springs (Refer to 4.b.2 for legal descriptions).

4. Other Key or Crucial Management Areas within the Allotment

a. Aquatic Habitat

Blue Link Spring, located approximately 11 miles east of Sodaville, Nevada, contains the Hiko White River Springfish (*Crenichthys baileyi grandis*) which is federally listed as an endangered species. They were released at this site in 1985 and a viable population continues to inhabit the spring (Refer to Map 4, Appendix A). Blue Link Spring is not a natural spring but the result of a drill hole. An artesian flow of warm water feeds a pond that contains the fish.

b. Riparian Habitat

The allotments riparian areas cover less than one tenth of one percent of the total acres contained within the allotment. Ten have been classified as key riparian areas. They are as follows:

Solomon Spring	T5N, R36E, Section 8
Cornelius Spring	T6N, R36E, Section 22
Bank (Sheep) Spring	T9N, R34E, Section 22
Upper Solomon Spring	T5N, R36E, Section 8
McGregor Spring	T9N, R34E, Section 2
Pine Tree Spring	T6N, R36E, Section 7
Little Spring	T6N, R35E, Section 25
Telephone Canyon Spring	T6N, R36E, Section 29
Big Spring	T6N, R36E, Section 21
Warner Spring	T6N, R36E, Section 17

Riparian areas are listed in Table 2, Appendix B.

5. Wildlife - General

The allotment contains many forms of wildlife. Some of the more common species are as follows:

Coyotes (*Canis latrans*), bobcats (*Felis rufus*), and the kit fox (*Vulpes macrotis*) are common furbearers found in the area. Upland game species include mountain cottontail (*Sylvilagus nuttallii*), desert cottontail (*Sylvilagus audubonii*), mourning dove (*Zenaidura macroura*), and chukar (*Alectoris chukar*). Rocky hillsides with an abundance of grass cover are favored areas

for chukar. Key areas within the Pilot Mountains are Telephone Canyon, Water Canyon, Dunlap Canyon, and Troy spring. Key areas within the Gabbs Valley Range are Paint Rock Canyon, Wildhorse Canyon, Cottonwood Canyon, Sunrise Flat, and the Benton spring area.

Raptors inhabiting the allotment include the prairie falcon (*Falco mexicanus*), red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*), American kestril (*Falco sparverius*), to name a few.

III. Allotment Profile

A. Description

1. Topography

The allotment is generally mountainous with associated large valley bottoms. The elevations in the valley bottoms vary from 4,200 to 4,600 feet. The two highest peaks within the allotment are Pilot Peak (9,187 ft.) and Mt. Ferguson (8,907 ft.).

2. Soils

The soils in the Pilot-Table Mountain allotment are typical of the Western Great Basin and exhibit wide ranges in depth, drainage class, percent surficial and subsurface rock fragments, pH, and other diagnostic soil properties. For a more detailed description, refer to the Walker RMP, Appendix A, page A-1.

Accelerated erosion within the allotment is mostly confined to small areas adjacent to seeps and springs. Wind erosion is prevalent in Gabbs Valley. There are also sediment producing areas in Dunlap and Cinnabar Canyons, in Long Canyon, and in the canyon (unnamed) adjacent to Blue Link Spring. These sediment producing areas seem to be the result of a variety of inherent factors, including shallow/lithic soils, steep slopes, summer convective storms, and sparse vegetative cover.

3. Water Resources

a) Surface Water: Surface water on BLM administered lands within the allotment consists of approximately 47 springs and one perennial stream (BLM, Water Source Inventory-1982). The majority of surface water is in the Pilot Mountains and Gabbs Valley Range areas. Most of the drainages are ephemeral. The only perennial stream in the allotment is Paint Rock which flows less than a quarter mile. Springs vary from small seeps to those with maximum flows of 19 gallons per minute (gpm).

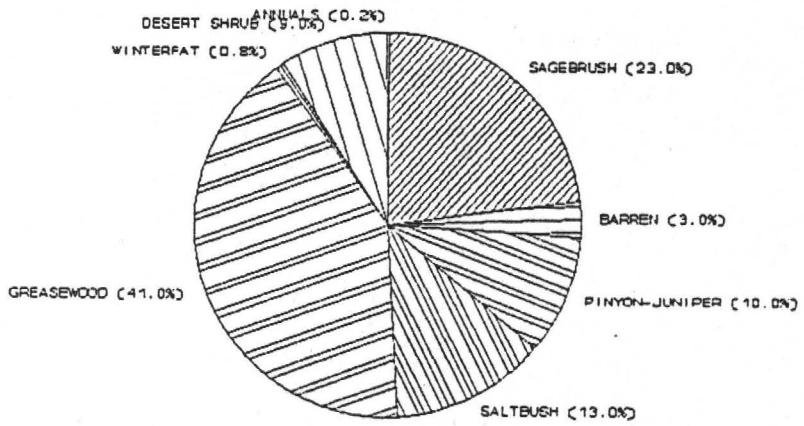
b) Ground Water: Due to low precipitation and high rates of evapotranspiration, there is little or no recharge to the groundwater. Groundwater yields are highly variable and depend upon the geology of the alluvium forming the valley fill aquifers. The allotment has 9 stockwatering wells. The depth of these wells range from 120 feet to over 300 feet. The majority of the allotment has been categorized as a designated water basin. A designated water basin has limitations as to what type of water developments are allowed. In the case of Pilot-Table Mountain allotment, the development of wells for the purpose of stockwatering/wildlife/wild horses is authorized while irrigation wells are denied.

4. Vegetation - General

The vegetation in the allotment is quite varied due to the extremes in elevation. Major vegetative types within the allotment, by acres, are as follows:

VEGETATION TYPE	ACRES
Sagebrush	117,863
Barren	15,373
Pinyon-Juniper	51,245
Saltbush	66,618
Greasewood	210,104
Winterfat	3,845
Desert shrub	46,120
Annuals	1,281
TOTAL ACRES	512,449

MAJOR VEGETATION TYPES



5. Vegetation - Key Species

a. Uplands

Winterfat (*Eurotia lanata*), fourwing saltbush (*Atriplex canescens*), and Indian ricegrass (*Oryzopsis hymenoides*) are found at the key areas.

1. Winterfat-(*Eurotia lanata*)-Eula: Leaf growth in latter March, full bloom by June, seed dissemination in July/August.

2. Fourwing saltbush- (*Atriplex canescens*)- Atca: Leaf growth in early March, full bloom by June, seed dissemination September.

3. Indian ricegrass - (*Oryzopsis hymenoides*) - Orhy: Starts growth in March, flowers in June, seed dissemination in July.

b. Riparian

No key area studies are established in riparian areas. Meadow plant species that most likely would be found include Nevada bluegrass (*Poa nevadensis*), rushes (*Juncus sp.*), sedges (*Carex sp.*), and willow (*Salix sp.*).

6. Threatened and Endangered Species

a. Vegetation

A Proposed Species that occurs on private land in Sodaville (Garfield Flat Allotment) is the Sodaville milkvetch (*Astragulus lentiginosus sesquemetralis*). Similar habitat is located on private land in the Pilot-Table Mountain allotment across the highway which also contains this species. It also occurs in T 12 N, R 34 E, section 6 in an adjacent allotment in the Lahonton Resource Area.

b. Wildlife

Blue Link Spring, located approximately 11 miles east of Sodaville, Nevada. Hiko White River Springfish, which are federally listed as an endangered species, were released at this site in 1985.

Category 2 [1], Candidate species that may occur in the allotment are the pygmy rabbit (*Brachylagus idahoensis*), spotted bat (*Euderma maculatum*), and the loggerhead shrike (*Lanius ludovicianus*).

7. Areas of Critical Environmental Concern (ACEC)

Stewart Valley Paleontological Site (Refer to Map 5 in Appendix A for location).

The Stewart Valley Paleontological Site contains a total of 16,000 acres. Public Land Order #6762 withdrew 1,420 acres of public land from surface entry and mining for a period of twenty (20) years to allow the Bureau of Land Management to protect the Stewart Valley Paleontological Site. The lands have been and remain open to mineral leasing.

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[1] Category 2: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.

This withdrawal allows livestock, wildlife, and wild horses use in the area. However, range improvements proposed in this area must be carefully considered

8. Wilderness Study Areas

The Gabbs Valley Wilderness Study Area (WSA) encompasses the area from Mount Ferguson to Superstition Canyon and contains approximately 79,600 acres (Refer to Map 6, Appendix A).

The area is being managed in accordance with Section 603 (c) of the Federal Land Policy Management Act and the Interim Management Policy and Guidelines for Lands Under Wilderness Review (1979) in order to preserve its wilderness characteristic. This will occur until Congress either designates it as Wilderness and includes it in the National Wilderness Preservation System, or officially releases it from further Wilderness consideration.

During the period of review and until Congress has determined otherwise, the Bureau shall continue to manage such lands so as not to impair the suitability of such areas for preservation as Wilderness...Subject to the continuation of existing grazing uses int he manner and degree in which the same was being conducted on the date of approval of this act. The Bureau is directed to take any action required to prevent unnecessary or undue degradation of the lands and their resources or to afford environmental protection.

As for range improvements, unless they are Grandfathered, new range improvements may be approved only if they enhance wilderness values by better protecting the rangeland in a natural condition, do not require motorized access, and are substantially unnoticeable.

At the time of passage of the Act (FLPMA-1976), livestock use in the Pilot Mountain allotment was 7200 AUMs (all active). For the Table Mountain allotment livestock use was 696 AUMs (active use). The Gabbs Valley Wilderness Study Area is located in the old Pilot Mountain allotment. Wild horse census data shows that for 1975, the population estimate was 363 head. The earliest census data shows that for 1973, the population estimate was 342 head.

9. Allotment Management Plan Revision

The Pilot-Table Mountain Allotment Management Plan was implemented in August of 1988. The allotment was divided into seven pastures, four (4) summer and three (3) winter (refer to Map 7 in Appendix A showing pasture areas). A grazing system was developed with the winter grazing season running from 11/1 to 3/31 and the summer grazing season running from 4/1 to 10/31.

After two years of operating under the allotment management plan, resource issues and conflicts were identified:

1. Water availability was a limiting factor.
2. Livestock ran short of feed before scheduled moves at the end of the winter and summer grazing seasons.
3. Key species at key areas were being utilized at a higher than desired use level.
4. Cattle drift from summer pastures into winter pastures and between winter pastures was a recurring problem.

6. Unauthorized livestock use in the southern portion of the allotment was a continual problem.

7. Death loss of livestock on State Route 361 was a problem, particularly around Stinson Well and the Luning Corral/Pipeline.

In order to begin meeting the Land Use Planning objectives, changes in existing management in the Pilot-Table Mountain Allotment were necessary. The allotment management plan was revised. The new AMP was implemented on October 9, 1990. The allotment was divided into two winter and two summer pastures, separated by highway 361 (Gabbs/Luning highway). Northwest of the highway is the Gabbs pasture, southeast of the highway is the Pilot pasture.

Two primary shipping points were established. Stinson Ranch (T 10 N, R 35 E, Section 11, SE 1/4) is used for the east side of the allotment. The Luning corral (T 8 N, R 34 E, Section 27, SE 1/4) is used for the west side of the allotment.

The grazing treatments and schedules for the winter pastures are as follows:

WINTER USE SEASON

Treatments	11/01	02/01	03/31
A	<---Graze at least 50% of herd--->	<----Graze all of herd---->	
B	<---Graze 50% of herd or less--->	XXXXXXXX REST XXXXXXXX	

Year	Pasture	Treatment
1991	Gabbs Pilot	A B
1992	Gabbs Pilot	A B
1993	Gabbs Pilot	B A
1994	Gabbs Pilot	B A
1995	CYCLE REPEATS ITSELF	

Up until 2/1, a maximum of 50% of the herd is allowed to graze in the pasture scheduled for treatment B. After 2/1, all livestock must be placed in the pasture scheduled for treatment A.

Sunrise Flat, which is contained within the Pilot pasture, has special management applied. Use is authorized on a yearly basis. A maximum of 100 cattle can be grazed for a period not to exceed two (2) months. When the use level on winterfat is approaching 55% at the key area, regardless of whether the two month time period has elapsed, livestock must be removed within 7 days. The 50% use level includes use by livestock, wild horses, and wildlife. Livestock must be removed from the area no later than 2/1 with the following exception. If utilization at the key area has not reached the 50% use level, the permittee may request in writing to the authorized officer, an extension of time for grazing.

While grazing in the Gabbs Pasture during the winter season of use under treatments A and B, Stinson Well, located in the Pilot pasture, must be turned off on 2/1. It is recommended that Black Cabin Well, Cedar Mountain Well, Bettles Well, and Stewart Springs also be controlled after this date. A small supply of water should be left available at these sites for wildlife.

Domestic horse use is confined to the vicinity of Rawhide ranch. Water may be made available at this site. This is outside the Pilot Mountain Herd Management Area.

While grazing in the Pilot pasture during the winter use period under treatment A, waters in the Gabbs pasture that must be turned off after 2/1 are the Finger Rock #1 well, Finger Rock #2 well, and the Luning Pipeline.

The grazing treatments and schedules for the summer pastures are as follows:

SUMMER USE SEASON

Treatments	04/01	07/16	10/31
A	XXXXXXXXXXXXXXXX GRAZE SEASON LONG XXXXXXXXXXXXXXX		
B	REST SEASON LONG		

Year	Pasture	Treatment
1991	Gabbs Pilot	B A
1992	Gabbs Pilot	B A
1993	Gabbs Pilot	A B
1994	Gabbs Pilot	A B
1995	CYCLE REPEATS ITSELF	

Grazing within the summer use areas is based upon a rest rotation combined with deferred rotation system. A combination of these two systems is needed to provide flexibility in years when forage is limited.

The maximum number of livestock allowed to graze during the summer period initially is 150 head. The minimum number identified by the permittee is 100 head. At no time is use authorized in Sunrise Flat.

In the event that utilization levels are approaching 55% in the area where use is authorized during the current grazing year, upon written approval from the authorized officer, the permittee may move his livestock after 7/16 to the area currently scheduled for rest. Water remains available in both summer pastures for wildlife.

B. Allotment Specific Objectives

1. The objectives identified in the Resource Management Plan (1984), Management Decisions Summary (1986), Mina Habitat Management Plan (1988), Rangeland Program Summary (1989), and the revised Allotment Management Plan (1990) have been combined where objectives were similar.

   a. Short Term

      1. Initially provide 7,900 AUMs of forage for livestock.

      2. Initially provide for approximately 3,408 AUMs of forage for wild horses which is prorated demand based on an estimate of 90% of the herd management area in the allotment.

      3. To support mule deer, limit utilization of riparian forage to 55% on five (5) sites. (Cornelius, Big, Warner Corral, Sheep and McGregor springs as identified in Mina Habitat Management Plan).

      4. To support bighorn sheep, limit utilization of riparian forage to 55% on five (5) sites. (Solomon, Upper Solomon, Pine Tree, Telephone Canyon, and Little springs as identified in Mina Habitat Management Plan).

      5. Support the reintroduction of pronghorn into the Sunrise Flat/Calvada Flat area by limiting utilization of winterfat to 55% at Sunrise Flat. Support a population of 150 animals in the Sunrise Flat/Calvada Flat area by 1995.

      6. PM-01:[2] Maintain utilization levels to less than or equal to 50% on Atca and Eula and 70% on Orhy.

      7. PM-02: Maintain utilization levels to less than or equal to 50% on Atca and 70% on Orhy .

      8. PM-03: Maintain utilization levels to less than or equal to 50% on Eula and 70% on Orhy.

      9. PM-04: Maintain utilization level to less than or equal to 50% on Orhy.

      10. PM-05: Maintain utilization level to less than or equal to 55% on Eula and 70% on Orhy.

   b. Long Term

      1) Develop and implement Allotment Management Plans (AMPs) on "I" allotments to improve and/or maintain condition; provide for proper utilization within key areas; achieve better livestock distribution to obtain more uniform utilization; and provide an increase in available forage and water for livestock, wild horses and burros, and wildlife.

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[2] These are objectives established for specific key areas (PM-01 to PM-05).

2) Continue rangeland and watershed monitoring to determine if management objectives are being met and what future adjustments in grazing use are necessary.

3) Develop and implement five (5) Herd Management Area Plans (HMAPs) for wild horses and burros, including the #4 priority, Pilot Mountain.

4) Develop seven (7) water sources for wild horses and burros. First priority will be a spring development in the Pilot Mountain Herd Area. Other water developments will be determined through activity plans.

5) Continue implementation of the Mina Mountain Habitat Management Plan.

6) Increase (by a statistically significant amount) frequency of key species on key areas.

7) Maintain habitat condition to support a population of 453 mule deer yearlong (1,359 AUMs).

8) To support the existing bighorn sheep population, improve the Pilot Mountain release rating from 92 to 100 and maintain the improved rating over the long-term. Support a herd of 120 animals yearlong by 1995.

9) To support planned bighorn sheep reintroduction improve the Volcano Peak habitat rating from 38 to 89 and Northern Gabbs Valley habitat rating from 64 to 70 and maintain these improved ratings over the long-term. Support a herd of 100 sheep yearlong by 1998 in the Volcano Peak area and 75 animals for the Northern Gabbs Valley (year-round use).

10) Maintain existing water quality at Blue Link Spring.

11) Over the long-term, manage upland riparian ecological sites in a late seral stage.

12) Maintain or improve wild horse habitat consistent with wildlife and livestock objectives. Maintain or improve free-roaming behavior of wild horses by protecting or enhancing the Herd Area. Maintain or improve wild horse habitat by assuring that all waters remain open to use by wild horses.

13) PM-01: Establish upward trend. Increase the frequency of Atca and Eula. Maintain the frequency of Orhy. Improve the ecological status from early-late seral to mid-late seral.

14) PM-02: Establish upward trend. Increase the frequency of Atca. Maintain the frequency of Orhy. Improve the ecological status from late-mid seral to early-late seral.

15) PM-03: Establish upward trend. Maintain or improve the frequency of Orhy and Eula. Improve the ecological status from early-mid seral to late-mid seral.

16) PM-04: Maintain static trend. Maintain the frequency of Orhy. Maintain the ecological status in late-mid seral.

17) PM-05: Establish upward trend. Maintain or improve the frequency of Orhy and Eula. Improve the ecological status from early-mid seral to late-mid seral.

*NOTE: Seral stage objectives were based upon numerical ratings established in 1985 (13-16) and 1989 (17) using 1983 SCS write-ups.

IV. Management Evaluation

A. Summary of Studies Data

1. Actual Use

Data shown in the table below was taken from the permittees licensed use and actual use reports. Livestock use shown is from March 1 to February 28 (example - 3/1/91 to 2/28/92).

a. Livestock

GRAZING YEAR	CATTLE	AUMS DOMESTIC HORSES	EOU[1] DOMESTIC HORSES
1991/92	5,726	88	30
1990/91	5,385	104	30
1989/90	4,993	61	30
1988/89	4,495	46	30
1987/88	3,220		
1986/87	2,772	72	30
1985/86	5,495	114	30

[1]Exchange of Use AUMs

b. Wild Horses

PILOT MOUNTAIN HERD MANAGEMENT AREA WILD HORSE AERIAL COUNTS							
YEAR	TOTAL IN HEAD PILOT HMA	CEDAR MTN. ALLOTMENT HEAD	AUMs	GILLIS MTN. ALLOTMENT HEAD	AUMS	PILOT-TABLE MTN. ALLOTMENT HEAD	AUMs
1992	697	78	936	17	204	602	7,224
1991				39	468		
1989	375	26	312	64	768	285	3,420

c. Wildlife (Existing Numbers)

The most current data (1992-93) identifies a total of 170 bighorn sheep within the allotment.

This equates to a yearly demand of 408 AUM's.

The most current data (1992-93) identifies a total of 50 antelope within the allotment. This equates to a yearly demand of 120 AUM's. Current data for mule deer is not available.

2. Precipitation

Precipitation patterns are affected by numerous factors. These include but are not limited to the intensity, duration, and magnitude of storms. Geographical influences (mountain ranges) also play a major role in precipitation patterns. Extrapolating precipitation data from one area to another is an estimate at best. Conclusions reached should be used with discretion.

The Gabbs Valley Range and the Pilot Mountains strongly influence precipitation patterns within the allotment. The mountainous areas receive the majority of precipitation in the form of snow. To present meaningful precipitation data, information should be collected at selected monitoring points in the Pilot-Table Mountain allotment.

The critical time for precipitation for the key species is during the winter and early spring periods. Moisture storage in the soil is essential for the plants to initiate growth of twigs and foliage. This in turn allows the plants to increase rooting depth and size, increase root reserves, and enhance vigor. Data presented below is from the Mina, Nevada, station:

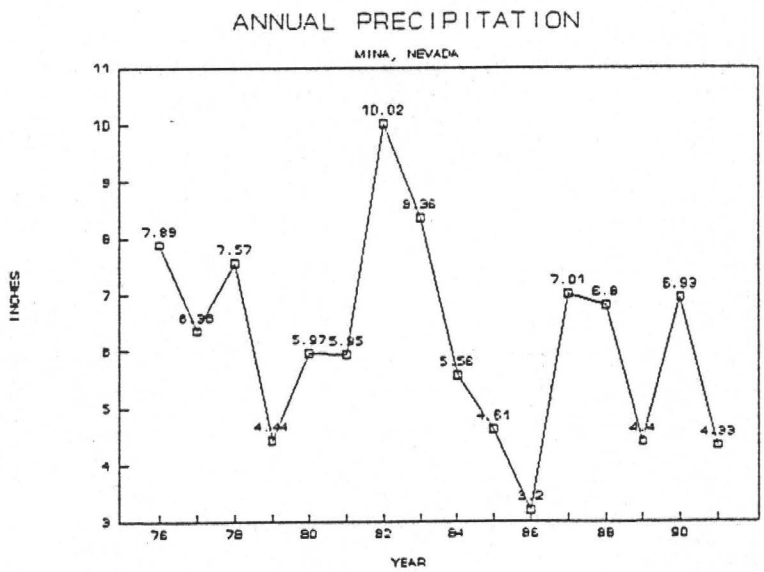
WINTER PRECIPITATION (INCHES)					
	November	December	January	February	TOTAL
1984/1985	0.36	0.25	0.35	0.05	1.01
1985/1986	0.64	0.05	0.16	0.94	1.79
1986/1987	0.01	0.18	0.57	0.46	1.22
1987/1988	1.31	0.40	0.27	0.37	2.29
1988/1989	0.25	0.27	0.02	0.17	0.71
1989/1990	0.15	0	0.99	0.41	1.55
1990/1991	0.09	0.32	0.24	0.24	0.89
AVERAGE	0.40	0.21	0.36	0.38	1.35

SPRING PRECIPITATION (INCHES)					
	March	April	May	June	TOTAL
1985	0.62	0.04	0.44	0.21	1.31
1986	0.45	0.44	0.06	0.18	1.13
1987	0.80	0.20	2.09	0.43	3.52
1988	0.11	3.47	0.46	0.39	4.43
1989	0.09	0.11	0.88	0.64	1.72
1990	0.32	2.40	1.32	0.15	4.19
1991	1.33	0.06	0.46	0.27	2.12
AVERAGE	0.53	0.96	0.81	0.32	2.63

As evidenced by the winter precipitation data, the amount received during the primary winter months is low. This appears to the norm rather than the exception. High evapotranspiration provides a harsh environment for the plants to exist.

Precipitation totals during the spring period are significantly higher. Winds in the spring are also more commonplace. This not only depletes the soil moisture but also can cure out the plants at a rapid pace.

The precipitation data shown below for Mina, Nevada, was summarized from the publications of the National Climatological Data Center.



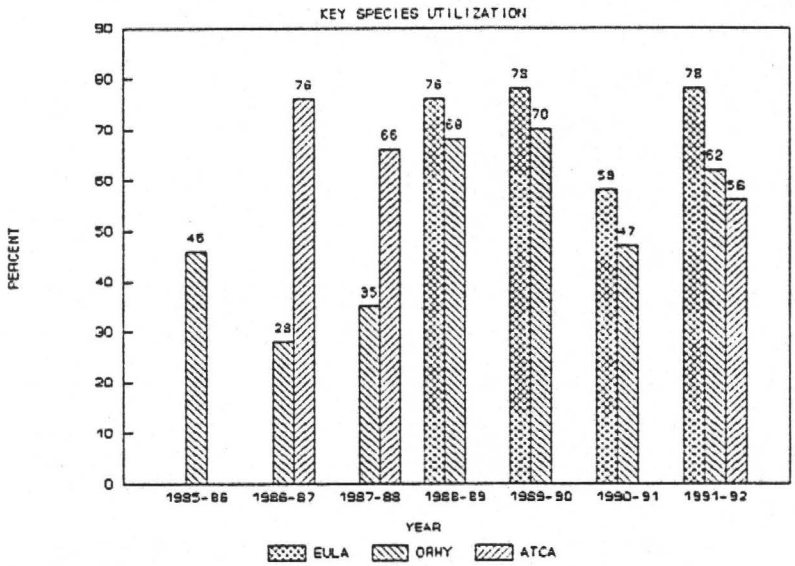
Data for 1985 is incomplete, twelve months of information was not collected. The average annual precipitation of the Mina station is 4.78 inches.

3. Utilization

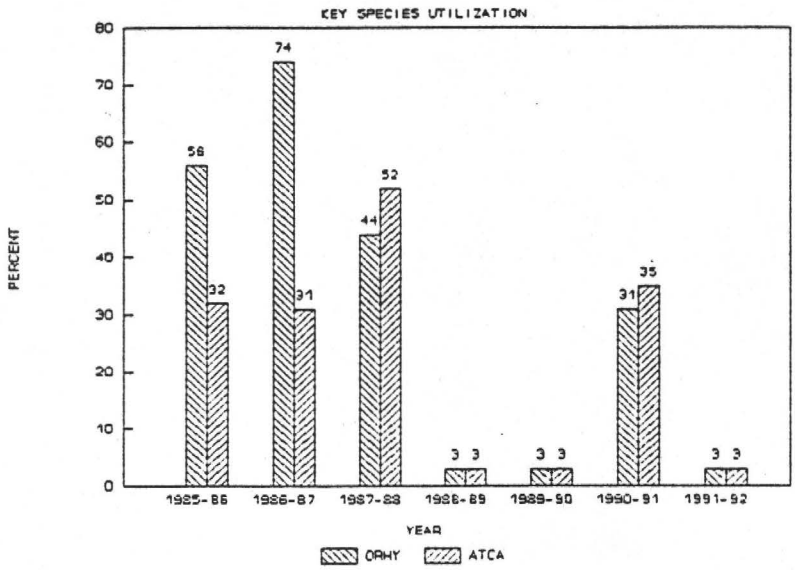
   a. Key Areas

      Use levels recorded at each of the key areas (Refer to Map No. 8, Appendix A) for the past five (5) years are as follows:

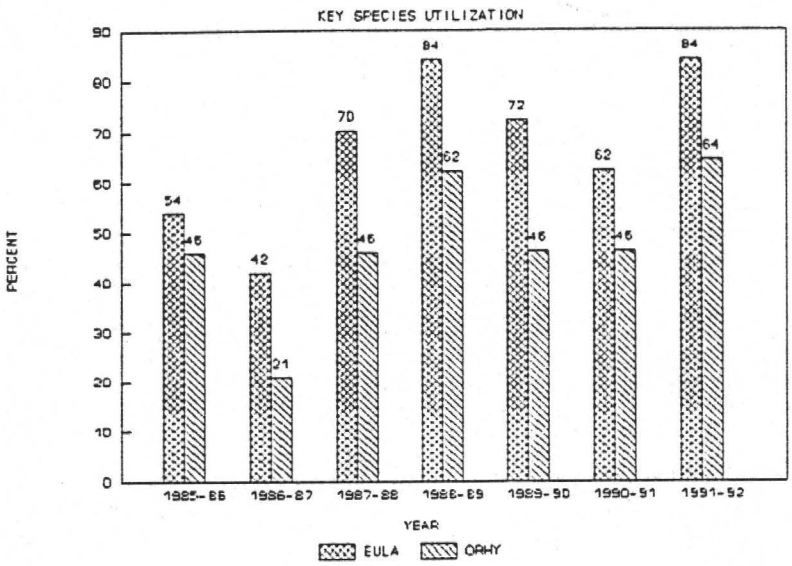
PM01


KEY SPECIES UTILIZATION
PERCENT
0
10
20
30
40
50
60
70
80
90
46
28
76
35
66
76
68
78
70
59
47
78
62
56
1985-86
1986-87
1987-88
1988-89
1989-90
1990-91
1991-92
YEAR
EULA
ORHY
ATCA

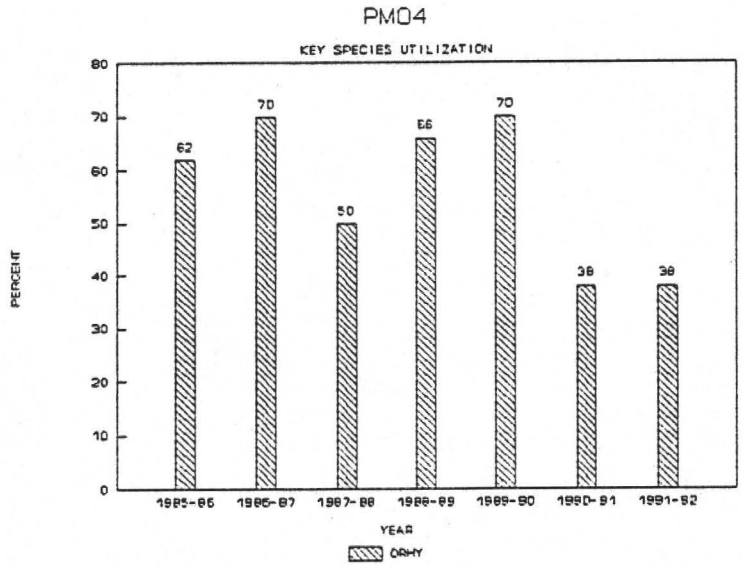
PM02

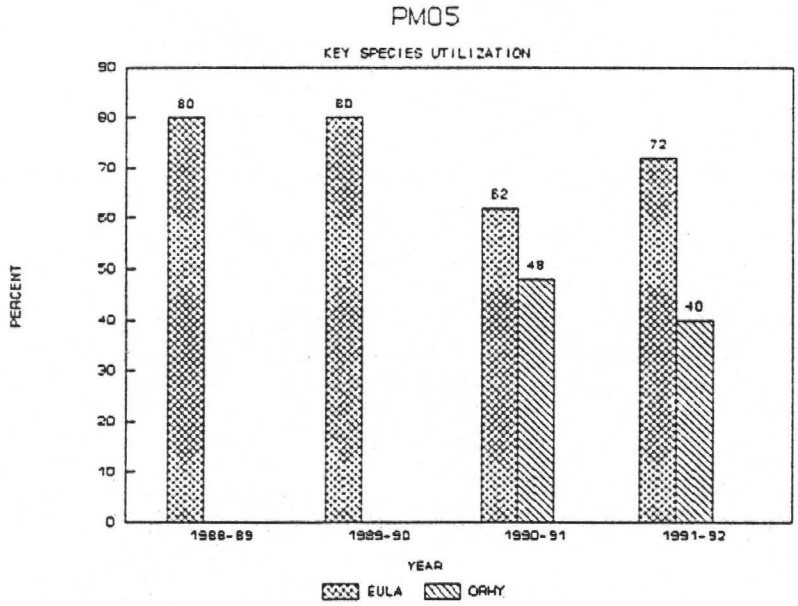

KEY SPECIES UTILIZATION
PERCENT
0
10
20
30
40
50
60
70
80
56
32
74
31
44
52
3 3
3 3
31
35
3 3
1985-86
1986-87
1987-88
1988-89
1989-90
1990-91
1991-92
YEAR
ORHY
ATCA

PM03


KEY SPECIES UTILIZATION
PERCENT
0
10
20
30
40
50
60
70
80
90
54
46
42
21
70
46
84
62
72
46
62
46
84
64
1985-86
1986-87
1987-88
1988-89
1989-90
1990-91
1991-92
YEAR
EULA
ORHY

PM04


KEY SPECIES UTILIZATION
PERCENT
0
10
20
30
40
50
60
70
80
62
70
50
66
70
38
38
1985-86
1986-87
1987-88
1988-89
1989-90
1990-91
1991-92
YEAR
ORHY



* Notations were made on the field write-up sheets for 1988, 1989, and 1991 that only horse sign was observed at key area PM04. This key area is located within the Pilot summer use pasture.

b. Use Pattern Mapping (Refer to Appendix A, Map Nos. 9 through 15).

Livestock use pattern mapping was completed on the winter use areas for the 1986/87, 1988/89, 1989/90, 1990/91 and 1991/92 grazing seasons. Mapping was also completed in 1991 and 1992 for livestock use in the Pilot summer pasture. The acreages shown are approximations and were calculated using a Modified Acreage Grid. Results of these surveys are as follows:

Grazing Season	Season of Use	Utilization Class										Total Acres Surveyed
		Slight		Light		Moderate		Heavy		Severe		
		Acres	%	Acres	%	Acres	%	Acres	%	Acres	%	
1986-1987	Winter	36,680	22.6	2,358	1.5	60,260	37.1	55,806	34.4	7,336	4.5	162,440
1988-1989	Winter	11,790	14.2	0	0	12,314	14.9	45,326	54.7	13,362	16.1	82,792
1989-1990	Winter	20,174	22.8	8,908	10.1	12,576	14.2	37,466	42.3	9,432	10.7	88,556
1990-1991	Winter	23,580	12.8	74,932	40.6	57,640	31.3	28,296	15.3	0	0	184,448
1991-1992	Winter	47,422	16.5	82,268	18.7	101,918	35.5	55,020	19.1	786	0.3	287,414
1991	Summer	10,218	15.2	12,576	18.7	23,580	35.0	5,240	7.8	15,720	23.3	67,334
1992	Summer	0	0	6,812	18.4	23,842	64.5	6,288	17.0	0	0	36,942

Use pattern mapping for wild horses was completed in 1991 and 1992 (refer to Appendix A, Map Nos. 16 and 17)

4. Trend

Frequency data has been collected at the five (5) key areas as follows:

Study Number	Date Collected	Study Number	Date Collected	Study Number	Date Collected
PM-01	07/23/91 08/10/88 08/27/85	PM-02	07/23/91 08/11/88 08/28/85	PM-03	07/25/91 08/10/88 09/04/85
PM-04	07/23/91 08/11/88 07/31/85	PM-05	07/25/91 06/20/89		

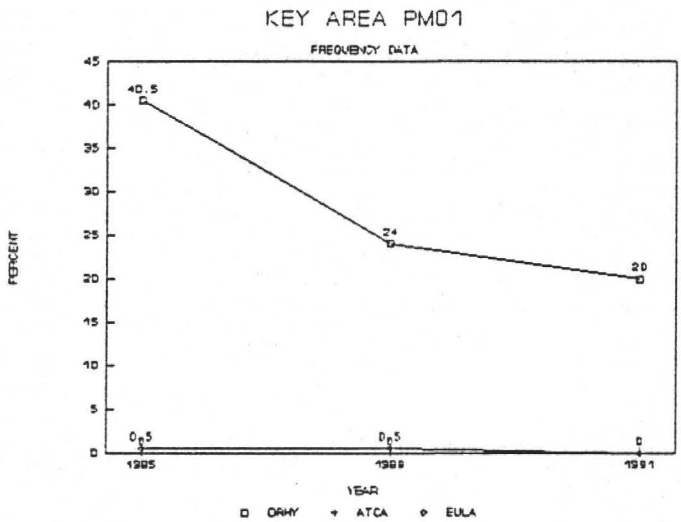


Figure 8 ORHY - 15 inch frame size
ATCA - 30 inch frame size
EULA - 30 inch frame size

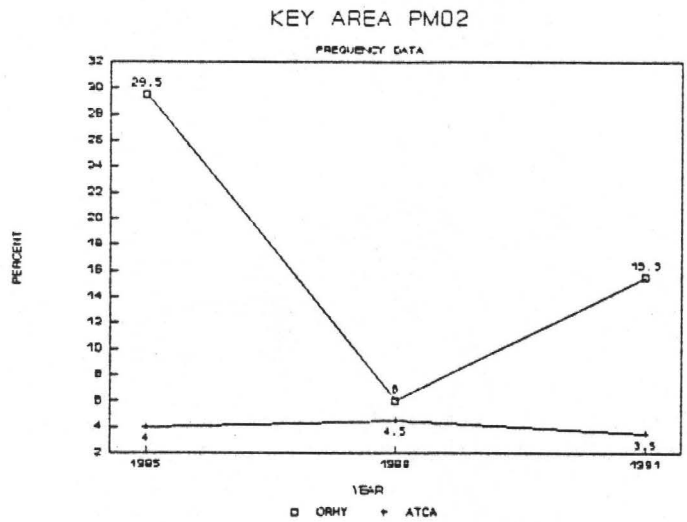


Figure 9 ORHY - 15 inch frame size
ATCA - 30 inch frame size

In 1988, the percent frequency for ORHY had fallen below the confidence limit of 10% for key species (i.e., the sample size had become too small to accurately show changes in frequency). Therefore, ORHY was recorded using a larger frame size which resulted in a larger sample size. This second set of data is shown below.

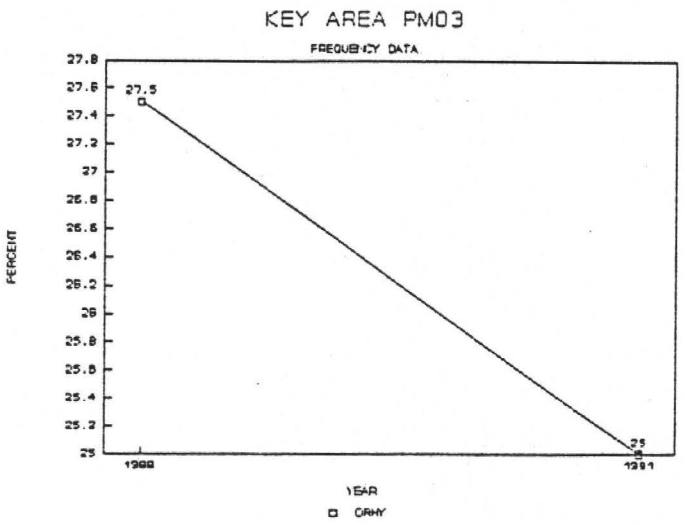


Figure 10 ORHY - 40 inch frame size

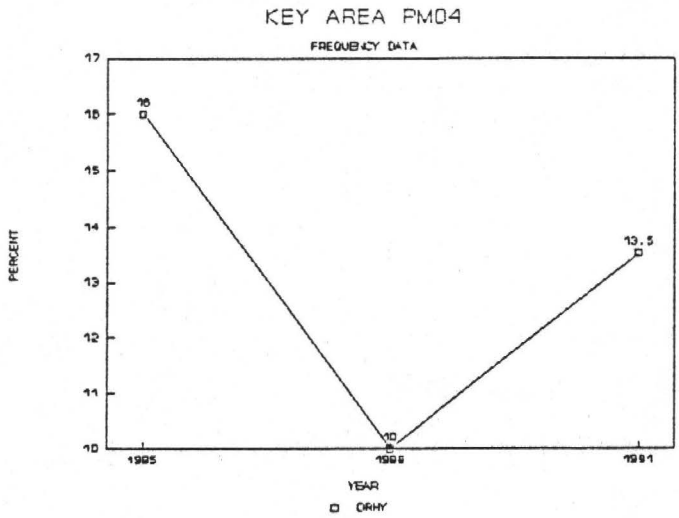


Figure 11 ORHY - 40 inch frame size

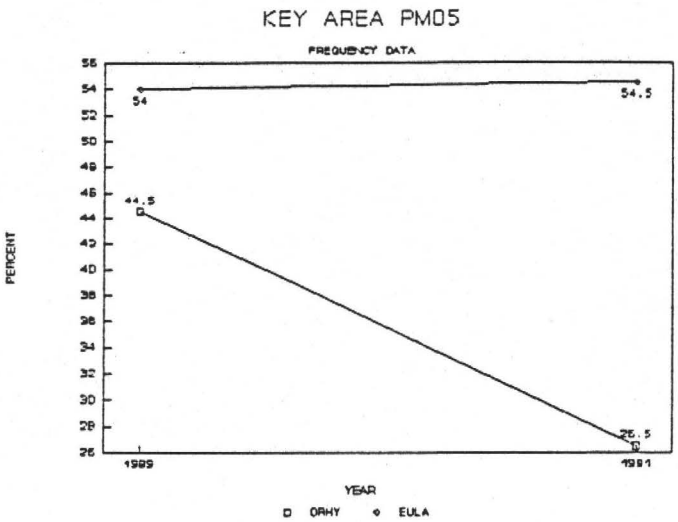


Figure 12 ORHY - 40 inch frame size / EULA - 10 inch frame size

5. Range Survey Data

The range survey for the this area was completed in 1953. At that time, the Pilot-Table Mountain allotment was listed as two sub-allotments. Following is the summary by allotment:

ALLOTMENT NAME	CLASS OF LIVESTOCK	SEASON OF USE	AUMS
TABLE MOUNTAIN	CATTLE	WINTER	985*
PILOT MOUNTAIN	CATTLE	YEARLONG	7,200

*In 1975, 285 AUMs were put into suspended non-use to provide forage for wild horses. In 1982 the Table Mountain Allotment was administratively combined with the Pilot Mountain Allotment.

6. Ecological Status

An order 3 soil survey has been completed in the Mina Planning Unit which encompasses the Pilot-Table Mountain Allotment. Though ecological sites were identified at that time, ecological status was not established. The ecological status[3] for the five (5) key areas identified in 1985 and 1989 are as follows:

KEY AREA	%PNC 1985 1990	SERAL STAGE CURRENT	RANGE SITE
PM-01	67 (59) 39	MID	SANDY 5-8" P.Z.
PM-02	58 (50) 5	EARLY	SANDY 3-5" P.Z.
PM-03	82 (37) 75	LATE	SILTY 5-8" P.Z.
PM-04	38 (40) 46	MID	COBBLY LOAM 5-8" P.Z.
PM-05	78	PNC	SILTY 5-8 P.Z.

For 1985 PNC data, the number shown in parenthesis () is the original rating derived from 1983 SCS range site descriptions. The other ratings shown for 1985 and 1990 reflect updated values derived from 1989 SCS range site descriptions. Key area PM-05 was established in 1989. Follow-up data will be gathered in 1993.

Key area PM-01 composition by weight should be 75% Grasses (G), 5% Forbs (F), and 20% Shrubs (S). Key area PM-02 should be 50% G, 5% F, and 45% S. Key area PM-03 should be 25% G, 5% F, and 70% S. Key area PM-04 should be 20% G, 5% F, and 75% S. Key area PM-05 should be 25% G, 5% F, and 70% S.

7. Wildlife Habitat

Qualitative studies have been completed using a Modified Hansen Rating System in establishing habitat condition ratings for areas designated as potential bighorn sheep habitat. Additional waters (guzzlers) have been developed within the release areas resulting in an increase in the rating.

Current population estimates are not available for mule deer.

Pronghorn antelope releases in Calvada/Sunrise Flat have totalled fifty animals. Observations

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[3] Ecological status is defined as the present state of vegetation of a range site in relation to the potential natural community (PNC) for the site. Ecological status is use dependent. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the potential natural community. The four (4) ecological classes correspond to 0-25, 26-50, 51-75, and 76-100 percent similarity to the potential natural community and are called early seral, mid seral, late seral, and potential natural community, respectively.

have shown that the antelope have spread throughout the allotment. Some recruitment is occurring from Ione Valley which lies to the east of the allotment. The population appears to be increasing.

8. Riparian/Fisheries Habitat

Key riparian sites have been identified to be monitored annually to ensure their protection as identified in the Mina Habitat Management Plan. There has been utilization data collected to measure the success of maintaining a 55% use level for vegetation at these sites. An ecological rating has not been established. Consequently, the current ecological condition for these riparian sites is unknown.

A qualitative study was completed at Blue Link Spring located in the southeastern portion of the allotment (T 5 N, R 37 E, Section 5, NW, Unsurveyed). It was determined that suitable habitat existed for supporting several species of warm water fishes. As a result of this study, the site was stocked with Hiko White River Springfish, listed as an endangered species on September 3, 1985.

9. Wild Horse and Burro Habitat

The most recent data (1992) for the Herd Management Area found within the allotment shows that a total of 602 wild horses (7224 AUMs) are present. Utilization and use pattern mapping (Refer to Appendix A, Map Nos. 17 and 18) identifies two areas of concern. The majority of wild horses are occupying the northern portion of the herd management area in the Gabbs Valley Range. The other area of concentration is in the extreme southern portion of the herd management area in the vicinity of Blue Link Spring.

V. Conclusions (Referred to by Number from III. C.).

A. Analysis of Land Use Planning (LUP) Objectives

1. Short Term

Initially provide 7,900 AUMs of forage for livestock.

During the evaluation period, licensed use has been well below the active preference of 7,900 AUMs. Less than desirable forage production coupled with a lack of snow has limited the amount of the allotment that has been available for use. Wild horse use is limiting cattle use. Wild horse use is now expanding into cattle winter use areas.

An intensive water hauling program could be set in motion by the permittee. This would result in livestock utilizing a much larger portion of the allotment. The limiting factor is the availability of roads. The construction of reservoirs, development of springs, and construction of pipelines could be used to compensate for the lack of access to major portions of the allotment.

The objective has not been met.

Initially provide for approximately 3,408 AUMs of forage for wild horses which is prorated demand based on an estimate of 90% of the herd management area in the allotment.

The initial demand of 3,408 AUMs for wild horses has been exceeded during the two most recent aerial surveys (3,420 in 1989 and 7,224 in 1992). The 1992 level of use is more than double the initial forage allocation identified in the Rangeland Program Summary (1989). Over-utilization of forage species is occurring in the Gabbs Valley Range which includes the Wilderness Study Area. A large portion of the area is incurring heavy use solely by wild horses. Key forage species are being selected throughout the entire year. This has resulted in less palatable species being selected. In 1991 no appreciable use was made by livestock in the Gabbs summer pasture. No livestock utilized the area in 1992.

A similar situation is occurring in the southern portion of the allotment in the vicinity of Blue Link and Troy springs. Use levels are primarily heavy by summers end. There is evidence of unpalatable forage being utilized by wild horses due to the lack of adequate, higher quality forage. This includes the woody stems of rabbitbrush and horsebrush. Due to the overuse by wild horses, the permittee moved his livestock to the north side of Pilot Mountain in the vicinity of Dunlap and Cinnabar canyons.

The objective for initially providing 3,408 AUMs has been met. Wild horses are currently exceeding (double) the initial demand.

To support mule deer, limit utilization of riparian forage to 55% on five (5) sites (Cornelius, Big, Warner Corral, Sheep and McGregor springs as identified in Mina Habitat Management Plan).

Cornelius Spring - Livestock use pattern mapping during 1991 and 1992 shows that use levels have ranged from light to moderate in the vicinity of the spring. Wild horse use pattern mapping has shown that no use has been made in the area. No adverse impact to the source is occurring.

The objective is being met.

Big Spring - Dan Delaney visited the site on 2/29/88. At this time no use was being made on the willows, heavy use was being made on the grasses. He noted no conflicts were apparent. The condition of the site was fair to good. He stated the objective was being met. No cattle had been there for several years. Horse use is heavy during the summer, grazing by horses was not a major conflict.

Use pattern mapping for livestock in 1991 and 1992 shows that use is not being made in the area. Wild horse data collected in 1991 and 1992 shows no conflicts.

The objective to be met.

Warner Corral Spring - Use pattern mapping in 1991 and 1992 shows that use has consistently been in the moderate range by livestock. Wild horses have not been using the area. Upper Warner Corral spring has been fenced. The site was revisited in 6/93 and no appreciable use is being made at the site. The site is stable.

The objective has been met.

Sheep (Bank) Spring - Dan Delaney visited the site on 12/9/87. Utilization levels at this time was heavy. The area was primarily used by mule deer and wild horses. The apparent trend was good and the objective was being met.

The site was revisited in 1991 and 6/93. The area was receiving very little use by wild horses and has not received use from livestock for several years. Vegetation is in very good condition around the source, the site is stable.

The objective is being met.

McGregor Spring - The spring is located near the top of Mt. Ferguson. Use pattern mapping for both wild horses and livestock has shown that no use is occurring in the area. Due to the location of the spring, it is reasonable to expect that livestock and wild horses will continue to not utilize the area.

It can be concluded that the objective is being met.

To support bighorn sheep, limit utilization of riparian forage to 55% on five (5) sites. (Solomon, Upper Solomon, Pine Tree, Telephone Canyon, and Little springs as identified in Mina Habitat Management Plan).

Solomon Spring - Dan Delaney visited the site on 12/8/87. Use was moderate, the condition of the site was good. Wild horses and bighorn sheep were using the site. He stated that the objective was being met.

The site was revisited in 6/93. The area is very stable. Vegetation on site is dominated by rumex and creeping wildrye. Use patterns would be similar as those found at Upper Solomon since these sites are in close proximity.

The objective is being met.

Upper Solomon Spring - Dan Delaney visited the site on 12/8/87. Use was severe by wild horses, heavy trampling was occurring. This was prior to the horse removal. If trampling continued, it was recommended that the site be fenced. The objective wasn't being met.

The site was re-visited in 6/93. The area appears to be in much better condition. Vegetation present is stabilizing the site. Willows are well established. Use pattern mapping shows levels primarily in the moderate range. Wild horses are the main users of the area.

The objective is being met.

Pine Tree Spring - Livestock use pattern mapping for 1991 and 1992 shows that use is confined to Dunlap and Cinnabar Canyons. Very little use, if any, is made outside of the draws. Wild horse use pattern mapping has shown that no use has occurred in the vicinity of the spring. The site has not been visited, but based on the information available, the source is not being adversely impacted.

The objective is being met.

Telephone Canyon Spring - The site was revisited in 6/93. The entire drainage bottom is in excellent condition. It is dominated by willows, creeping wildrye, and rose. The site is very stable. There was no evidence of any livestock or wild horse use.

The objective is being met.

Little Spring - Dan Delaney visited the site on 12/8/87. Use level was light, the area was in good condition and the objective was being met.

The site was revisited in 6/93. The condition of the area is very good, no use was being made by livestock or wild horses.

The objective continues to be met.

Support the planned reintroduction of pronghorn antelope in the Sunrise Flat/Calvada Flat by limiting utilization of winterfat to 55% at Sunrise Flat. Support a population of 150 animals in the Sunrise Flat / Calvada Flat area by 1995.

To date, a total of 50 antelope have been released. An additional 50 antelope are tentatively proposed to be released during the summer or fall of 1993. Utilization data has shown that the 55% use level goal for winterfat has not been met during the evaluation period. In order to effectively ensure that the use level goal for winterfat can be met on a consistent basis, fencing the area is the most feasible alternative.

The objective has not been met.

Key Area #	Key Sp.	Max. All. Use%	Actual Use % 86	87	88	89	90	91	92	Avg. Use
PM-01	Orhy	70	46	28	35	68	70	47	62	51
	Atca	50		76	66				56	66
	Eula	50				76	78	58	78	71
PM-02	Orhy	70	56	74	44	3	3	31	3	31
	Atca	50	32	31	52	3	3	35	3	23
PM-03	Eula	50	54	42	70	84	72	62	84	67
	Orhy	70	46	21	46	62	46	46	64	47
PM-04	Orhy	50	62	70	50	66	70	38	38	56
PM-05	Eula	50				80	80	62	72	74
	Orhy	70						48	40	44

PM-01: Maintain utilization levels to less than or equal to 50% on Atca and Eula and 70% on Orhy.

The use level goal for Orhy has consistently been met, averaging 51%. Use level information for Atca and Eula has not consistently been gathered. Out of the four years data was gathered for Eula, the use level goal was never met, averaging 71%. Out of the three years data was gathered for Atca, the use level goal was never met, averaging 66%.

Notes were made on the utilization forms in 1987, 1988, and 1990 that recorded the fact that many Orhy plants were dying.

The objective was not met.

PM-02: Maintain utilization levels to less than or equal to 50% on Atca and 70% on Orhy.

Data was gathered for both key species the entire evaluation period. The use level goal for Orhy and Atca was met six of the seven years, averaging 31% and 23% respectively.

It was noted on the 1988 utilization form that Orhy was in poor vigor and according to the observer it had been a very dry year. In 1989 it was noted that a large percentage of the Orhy plants were dead. In 1990, 1991, and 1992 it was also noted that many of the Orhy plants were dead.

The objective was met.

PM-03: Maintain utilization levels to less than or equal to 50% on Eula and 70% on Orhy.

Data was gathered for both key species the entire evaluation period. The use level goal for Orhy was met every year, averaging 47%. The use level goal for Eula was met only once in seven years, averaging 67%.

On the utilization forms for 1987, 1988, and 1990 it was noted that Orhy was in very poor condition.

The objective was not met.

PM-04: Maintain utilization level to less than or equal to 50% on Orhy.

The use level goal was met three out of seven years, averaging 56%. Wild horses move into this area during the summer months from Monte Cristo Valley. There is a substantial amount of water located within this area that attracts the horses.

On the utilization form in March of 1991, it was noted that horse sign only was present at the key area. This was again noted on the utilization form in October of 1991. In 1988 and 1989 only horse sign was observed as noted on the utilization forms. The use being made in the vicinity of the key area is by wild horses.

It can be concluded that the objective was not met.

PM-05: Maintain utilization level to less than or equal to 55% on Eula and 70% on Orhy.

The use level goal for Eula has consistently been exceeded, averaging 74%. The use level for Orhy has consistently been met.

The objective was not met.

2. Long Term

Develop and implement Allotment Management Plans (AMPs) on "I" allotments to improve and/or maintain condition; provide for proper utilization within key areas; achieve better livestock distribution to obtain more uniform utilization; and provide an increase in available forage and water for livestock, wild horses and burros, and wildlife (RMP - Walker Management Decisions Summary, 1.b,1).

The Pilot-Table Mountain Allotment Management Plan was implemented in August of 1988. A

revision was made to the Allotment Management Plan in November of 1990.

This portion of the objective has been met.

Out of the five key areas, only the utilization objectives for Key Area PM-02 have consistently been achieved.

This portion of the objective has not been met.

Use pattern mapping shows that distribution has improved since the revision of the allotment management plan. This has resulted in more even utilization of the areas being grazed.

Management actions have provided increased opportunity to meet this portion of the objective.

Two additional watering sites have been established within the Gabbs winter pasture during the evaluation period for livestock use. This water, when in use for livestock, is also available for wild horses and wildlife. Whiskey spring, located in the Gabbs Valley Range, was rehabilitated for the purpose of providing water for wild horses. The Bureau has applied for water rights. Beneficial use is for wild horses.

Over the long term, the grazing treatments and schedules being applied should provide the opportunity to enhance forage production for livestock, wild horses, and wildlife. Additional water developments, hauling water, and intensified livestock management will provide more opportunity to better distribute livestock and more uniformly utilize the allotment.

Management action is providing the means to meet this portion of the objective.

Continue rangeland and watershed monitoring to determine if management objectives are being met and what future adjustments in grazing use are necessary (RMP - Walker Management Decisions Summary, 1.b,2).

Data collected during the evaluation period has been key area utilization, use pattern mapping, frequency, actual use, wild horse census information, ecological condition, and photo trend plots.

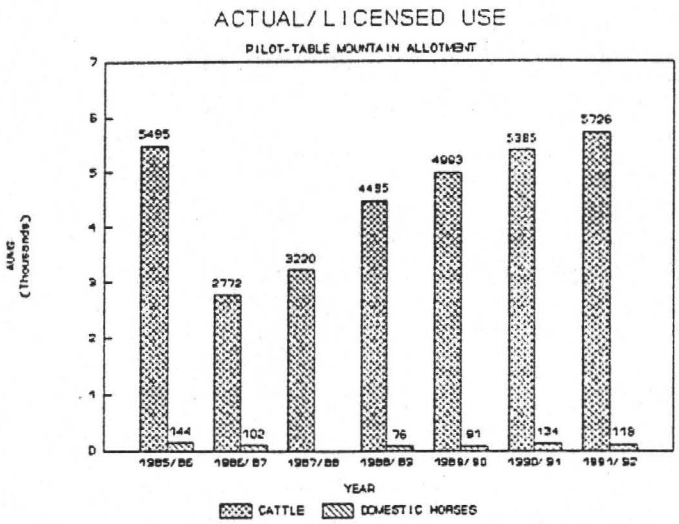
Key Area Utilization - refer to short term objectives for conclusions.

Use Pattern Mapping - Initial winter use pattern mapping (1986-87, 1988-89, and 1989-90) shows that a substantial amount of use was made in Finger Rock Wash. For the acreages surveyed, the percentage of use in the heavy and severe use classification was 38.9, 70.8, and 53.0 respectively. After implementation of the revised allotment management plan, use pattern mapping in 1990/91 and 1991/92 showed that distribution improved. For the acreages surveyed, the percentage of use in the heavy and severe classification was 15.3 and 19.4. A substantial portion of the allotment is still not being utilized due to the lack of water (either impoundments and/or water hauling sites). As water distribution is improved, livestock distribution will improve and a further decline in acreages of heavy/severe use should occur.

Two years of use pattern mapping completed in the summer use area in the Pilot pasture shows use is confined primarily to Dunlap and Cinnabar Canyons. The area on the southern end of the pasture has been used only slightly by livestock. The majority of use is being made

by wild horses. Use levels have generally been moderate to heavy with the exception of areas located near developed waters.

Actual Use - Use shown for wild horses does not include the 30 AUM's Exchange of Use:



Ecological condition ratings for the key areas were established in 1985 and 1986. For PM-05 this data was gathered in 1989. Ecological condition transects were read again in 1990 for all key areas except PM-05. It will be read again in 1993. Between the time the initial readings were taken and the development of this evaluation, new range site write-ups were completed by the Soil Conservation Service. The original data was updated to reflect ratings as per the current information. The results are as follows:

KEY AREA	DATE	RATING	DATE	RATING
PM-01	8/27/85	67	8/16/90	39
PM-02	8/28/85	58	8/14/90	5
PM-03	7/8/86	82	8/15/90	75
PM-04	7/31/85	38	8/14/90	46
PM-05	6/20/89	78		

Data shows that only key area PM-04 increased in ecological rating. PM-03 shows only a slight decrease, while the remaining two sites show a significant decline, especially PM-02. Ironically, the average utilization levels for key species at the this key area (PM-02) were well below the allowable use levels. In fact, three out of the last four years, there has been no use made in and around the key area. This substantial decrease cannot be blamed on livestock grazing. Other factors have been present to more realistically explain this decline. Ergot was noted as being present on the plants.

To further get an idea of what may have occurred, specialists at the University of Nevada, Reno, were consulted as to why there could have been such a dramatic decline in the frequency of Indian ricegrass. One explanation given was that the health and success of ricegrass is tied closely to rodent activity. In many instances, where you see a grass plant is the result of a seed cache. The sharp teeth of the rodents scarify the seed allowing for germination. If there had been a crash in the rodent population, along with the dry conditions, this could have lead to the decline in frequency. It is theorized that Indian ricegrass stands have a life cycle of 10 to 12 years.

Photo trend plots - A total of ten photo trend plots are located within the allotment (Refer to Map No. 18, Appendix A). Photos have been taken in 1977, 1979, 1982, 1985, 1989, and 1992.

Photo Plot #1- Comparison of photos has shown a definite improvement in the frequency of white sage and ricegrass. The late seventies photos showed few grass plants present within the plot. The 1992 photos show a minimum of five plants present.

Photo Plot #2 - Comparison of photos shows that the site has remained static. The frequency of grass plants within the plot appears to be the same.

Photo Plot #3 - Comparison of photos shows that the site has remained static. The frequency of grass plants within the plot appears to be the same.

Photo Plot #4 - Comparison of photos show that the site has remained static to slightly downward. Photos from 1992 show grazing was localized at the plot, thereby making comparisons difficult.

Photo Plot #5 - Comparison of photos show that the site is in a downward trend. Grass species within the plot have disappeared. Winterfat appears to have increased. Overall losses outweigh the gains.

Photo Plot #6 - Comparison of photos show that the plot is static to slightly downward. The panoramic view shows a static to slightly upward trend. Occurrence of grass species appears to be increasing.

Photo Plot #7 - Comparison of photos show that the plot has lost a majority of the grass species. The shrub component within the plot has increased with additional winterfat and sagebrush plants. The panoramic view shows the shrub component to have increased as well. The plants are smaller exhibiting a decline in vigor.

Photo Plot #8 - Comparison of photos show the plot has lost the majority of grass species. The shrub along with Pinon/Juniper is faring very well. Based upon the decline of the grass component, the site is in a downward trend.

Photo Plot T-1 - Comparison of photos show the grass component has remained stable. The winterfat component has dramatically declined. The panoramic view shows that the condition of the site has declined.

Photo Plot T-2 - Comparison of photos show that the site has lost the majority of the grass component. The shrub community appears to have remained stable although vigor appears to lessened.

The majority of the photo plots appear to be in a downward trend with the exception of Photo Plot #1. Use pattern mapping has shown that in the locations of these photo plots, plot #1 has incurred heavy use twice. Plot #5 has incurred heavy and severe use (one year). For the most part though, use levels have been light to moderate by livestock for all photo plot locations.

Develop and implement five (5) Herd Management Area Plans (HMAPs) for wild horses and burros, including Pilot Mountain which is listed as the #4 priority (RMP - Walker Management Decisions Summary 1.b,3).

The Pilot-Table Mountain HMAP is scheduled for completion in FY93. Monitoring data continues to be gathered. This evaluation will recommend an Appropriate Management Level for wild horses for that portion of the Pilot Herd Management Area that is contained within the allotment.

Steps are being taken to meet the objective. To date the objective has not been met.

Develop seven (7) water sources for wild horses and burros. First priority will be a spring development in the Pilot Mountain Herd Area. Other water developments will be determined through activity plans (RMP - Walker Management Decisions Summary 1.b,4).

Whiskey Springs, located in the Gabbs Valley Range, was reconstructed/maintained during the summer of 1991. Tom, Corral, and Summit springs have been rehabilitated. The source was fenced for protection. Water is provided at the spring.

Water rights status for sources within the Herd Management Area should be investigated. In the event that unadjudicated water is available, the Bureau should make a concerted effort to obtain the water rights. Wild horses and wildlife will benefit from this type of action.

This objective has been met.

Continue implementation of the Mina Habitat Management Plan (RMP - Walker Management Decisions Summary 1.b,5).

Plans are being finalized for release of Bighorn sheep in the Mt. Ferguson area in the summer/fall of 1993. Augmentation of existing herds have occurred over the course of the evaluation period.

It is currently being proposed to release an additional 50 head of antelope in the allotment during the summer/fall of 1993.

Studies, specifically utilization data on the ten key riparian areas, has not been collected. Additional bighorn guzzlers have been installed during the evaluation period. This has increased the Hansen Rating for all release sites.

During the month of May, 1993, an additional guzzler was constructed north of Highway 361 in the vicinity of Calvada Flat for antelope. An additional bighorn guzzler was constructed in the vicinity of Chukar Ridge within the allotment in June of 1993..

This objective is being met.

Maintain habitat condition to support a population of 453 mule deer yearlong (1,359 AUMs).

Management actions (ie development of the AMP in 1988 and the revision of 1990) have been implemented to enhance all resource values within the allotment. Baseline data for the quality of mule deer habitat is lacking as well as any follow-up data.

Based upon livestock distribution and use pattern mapping during the summer use period of 1991 and 1992 (Pilot summer use pasture), heavy use is occurring on the riparian areas contained within Cinnabar and Dunlap canyons. Although this is a small portion of the Pilot summer pasture, it is still of concern. Wild horse use, by summers end, located in the vicinity of Blue Link Spring, is also heavy. This area is outside of the main mule deer range. However, with the current condition of this area, expansion of horse use, although not currently a problem, could result in additional pressure within the range.

Within the Gabbs Valley Range, wild horse use pattern mapping show's that it may result in a decline in habitat condition if numbers and year-round use are allowed to continue. Currently, a large portion of this area is incurring heavy use levels. Riparian areas are receiving a lot of pressure. All other portions of the Herd Management Area appear not to be adversely affected.

The objective is not being met for those riparian areas in concentration areas.

To support the existing bighorn sheep population, improve the Pilot Mountain release rating from 92 to 100 and maintain the improved rating over the long-term. Support a herd of 120 animals yearlong by 1995.

Additional waters have been constructed in this area. This has raised the habitat rating to 100. Based upon use pattern mapping for livestock, they have not been occupying the area inhabited by the bighorn sheep. Wild horse census data shows limited overlap with bighorn sheep habitat. They have been sighted in adjacent areas.

The objective has been met.

To support planned bighorn sheep reintroduction improve the Volcano Peak habitat rating from 38 to 89 and Northern Gabbs Valley habitat rating from 64 to 70 and maintain these improved ratings over the long-term. Support a herd of 100 sheep by 1998 in the Volcano Peak area and 75 animals for the Northern Gabbs Valley (year-round use).

Additional waters have been constructed. This has increased the habitat ratings of both areas to the goals of 89 and 70 respectively.

The objective has been met.

Maintain existing water quality at Blue Link Spring.

Water quality has been maintained at the site. Steps were taken to plumb the bathtub so that water isn't diverted from the pond. This spring has been designated as the top priority for water rights survey. The survey has been completed and appropriate steps are being taken with the State Water Rights Engineer's to acquire the water rights to the spring.

The objective has been met.

Over the long-term, manage upland riparian ecological sites in a late seral stage.

Baseline data is insufficient. There is no current ecological condition classification. Up until

the summer of 1991, no use pattern mapping for livestock was gathered in the vicinity of these sites. Location of wild horses was recorded during aerial census. No specific information has been gathered as to what impact, if any, wild horses or livestock are having on these sites.

Insufficient data is available to determine if the objective has or has not been met.

Maintain or improve wild horse habitat consistent with wildlife and livestock objectives. Maintain or improve free-roaming behavior of wild horses by protecting or enhancing the Herd Management Area. Maintain or improve wild horse habitat by assuring that all waters remain open to use by wild horses.

Implementation of the grazing treatments/schedules and reconfiguration of the pastures (winter and summer) in the revised allotment management plan, provide a basis to maintain or improve the resource conditions throughout the allotment.

No management actions have been taken that would impede the free-roaming behavior of the wild horses. It is being proposed to fence the winterfat area of Sunrise Flat. This will require approximately four miles of fence. This is identified as an important area for antelope. The fence should pose no problems for wild horses. There is access around the proposed improvement. During the summer use period, the gates will remain open. During the winter use period, the gates will remain closed. This will prevent any livestock intrusion.

All waters remain open for use by wild horses.

This objective has been met.

Increase (by a statistically significant amount) frequency of key species on key areas.

PM-01: Establish upward trend. Increase the frequency of Atca and Eula. Maintain the frequency of Orhy. Improve the ecological status from early-late seral to mid-late seral.

Trend has been downward. The frequency of fourwing saltbush and winterfat remains stable. The frequency of Indian ricegrass has significantly declined. Ecological condition classification rating has dropped from 67 (late seral) to 39 (mid seral).

The objectives have not been met.

PM-02: Establish upward trend. Increase the frequency of Atca. Maintain the frequency of Orhy. Improve the ecological status from late-mid seral to early-late seral.

Trend has been downward. The frequency of fourwing saltbush has remained stable. The frequency of Indian ricegrass has declined from the 1985 level but has improved between 1988 and 1991. The ecological status has dramatically dropped. The initial rating was 58 (late seral) but is now 5 (early seral).

This area is one that has received no use for three of the last four years of the evaluation period. Utilization write-ups noted that a dramatic die-off of Orhy was occurring. Ergot was noted as being present on many of the grass plants. This decline is for reasons other than livestock grazing.

The objectives have not been met.

PM-03: Establish upward trend. Maintain or improve the frequency of Orhy and Eula. Improve the ecological status from early-mid seral to late-mid seral.

Trend is downward. The frequency of Indian ricegrass has declined dramatically. Frequency data gathered in 1985 shows that squirreltail and ricegrass were combined. Follow-up studies (1988 and 1991) separated the two. When comparing these follow-up studies, evidence shows that ricegrass has remained stable. Figures for ricegrass show that it made up only two (2) percent of the production in both years that the data was gathered.

Winterfat has increased in frequency although this change is not significant.

Ecological condition has not changed.

The objectives have not been met.

PM-04: Maintain static trend. Maintain the frequency of Orhy. Maintain the ecological status in late-mid seral.

Trend at this site has remained relatively stable. The frequency of ricegrass declined significantly between 1985 and 1988. When comparing the frequency from 1985 to 1991, the decline is not significant.

The ecological status has not changed.

The objectives have been met.

PM-05: Establish upward trend. Maintain or improve the frequency of Orhy and Eula. Improve the ecological status from early-mid seral to late-mid seral.

Trend is downward. The frequency of Indian ricegrass has declined significantly while winterfat has remained stable.
Changes in ecological status has not been analyzed. Additional information will be gathered in 1993.

The objectives have not been met.

VI. TECHNICAL RECOMMENDATIONS

A. TREATMENTS/SCHEDULES

For the most part, for key species at each key area, utilization level goals have not been met. Frequency for the grass species have shown declines while the shrub component has remained stable. This is due in part to the dry conditions that the region has been experiencing. The revised Allotment Management Plan has only been in place for two years (winter season of use) and is entering the third year for the summer season of use.

A major reason for the 1990 Allotment Management Plan Revision was the large areas of over-use and the very large areas of non-use. It is recommended that the grazing treatments and schedules be continued as per the revised Allotment Management Plan (1990) and outlined in Section III of this evaluation. Use pattern mapping has shown significantly improved distribution which is resulting in much more uniform utilization levels. Those areas that are receiving heavy use, although the use is occurring during the dormant period for the vegetation, are of concern. With

the implementation of intensified management it is anticipated that additional progress can be made in the attainment of the Land Use Plan objectives.

B. CHANGES IN PASTURE

The Pilot summer use area should be modified to exclude that portion of Finger Rock wash (southern end that is watered by Black Cabin well) which contains winterfat. Winterfat is primarily found in the bottom of the wash and small fingers that radiate from the wash.

This change is needed to protect winterfat. Although the area is small, being confined primarily to the bottomland, it is important to manage it more closely. It appears that enough use has occurred over time from livestock and wild horses that it is leading to the loss of plants. The plants are small and appear to be heavily stressed. It also appears that rabbitbrush is invading the site. The lack of winter moisture has also contributed to the declining vigor.

No water should remain available at either Black Cabin Well or at Simon Well which is north of this area during the spring/summer months. In addition closer monitoring of the area by the permittee should be required to ensure that cattle drift, when it does occur, is minimal and taken care of immediately.

The boundary will be from the eastern slopes of Table Mountain southward until you reach Tim Holt Summit, travel eastward across the main road, and proceed in a northerly direction along the western foothills to include that portion of the Cedar Mountains contained within the allotment.

Interspersed within Win Wan Flat are pockets (stands) of winterfat. This area is contained within the Gabbs summer pasture. The boundary between the summer and winter pastures should be modified to include this area in the Gabbs winter pasture. Snow levels can limit use so it is recommended that this area be grazed in the fall. (Refer to Map No. 19, Appendix A).

C. FENCING OF SUNRISE FLAT (WINTERFAT AREA)

Sunrise Flat (winter use) and adjacent areas contain a large quantity of forage that is not adequately being utilized while a pocket of winterfat is being over-utilized. Livestock tend to concentrate in the low lying area of the flat where the winterfat occurs. The 55% use level goal for winterfat is consistently being exceeded. This results in the permittee having to remove all livestock from the area prior to making any appreciable use on the majority of land.

Approximately four miles of fence should be constructed to adequately protect the winterfat. This enclosure will be treated as a separate pasture. Use may be permitted annually by the authorized officer. This authorization will be based upon the amount of current years production.

D. WATER DEVELOPMENTS

It is recommended that additional waters be developed within the allotment. These can be spring developments, pipelines, construction or reconstruction of reservoirs, and the installation of tank/troughs watering sites. The majority of existing developed waters are contained within the Finger Rock Wash area. This is the most productive portion of the allotment. Field observations and use pattern mapping has shown that this area receives a substantial amount of the use made during the winter season of use. Although a large portion of the allotment has basically low production potential, forage is available. By better distributing livestock in the allotment, grazing pressure in the Finger Rock Wash area can be reduced and productivity can be increased. Animal impact (i.e., grazing/trampling) on the lower producing sites may also result in increased

production. Many of the forage species are becoming decadent due to non-use or extremely low use levels. Grazing can promote increased growth, vigor, and seedling establishment. Likely areas where water development should be established are as follows (Refer to Map No. 20, Appendix A) for general locations):

AREA 1

1. In the foothills and/or bottomlands of Soda Springs Valley, from Paymaster Canyon east to State Route 360. Throughout this area there are concentrations of forage that seldom are used by livestock. Within many of the canyon mouths and associated foothills, plentiful forage is available.

2. From State Route 360 (vicinity of Luning and still within Soda Springs Valley), east and southward to Rhodes Saltmarsh, water is needed primarily along the foothills. The upper portions of the alluvial fan contain a substantial amount of forage.

AREA 2

3. The area located between Mt. Ferguson and Gabbs Mountain which is north of State Route 360 contains a substantial amount of forage. No development should be considered until 1) Congress decides whether to incorporate this area into the Wilderness System, or 2) if such developments would provide a means by which to halt any degradation of the resource and result in enhancement of wilderness values.

4. From Petrified Summit to Finger Rock on the southeast side of State Route 360 contains areas of adequate forage. With the development of reservoirs, this area could be used for several weeks.

AREA 3

5. In between Calvada Flat and Sunrise Flat, above Stone Cabin Spring, a substantial amount of forage is available. There is an opportunity to develop a reservoir(s).

AREA 4

6. Midway down Volcano Canyon a reservoir could be constructed in addition to a new reservoir in the Sunrise Flat. These two facilities would service an area whereby livestock could graze for a substantial period of time.

A water hauling program can also be used in Areas 1, 2, and 3, particularly 1 and 2, in conjunction with water developments. More intensive management by moving livestock and controlling the amount of time they spend in any one area within the allotment will provide additional opportunities to meet objectives..

Two fences should be constructed to better control livestock. These fences would be located in the Herd Management Area.

The Highway 361 fence would provide safety for motorists during the winter season of use by eliminating livestock and wild horses on the highway. Approximately 44 miles of fencing would be required to enclose both sides of the highway. Although it would essentially split the Herd Management Area in two halves, this would not have a significant impact on the free-roaming nature of the wild horses. There has been very little movement across the highway. Prior to 1986

this HMA was considered to be two separate herd areas, one north of the highway and one south of the highway.

A second fence should be constructed at the southern end of the allotment. This would separate the Battle Mountain and Carson City Districts and essentially close off the allotment from adjoining allotments. Approximately 12 miles of fence would be required. This would bisect the southern end of the Herd Management Area.

E. APPROPRIATE MANAGEMENT LEVEL - WILD HORSES

Section 603(c) of the Federal Land Policy Management Act tells the Bureau how to manage the lands under wilderness review, in these words;

> "During the period of review of such areas and until such time as Congress has determined otherwise, the Secretary shall continue to manage such lands according to his authority under this Act and other applicable law in a manner so as not to impair the suitability of such areas for preservation as wilderness...." This is known as the nonimpairment mandate.

Importantly, section 603(c) provides a special exception from the nonimpairment mandate for existing mining, grazing, and mineral leasing use - what is called "grandfathered uses" - in these words;

> "... subject, however, to the continuation of existing mining and grazing uses and mineral leasing in a manner and degree in which the same was being conducted on the date of approval of the Act..."

The Secretary is also directed by section 603(c) to "take any action required to prevent unnecessary or undue degradation of the lands and their resources or afford environmental protection." This applies to these grandfathered uses and all other activities.

Wild horses are using the majority of the Gabbs Valley Wilderness Study Area. The 1992 aerial survey estimates that 429 wild horses are located in the area. During the winter season, the animals are spread throughout the area. The horses concentrate in the central portion of the WSA during the spring and summer months. This coincides with the growing season. If current numbers and use levels remain unchecked this may impair the suitability of the area for preservation as wilderness.

Use levels by summers end in the southern portion of the allotment (Blue Link Spring vicinity) are usually heavy. Again this use is being made throughout the growing season. In the long term, this could result in loss habitat for all animals.

The Appropriate Management Level for wild horses within that portion of the Pilot Herd Management Area that occurs within the allotment should be 303 head (3630 AUMs). This will provide a healthy herd, maintain/improve the condition of the habitat, and the area will be in a thriving natural ecological balance. (Refer to Appendix C for calculations)

F. WATER RIGHTS

The Bureau should investigate thoroughly the water rights status of all spring/seeps located within the allotment's boundary. For those waters that currently have no water rights, the Bureau should proceed, where feasible, in obtaining water rights for wildlife and wild horses. For those water sources which have existing water rights that could be used to benefit wildlife and wild horses, an

attempt should be made to acquire these through quit claim deeds.

G. WOODCUTTING AREAS

It is recommended that woodcutting areas be established within the allotment. They should be designed in a manner so that they would create a mosaic of open and wooded areas. This will provide increased edge effect for mule deer and also expand the forage base for all animals.

Fire suppression activities should be limited in the allotment unless there is imminent danger to existing structures/lives or the potential for loss of structures/lives. This will result in habitat forage enhancement.

H. RIPARIAN MONITORING

Utilization and seral stage objectives should be replaced with function-oriented objectives on the key riparian areas. These ten key areas should be evaluated as to whether they are functioning or non-functioning. For example, a functioning riparian site (spring/seep) should not have erosion problems. Vegetation should be in good condition (no hedging, a diverse plant community, vertical structure). The flow of water should not be impeded due to trampling by livestock and/or wild horses.

Photo trend plots should be established to record changes in vegetation. Areas which are not functioning properly due to overuse by livestock and/or wild horses should be fenced, as those areas are so small in relation to the total allotment, that adequate control can be assured only by enclosing the areas. This management action should be applied to all riparian areas found within the allotment that are being adversely affected by livestock and/or wild horses.

I. KEY AREA UTILIZATION LEVELS

The utilization level for Indian ricegrass should be re-established at 60% for the winter use period at the appropriate key areas. Key Area PM-04 will be used in conjunction with the Pilot Summer Pasture. The use level for Indian ricegrass shall be maintained at 50%.

K. ESTABLISHMENT OF NEW KEY AREAS - SUMMER USE PASTURES

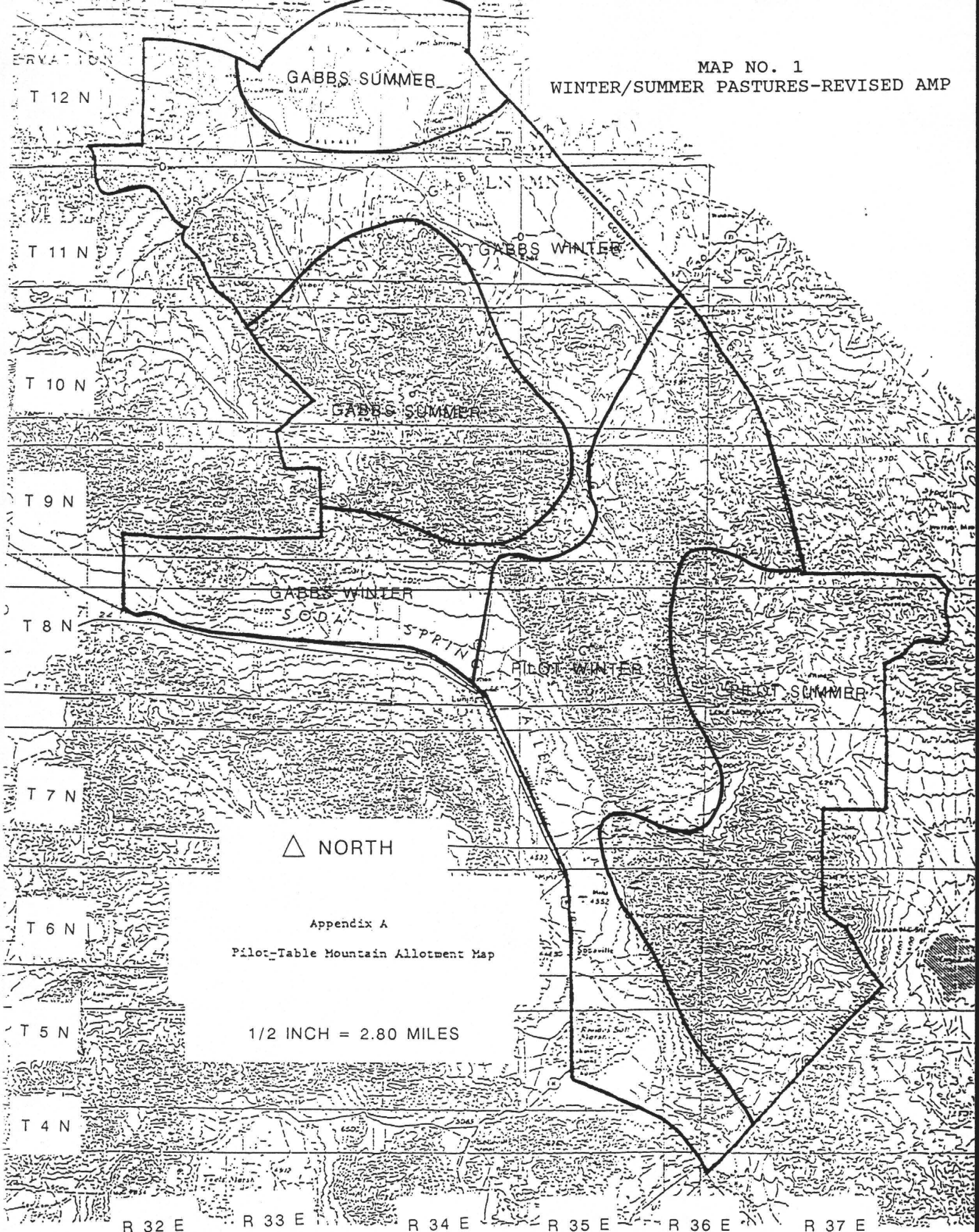
Key areas need to be established within the livestock summer use area with the permittee and other interested parties. These will provide valuable information on condition and trend. Additional photo trend plots will also be established.

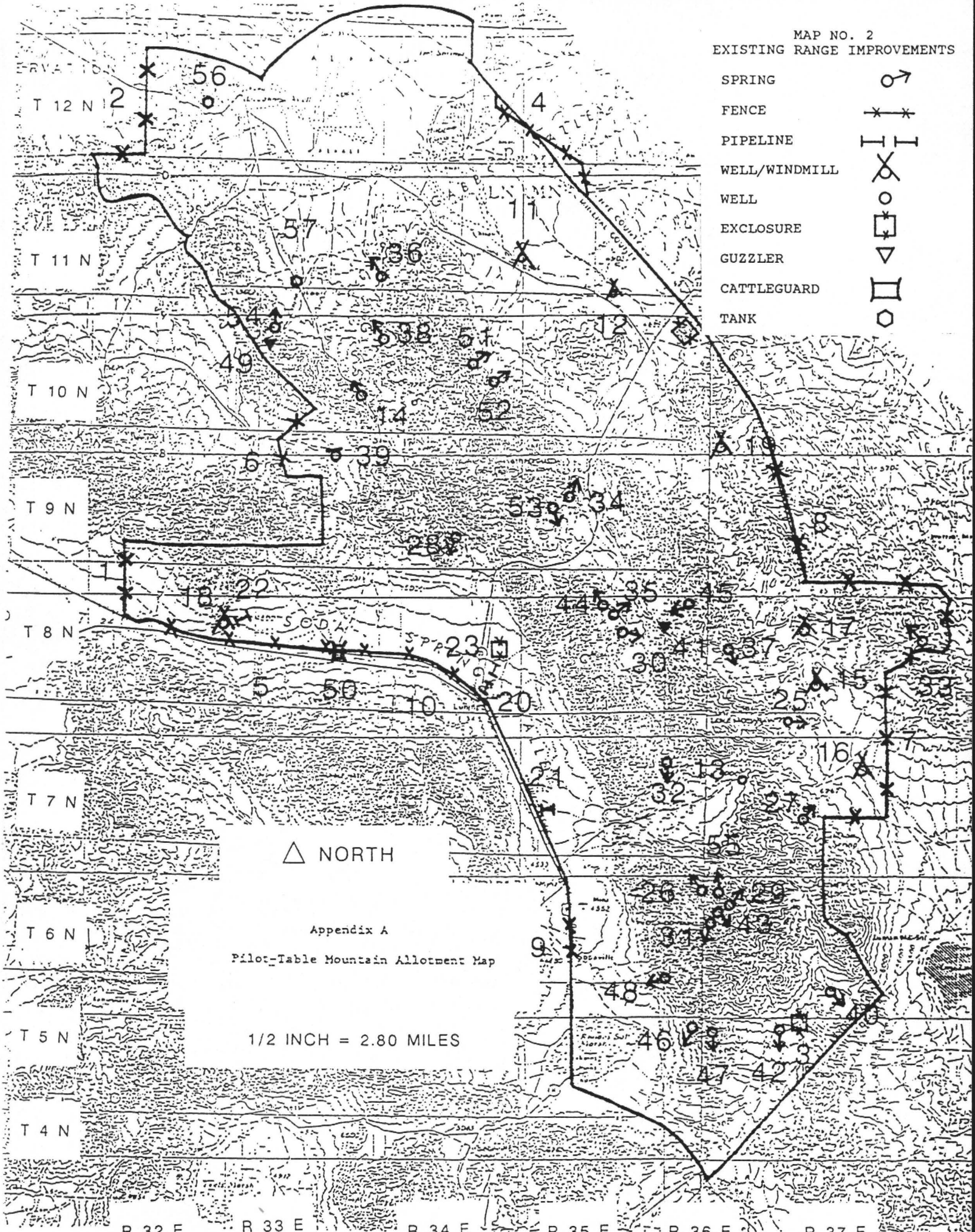
L. ELIMINATION OF KEY SPECIES AT KEY AREA

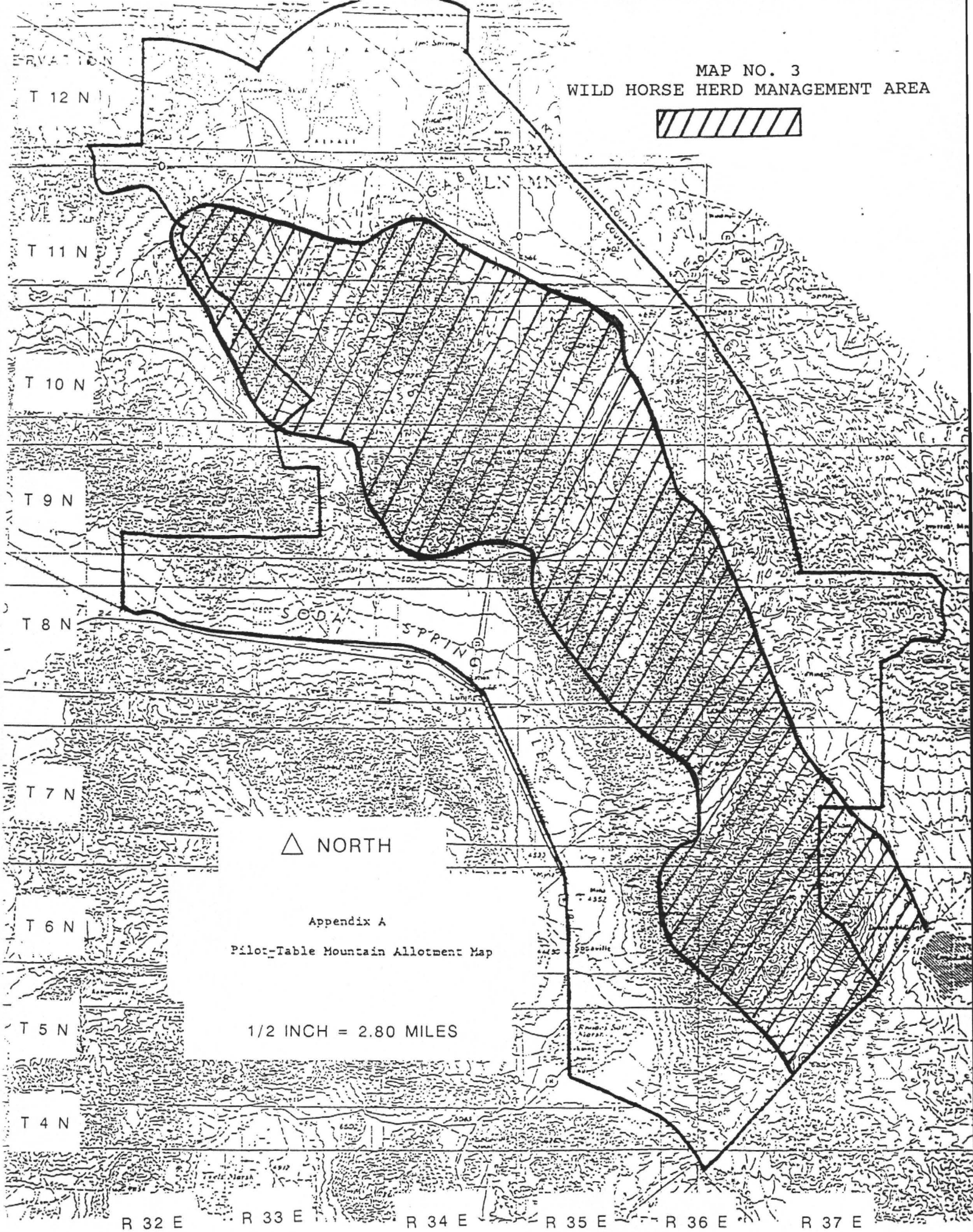
At key area PM-01, the key species are currently Indian ricegrass, Fourwing saltbush, and winterfat. The most current SCS range site description shows that production should be 75% grasses, 5% forbs, and 20% shrubs. Ricegrass should comprise 50-70% of grass production. For the shrubs, saltbush should comprise 10-20% and winterfat should comprise 2-8% of shrub production. It is recommended that since winterfat, at best, is a minute component of the range site that it be dropped as a key species.

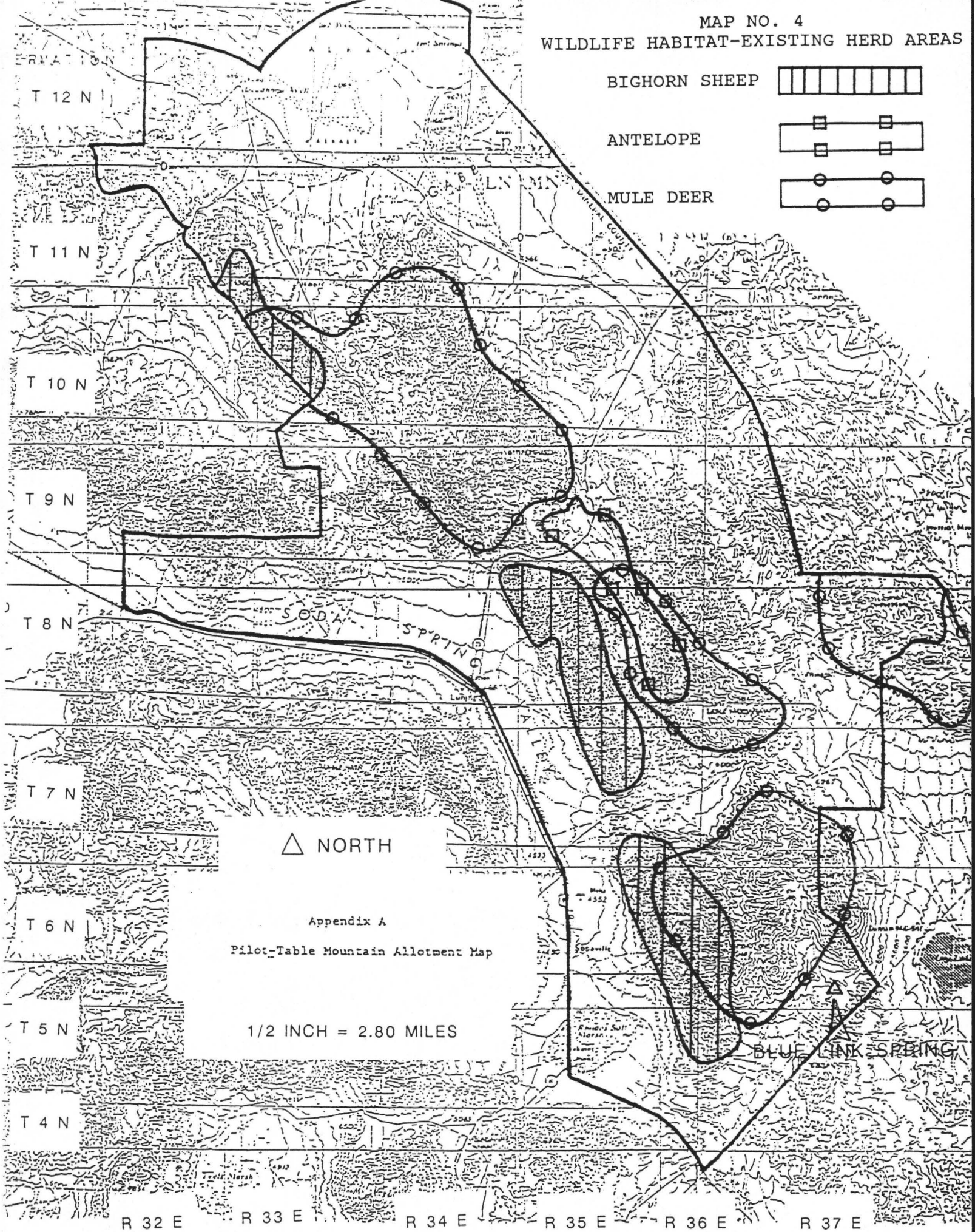
APPENDIX A
PILOT-TABLE MOUNTAIN MAPS

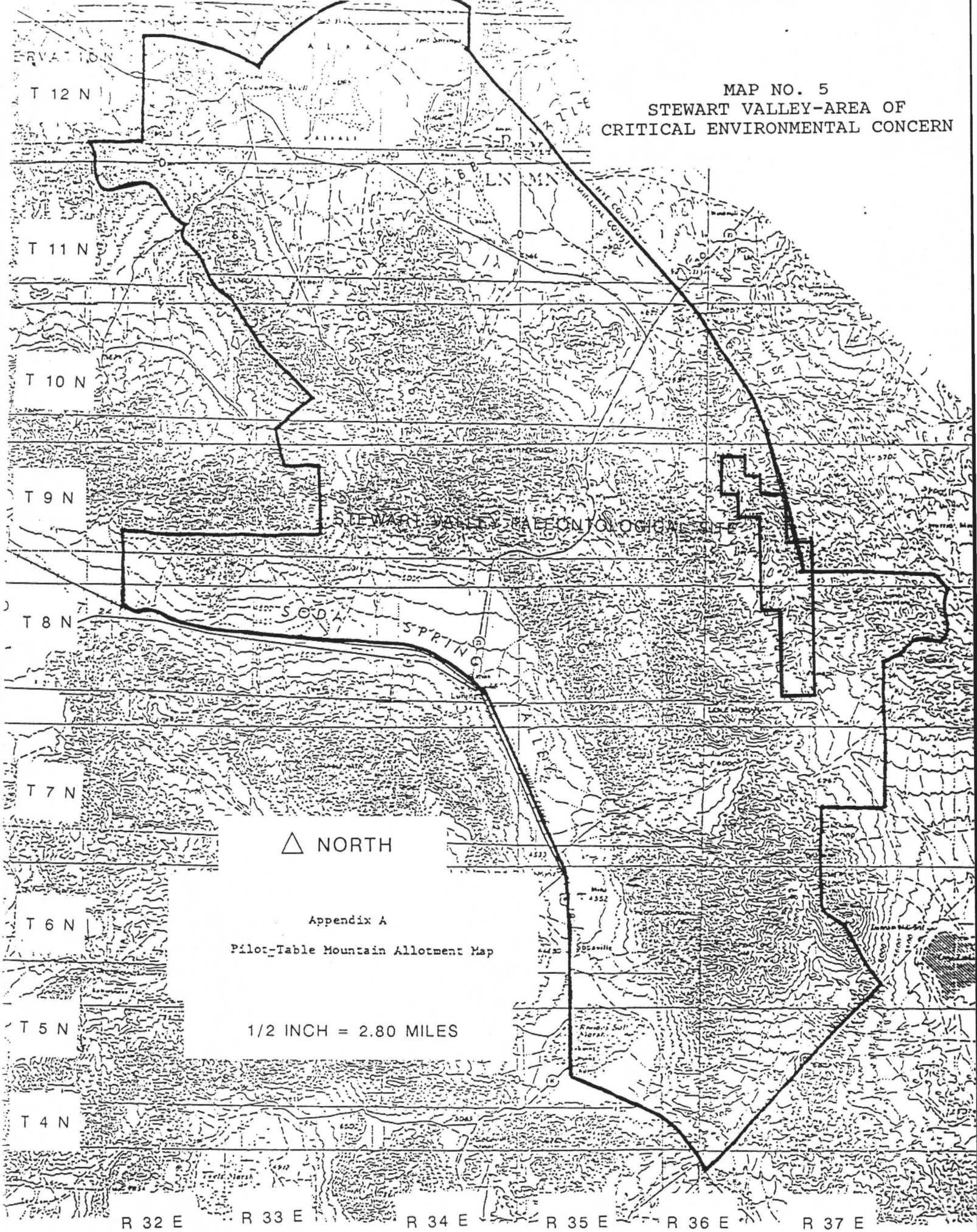
MAP NO. 1	WINTER/SUMMER PASTURES-REVISED AMP
MAP NO. 2	EXISTING RANGE IMPROVEMENTS
MAP NO. 3	WILD HORSE HERD MANAGEMENT AREA
MAP NO. 4	WILDLIFE HABITAT
MAP NO. 5	STEWART VALLEY - ACEC
MAP NO. 6	GABBS VALLEY WILDERNESS STUDY AREA
MAP NO. 7	ORIGINAL PASTURE DELINEATIONS
MAP NO. 8	KEY AREA LOCATIONS
MAP NO. 9	1986-87 LIVESTOCK WINTER USE PATTERN MAPPING
MAP NO. 10	1988-89 LIVESTOCK WINTER USE PATTERN MAPPING
MAP NO. 11	1989-90 LIVESTOCK WINTER USE PATTERN MAPPING
MAP NO. 12	1990-91 LIVESTOCK WINTER USE PATTERN MAPPING
MAP NO. 13	1991-92 LIVESTOCK WINTER USE PATTERN MAPPING
MAP NO. 14	1991 LIVESTOCK SUMMER USE PATTERN MAPPING
MAP NO. 15	1992 LIVESTOCK SUMMER USE PATTERN MAPPING
MAP NO. 16	1991 WILD HORSE USE PATTERN MAPPING
MAP NO. 17	1992 WILD HORSE USE PATTERN MAPPING
MAP NO. 18	PHOTO TREND PLOT LOCATIONS
MAP NO. 19	PROPOSED PASTURE ADJUSTMENTS
MAP NO. 20	PROPOSED IMPROVEMENTS - GENERAL LOCATIONS

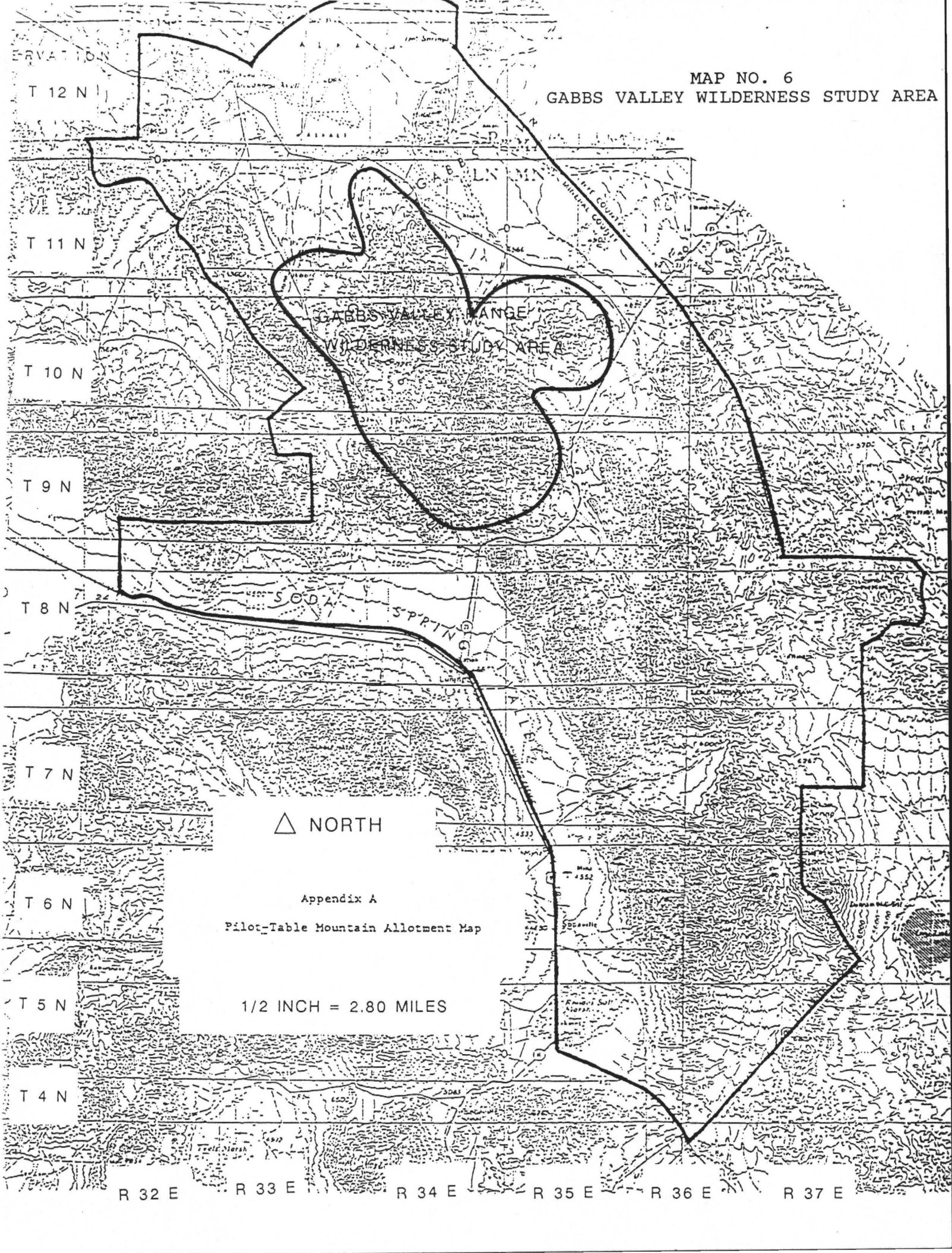

MAP NO. 1
WINTER/SUMMER PASTURES-REVISED AMP
GABBS SUMMER
GABBS WINTER
GABBS SUMMER
GABBS WINTER
SODA SPRING
PILOT WINTER
PILOT SUMMER
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

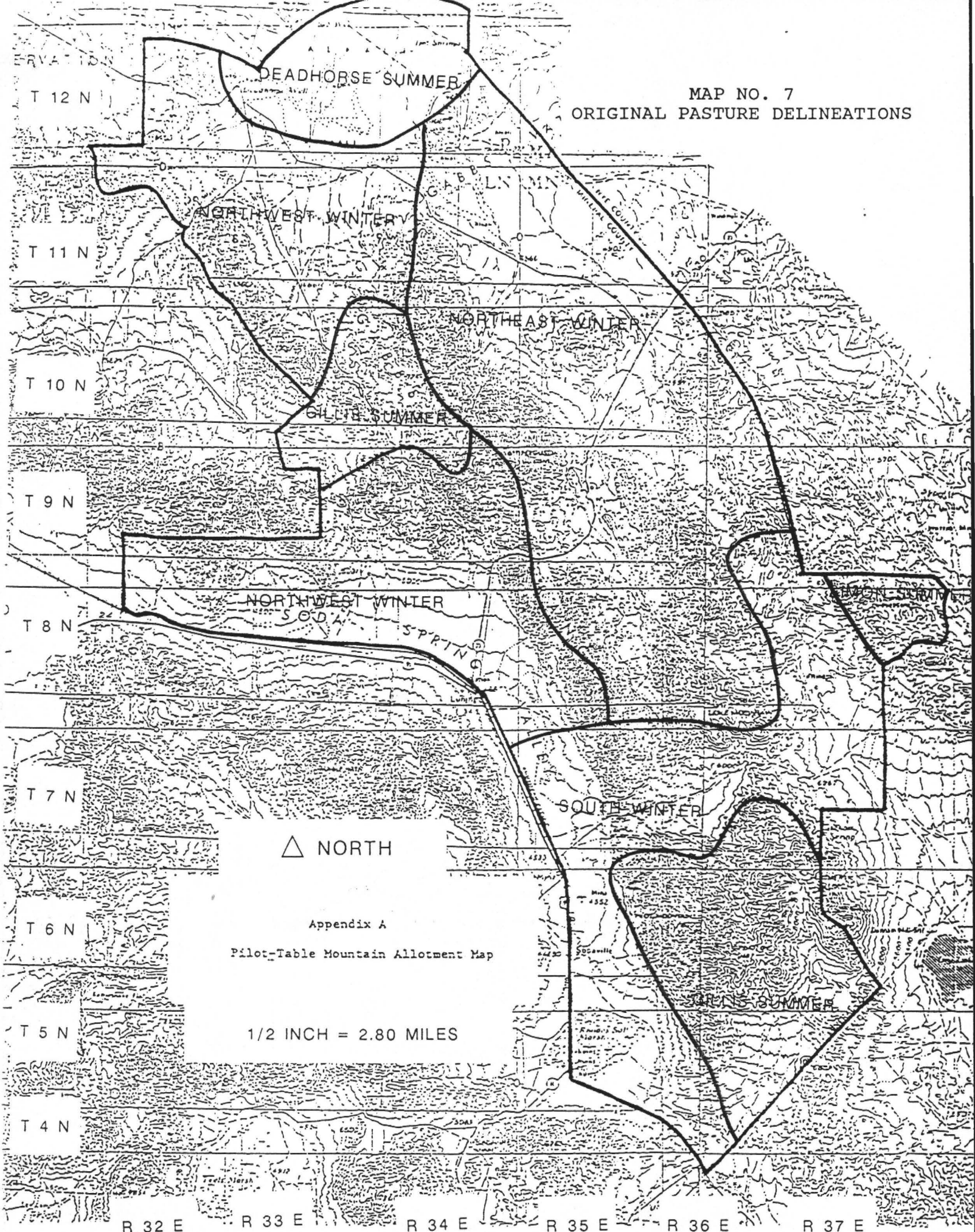

MAP NO. 2
EXISTING RANGE IMPROVEMENTS
SPRING
FENCE
PIPELINE
WELL/WINDMILL
WELL
EXCLOSURE
GUZZLER
CATTLEGUARD
TANK
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

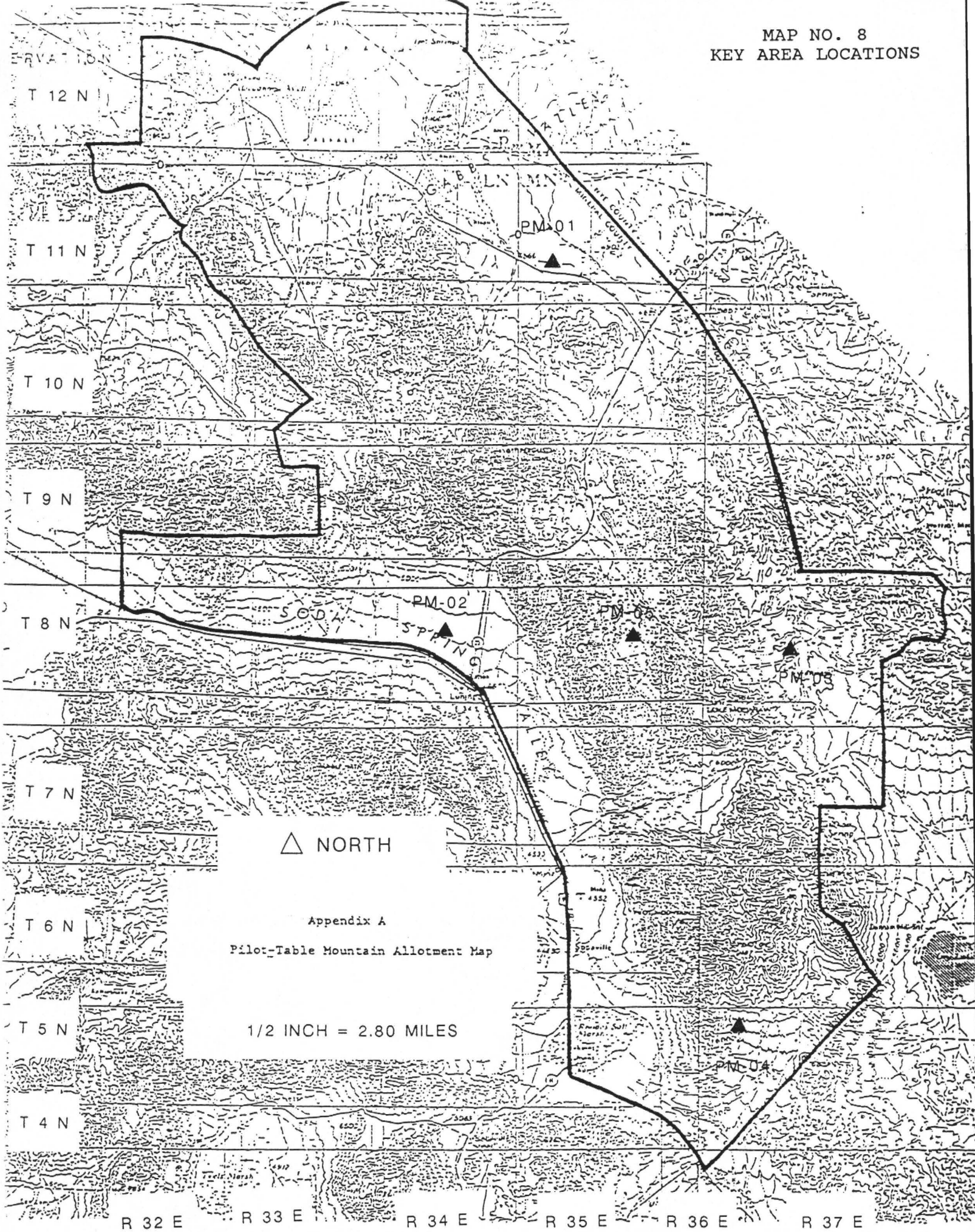

MAP NO. 3
WILD HORSE HERD MANAGEMENT AREA
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
SODA SPRING
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

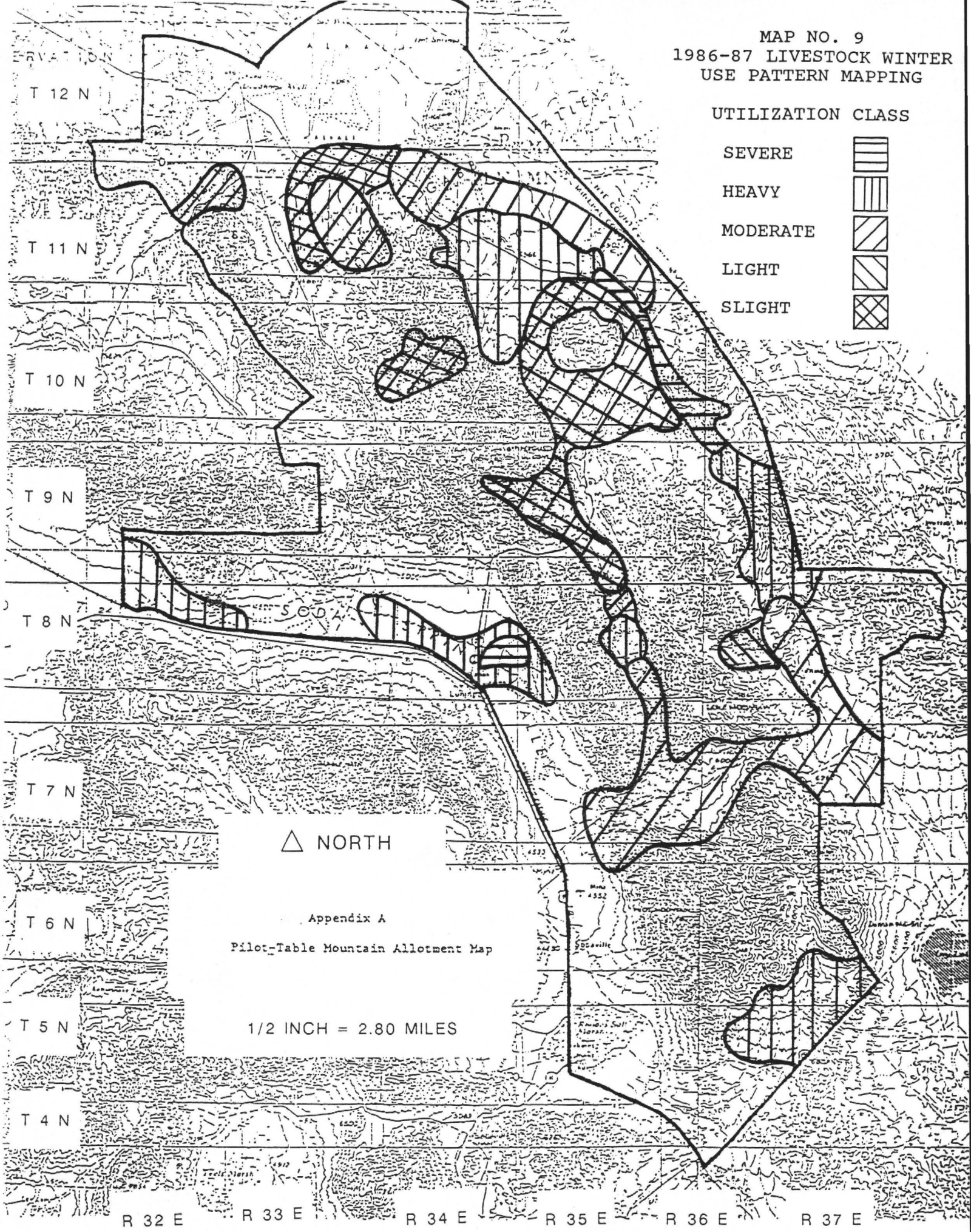

MAP NO. 4
WILDLIFE HABITAT-EXISTING HERD AREAS
BIGHORN SHEEP
ANTELOPE
MULE DEER
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
SODA SPRING
BLUE LINK SPRING
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

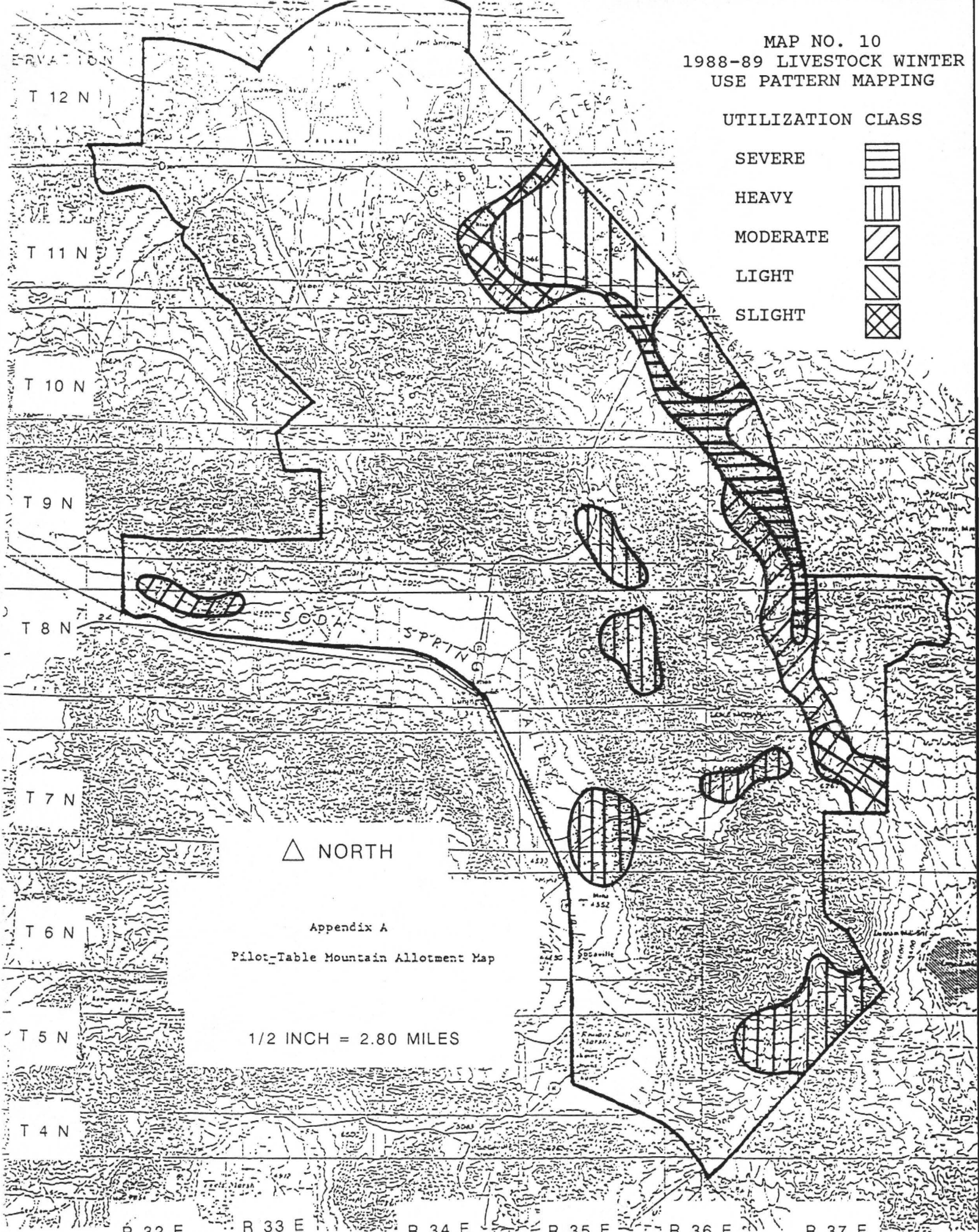

MAP NO. 5
STEWART VALLEY-AREA OF
CRITICAL ENVIRONMENTAL CONCERN
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
STEWART VALLEY PALEONTOLOGICAL SITE
SODA SPRING
△ NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

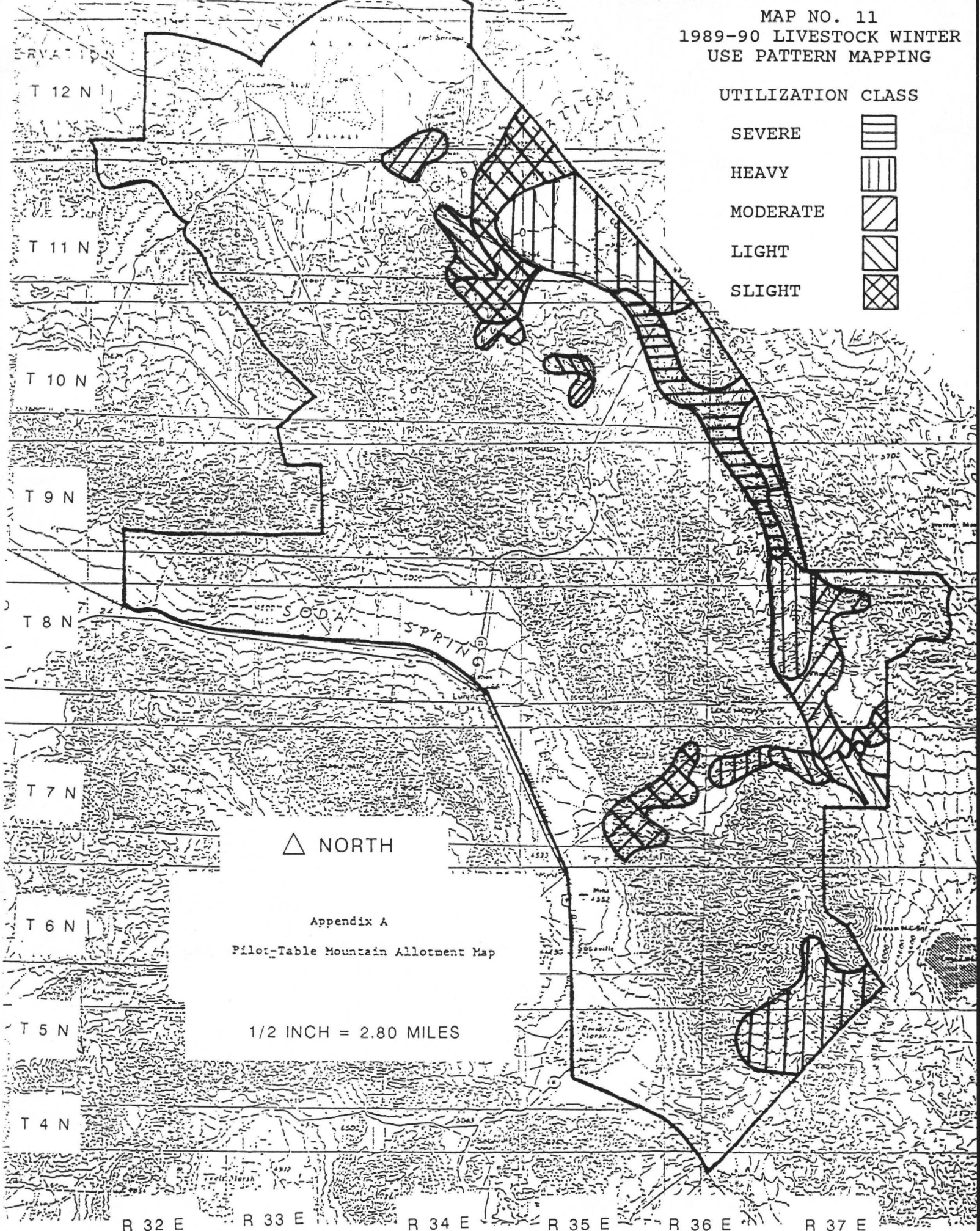

MAP NO. 6
GABBS VALLEY WILDERNESS STUDY AREA
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
GABBS VALLEY RANGE
WILDERNESS STUDY AREA
SODA SPRING
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E

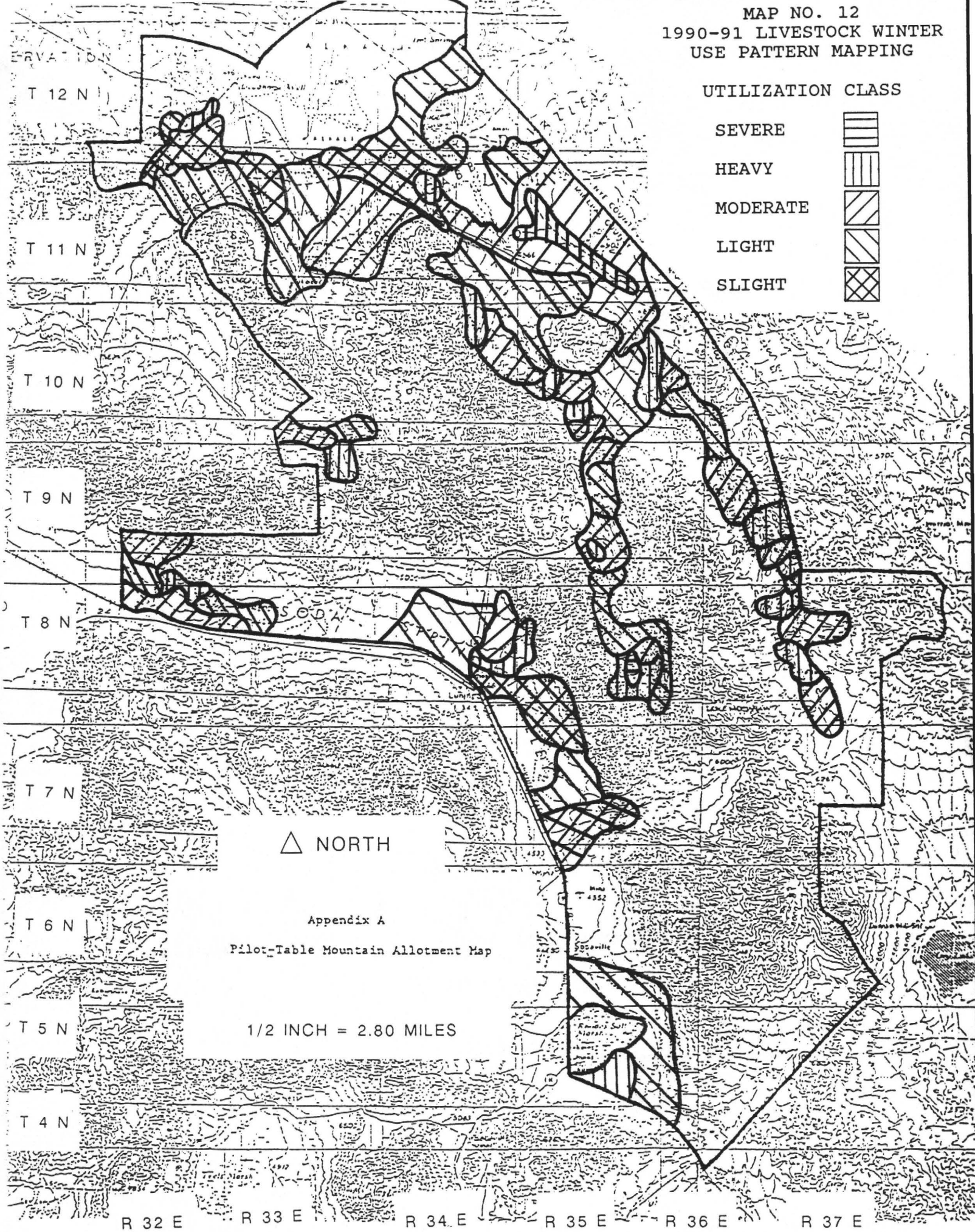

MAP NO. 7
ORIGINAL PASTURE DELINEATIONS
DEADHORSE SUMMER
NORTHWEST WINTER
NORTHEAST WINTER
GILL'S SUMMER
NORTHWEST WINTER
SODA SPRING
SOUTH WINTER
GRENS SUMMER
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
△ NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

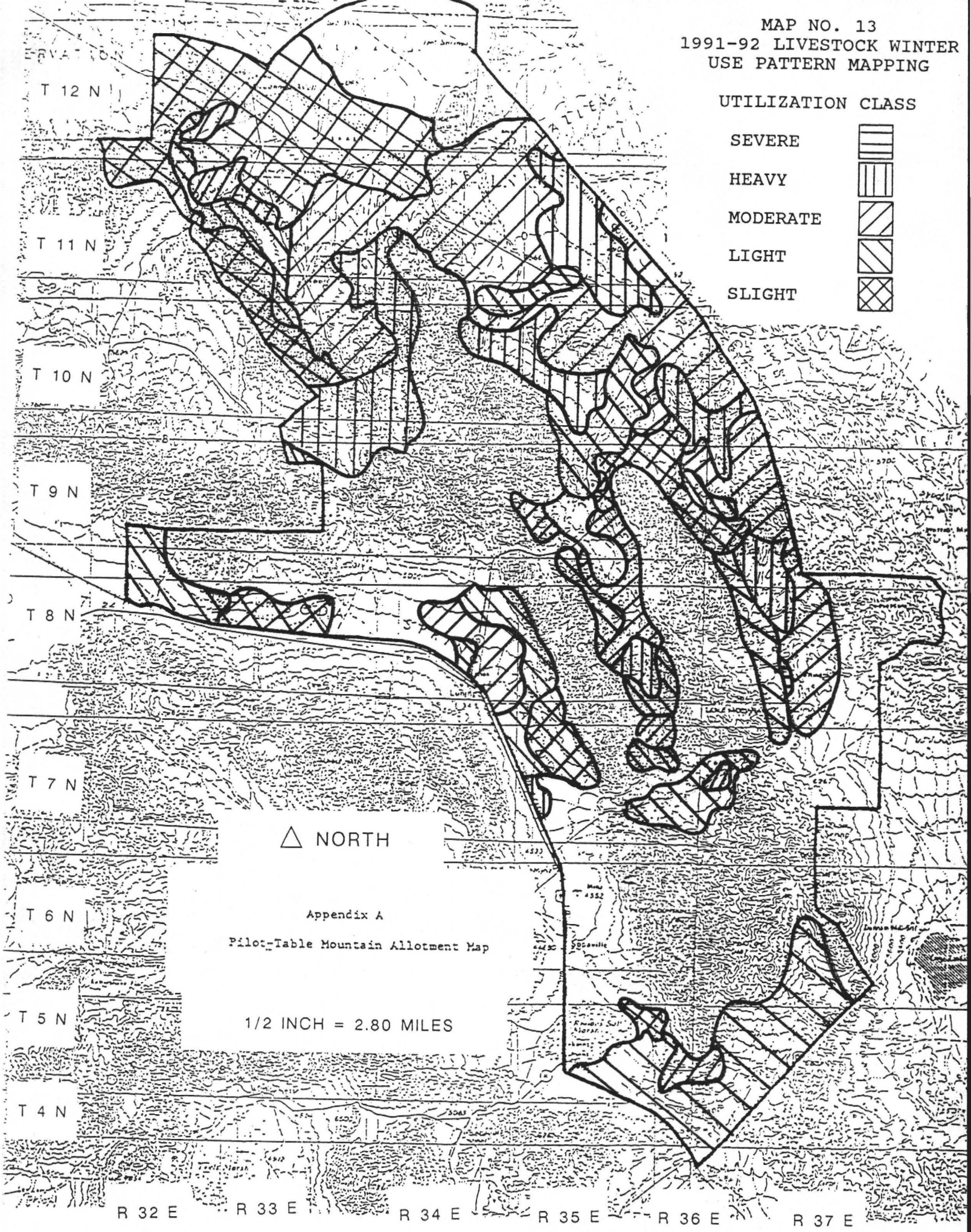

MAP NO. 8
KEY AREA LOCATIONS
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
PM-01
PM-02
PM-03
PM-04
PM-05
SODA SPRING
△ NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

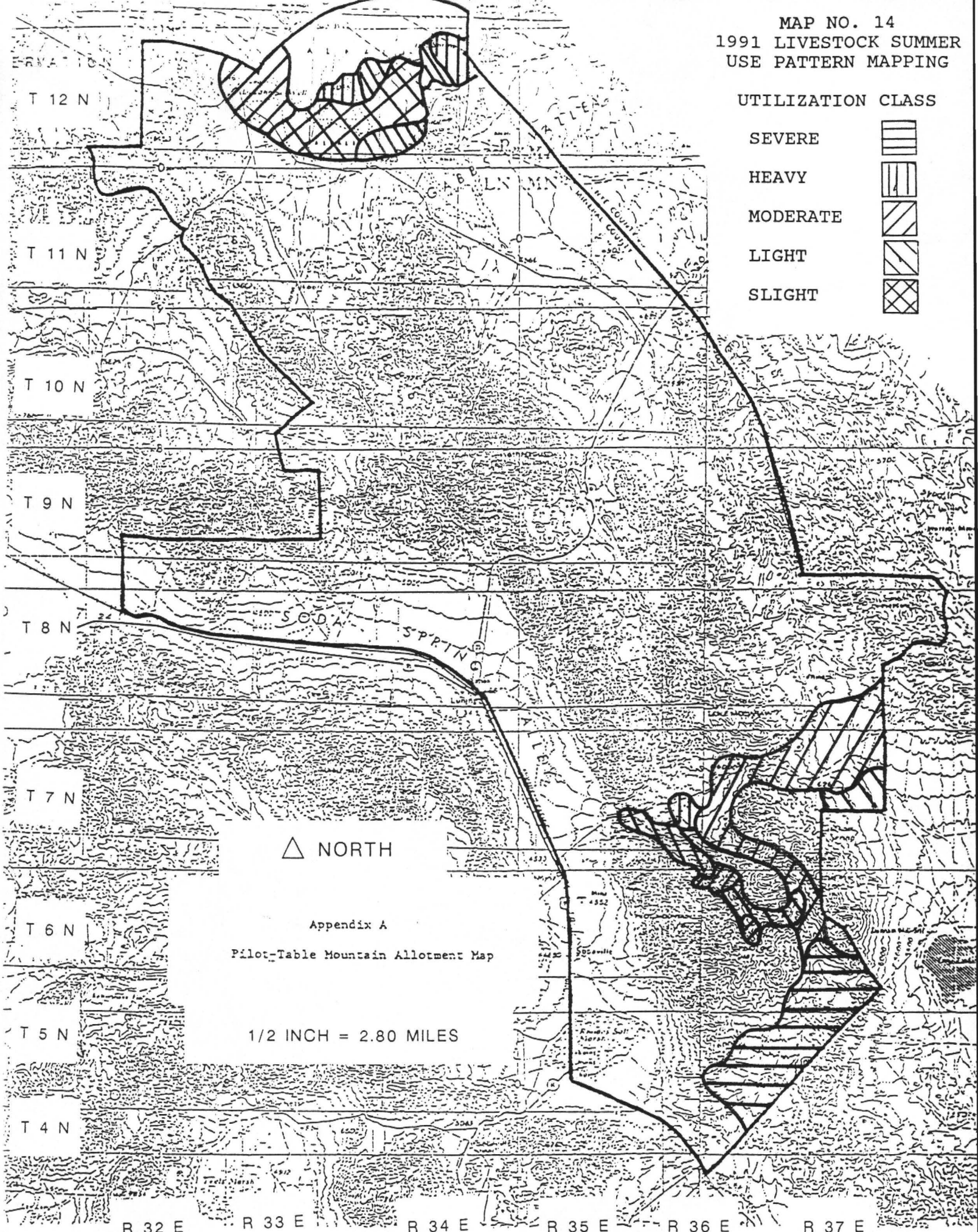

MAP NO. 9
1986-87 LIVESTOCK WINTER
USE PATTERN MAPPING
UTILIZATION CLASS
SEVERE
HEAVY
MODERATE
LIGHT
SLIGHT
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
SODA
△ NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E

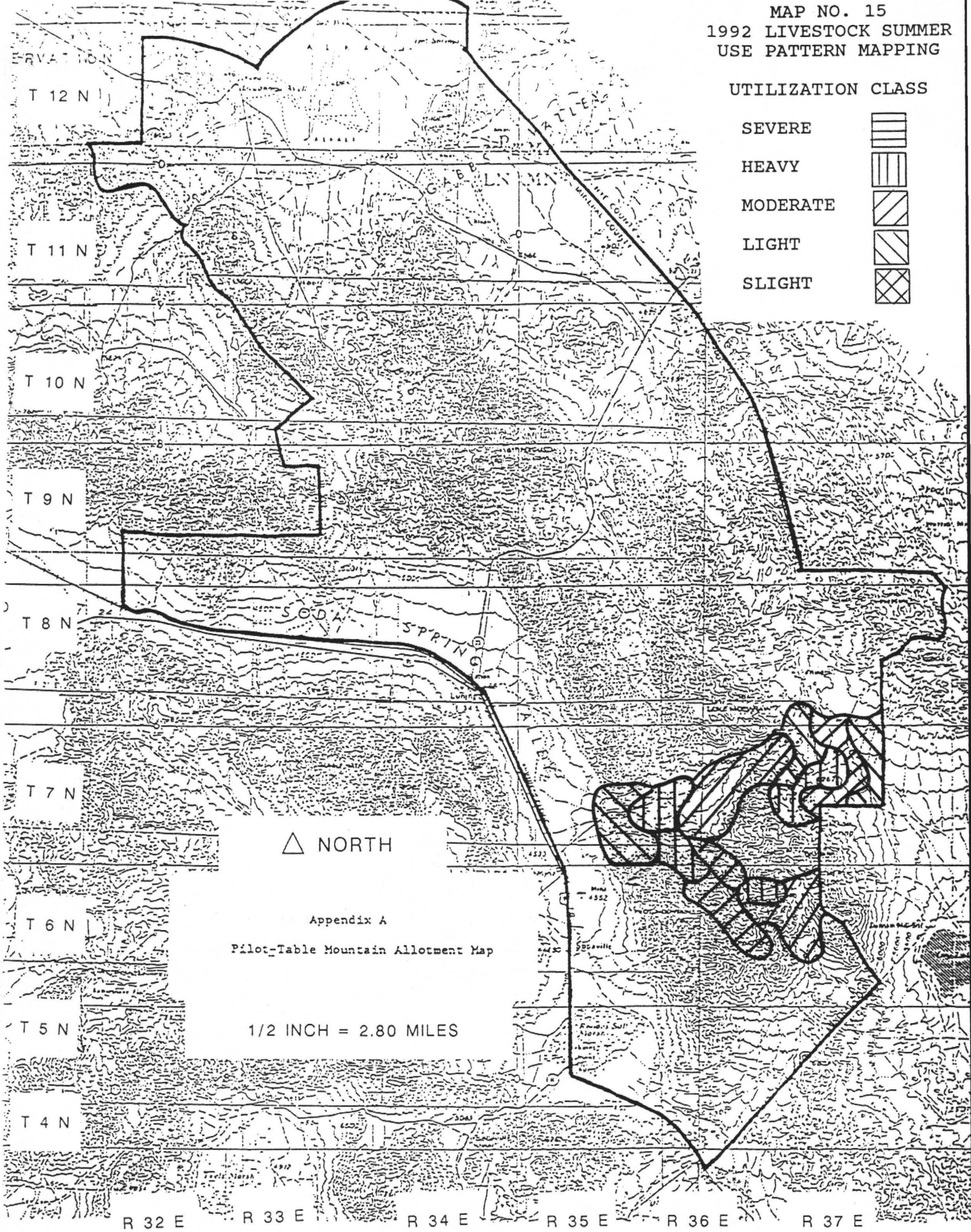

MAP NO. 10
1988-89 LIVESTOCK WINTER
USE PATTERN MAPPING
UTILIZATION CLASS
SEVERE
HEAVY
MODERATE
LIGHT
SLIGHT
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
SODA SPRING
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

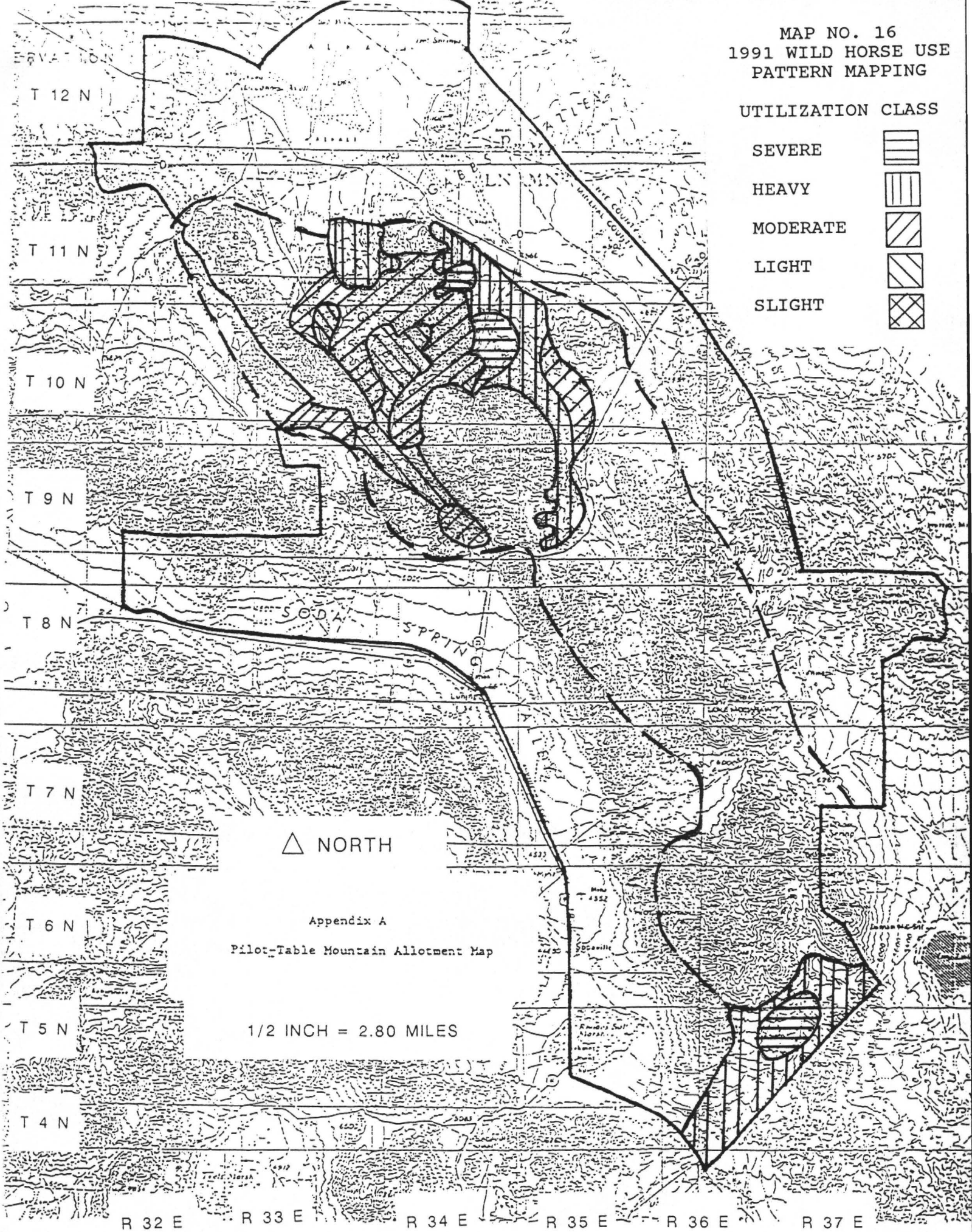

MAP NO. 11
1989-90 LIVESTOCK WINTER
USE PATTERN MAPPING
UTILIZATION CLASS
SEVERE
HEAVY
MODERATE
LIGHT
SLIGHT
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
SODA SPRING
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

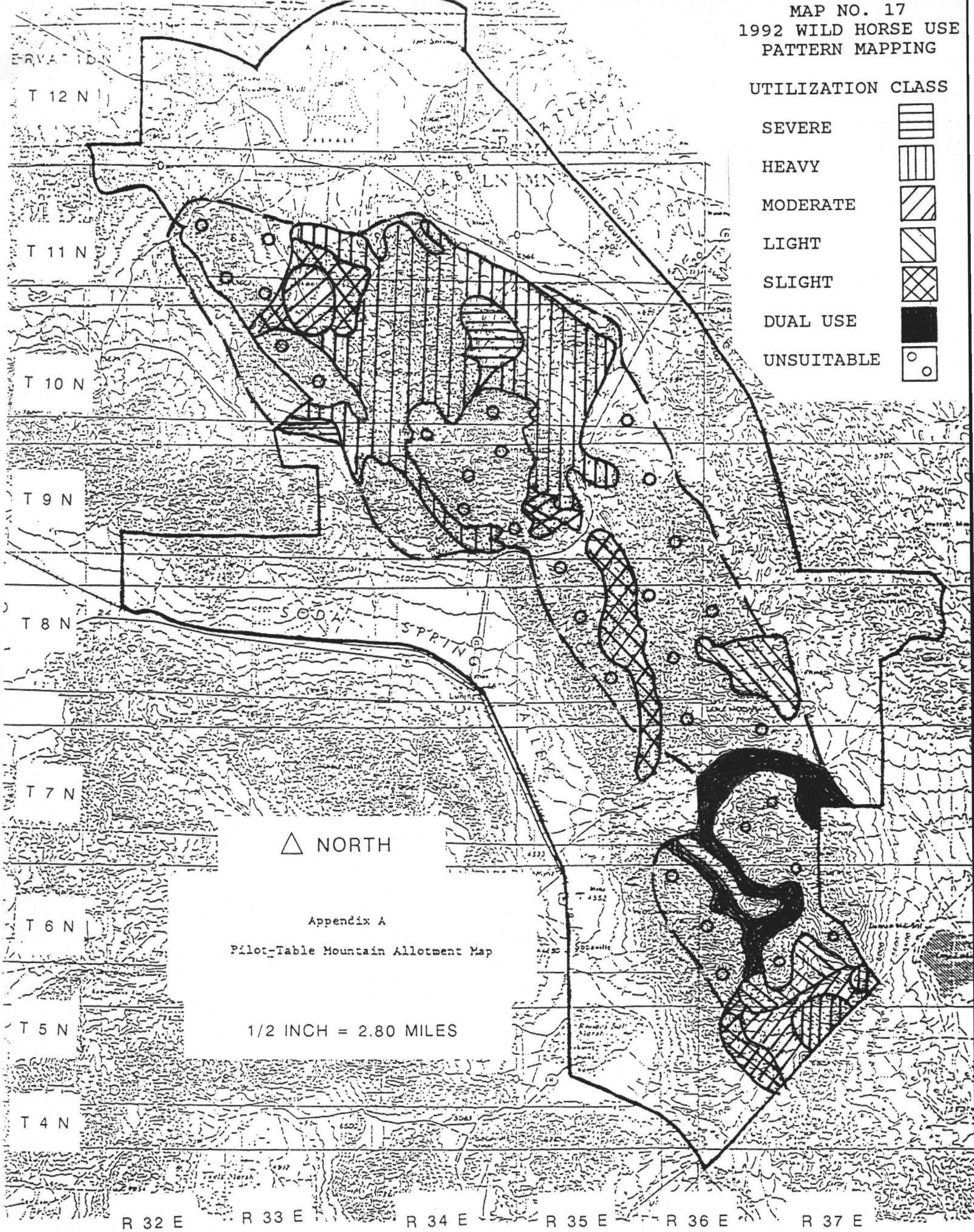

MAP NO. 12
1990-91 LIVESTOCK WINTER
USE PATTERN MAPPING
UTILIZATION CLASS
SEVERE
HEAVY
MODERATE
LIGHT
SLIGHT
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

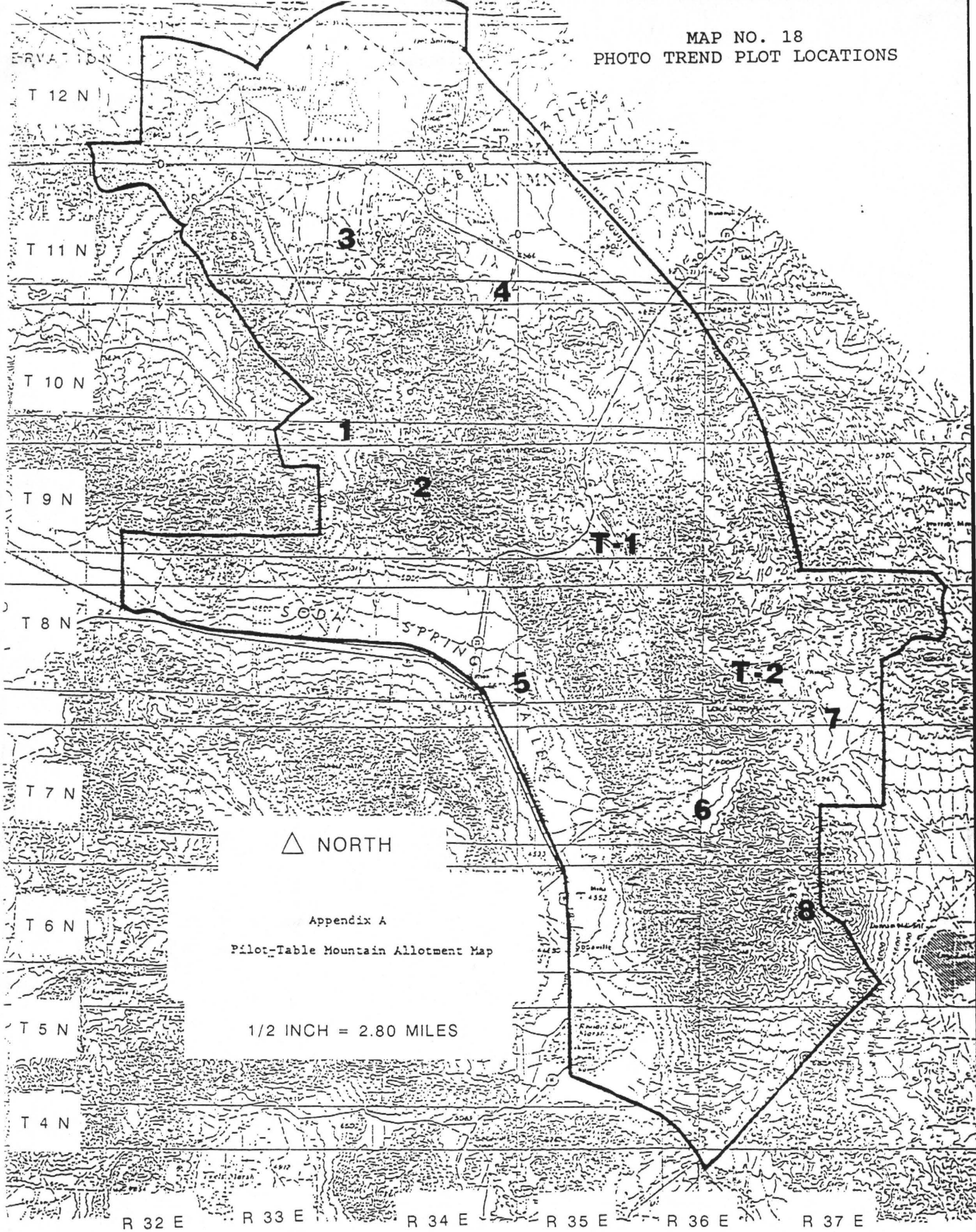

MAP NO. 13
1991-92 LIVESTOCK WINTER
USE PATTERN MAPPING
UTILIZATION CLASS
SEVERE
HEAVY
MODERATE
LIGHT
SLIGHT
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E


MAP NO. 14
1991 LIVESTOCK SUMMER
USE PATTERN MAPPING
UTILIZATION CLASS
SEVERE
HEAVY
MODERATE
LIGHT
SLIGHT
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
SODA SPRING
△ NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

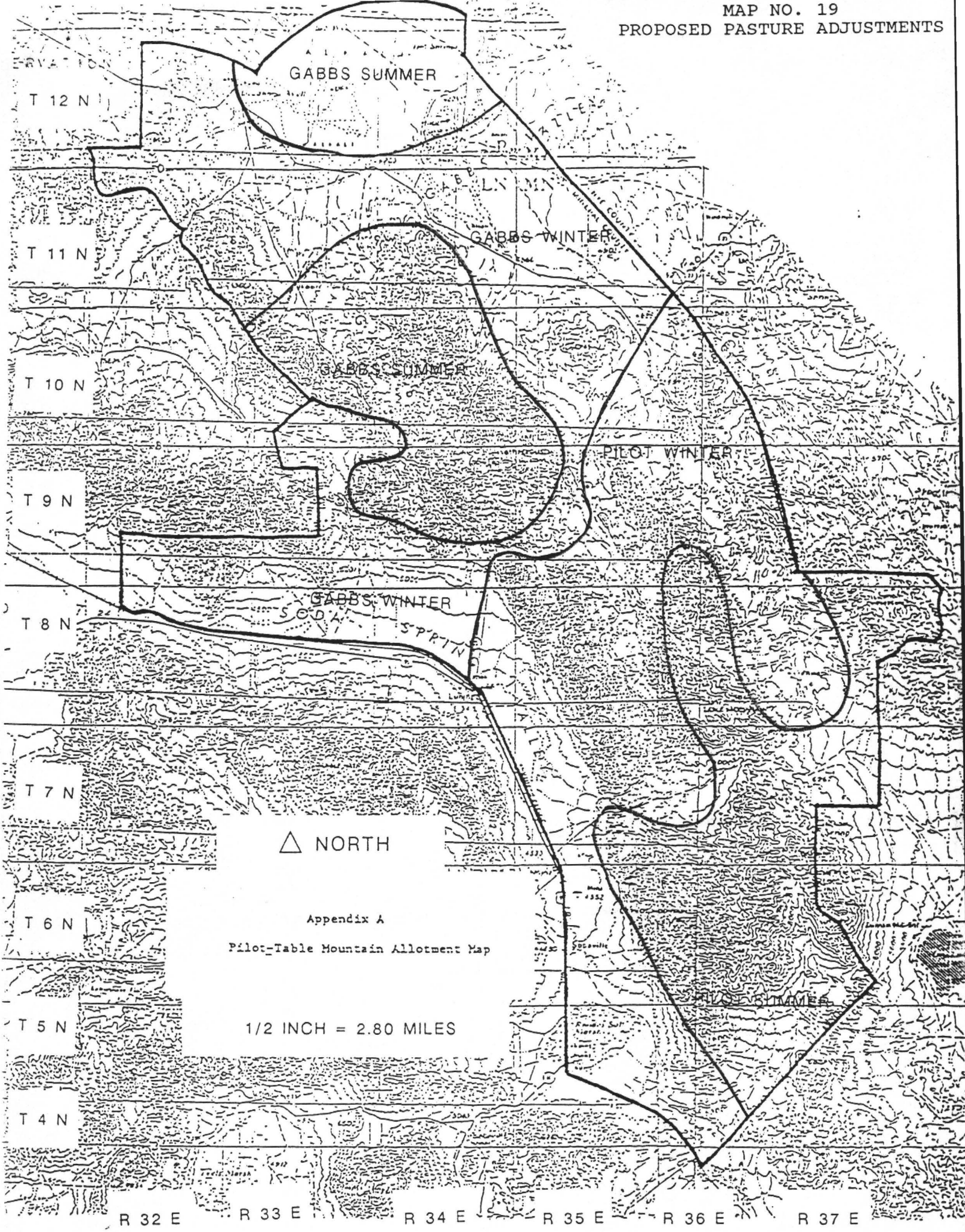

MAP NO. 15
1992 LIVESTOCK SUMMER
USE PATTERN MAPPING
UTILIZATION CLASS
SEVERE
HEAVY
MODERATE
LIGHT
SLIGHT
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
SODA SPRING
△ NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

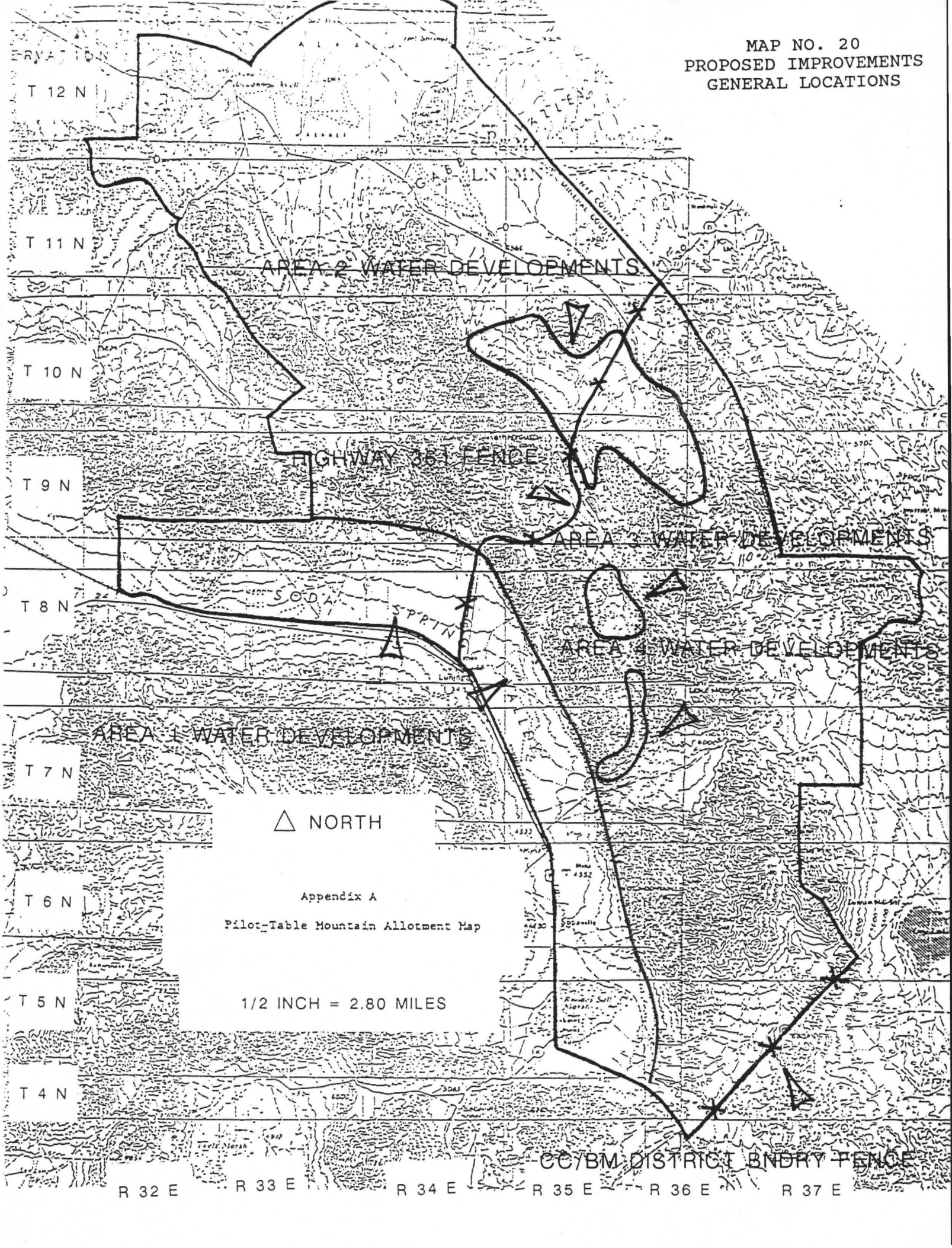

MAP NO. 16
1991 WILD HORSE USE
PATTERN MAPPING
UTILIZATION CLASS
SEVERE
HEAVY
MODERATE
LIGHT
SLIGHT
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
SODA SPRING
△ NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E


MAP NO. 17
1992 WILD HORSE USE
PATTERN MAPPING
UTILIZATION CLASS
SEVERE
HEAVY
MODERATE
LIGHT
SLIGHT
DUAL USE
UNSUITABLE
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
SODA SPRING
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES


MAP NO. 18
PHOTO TREND PLOT LOCATIONS
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E
1
2
3
4
5
6
7
8
T-1
T-2
SODA SPRING
△ NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES

MAP NO. 19
PROPOSED PASTURE ADJUSTMENTS




MAP NO. 20
PROPOSED IMPROVEMENTS
GENERAL LOCATIONS
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
AREA 2 WATER DEVELOPMENTS
HIGHWAY 361 FENCE
AREA 3 WATER DEVELOPMENTS
AREA 1 WATER DEVELOPMENTS
AREA 1 WATER DEVELOPMENTS
NORTH
Appendix A
Pilot-Table Mountain Allotment Map
1/2 INCH = 2.80 MILES
CC/BM DISTRICT BNDRY FENCE
R 32 E
R 33 E
R 34 E
R 35 E
R 36 E
R 37 E

APPENDIX B
PILOT-TABLE MOUNTAIN ALLOTMENT

TABLE 1 EXISTING RANGE IMPROVEMENTS

TABLE 2 RIPARIAN HABITAT LOCATIONS

APPENDIX B
EXISTING RANGE IMPROVEMENTS
PILOT-TABLE MOUNTAIN ALLOTMENT

	NAME	UNITS	MAINT. RESP.
1.	SHEEPS HEAD FENCE	2.6 MI.	PERMITTEE
2.	DEADHORSE WELL FENCE	3.7 MI.	PERMITTEE
3.	SUMMIT SPRING PROTECTION FENCE	1.0 EA.	BLM
4.	NORTH PILOT MOUNTAIN BOUNDARY FNC.	5.0 MI.(2.5)	PERMITTEE
5.	KINKAID HIGHWAY FENCE	7.0 MI.	PERMITTEE
6.	WIN WON FENCE	5.2 MI.(2.6)	PERMITTEE
7.	CEDAR MOUNTAIN FENCE	16.0 MI.(8.0)	PERMITTEE
8.	STEWART FENCE	20.0 MI.(10.0)	PERMITTEE
9.	SODAVILLE-MINA FENCE	3.3 MI.	PERMITTEE
10.	LUNING FENCE	7.0 MI.	PERMITTEE
11.	FINGER ROCK WELL #1	1.0 EA.	PERMITTEE
12.	FINGER ROCK WELL #2	1.0 EA.	PERMITTEE
13.	BETTLES WELL	1.0 EA.	PERMITTEE
14.	GILLIS WELL	1.0 EA.	PERMITTEE
15.	BLACK CABIN WELL	1.0 EA.	PERMITTEE
16.	CEDAR MOUNTAIN WELL	1.0 EA.	PERMITTEE
17.	SIMON WELL	1.0 EA.	PERMITTEE
18.	KINKAID WELL	1.0 EA.	PERMITTEE
19.	FINGER ROCK WELL #3 (RAWHIDE)	1.0 EA.	PERMITTEE
20.	LUNING PIPELINE	1.0 EA.	PERMITTEE
21.	WATERHOLE PIPELINE	.4 MI.	PERMITTEE
22.	KINKAID PIPELINE	.2 MI.	PERMITTEE
23.	LUNING CORRAL	1.0 EA.	PERMITTEE
24.	FINGER ROCK EXCLOSURE	1.0 EA.	PERMITTEE
25.	MUD SPRING	1.0 EA.	PERMITTEE
26.	WARNER CORRAL SPRING	1.0 EA.	PERMITTEE
27.	BLACKJACK SPRING	1.0 EA.	PERMITTEE
28.	BENTON SPRING	1.0 EA.	PERMITTEE
29.	MINERS SPRING	1.0 EA.	PERMITTEE
30.	BUFFINGTON SPRING	1.0 EA.	PERMITTEE
31.	WARLOCK SPRING	1.0 EA.	PERMITTEE
32.	TAFT SPRING	1.0 EA.	PERMITTEE
33.	GRANITE SPRING	1.0 EA.	PERMITTEE
34.	PETRIFIED SPRING	1.0 EA.	PERMITTEE
35.	STONE CABIN SPRING	1.0 EA.	PERMITTEE
36.	POINSETTIA SPRING	1.0 EA.	PERMITTEE
37.	POLE LINE SPRING	1.0 EA.	PERMITTEE
38.	WHISKEY SPRING	1.0 EA.	PERMITTEE
39.	WIN WON CATCHMENT	1.0 EA.	PERMITTEE
40.	BLUE LINK SPRING	1.0 EA.	BLM
41.	SUNRISE FLAT GUZZLER	1.0 EA.	BLM
42.	EAGLE SPRING	1.0 EA.	BLM
43.	APPLE SPRING	1.0 EA.	BLM
44.	YORK SPRING	1.0 EA.	PERMITTEE
45.	DUNBARTON SPRING	1.0 EA.	PERMITTEE
46.	SOLOMON SPRING	1.0 EA.	BLM

APPENDIX B
RIPARIAN HABITATS

NAME	LEGAL DESCRIPTION T	R	SECTION
BENTON	9	34	28
BLACK JACK	7	36	25
BLUE LINK	5	37	5
BUFFINGTON	8	35	10
CORNELIUS	6	36	22
SHEEP (BANK)	9	34	22
UPPER SUMMIT	5	36	1
LOWER SUMMIT	5	36	12
CORRAL (BURNT)	10	34	22
LOWER PETRIFIED	9	35	18
TOM	10	34	14
MITCHELL	6	36	1
LATERAL	9	34	28
SNOW	10	33	20
WHISKEY (TIN CABIN)	6	36	20
UPPER WARNER	6	36	17
WARNER CORRAL	6	36	17
ROSEBUD	10	33	15
UPPER PETRIFIED	9	34	12
MIDDLE	9	34	17
RAMSEY	11	33	36
SOLOMAN	5	36	8
UPPER SOLOMAN	5	36	8
GRAHAM	7	37	32
PURPLE MOUNTAIN	9	34	28
GRANITE	8	37	20
EAGLE	5	36	2
PINE TREE	6	36	7
ROSALINA	6	35	3
POLELINE	8	36	20
MUD	8	36	35
ROADSIDE	6	36	4
MILLSITE	6	36	10
DAVIS	6	36	15
TREE	9	34	28
TROY	5	37	4
GRANITE PEAK	9	34	27
COTTONWOOD	10	33	5
PAINT ROCK	10	34	16
OWL (UPPER BENTON)	6	36	15
RED CLOUD	6	36	15
CINNABAR	6	36	14
TELEPHONE CANYON	6	36	29
MCGREGOR	9	34	2
YELLOW	6	36	10
BIG	6	36	21
BETTY	6	36	25
COPPERS	10	33	20

APPENDIX C
PILOT-TABLE MOUNTAIN ALLOTMENT
APPROPRIATE MANAGEMENT LEVEL CALCULATION
WILD HORSES

APPENDIX C
PILOT-TABLE MOUNTAIN ALLOTMENT
APPROPRIATE MANAGEMENT LEVEL CALCULATIONS
WILD HORSES

Shown below are the series of calculations used to derive the potential number of wild horses in the Pilot Mountain HMA portion of the Pilot-Table Mountain Allotment.

1) **DUAL USE AREA:** The Pilot Pasture summer use (Map 17) was dual use by cattle and horses. Field observation was that 2/3 of the use was made by cattle, 1/3 by horses. Use of this area of 36,942 acres averaged moderate (our desired utilization level). Actual use by cattle was 810 AUMs, with wild horse use approximately 405 AUMs.

2) **UNSUITABLE AREAS:** Some 95,637 acres within the HMA are used only incidentaly by horses. These areas, shown as "Unsuitable" on Map 17, are generally steeper, rockier, more heavily tree covered and/or farther from water than the more favored areas. Although recorded as "No Use" in the utilization study, utilization actually varies from 0 to 5% over this area (which gives a midpoint for calculation purposes of 2.5%). The area averages 67 acres per AUM, for a total production on this "Unsuitable" area of 1427 AUMs. 1427 AUMs * 2.5% use is 36 AUMs. The wild horses, through incidental use of this unfavored area, are consuming about 36 AUMs on it. It should be noted that although neither the horses nor the cattle make appreciable use of this portion of the allotment, both bighorn sheep and deer readily use portions of this area.

3) **PRIMARY USE AREAS:**

A. Wild Horse Actual Use: The 1992 census of 602 wild horses require 12 * 602 = 7224 AUMs of forage.

B. Average Utilization Calculation: Acreages in the Pilot Mountain HMA portion of the Pilot-Table Mountain Allotment are taken from the 1992 use pattern mapping. This use pattern mapping (Map 17) done prior to winter livestock turn-out produced the following data on the balance of the HMA not addressed in sections 1) and 2) above:

D. Potential Stocking Level (AUMs) Calculation: The stocking level (potential actual use) of wild horses necessary to bring the average utilization down to 27.5% is calculated below. The source of this formula is TR 4400-7, Appendix 2, pages 54 - 56.

$$\frac{\text{Actual Use (AUMs)}}{\text{Percent Avg. Util.}} = \frac{\text{Potential Actual Use (AUMs)}}{\text{Percent Desired Avg. Util.}}$$

7224 AUMs Total Actual Use
-405 AUMs (From the "DUAL USE" areas)
- 36 AUMs (From the "UNSUITABLE" areas)
6783 AUMs (consumed in the "PRIMARY USE" areas)

$$\frac{6783 \text{ AUMs}}{59.427\%} = \frac{\text{Potential AUMs}}{27.5\%}$$

Potential AUMs for Wild Horses = 3189 AUMs in this primary use area.

3189 AUMs (In the primary use area)
+405 AUMs (From the Dunlap/Cinnabar area)
36 AUMs (From the "Unsuitable" area)
3630 AUMs (Total AUMs potentially available for horses)

E. Potential Desired Number of Head: The potential stocking level as calculated above for the Pilot Mountain HMA portion of the Pilot-Table Mountain allotment is 3630 AUMs. Since this is for yearlong use, the maximum desired number of head needed to bring the utilization level down to 27.5% is calculated as follows:

$$\frac{3630 \text{ AUMs}}{12 \text{ months}} = 303 \text{ head of horses}$$

STATE OF NEVADA
DEPARTMENT OF WILDLIFE
1100 Valley Road
P.O. Box 10678
Reno, Nevada 89520-0022
(702) 688-1500
Fax (702) 688-1595

BOB MILLER
Governor

WILLIAM A. MOLINI
Director

July 22, 1993

Mr. John M[illegible]thiessen
Walker Resource Area Manager
Bureau of Land Management
1535 Hot Springs Road, Suite 300
Carson City, Nevada 89701

Re: Pilot-Table Mountain Allotment Evaluation

Dear John:

Thank you for consulting the Department of Wildlife concerning the Pilot-Table Mountain Allotment Evaluation. Our agency has a long vested interest in the planning for this allotment within the Mina Habitat Management Area. Livestock and wild horse management objectives and planned actions are essential elements of the Mina Habitat Management Plan. The issues and concerns of our agency are the same as previously presented to the Walker Resource Area during the issuance of the original AMP in 1988, draft AMP and revised AMP in 1990.

Please consider our specific comments for the Multiple Use Decisions to set livestock carrying capacities and appropriate management levels for wild horses.

SPECIFIC COMMENTS

Page 1, Introduction

Land use planning was initiated by the Walker Resource Area Record of Decision in 1986. The Department entered into a cooperative agreement, Mina Habitat Management Plan, in 1988 that set specific management objectives, key management areas and specific monitoring studies consistent with the land use plan. The purpose of this allotment evaluation is to assess management

objectives with monitoring data for multiple use decisions for livestock, wild horses and wildlife. We disagree that this evaluation should analyze how reasonable or attainable land use plan objectives are for this allotment. Changing existing objectives may be subject to a land use plan amendment.

The Pilot-Table Mountain Allotment Evaluation does not determine the adequacy of the land use plan.

Page 3, Key and Crucial Areas

We assume these five riparian zones are among the 12 key riparian sites with specific management objectives found on Table 9 of the Mina Habitat Management Plan.

Page 3, Key and Crucial Areas (Antelope)

Antelope dependence on forbs and winterfat for forage at Sunrise Flat was an issue of stipulation in the Pilot-Table Mountain AMP. Sunrise Flat is a key management area for winterfat with a stipulation that implements a management action to meet 50 percent overall utilization of key forage species.

Page 4, Riparian Habitat

The Mina Habitat Management Plan identifies Snow Spring as key management area.

Page 7, Riparian

Key management areas, key plant species and monitoring studies are established in the Mina Habitat Management Plan.

Page 11, Allotment Specific Objective

Management Objectives of the Mina Habitat Management Plan were not evaluated in this document. Failure to recognize allotment specific objectives, agreed to in a cooperative agreement with the Department, is contrary to the District land use planning.

Page 21, Range Survey Data

Livestock grazing suitability studies were commonly conducted in 1978. Were these studies completed for this allotment?

Page 22, Wildlife Habitat

Current wildlife populations may be indicators of habitat condition, but cannot assess the condition of wildlife habitat. Big game survival and recruitment data are indices of wildlife habitat. Wildlife objectives of the Mina Habitat Management Plan focus upon big game recruitment rates. These data are collected annually by the Department and were provided to the District. Data are available to assess the allotment specific objectives.

Page 23, Conclusions

Authorization of livestock is dependent upon the issuance of a 10-year license. The terms and conditions of grazing permits are dependent upon the allotment management plan. We assume when forage was depleted, or wild horses utilized available forage prior to livestock, that the District issued annual preference statements that enforced the AMP terms and conditions. Please provide us with an example of how the 55 percent utilization rate on key forage was enforced by the District.

Page [illegible], Short Term Objectives

Key riparian management areas, key species and management objectives are found in the Mina Habitat Management Plan. The conclusions are not based upon these specific allotment objectives with established monitoring studies.

Page 30, Long Term Objectives

Declining frequency of key species may be a result of improper season of use for grazing in key areas. Phenological data of the Draft Walker Resource Area Environmental Impact Statements indicate Indian ricegrass is growing during March when livestock are grazing this allotment. Range conservationists of the Carson City District are better defining phenologic requirements of key species to better prescribe proper season of use for livestock. Early grazing of key species on the winter range could be conflicting with forb and winterfat objectives for antelope.

Page 31, Implementation of the Mina Habitat Management Plan

Objectives of this approved activity plan were not assessed in the evaluation. Key forage species on key management areas were not monitored by established studies of the HMP. Failure to monitor the 12 key riparian areas, lends any conclusion or decision arbitrary in regards to wildlife.

Page 32, Blue Link Spring

Blue Link Spring is a refuge for spring fish. Water quality is a key issue and requires monitoring. It would seem reasonable that livestock and wild horse use of this site proposes a pollution problem. Please provide the water quality data and criteria to support your conclusion.

Page 34, Technical Recommendations

Data presented in this evaluation clearly indicate significant problems with livestock grazing on this allotment. Carrying capacities are not computed for livestock, whereas, wild horses are reduced significantly to meet the 55 percent utilization of key species. The adjustment of wild horses to appropriate management levels is based upon the assumption that the current livestock grazing system and stocking rate is meeting all allotment objectives; the conclusion of this evaluation finds this assumption is incorrect. As stipulated in the AMP and stated in this evaluation, the permittee must remove his cattle within 7 days , when monitoring data finds 55 percent utilization is being approached. The District provides no data that this term and condition was enforce or proposes any intention to enforce it.

We suggest that the evaluation address all allotment management objectives. Livestock carrying capacity must be determined with existing use pattern mapping data without weight averaging. Completion of all range improvement projects must be scheduled. Prior to all range improvement projects being completed, the interim livestock grazing system must strictly enforce and meet the utilization limits of the land use plan.

Please consider our concerns and input prior to issuing a manager decision on this matter. Further correspondence should be directed to both our field and regional offices.

Sincerely,

WILLIAM A. MOLINI, DIRECTOR

Roy Leach
Acting Region I Manager
Region I

CC: Habitat, Reno
Craig Mortimore

WHOA
WILD HORSE ORGANIZED ASSISTANCE
P.O. BOX 555
RENO, NEVADA 89504

. . . a note from

Dawn Y. Lappin

July 26, 1993

Mr. John Matthiessen, Area Manager
Walker Resource Area
BLM-Carson City District Office
1535 Hot Springs Road, Ste. 300
Carson City, Nevada 89701

Dear Mr. Matthiessen,

Thank you for the opportunity to review and comment on the allotment evaluations for the Cedar Mountain, Gillis, and Pilot-Table Mountain Allotment Evaluations.

We are confused as to the procedure to follow in these allotment evaluations. You request response to these documents by July 26, 1993, however, the Pilot-Table Mountain Evaluation was issued as a "draft" evaluation and for Gillis and Cedar Mountain Allotments they are not sent as draft documents. They are issued inconsistent with each other. Please explain how the three evaluations will be further evaluated. Are all of these drafts and a final will be issued, or is one a draft and the others are finals? Since it is not explained, please provide the appropriate information.

In general from all allotments evaluated, we feel that appropriate management levels have been erroneously set. The mandate of the IBLA ruling is that the BLM is to do the monitoring, evaluate that data, remove the offending horses if it is determined they are causing resource damage, and set management levels in a multiple use concept that will protect the habitat as well as keep the horses in a thriving natural ecological balance. By determining that according to the percentage of acreage an allotment is to the herd area, you have allocated your AML's.

You must first, evaluate the individual allotment, determining exact carrying capacity for livestock and wild horses using use pattern mapping, census, and distribution information, and then set your AML. After determining that allotment specific AML, you need to then evaluate other individual allotments within the HMA boundaries. After setting AML on all of the individual allotments, the total of all the AMLs will determine the AML for the HMA. Also this will dictate that the total AML for the HMA must be considered whenever a removal is considered taking into consideration movement of horses within the HMA. This would prohibit the removal of

animals just because seasonally they have moved from one allotment to another during seasonal movement. You have not allowed for any movement within these allotments. In your final, please evaluate the distribution of animals and state that you will allow for their movement within their HMA without the threat of removal. Wild horses cannot be allocated percentages of their HMA to strictly be adhered to as livestock would be issued use on a pasture by pasture basis. As an example, you have provided for "AUMs of forage for wild horses which is the prorated demand based on an estimate of 90% of the herd management area in the allotment." How have you determined that 90% of the herd use this area of the HMA specifically and never move?

Pilot-Table Mountain Allotment Draft Evaluation

The data presented in this evaluation clearly indicates significant problems with livestock grazing. Carrying capacities are not computed for livestock, However, wild horses are reduced significantly to meet the 55% utilization of key species. The adjustment of wild horses to appropriate management levels is based upon the assumption that the current livestock grazing system and stocking rate is meeting all allotment objectives, the conclusion of this evaluation finds this assumption is incorrect. As stipulated in the AMP and stated in this evaluation, the permittee must remove his cattle within 7 days, when monitoring data finds 55% utilization is being approached. You provide no data that this term and condition was enforced or proposes any intention to enforce it.

Why is it that your document has identified that in order to meet Land Use Plan Objectives, changes in existing management were and are necessary. You have identified that livestock stocking and management is not working, however, livestock is not changing and horses are to be reduced.

You have identified that water is a limiting factor and that you recommended in your RMP (1984), Management Decisions Summary(1986), Mina HMP(1988), RPS(1989), and revised AMP(1990), that long term objectives were to "develop seven (7) water sources for wild horses and burros." Even in the technical recommendations of this document we see that water developments are recommended. This goes back to initially 1984, when and where do you proposed to do these development and will they ever be done or will they stay as permanent recommendations and never be accomplished?

You have also recommended completing an HMAP. Has that been initiated and when can we expect completion? You have a HMAP but are not following those terms.

You are also proposing a 44 mile fence project and a 12 mile fence project bisecting the HMA at least three times. How can you maintain the free roaming behavior of the horses with all of this fencing?

In conclusion, we recommend that the final evaluation, (since this was issued as a draft evaluation), evaluate all allotment management objectives. Livestock carrying capacity must be determined with existing use pattern mapping data without weight averaging. Completion of all range improvement projects must be scheduled. Prior to all range improvement projects being completed, the interim livestock grazing system must be strictly enforced and meet the utilization limits established in the land use plan.

Gillis Mountain Allotment Evaluation

43 CFR 4710.4 states that "management of wild horses and burros shall be undertaken with the objectives of limiting the animals to herd areas." How can horses utilize their entire area when there is no water. The incidental horse use on the Gillis Mountain Allotment appears to be from snowmelt and at other times of the year they are forced from this area of the HMA. It would be the mandate of the BLM to provide waters in this area that would allow for usage of the entire HMA by wild horses and also help with better distribution of the herd.

This evaluation points out the errors of the District in adhering to the land use plan. Your District has changed the kind and season of use on this allotment contrary to the land use plan and without appropriate documentation. We suggest that you address this and also consider amending the LUP.

Cedar Mountain Allotment Evaluation

According to your documentation, you state that horse use is heavy and severe in this allotment at that the AUL has already been exceeded by horse use. How then, could you authorize livestock use on an area that is already overutilized by horses prior to establishing and obtaining AML? You are authorizing livestock use without available AUM's and exceeding carrying capacity which is a violation of BLM policy and law.

We understand that the Tipton's have shown to be responsible permittees and have done well in others areas that they lease. However, the AUM's had previously been retired for livestock and it is our understanding that AUM's cannot be retired unless specifically identified in the Land Use Plan. We recommend an amendment to the LUP for activation of these retired AUM's.

It is also our understanding that you have changed the season of use from winter to year round without reference to an EA. We would recommend completion of an EA as soon as practical to analyze the consequences of changing that season of use. The EA should have been completed prior to the change.

Conclusion

We are not arguing that wild horses have caused damage in some areas, and that management of wild horse and burro populations requires removal at times to achieve AML. However, these documents

seem to have been completed with the main intent of removing horses to meet allotment specific objectives without any reductions to livestock. The math has been worked to accomplish those goals.

Please consider our comments and concerns prior to issuing a final or Multiple Use Decision. We look forward to reviewing those documents when issued. If you have any questions, please feel free to call.

Sincerely,

DAWN Y. LAPPIN
Director

7/26/93

BOB MILLER
Governor

STATE OF NEVADA

CATHERINE BARCOMB
Executive Director

COMMISSION FOR THE PRESERVATION OF WILD HORSES
Stewart Facility
Capitol Complex
Carson City, Nevada 89710
(702) 687-5589

July 26, 1993

Mr. John Matthiessen, Area Manager
Walker Resource Area
BLM-Carson City District Office
1535 Hot Springs Road, Ste. 300
Carson City, Nevada 89701

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