



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

ELY DISTRICT OFFICE

Star Route 5, Box 1

Ely, Nevada, 89301



8/22/89

IN REPLY REFER TO
4400
(NV-046)

AUG 22 1989

Dear Participant:

We appreciate your interest in being involved in the consultation process and enclosed for your information and review is the Chin Creek Allotment Monitoring Evaluation. This is your opportunity again to provide allotment specific information and also to provide comments to the evaluation. We would appreciate receiving your information and/or comments by September 25, 1989, to allow adequate time to review all input and to adhere to our deadlines. All of the information received will be evaluated and considered in the final portion of the evaluation which is the selection of a management action.

We appreciate your participation and solicit your continued involvement in the consultation process.

Sincerely,

Gerald M. Smith, Manager
Schell Resource Area

1 Enclosure

1. Chin Creek Evaluation (57 pp)

ALLOTMENT EVALUATION SUMMARY

I. INTRODUCTION

- A. Allotment Name and Number. Chin Creek 10104 (see Map 1)
- B. Permittee. Reed Robison
- C. Evaluation Period. 1980 to 1988
- D. Selective Management Category and Priority. Improve, High

II. INITIAL STOCKING LEVEL

A. Livestock Use

- 1. Land Use Plan Objective (AUMs)
 - a. Total Preference 13,245
 - b. Suspended 130
 - c. Active 13,115
 - d. Temporary Non Renewable 0
- 2. Season of Use - Yearlong, 3/01 - 2/28
- 3. Kind and Class of Livestock - Sheep and Cattle
- 4. Percent Federal Range/Exchange of Use - 100%/None

B. Wild Horse and Burro Use

- 1. Appropriate Management Level - 1,698 AUMs.
The AML figure was establish for administration convenience as an initial stocking level, the Bureau is actually managing for a thriving natural ecological balance in implementing the land use plan through monitoring evaluation data.
- 2. Herd Use Area - The entire allotment is within the Antelope Herd Management Area.

141.5
horses

C. Wildlife Use (see Map 2)

- 1. Mule Deer
 - a. Reasonable Numbers - 1,143 AUMs
 - b. Key/Crucial Areas - None identified
- 2. Pronghorn Antelope
 - a. Reasonable Numbers - 394 AUMs
 - b. Key/Crucial Areas:
 - PAW-1 (Chin Creek) 7,945 acres
 - PAW-2 (Ayarbe Spring) 20,910 acres
 - AKG (Chin Creek) 2,465 acres
- 3. Sage Grouse - One active strutting ground on the allotment and three active strutting grounds within two miles of the allotment.
- 4. Ferruginous Hawks - 13 occupied nests on or adjacent to the allotment and 11 unoccupied nests on or adjacent to the allotment.

152
12
304
1520
1824

5. Threatened and Endangered Species - Bald eagles and peregrine falcons may be found on the allotment any time of the year, but no special use areas have been identified.

III. ALLOTMENT PROFILE

A. Description

The Chin Creek Allotment is located approximately 40 miles northeast of Ely, Nevada in White Pine County. It includes part of the Schell Creek, Antelope, and Black Hills Mountain Ranges. The Antelope Mountains divide Spring Valley from Antelope Valley forming two natural use areas.

The allotment has three pastures. The west pasture encompasses the portion in Spring Valley. Antelope Valley has a division fence forming the north and south pastures.

For the last ten years the permittee has only sporadically activated a few sheep AUMs and has activated cattle AUMs up to a maximum of 58% of preference. He has only grazed the eastern portion of the allotment. This is due to a lack of needed management facilities, competition for forage with wild horses, and loss of forage due to pinyon/juniper expansion on the west side. The permittee has reduced active use to compensate for reducing his area of use and competition with wild horses for available forage throughout the allotment.

Since 1980 several range improvement projects have been constructed and a deferred/rotation grazing system has been initiated on the allotment. The range improvement projects have not fully achieved their intended objectives. The above items have and will significantly affect conditions and management practices for the area (see Map 3).

There are no pending or anticipated land or mineral actions that would affect the allotment in the foreseeable future.

B. Acreage/AUMs (Livestock)

1. Allotment Total	Acres	AUMs
	148,497	13,115
2. Pastures: West (Spring Valley)	45,697	3,534
North (Antelope Valley)	50,379	4,521
South (Antelope Valley)	52,421	5,060

C. Allotment Specific Objectives

1. Land Use Plan/Rangeland Program Summary Objectives
 - a. Livestock

- (1) The Short Term objective will be accomplished through managing the allowable use level by season of use to improve or maintain the desired vegetative community (see Appendix I).
- (2) The Long Term objective is to improve those acres in poor or fair livestock forage condition and maintain all acres presently in good livestock forage condition by managing for those seral stages which optimize livestock forage production (see Appendix I)

b. Wild Horses

- (1) The Short Term objective will be accomplished through managing the allowable use level by season of use to improve or maintain the desired vegetative community (see Appendix I).
- (2) The Long Term objective is to manage for the most appropriate seral stage to provide desired quantity, quality, variety, and density of forage in order to meet the requirements of the wild horses (see Appendix I).

habitat requirements

c. Mule Deer

- (1) The Short Term objective is to limit yearlong use on key species to 40 percent for perennial grasses, grass-like plants, and forbs and to 35 percent for shrubs if the mule deer range is in poor habitat condition. If the range is in fair condition or better, the objective is to limit yearlong use on key species to 55 percent for perennial grasses, grass-like plants, and forbs and to 45 percent for shrubs.
- (2) The Long Term objective is to maintain mule deer range in at least fair habitat condition by providing diversity of forage species.

d. Pronghorn Antelope

- (1) The Short Term objectives are:

Limit use on key browse species listed for PAW to 35 percent yearlong.

Limit use on key species listed for kidding grounds to 30 percent for perennial grasses, grass-like plants, and forbs until June 30, and to 40 percent yearlong, also 35 percent for shrubs yearlong.

Limit use on grass and grass-like species on wet meadows and stream riparian areas within kidding grounds to 30 percent yearlong (see Appendix II).

- (2) The Long Term objective is to improve habitat condition on key/crucial areas to good condition.

e. Sage Grouse

- (1) The Short Term objective is to manage the allowable use level by season of use to improve or maintain the desired vegetative community (see Appendix I).
- (2) The Long Term objective is to manage big sagebrush sites within 2 miles of active strutting grounds for late mid seral stage to the Potential Natural Community (PNC) with at least 30 percent shrubs.

f. Ferruginous Hawks

- (1) The Short Term objective is to limit use on winterfat near occupied ferruginous hawk nests to 45 percent yearlong.
- (2) The Long Term objectives are to manage winterfat stands (Silty Range Sites) near occupied ferruginous hawk nests in mid to late seral stage and to maintain integrity of existing pinyon-juniper "stringers near winterfat stands".

g. Riparian Areas

- (1) The Short Term objective is to limit use on wet meadows and stream riparian areas in less than good condition to 30 percent for grass and grass-like species by all animals yearlong and to limit use on all other wet meadows and stream riparian areas to 50 percent for grass and grass-like species by all animals yearlong. (see Appendix I).
- (2) The Long Term objectives are to manage all wet meadows for late seral stage (80-85 percent grass and grass-like plants, 10-15 percent forbs, and 5 percent shrubs).

2. Activity Plan Objectives

a. Antelope Wild Horse Herd Management Area Plan

- (1) The Short Term objective will be accomplished through managing the allowable use level by season of use to improve or maintain the desired vegetative community (see Appendix I).
- (2) The Long Term objectives are to manage for the most appropriate seral stage to provide desired quantity, quality, variety, and density of forage in order to meet the requirements of the wild horses [and other foraging animals] (see Appendix I); and to improve distribution and provide water yearlong for wild horses throughout the herd management area.

How are you going to mg. season of use by w.h.

b. Antelope Range Habitat Management Plan

- (1) The Short Term objective will be accomplished through managing the allowable use level by season of use to improve or maintain the desired vegetative community (see Appendix I).
- (2) The Long Term objectives are:

Manage for the most appropriate seral stages to provide desired quantity, quality, variety and density of forage in order to meet the requirements of the key foraging animals.

Provide nesting, brooding and wintering habitat for upland game species. Minimize the impacts of livestock grazing on sage grouse strutting/nesting grounds.

Protect raptor nesting habitat and provide and protect habitat for raptor prey species.

Manage riparian areas for late seral stage or appropriate stage for a specific use.

Specific resource objectives for key management areas identify key forage species, the existing density and production, and the levels of density and production to be managed for (see Appendix III).

3. Threatened and Endangered Plants and Animals.

No objectives have been identified, because these species (i.e. bald eagles and peregrine falcons) are not being impacted by grazing.

D. Key Species Identification

1. Uplands (see Appendix I)

- CCR1 - Winterfat (EULA)
- CCR2 - Winterfat (EULA)
 - Indian ricegrass (ORHY)
- CCR3 - Bluebunch wheatgrass (AGSP)
- CCR4 - Indian ricegrass (ORHY)
- CCR5 - Crested wheatgrass (AGCR)
- CCR6 - Crested wheatgrass (AGCR)
- CCR7 - Crested wheatgrass (AGCR)
- CCR8 - Winterfat (EULA)
 - Indian ricegrass (ORHY)
- CCR9 - Winterfat (EULA)
- CCR10 - Winterfat (EULA)
- CCR11 - Indian ricegrass (ORHY)
- CCW2 - All Forbs
 - Needlegrass (STIPA)
 - Snowberry (SYMPH)

2. Riparian Areas

All perennial grass and grass-like species

3. Key/Crucial Areas (see Appendix II)

- PAW - All Forbs
 - Indian ricegrass (ORHY)
 - Black sagebrush (ARARN)
 - Shadscale (ATCO)
 - Bud sagebrush (ARSP)
- AKG - All Forbs
 - Indian ricegrass (ORHY)
 - Douglas rabbitbrush (CHVI)
 - Shadscale (ATCO)
 - Bud sagebrush (ARSP)
 - Black sagebrush (ARARN)

IV. MANAGEMENT EVALUATION

A. Purpose

The purpose of this document is to evaluate the nature of grazing that has occurred on the Chin Creek Allotment and to measure effectiveness in meeting specific management objectives identified in the land use plan (LUP). Included will be recommendations to make specific changes in current management where these LUP objectives are not being met.

B. Summary of Studies Data

1. Key Management Area Evaluation Summary, Form NV 4400-17 (see Appendix IV).

2. Actual Use

- a. Livestock - Use was estimated from past licenses (see Appendix V). Over the last eight years, use has averaged 4,725 AUMs which is 36 percent of preference. All cattle use has been made in Antelope Valley. Prior to 1985 sheep use was also in Antelope Valley. Since 1986 sheep use in Spring Valley has been authorized through an interim rest rotation grazing system between the Chin Creek and Sampson Creek Allotments. That grazing system will continue to be implemented or cancelled when the evaluation has been completed.
- b. Wildlife - Use was extrapolated from Nevada Department of Wildlife's estimates of mule deer herd numbers and surveys of pronghorn antelope numbers. The estimated use is based on the amount of deer and pronghorn antelope range that is on the allotment and the season the animals are on that range (see Appendix V).
- c. Wild Horses - Use was estimated from censuses conducted during the past several years (see Appendix V). Only animals counted on the allotment were considered to be using the allotment. Wild horse use has steadily increased during the evaluation period. In 1983 the estimated use was 1,896 AUMs, and in 1987 it was 7,872 AUMs.

159
656
Wild horse use by pasture/use area was based on census data and recognized seasonal use patterns. Horses can be seen in any pasture/use area any month of the year, but most of the horses follow these seasonal use patterns. The Spring Valley use area which includes the crested wheatgrass seedings is considered yearlong use. Use in the pasture equals the number of horses counted in the area times 12 months. The Black Hills use area is also yearlong range. Use in this area equals the number of horses counted in the hills plus the number of horses counted south and east of Ayarbe Spring times twelve months. The Antelope Range use area is summer range. Use in this area equals the number of horses counted in the mountains and in Antelope Valley times five months. The Antelope Valley pastures are the horses' winter use areas. Use in these pastures equals the number of horses counted in the valley and the Antelope Range times seven months.

Removals -
dates + #s

how
divided?
when censused?

3. Precipitation

Data from the National Oceanic and Atmospheric Administration weather stations located at Ely, Nevada and Ibapah, Utah are being used for this evaluation.

Precipitation data will be used to calculate a yield index for each year (Sneva et al. 1983). The yield index will be used to adjust the utilization levels for above or below normal precipitation. The first step is to calculate the crop yield, which is the effective precipitation for plant growth. According to Sneva et al., for the Intermountain Big Sagebrush Region it is the precipitation that falls from September through June. The crop yield is then divided by the normal crop yield to determine the precipitation index for each year. The normal crop yield for Ely for the period 1951-1980 was 7.75 inches, and for Ibapah it was 7.17 inches.

The yield index is then calculated using the linear regression equation $Y = -23 + 1.23X$, where Y = the yield index and X = the precipitation index. Table 1 shows the yield index for Ely for the evaluation period, and Table 2 shows the yield index for Ibapah.

Table 1. Yield Index for Ely

Year	Crop Yield	Precipitation Index	Yield Index
1980	9.16	118%	122%
1981	9.31	120%	125%
1982	10.24	132%	139%
1983	16.21	209%	234%
1984	7.55	97%	96%
1985	10.80	139%	148%
1986	9.76	126%	132%
1987	8.02	103%	104%
1988	8.17	105%	106%

Table 2. Yield Index for Ibapah

Year	Crop Yield	Precipitation Index	Yield Index
1980	12.04	168%	181%
1981	8.76	122%	127%
1982	8.88	124%	130%
1983	14.84	207%	232%
1984	11.07	154%	166%
1985	7.29	102%	102%
1986	9.44	132%	139%
1987	10.92	152%	164%
1988	10.96	153%	165%

4. Utilization

a. Key Areas (see Map 4)

Data was collected at most of the key management areas for seven years (see Appendix V). The allowable use levels have been exceeded at all but one of the key areas (see Appendix I). That one key area represents the native summer range.

Since 1986, sheep from the Sampson Creek Allotment have grazed a small area of the Chin Creek Allotment under a rest/rotation grazing system (see Map 5). This has amounted to approximately 300 AUMs of use each year. The rest of the use in the Spring Valley portion of the allotment can be attributed to wild horses and wildlife. Cattle do not graze in this part of the allotment.

In 1986 utilization did not exceed AUL in Antelope Valley. In 1987 utilization exceeded AULs at key areas CCR1 and CCR8 which are in the south pasture. Cattle did not graze in the south pasture that year but only trailed through it. A post-gather census in February, 1988 showed there were 320 wild horses on the allotment, and that was after 336 horses were removed from the allotment during the gather. The census showed horses concentrated in the south pasture. The overuse in the south pasture in 1987 is being attributed to wild horses.

The percent utilization determined at the key areas is multiplied by the yield index (discussed in the previous section) to calculate a utilization figure normalized by precipitation (see Tables 3 & 4).

Table 3. Utilization in Spring Valley normalized by precipitation using yield index from Ely.

	1980	1981	1982	1983	1984	1985	1986	1987
Yield Index(%)	122	125	139	234	96	148	132	104
Actual Utilization (%)								
CCR3 (AGSP)	-	-	-	-	-	50	49	-
CCR5 (AGCR)	53	-	66	34	23	42	44	62
CCR6 (AGCR)	53	-	76	50	51	86	54	20
CCR7 (AGCR)	53	-	78	47	68	51	54	40
Normalized Utilization (%)								
CCR3 (AGSP)	-	-	-	-	-	74	65	-
CCR5 (AGCR)	65	-	92	80	22	62	58	64
CCR6 (AGCR)	65	-	106	117	49	127	71	21
CCR7 (AGCR)	65	-	108	110	65	75	71	42

Mo!

Table 4. Utilization in Antelope Valley normalized by precipitation using yield index from Ibapah.

	1981	1982	1983	1984	1985	1986	1987
Yield Index(%)	127	130	232	166	102	139	164
Actual							
Utilization (%)							
CCR1 (EULA)	38	3	36	58	64	46	60
CCR2 (EULA)	24	7	18	49	40	21	11
CCR4 (ORHY)	-	0	7	23	70	10	43
CCR8 (EULA)	-	66	15	52	68	44	65
CCR9 (EULA)	-	-	-	-	-	-	26
CCR10 (EULA)	-	-	-	-	-	-	21
CCR11 (EULA)	-	-	-	-	-	-	38
PAW/AGK ^{1/}	-	77	46	59	58	55	-
Normalized							
Utilization (%)							
CCR1 (EULA)	48	4	84	96	65	64	98
CCR2 (EULA)	30	9	42	81	41	29	18
CCR4 (ORHY)	-	0	16	38	71	14	71
CCR8 (EULA)	-	86	35	86	69	61	107
CCR9 (EULA)	-	-	-	-	-	-	43
CCR10 (EULA)	-	-	-	-	-	-	34
CCR11 (EULA)	-	-	-	-	-	-	62
PAW/AGK ^{1/}	-	100	107	98	59	76	-

How can you utilize more than 100%?

No!

^{1/} Key species utilized the most. (See Section III. D. 3.)

b. Use Pattern Mapping

Use pattern mapping was completed in 1985 and 1986. Maps 6 and 7 show only the areas of heavy and severe use. There is a noticeable decrease in the amount of overused areas from 1985 to 1986 even though total estimated use increased.

The use pattern mapping also indicated areas of closed stands of pinyon/juniper where no forage is available. This amounted to 34,558 acres (average of the two years). The 1946 range survey rated this vegetative type at 16 acres per AUM; therefore, approximately 2,160 AUMs of forage that were originally adjudicated are no longer available to grazing.

5. Trend

Frequency data collected from 1981 to 1986 was used to make certain assumptions about apparent trend based on changes in frequency of desirable and undesirable plant species. Determination of trend for eight key areas was made as follows:

CCR1 (Antelope Valley) - upward trend
The key species (EULA) increased, but not significantly. Saltbush (Atriplex falcata aka. nuttallii), another desirable species showed a significant increase. Two perennial grass species, Indian ricegrass (ORHY) and bottlebrush squirreltail (SIHY), were not present in 1981 but were recorded in 1986.

CCR2 (Antelope Valley) - not apparent
The key species (EULA) showed a significant decrease, but squirreltail and bud sagebrush (ARSP5) increased significantly. ORHY increased, but not significantly. Four perennial forb species and cheatgrass (BRTE) appeared only in 1986.

CCR8 (Antelope Valley) - downward trend
There were significant increases in cheatgrass and Douglas rabbitbrush (CHVI8) and significant decreases in bud sagebrush and shadscale (ATCO). The two key species, ORHY and EULA, also decreased although not significantly.

CCR3 (Antelope Range) - downward trend
The key species, Agropyron spicatum (AGSP), and two perennial forb species (HAPLO2 and ERIOG) showed significant decreases. Douglas rabbitbrush, horsebrush (TECA2), and bluegrass (POSE) showed significant increases. Low sagebrush (ARAR8) and phlox showed decreases that were not significant. ORHY recorded in 1981 was not present in 1986.

CCR4 (Black Hills) - downward trend
The two key species, ATCO and ORHY, and Douglas rabbitbrush showed significant decreases. Cheatgrass, needle-and-thread grass (STCO4), and stickseed (HACKE - an undesirable forb) showed significant increases. Winterfat and squirreltail showed decreases that were not significant.

CCR5 (North Creek Seeding) - static to downward
The key species, crested wheatgrass (AGCR), showed a decrease that was not significant. There were significant increases in annual forbs and Douglas rabbitbrush. There were increases in ORHY, POSE, ERIOG, and horsebrush that were not significant.

CCR6 (Flat Spring Seeding) - upward
There was a significant increase in the key species (AGCR). Douglas rabbitbrush decreased, but not significantly.

CCR7 (Robison Seeding) - upward
The increase in the key species (AGCR) was not significant, but three perennial grass species (ORHY, SIHY, and POSE) increased significantly.

Three new key management areas were identified in 1987 after a division fence was built in Antelope Valley. Frequency transects were established at each key area at that time.

6. Range Survey Data

The 1979 Ocular Reconnaissance Forage Survey indicated there were 4,545 AUMs available for livestock on the Chin Creek Allotment.

7. Ecological Status

Ecological status was determined at each key area in 1984. At that time, all but one of the key areas were at the desired plant composition within the existing seral stage (see Appendix I). This does not include the crested wheatgrass seedings where ecological status does not apply.

In addition, ecological status has been mapped on approximately 50 percent of the area (as of the end of 1988). This information has not been summarized by allotments yet.

8. Wildlife Habitat

The habitat ratings for the pronghorn antelope winter range (PAW) and the pronghorn antelope kidding ground (AKG) were determined in 1982. Both areas are in fair condition (see Appendix II).

9. Riparian/Fisheries Habitat

Over thirty-five springs were identified on the allotment during the water resources inventory completed in 1983. Seventeen springs were selected as key springs to monitor and evaluate (see Appendix I, Map 2). Based on the water resource inventory and field examination, five springs are in less than good condition. No ecological status survey has been completed to date.

10. Wild Horse Habitat

Wild horse and burro habitat ratings have not been determined and will not be available during the evaluation period, as the Nevada State Habitat rating system is pending approval.

*use it
any way
C.C. did.*

V. CONCLUSIONS

A. Refer to Section III. C. for allotment specific objectives.

1. Land Use Plan/Rangeland Program Summary Objectives.

a. Livestock (1) & (2)

Not Met. Allowable use levels were exceeded, and use pattern mapping indicated areas of heavy and severe use in 1985 and 1986. Apparent trend is down at four out of eight key areas (Refer to discussion on trend in Section IV). Only one of these four key areas is in an area used by livestock. Wild horses and livestock contribute almost equally to use levels in Antelope Valley. all other use is made by wild horses.

b. Wild Horses (1) & (2)

Not Met. Allowable use levels were exceeded, and use pattern mapping indicated areas of heavy to severe use in 1985 and 1986. Apparent trend is down at four out of eight key areas, all of which are in wild horse use areas. (Refer to trend discussion in Section IV) Wild horses and livestock contribute almost equally to use levels in Antelope Valley. All other use made within the allotment is made by wild horses.

c. Mule Deer

Not Met. Allowable use levels were exceeded, and use pattern mapping indicated areas of heavy and severe use in 1985 and 1986. Utilization in mule deer use areas in primarily attributed to wild horses.

d. Pronghorn Antelope

Not Met. Both Key/Crucial areas are in only fair condition, and utilization exceeded allowable use levels to improve habitat condition. Utilization in antelope use areas is made primarily by livestock and wild horses.

e. Sage Grouse

Met. No Big sagebrush sites have been identified in the area (most likely they are inclusions within the Black sagebrush sites). The area around the strutting ground is an old crested wheatgrass seeding that is being reinvaded by sagebrush which is moving toward meeting the long term objective for sage grouse.

f. Ferruginous Hawks

Not Met. Utilization on winterfat near occupied ferruginous hawk nests (key areas CCRI and CCR8) exceeded the allowable use levels. Key area CCR8 is not at the desired seral stage. Utilization on winterfat is attributable to livestock and wild horses.

g. Riparian Areas

Not Met. Heavy use has occurred at several springs. In addition, five out of seventeen springs are in less than good condition.

discrepancy from previous #.

2. Activity Plan Objectives

a. Antelope Wild Horse HMAP (1) & (2)

Not Met. Allowable use levels were exceeded, and use pattern mapping indicated areas of heavy to severe use in 1985 and 1986. Apparent trend is down at four of eight key areas, all of which are in areas used by wild horses.

some shared by wildlife & livestock

b. Antelope Range HMP (1) & (2)

Not Met. Allowable use levels were exceeded.

VI. TECHNICAL RECOMMENDATIONS

Problems identified on the Chin Creek Allotment include:

Allowable use levels exceeded.

Poor distribution of grazing animals throughout the allotment.

Areas not at the desired seral stage.

Seedings in less than good condition.

Key/crucial areas for pronghorn antelope in only fair condition.

Several springs in less than good condition.

Apparent trend down at four key areas.

A. Short Term Solutions

Adjust Numbers.

Change season of use.

Implement grazing system.

1. Option 1 - Reduce livestock and wild horse use.

To determine the desired stocking level for the allotment, the following formula was used:

$$\frac{\text{Actual Use (AUMs)}}{\text{KMA \% Utilization (Normalized)}} = \frac{\text{Desired Use (AUMs)}}{\text{Desired \% Utilization}}$$

No

The desired stocking level was determined for each pasture/use area by calculating the use for each year data was available and then computing the mean for those figures. (Refer to Appendix VI)

Monitoring data indicates that wild horses have contributed significantly to overutilization in the allotment. Allowable use levels were exceeded in areas receiving only wild horse use. Use levels in Antelope Valley resulted from livestock and wild horses. The total amount of actual use made by livestock and wild horses in the allotment was used to calculate the percentage of use each contributed. These figures were then used to determine the amount of reduction from present demand necessary to achieve desired stocking rates. Average actual use and calculated stocking rates from 1985 and 1986 were used because these years have the most complete utilization data for all use areas. Wildlife AUMs were only calculated into the formula when utilization was read on wildlife forage species in areas used by wildlife. Stocking rates by use area were calculated as follows:

Spring Valley (Seedings) - The average calculated stocking rate for the seeded areas of Spring Valley for the two years was 764 AUMs. This was based on monitoring data from key area CCR6 (Flat Spring Seeding) and the desired use level of 50 percent to improve crested wheatgrass.

Spring Valley (Native) - The only measurement of utilization in the native portion of Spring Valley was in 1987. Based on that information and the desired yearlong use level of 45 percent on black sagebrush an initial stocking level of 1,430 AUMs was calculated.

Black Hills - The average calculated stocking level of 1,792 AUMs was based on use pattern mapping data for 1985 and 1986 and the desired yearlong utilization level for perennial grasses of 55 percent.

Antelope Range - The average calculated stocking level was 892 AUMs based on monitoring data from key area CCR3 and the desired utilization for bluebunch wheatgrass of 55 percent under summer/fall use.

drought year

Antelope Valley - A desired stocking level was determined for Antelope Valley based on monitoring data from key area CCR8 because it is the key area with the objective to improve condition. The desired utilization to improve winterfat under yearlong use is 35 percent. The average calculated stocking level for those two years was 4,464.

In 1987, a fence was installed across Antelope Valley dividing the valley into two pastures. Beginning with the winter grazing season, livestock use was made in the North Pasture. The South Pasture was not used by livestock. Wild horses could go around the ends of the fence and use both pastures. Pronghorn antelope could go through the fence and also use both pastures.

did they?

Not enough monitoring data is available to determine a separate stocking level for the North Pasture and the South Pasture. To determine a desired stocking for each pasture, the desired stocking level of 4,464 AUMs that was computed for the entire valley was divided in half; therefore, the desired stocking level for each pasture would be 2,232 AUMs.

Within the South Pasture there is a key pronghorn antelope winter area and kidding ground. Both of these areas are in only fair habitat condition. To improve habitat condition from fair to good (long term objective, see Appendix II), the allowable use level of key browse species is 35 percent. Since the appropriate stocking level was calculated at the 35 percent use level, it is assumed that this action would meet the habitat objectives for antelope.

Table 5. Stocking level by user for each pasture under Option 1.

Pasture/ Use Area	Calculated Rate (AUMs)	Livestock		Wildlife		Wild Horses
		Sheep	Cattle	Deer ^{1/}	Antelope	
Spring Valley (AGCR)	764	-	139	-	-	625
Spring Valley (ARARN)	1,430	1,176	-	222	32	-
Antelope Range	892	779	-	(404) ^{2/}	-	113
Antelope Valley North Pasture	2,232	-	2,099	-	56	77
Antelope Valley South Pasture	2,232	-	2,098	-	57	77
Black Hills	1,792	1,116	-	-	-	676
Total	9,342	3,071	4,336	626	145	1,568

^{1/} Mule deer within Unit 112 only.

^{2/} Deer AUMs were not included in the stocking rate calculation for Antelope Range because the calculation is based on utilization of AGSP.

Under Option 1, active preference would be reduced 44% from 13,115 AUMs to 7,407 AUMs resulting in an additional 5,708 AUMs of suspended nonuse. Existing wild horse use would be reduced from the existing number of 7,872 AUMs to 1,568 AUMs.

Five of the eight riparian areas for which objectives are not being met are in the Antelope Range. Two of the other springs are in North Spring Valley. Heavy utilization and trampling are the factors causing objectives to be not met. Since no livestock use is presently occurring in either area, managing wild horses at reduced levels would be the most effective means of meeting riparian objectives. Additionally, AUMs available for livestock in the Antelope Range would be for sheep since sheep have been shown to have less impact on riparian areas than cattle, and the topography is more suitable for sheep.

AUMs available for livestock in the Black Hills would also be for sheep use due to terrain and lack of management facilities (fencing and water developments).

check computations

*No!
fence it.*

When the grazing system in the Sampson Creek Allotment is fully implemented lambing will occur on the Chin Creek Allotment in Spring Valley two out of three years. In order to avoid mixing of livestock, the operator in Chin Creek would use Spring Valley in the summer and/or fall with sheep and/or cattle not to exceed the stocking levels identified in the above table. Because of the lack of fences and water developments, herding and water hauling would be necessary to make livestock use in Spring Valley.

2. Option 2 - Change season of use.

If the season of use were changed in the entire allotment to fall/winter use, allowable use levels would be 60% on grass species and 50% on shrub species. Due to the elevation and winter inaccessibility of Spring Valley and the Antelope Range, these areas would be used by sheep in the fall. The Black Hills would be used fall or winter depending on snowfall each year. Antelope Valley would be used fall and winter by cattle. Herding and water hauling would still be necessary to make use in Spring Valley. Livestock would be restricted to a fall/winter season of use. Since the season of use by wild horses cannot be controlled, they would continue to use the allotment yearlong. In order for the spring and summer rest on the allotment to be effective, wild horse numbers would have to be controlled to maintain a thriving ecological balance. Other means such as controlling waters in Antelope Valley may be necessary to discourage wild horse use in the valley during spring and summer. Stocking levels would be as listed in the following table.

Table 6. Stocking level by user for each pasture under Option 2.

Use Area	Calculated AUMs	Sheep	Cattle	Wild Horses	Wildlife
Spring Valley(AGCR)	917		292	625	
Spring Valley(ARNO)	1,430	1,176			254
Antelope Range	973	860		113	(404)
N.Antelope Valley	3,188		3,055	77	56
S.Antelope Valley	3,189		3,055	77	57
Black Hills	1,954	1,278		676	
Total	11,651	3,314	6,402	1,568	367

Under Option 2, active preference would be reduced from 13,115 AUMs to 9,716 AUMs resulting in 3,399 AUMs of suspended nonuse. This would be about a 26 percent reduction.

3. Option 3 - Deferred Grazing System

The objective of a deferred system would be to reduce the spring/summer grazing pressure on Antelope Valley to improve and maintain condition of the vegetation.

Since the Antelope Valley Division Fence was constructed in early 1987, a deferred system has been implemented. The original system is as follows:

	Grazed Period	
	(Year 1)	(Year 2)
North Pasture	11/1 - 2/28	3/1 - 6/30
South Pasture	3/1 - 6/30	11/1 - 2/28

Why not?

Although ~~no use pattern mapping information is available~~ for the past two years, key area utilization measured in both pastures indicated that utilization levels in the pasture rested by livestock were as high as those measured in the pasture grazed by livestock. At present levels of wild horse use, little or no progress is being made with the deferred system. Due to the free-roaming nature of wild horses, it is not possible to control their movements to conform to a grazing system. In order to accomplish the goal of reducing grazing pressure during the growing season, horse numbers will have to be controlled at a level which would maintain a thriving ecological balance.

To provide more rest during the growing season the deferred system could be changed to the following schedule:

	Grazed Period	
	(Year 1)	(Year 2)
North Pasture	11/1 - 2/28	3/1 - 4/15
South Pasture	3/1 - 4/15	11/1 - 2/28

Early use (April 15 to June 30) would be removed from Antelope Valley and rotated between the seedings in Spring Valley and the Antelope-Badlands Allotment in the Elko District. In order for the system to work, most of the forage in Spring Valley should be available for livestock. To accomplish this, removal of excess wild horses would primarily occur in Spring Valley in the short term. Cattle use in Spring Valley would be scheduled for those years when sheep from the Sampson Creek Allotment are not lambing in the Chin Creek Allotment. Early use in both of these areas would require herding and water hauling to insure proper distribution of livestock. The Black Hills and the Antelope Range would continue as summer/fall sheep use. Fall sheep use could also be made in Spring Valley. Stocking levels by pasture would be as follows:

Table 7. Stocking level by user for each pasture under Option 3.

<u>Use Area</u>	<u>Calculated AUMs</u>	<u>Sheep</u>	<u>Cattle</u>	<u>Wild Horses</u>	<u>Wildlife</u>
Spring Valley(AGCR)	764		644	120	
Spring Valley(ARNO)	1,430	1,176			254
Antelope Range	892	779		113	(404)
N.Antelope Valley	2,869		2,736	77	56
S.Antelope Valley	2,870		2,736	77	57
Black Hills	1,792	1,116		676	
<u>Total</u>	<u>10,617</u>	<u>3,071</u>	<u>6,116</u>	<u>1,063</u>	<u>367</u>

Under Option 3, active preference would be reduced from 13,115 AUMs to 9,187 AUMs resulting in 3,928 AUMs of suspended nonuse. This would be about a 30 percent reduction.

4. Option 4 - Rest Rotation Grazing System.

The objective of a rest rotation grazing system would be to provide relief from spring and summer grazing pressure and to improve the ecological condition of Antelope Valley. Sheep use would be the same as described in Option 3. The seedings in Spring Valley would be for summer/fall cattle use and would require herding and water hauling. The two pastures in Antelope Valley and the Antelope-Badlands Allotment in the Elko District would be used in a rest rotation system. Use in the Antelope-Badlands Allotment would require herding and water hauling for proper livestock distribution because there is only one available water source now. As long as wild horses are in the allotment, complete rest of any given pasture will not be possible. In order to realize the benefits to the vegetation from implementing a system, wild horses numbers should be controlled at a level which would maintain a thriving ecological balance. Also, the period of rest from livestock grazing should extend through two growing seasons. The stocking levels for this option would be the same as for Option 3.

B. Long Term Solutions

1. Option 1 - Grazing System with Range Improvements

In order to best implement a grazing system and meet the long term resource objectives for the allotment, certain range improvement projects are necessary.

a. Seeding Maintenance/Vegetation Conversion

The three existing seedings in Spring Valley should be maintained and fenced. Currently these seedings, the Robison Seeding (1500 acres), the North Creek

Seeding (750 acres), and the Flat Spring Seeding (905 acres), are in poor to fair condition producing about one third of their potential (less than 30 percent crested wheatgrass). Any treatment of the three existing seedings must be in accordance with procedures specified in the Memorandum of understanding between the BLM and the Nevada Department of Wildlife relating to the Western States Sage Grouse Guidelines.

There are several areas on the allotment that are climax stands of big sagebrush and pinyon/juniper considered to be producing little if any forage for livestock, wildlife, and wild horses. These areas could be treated to remove brush and trees and could be seeded with a mixture of grasses, forbs, and browse to increase forage production. (Refer to Map 8.)

The total amount of AUMs generated by these actions would depend on the number of acres treated and the success of treatment determined by inventories and/or monitoring. The AUMs determined to be available for livestock would be for spring and summer use. Forage available for wildlife and wild horses would be for yearlong use.

b. Water Developments

In order to improve distribution of grazing animals and meet riparian objectives several water developments should be considered. A pipeline from an existing well in T.25 N., R.68 E., Section 27 could be installed. Several springs and a riparian complex at the upper end of Sharp Creek (T.24 N., R.67 E., Section 18) could be fenced to protect the source, and a pipeline could be installed into Spring Valley (see Map 8). The pipeline from the Black Hills Well extending into the Antelope-Badlands Allotment (Map 3) could be extended further into the allotment. Several other springs in need of improvement could be developed and protected by fencing the source and providing water outside with a short pipeline.

DO IT

c. Grazing System - Sheep

Sheep could be grazed in the Antelope Range from May through October and in the Black Hills from November through April. A simple deferred rotation could be used in these two areas. Sheep would be turned out on the north end one year and on the south end the next year.

By agreement the sheep from the Sampson Creek Allotment would be allowed to lamb on the Chin Creek Allotment in May two out of every three years. This use would be rotated between the north and south ends of Spring Valley (see Map 5). The sheep would be allowed to graze through June on the native range. This agreement precludes the need for an allotment boundary fence which would have to be placed down the middle of the valley, disrupting wild horse movement. Implementation of a grazing system could increase the available AUMs in the long term (Van Poolen and Lacey, 1979). Stocking levels will be determined and adjustments made using monitoring data.

d. Grazing System - Cattle

Either a deferred or rest rotation system as discussed in the short term options would be implemented for Antelope Valley; however, this use would primarily be in the fall and winter. If the deferred system is used, the Antelope-Badlands Allotment would again be used only in the winter. Spring and summer use would be made primarily on the seedings and vegetation conversions in a rotation system to avoid using any one area at the same time each year. Implementation of range improvements as described will allow the most efficient use of the allotment because of the better balance between available fall/winter and spring/summer forage and less dependence on water hauling. A long term increase in available forage could result from the implementation of a grazing system (Van Poolen and Lacey, 1979). However, future stocking levels will be based on monitoring data.

The native portion of Spring Valley could also be used by cattle in the late summer and fall.

C. Additional Monitoring Required

Determine existing numbers of horses by season of use for each area/pasture.

Determine status of sage grouse strutting ground in T. 24 N., R. 66 E., Sections, 27, 28, 33 & 34, and extent of nesting habitat used.

Estimate use on wet meadows and stream riparian areas.

Develop ecological site descriptions for riparian areas and determine ecological status (seral stage) of wet meadows and stream riparian areas.

Establish monitoring studies on key riparian areas.

Establish a key area with monitoring studies in the native Black sagebrush range on the east side of Spring Valley.

Establish a key area with monitoring studies in the Black Hills.

Redetermine ecological condition on all key areas, particularly where statistically significant changes in frequency of key species have occurred.

Summary of Problem Resolution
by Use Area

<u>Use Areas</u>	<u>Objective Not Met</u>	<u>Problems</u>	<u>Optional Solutions - Short Term</u>	<u>Optional Solutions - Long Term</u>
Spring Valley	Utilization	1) AUL for AGCR at Key areas exceeded by wild horses.	1) Reduce horses to 625 AUMS, cattle to 139 AUMs and sheep to 1,176 AUMs	1) Develop additional waters. (Note: Short term problem of grazing and trampling of spring by wild horses should be corrected by short term solutions. Long term objective of spring in good condition is being met so no riparian enclosure is proposed.)
		2) One spring grazed and trampled by wild horses.	2) Reduce wild horses to 625 AUMs, cattle to 292 AUMs, and sheep to 1,176 AUMs, change the season of use to Fall/Winter.	
		3) Poor distribution of horses resulting in areas	3) Reduce wild horses to 120 AUMs, cattle to 644 AUMs and sheep to 1,176 AUMs. Implement a grazing system with a Spring/Summer season of use.	
	Seral Stage/ Condition	1) Closed stand of pinyon/juniper		1) Vegetation conversions to remove trees
		2) AGCR seedings in only fair condition.		2) Seeding maintenance.

Summary of Problem Resolution
by Use Area (cont.)

<u>Use Areas</u>	<u>Objective Not Met</u>	<u>Problems</u>	<u>Optional Solutions - Short Term</u>	<u>Optional Solutions - Long Term</u>
Antelope Range	Utilization	1) UPM shows areas of heavy use by wild horses	1) Reduce horses to 113 AUMs and sheep to 779 AUMs.	1) Fence spring/wet meadow to protect riparian area, and pipe water to a trough for livestock and wild horses.
		2) Several Springs grazed and trampled by wild horses.	2) Reduce wild horses to 113 AUMs and sheep to 860 AUMs. Change season of use to Fall/Winter.	
	Riparian	1) Several springs in less than good condition.	3) Reduce wild horses to 113 AUMs and sheep to 779 AUMs. Implement a grazing system with a Spring/Fall season of use.	

Summary of Problem Resolution
by Use Area (cont.)

<u>Use Areas</u>	<u>Objective Not Met</u>	<u>Problems</u>	<u>Optional Solutions - Short Term</u>	<u>Optional Solutions - Long Term</u>
Antelope Valley	Utilization	<p>1) AUL for EULA at key areas exceeded by livestock and wild horses. UPM shows areas of heavy-severe use.</p> <p>2) Poor distribution of livestock and wild horses resulting in areas of heavy-severe use.</p> <p>3) One spring used heavily, trampled.</p>	<p>1) Reduce horses to 154 AUMs and cattle to 4,197 AUMs.</p> <p>2) Reduce wild horses to 154 AUMs and cattle to 6,110 AUMs. Change season of use to Fall/Winter for livestock.</p> <p>3) Reduce wild horses to 154 AUMs and cattle to 5,472 AUMs. Implement a grazing system with a Fall/Winter/Spring season of use for livestock.</p>	<p>1) Water Development.</p> <p>2) Vegetation conversion of P-J and Big sagebrush.</p>
	Seral Stage	<p>1) One key area not at desired seral stage.</p>		
	Riparian	<p>1) Two springs/wet meadow in less than good condition.</p>		
	Wildlife Habitat	<p>1) Antelope kidding ground in less than good habitat condition.</p>		

Summary of Problem Resolution
by Use Area (cont.)

<u>Use Areas</u>	<u>Objective Not Met</u>	<u>Problems</u>	<u>Optional Solutions - Short Term</u>	<u>Optional Solutions - Long Term</u>
Black Hills	Utilization	1) UPM shows areas of heavy-severe use by wild horses.	1) Reduce horses to 676 AUMs and sheep to 1,116 AUMs. 2) Reduce wild horses to 676 AUMs and sheep to 1,278 AUMs. Change to a Fall season of use. 3) Reduce wild horses to 676 AUMs and sheep to 1,116 AUMs. Implement a grazing system with a Spring/Fall season of use.	

APPENDIX I

ALLOTMENT: Chin Creek (Livestock & Wild Horses)

Study No.	Key Area Location	Ecological Site No.	Key Species	PRESENT SITUATION		LONG TERM OBJECTIVE		SHORT TERM OBJECTIVE				Rationale
				Key Spp % Comp By Weight	Seral Stage (% of PNC)	Maintain or Improve	Key Spp % Comp By Weight	Seral Stage (% of PNC)	Allowable Use Level	Season of Use	Met or Not Met	
CCR1	S. Antelope Well Sec. 27 T. 25 N., R. 68 E.,	028BY047NV	EULA	85	30	Maintain	77	26-33	45	Yearlong	Not Met	AUL Exceeded 1984=58% 85=64% 86=46% 87=60%
CCR2	N.E. Antelope Valley Sec 26 T. 26 N., R. 68 E.	028BY075NV	EULA ORHY	25 38	60	Maintain	26 35	57-67	45 55	Yearlong	Not Met	AUL exceeded 1984=49% 84=69% 85=70%
CCR3	Baldy Peak Sec 9 T. 24 N., R. 67 E.	028BY034NV	AGSP	27	77	Maintain	25	74-80	50	Summer	Met	AUL not exceeded
CCR4	E. Ayarbe Drift Fence Sec 28 T. 25 N., R. 69 E.	028BY11NV	ORHY	16	64	Maintain	15	67-75	55	Yearlong	Not Met	AUL exceeded 1985=70%
CCR8	S.W. Antelope Valley Sec 8 T. 24 N., R. 68 E.	028BY075NV	EULA ORHY	7 7	30	Improve	33	30-37	35 40	Yearlong	Not Met	AUL exceeded 1982=66% 85=68% 87=65% 1982=66% 84=58% 85=75% 86=74%

APPENDIX I

ALLOTMENT: Chin Creek (Riparian Areas)

Study No.	Key Area Location	Ecological Site No.	Key Species	PRESENT SITUATION		LONG TERM OBJECTIVE		SHORT TERM OBJECTIVE				Rationale 1/
				Key Spp % Comp By Weight	Seral Stage (% of PNC)	Maintain or Improve	Key Spp % Comp By Weight	Seral Stage (% of PNC)	Allowable Use Level	Season of Use	Met or Not Met	
Creek and Reservoir	T. 24 N., R. 67 E., Sec. 6, SE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					30%	Yearlong	Not met	Fair Condition Moderately grazed
Spring (Tunnel Canyon)	T. 24 N., R. 67 E., Sec. 23, SE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Met	Good Condition
Spring (Com. of 3)	T. 24 N., R. 67 E., Sec. 18, NW $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Not Met	Grazed and trampled (Good condition over all)
Spring	T. 24 N., R. 68 E., Sec. 6, SE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					30%	Yearlong	Not met	Fair Condition
Willow Spring	T. 25 N., R. 65 E., Sec. 24, SW $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Met	Good Condition
Long Cedar Spring	T. 25 N., R. 65 E., Sec. 25, NE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Met	Good Condition

1/ Condition of springs/wet meadows based on water resources inventory in 1983.

APPENDIX I

ALLOTMENT: Chin Creek (Riparian Areas)

Study No.	Key Area Location	Ecological Site No.	Key Species	PRESENT SITUATION		LONG TERM OBJECTIVE			SHORT TERM OBJECTIVE			Rationale 1/
				Key Spp % Comp By Weight	Seral Stage (% of PNC)	Maintain or Improve	Key Spp % Comp By Weight	Seral Stage (% of PNC)	Allowable Use Level	Season of Use	Met or Not Met	
Moon-Shine Spring	T. 25 N., R. 65 N., Sec. 26, NW $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Not Met	Grazed and trampled Good condition of meadow w/drinker separate
Flat Spring	T. 25 N., R. 66 E., Sec. 2, SE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Met	Good Condition Enclosure Completed in 1986
Springs (Complex of 4)	T. 25 N., R. 67 E., Sec. 4, SE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Not Met	Good Condition But moderately trampled
Stockade Spring	T. 25 N., R. 67 E., Sec. 10, NW $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Met	Good Condition Exclosure completed in 1987
Spring	T. 25 N., R. 67 E., Sec. 19, NE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					30%	Yearlong	Not Met	Moderately trampled Fair Condition
Spring (Complex of 2)	T. 25 N., R. 67 E., Sec. 21, NW $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Met	Excellent condition

1/ Condition of springs/wet meadows based on water resources inventory in 1983.

APPENDIX I

ALLOTMENT: Chin Creek (Riparian Areas)

Study No.	Key Area Location	Ecological Site No.	Key Species	PRESENT SITUATION		LONG TERM OBJECTIVE			SHORT TERM OBJECTIVE				Rationale 1/
				Key Spp % Comp By Weight	Seral Stage (% of PNC)	Maintain or Improve	Key Spp % Comp By Weight	Seral Stage (% of PNC)	Allowable Use Level	Season of Use	Met or Not Met		
Reservoir	T. 25 N., R. 67 E., Sec. 21, SW $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Met	Very Good Condition	
Spring/Creek	T. 25 N., R. 67 E., Sec. 29, SE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Met	Excellent condition	
North Cr.Sp. (Complex of 3)	T. 25 N., R. 67 E., Sec. 31, NE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					50%	Yearlong	Met	Excellent Condition Exclosure constructed in 1986.	
Spring and Reservoir	T. 25 N., R. 67 E., Sec. 32, SE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					30%	Yearlong	Not Met	Trampled Broken reservoir needs repair-only riparian in reservoir Poor condition	
Spring	T. 25 N., R. 67 E., Sec. 36, SE $\frac{1}{4}$	Unknown	Grasses and Grass-like	No Ecological Status Survey Completed to Date					30%	Yearlong	Not Met	Heavily used Trampled Fair condition Water table dropped.	

1/ Condition of springs/wet meadows based on water resources inventory in 1983.

APPENDIX II

ALLOTMENT: Chin Creek (Wildlife)

Study No.	Key Area Location	Ecological Site No.	Key Species	PRESENT SITUATION		LONG TERM OBJECTIVE		SHORT TERM OBJECTIVE			Rationale
				Habitat Condition Rating 1/		Maintain or Improve	Habitat Condition Rating	Allowable Use Level	Season of Use	Met or Not Met	
PAW-1 AKG (Chin Creek)	NW¼, Sec. 8 T. 24 N., R. 68 E.	D28A026N	Forbs CHV1 ATCO ARARN	Fair		Improve	Good	30% 35% 35% 35%	Yearlong	Not met	Utilization exceeded Allowable Use Levels in: 1985 - 50% CHV1 48% ATCO 1984 - 40% CHV1 59% ATCO 1983 - 45% CHV1 46% ATCO 1982 - 77% CHV1 50% ATCO 40% ARARN
PAW-2 AYARBE Spring)	NE¼, Sec. 21, T. 25 N., R. 69 E.	D28A024N	ATCO ARARN ARSP	Fair		Improve	Good	35% 35% 35%	Yearlong	Not Met	Utilization exceeded Allowable Use Levels in: 1986 - 48% ATCO 55% ARSP 1985 - 58% ATCO 53% ARSP

1/ For pronghorn antelope, habitat condition is based on vegetation quality rating, diversity index, and vegetation quantity rating.

APPENDIX III

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 24 N., R. 68 E., sec. 8, NWNW ⁴	D28A026N		CCW 1	
<u>Key Species</u>	<u>Present Situation</u>		<u>Management Objective</u>	
	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian ricegrass	8,700	50	Increase	75
Forbs	-	1	Increase	10
Shadscale*	1,100	21	Increase	30
Winterfat*	580	3	Increase	20
Bud Sagebrush*	-	3	Increase	15

<u>Ecological Status</u> (% of Climax or PNC**)	Early Mid Seral (32% of PNC)		Mid Seral Stage (26-50% of PNC)	

<u>Relative Composition</u> (all species)	Grasses - 46%		40-55%	
	Forbs - 1%		1-5%	
	Shrubs - 53%		45-60%	

* Increase overall production of shrubs, but not one species at the expense of the others because they are codominants.

** PNC = Potential Natural Community (see Glossary).

APPENDIX III

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 25 N., R. 67 E., sec. 31, SWNE	D28B026N		CCW 2	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production*</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Needle Grasses (Thurber's and Letterman)	17,000	44	Maintain or Increase	Maintain Above 44
Forbs	63,000	280	Maintain	Maintain Above 150
Snowberry	3,000	70	Increase	100

<u>Ecological Status</u> (% of Climax or PNC**)	Mid Seral Stage (38% of PNC)		Mid Seral Stage (35-50% of PNC)	

<u>Relative Composition</u> (all species)	Grasses - 21%		20-40%	
	Forbs - 21%		10-20%	
	Shrubs - 58%		55-65%	

* Need to increase total production from 800 lbs/ac to 950 lbs/ac.

** PNC = Potential Natural Community (see Glossary).

APPENDIX III

<u>Location</u>	<u>Ecological Site</u>		<u>Studies Number</u>	
T. 25 N., R. 69 E., sec. 31, SWNE	D28A024N		CCW 3	
	<u>Present Situation</u>		<u>Management Objective</u>	
<u>Key Species</u>	<u>Density</u> (Plants/ac.)	<u>Production</u> (Lbs./ac.)	<u>Density</u>	<u>Production</u>
Indian ricegrass	580	22	Increase	50
Forbs	2,300	Trace	Maintain or Increase	15
Shadscale	1,400	32	Increase	75
Black Sagebrush	400	-	T	10

<u>Ecological Status</u> (% of Climax or PNC**)	<u>Early Seral</u> (25% of PNC)		<u>Mid Seral Stage</u> (26-50% of PNC)	

<u>Relative Composition</u> (all species)	Grasses - 61%*		30-55%	
	Forbs - -		0-5%	
	Shrubs - 39%		40-65%	

* Relatively high production of grasses (particularly Stipa comata) due to high ppt. year.

** PNC = Potential Natural Community (see Glossary).

APPENDIX IV

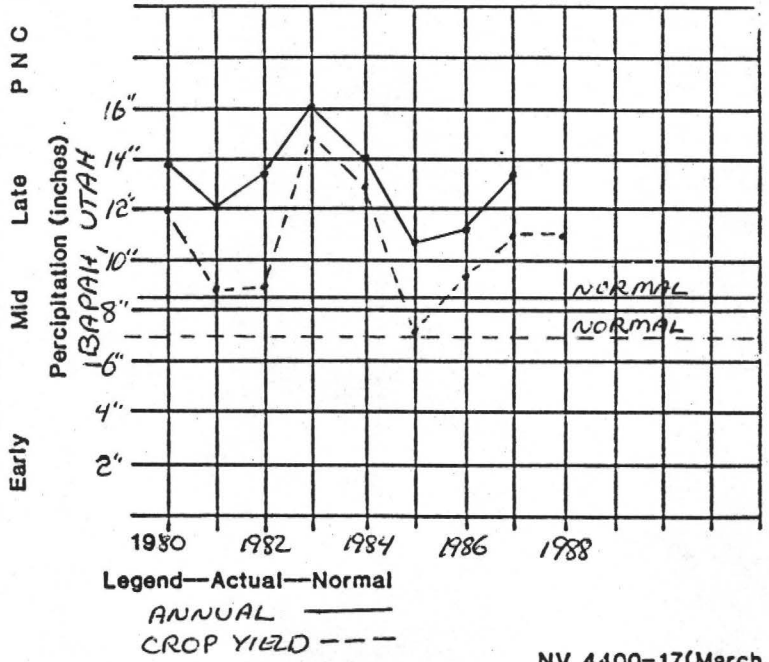
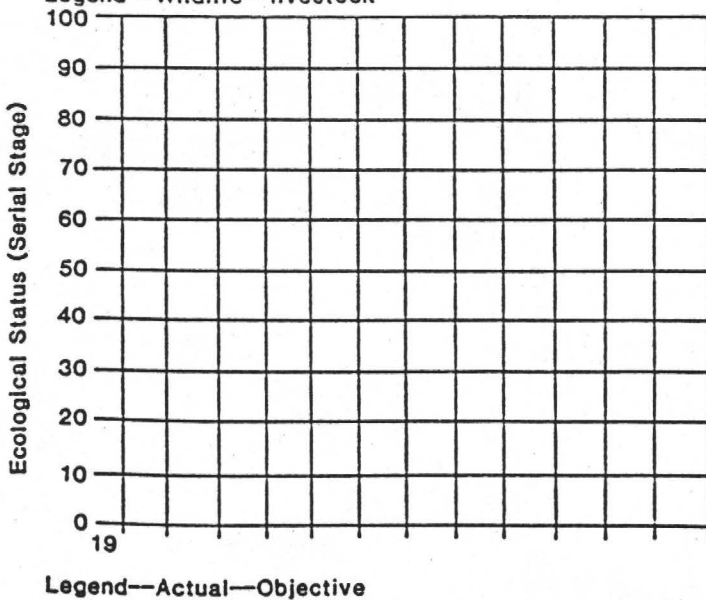
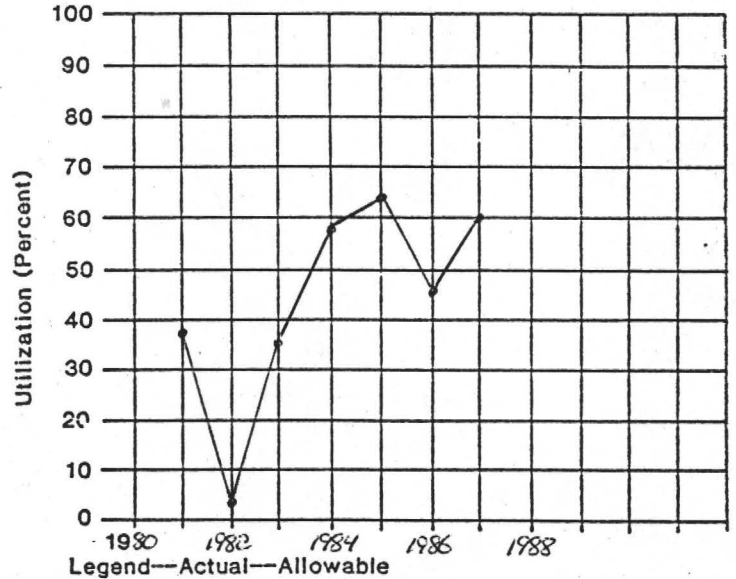
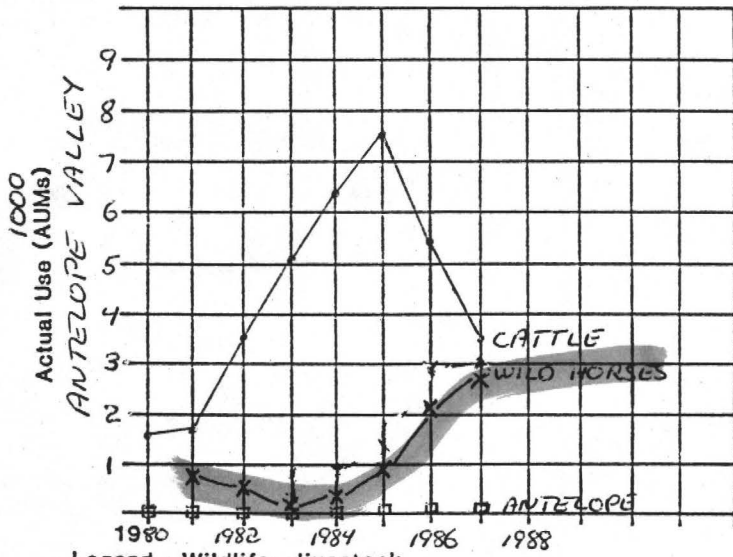
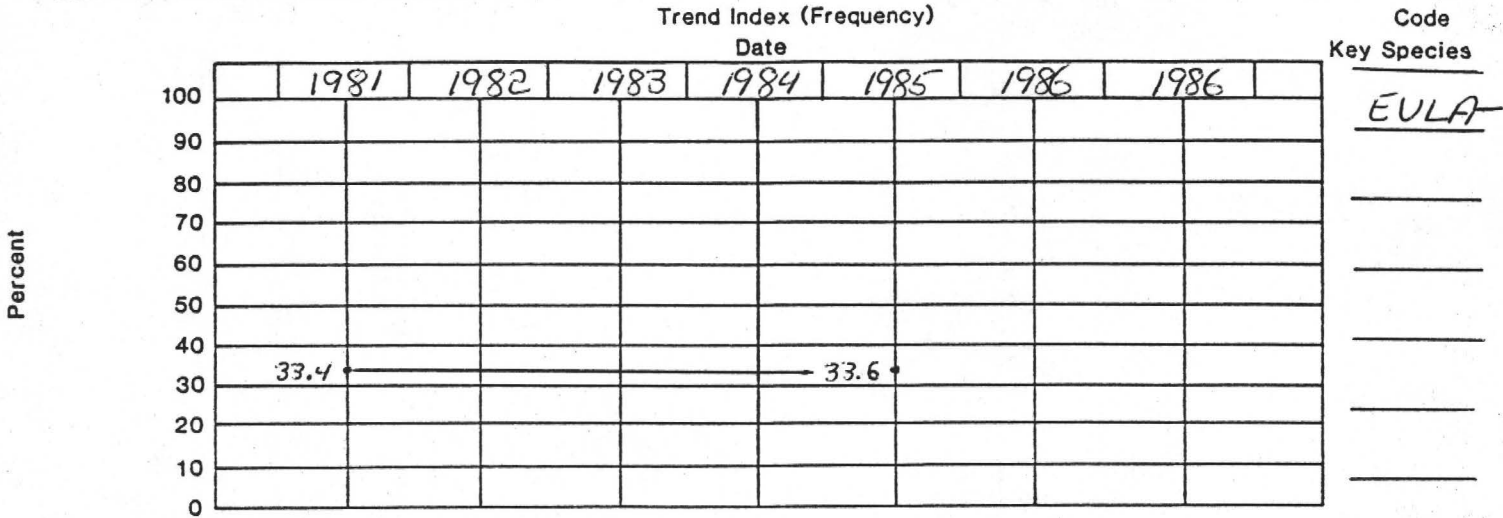
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
KEY MANAGEMENT AREA
EVALUATION SUMMARY

District ELY
Planning Area MORIAH Date 5/12/88

Allotment CHIN CREEK

Key Management Area CCRI

Trend Index (Frequency)

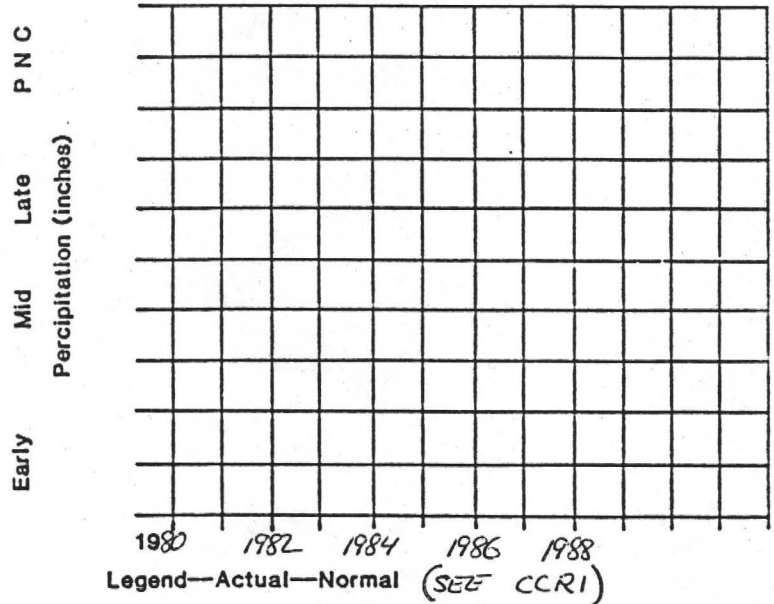
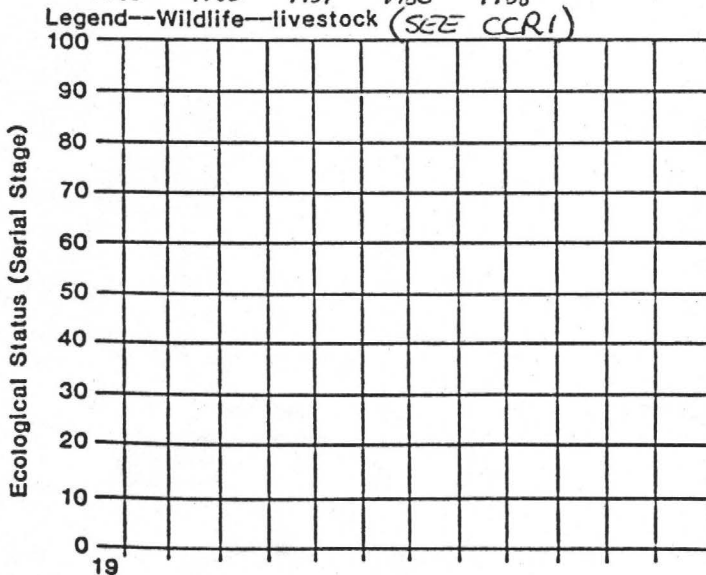
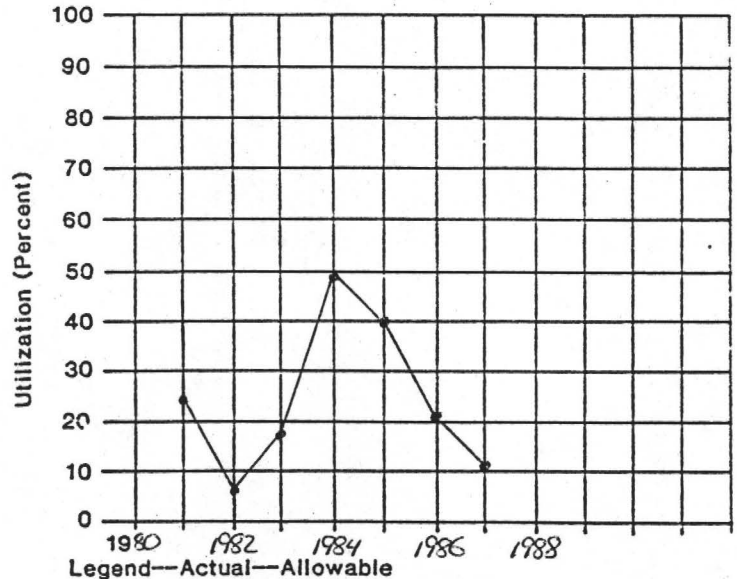
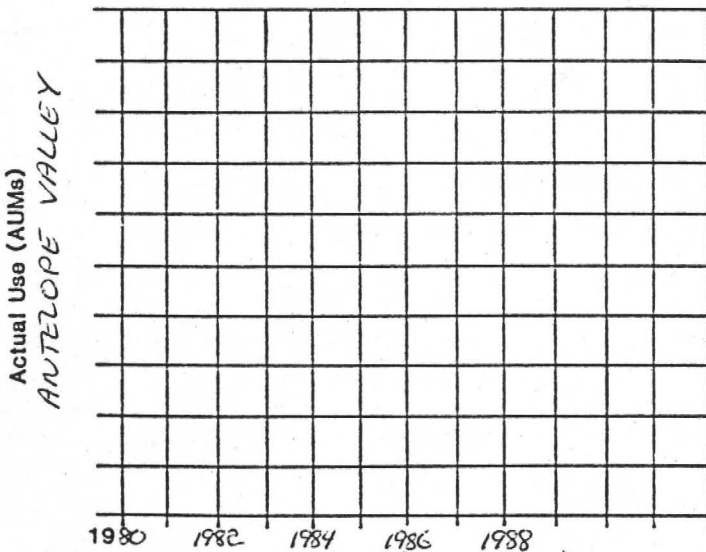
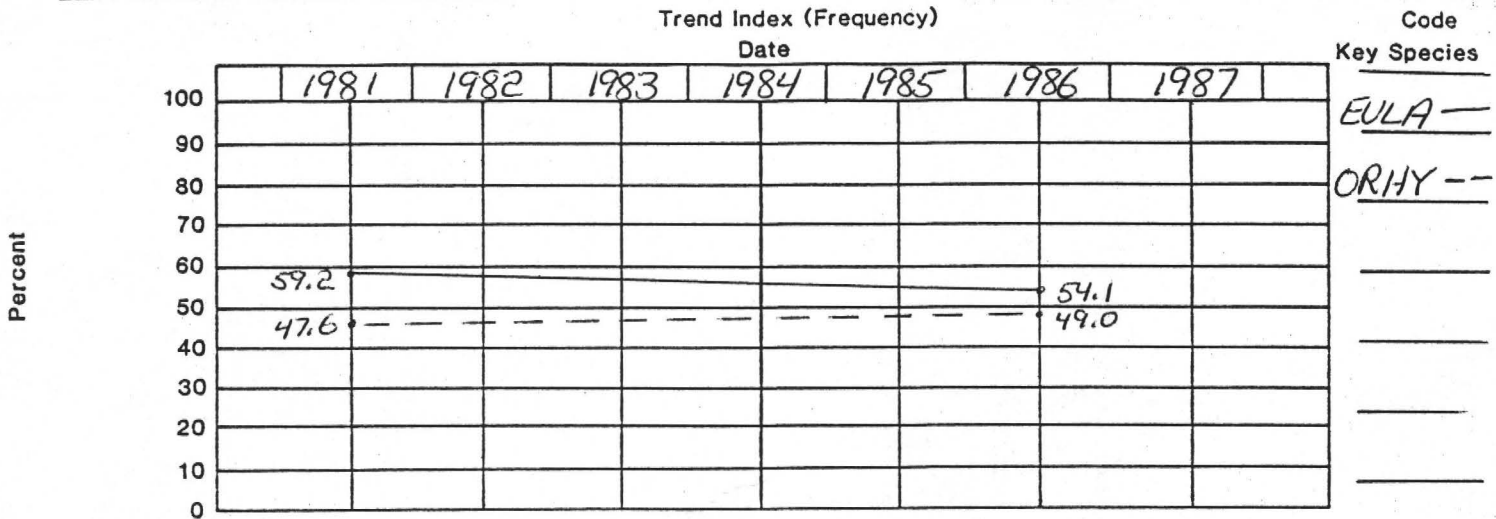


APPENDIX IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
KEY MANAGEMENT AREA
EVALUATION SUMMARY

District	ELY	
Planning Area	MORIAH	Date
		5/12/88

Allotment	CHIN CREEK	Key Management Area	CCR2
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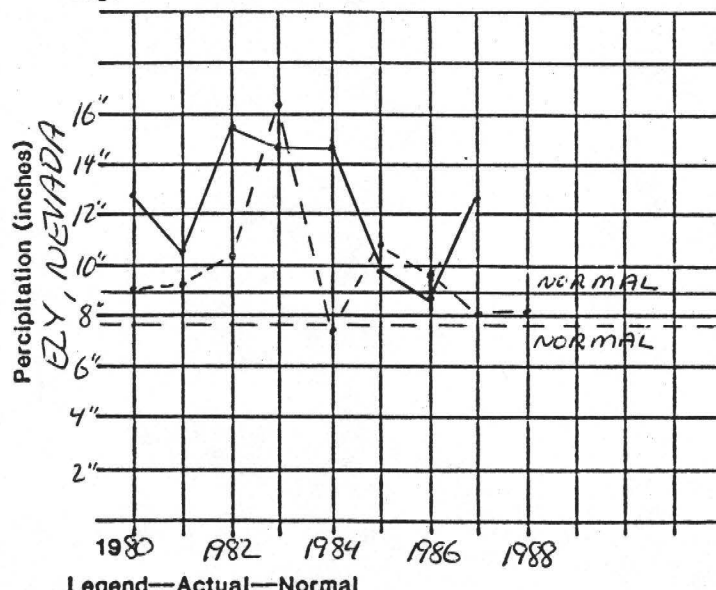
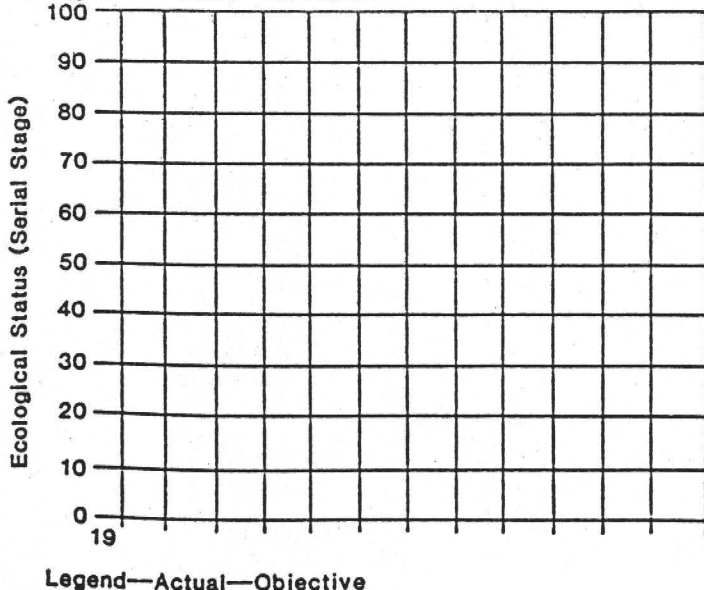
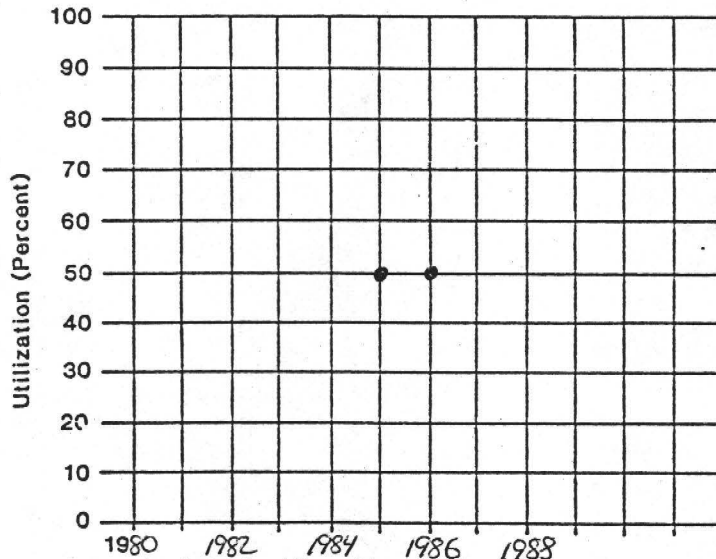
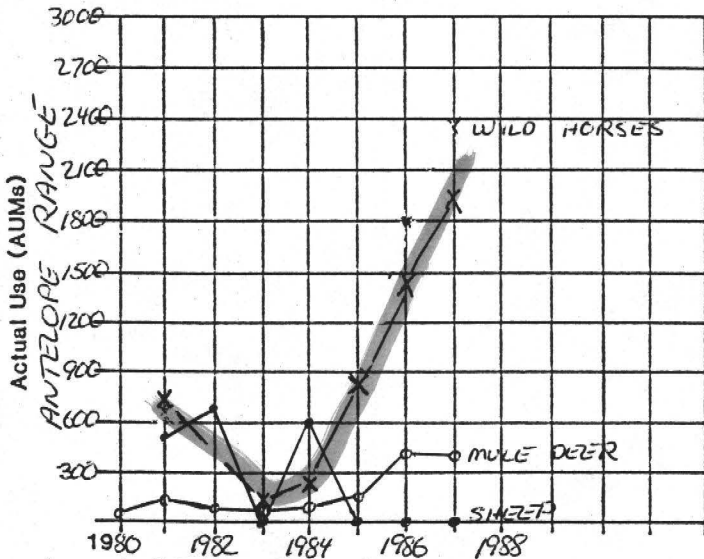
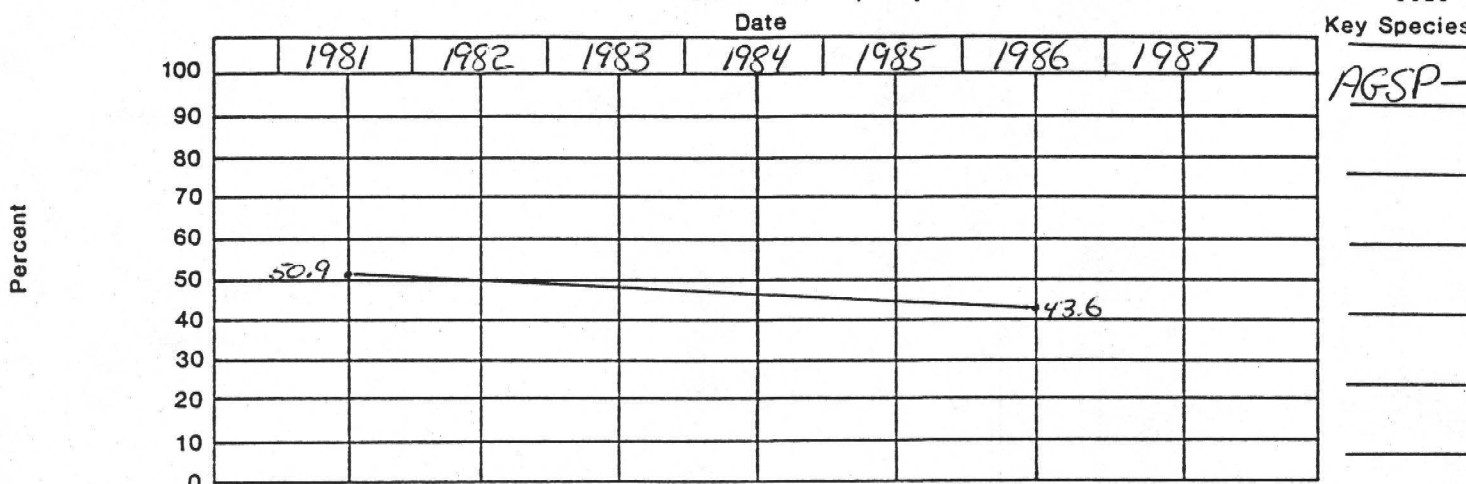
APPENDIX IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
KEY MANAGEMENT AREA
EVALUATION SUMMARY

District	ELY	
Planning Area	MORIAH	Date
		5/12/88

Allotment	CHIN CREEK	Key Management Area	CCR3
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Trend Index (Frequency)



APPENDIX IV

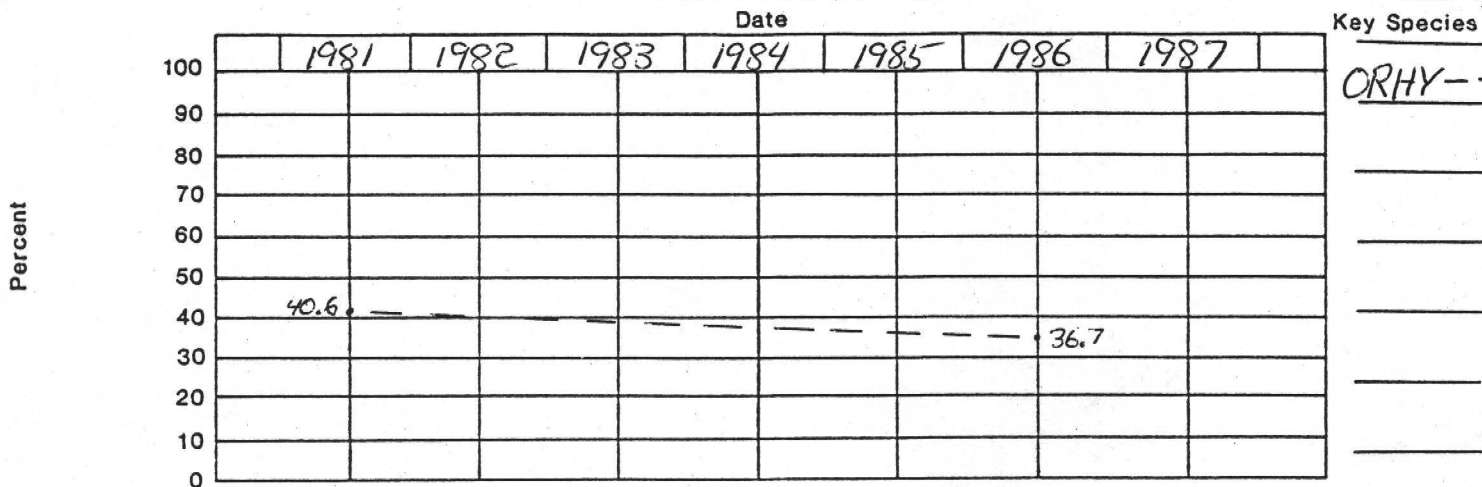
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
KEY MANAGEMENT AREA
EVALUATION SUMMARY

District ELY
Planning Area MORIAH Date 5/12/88

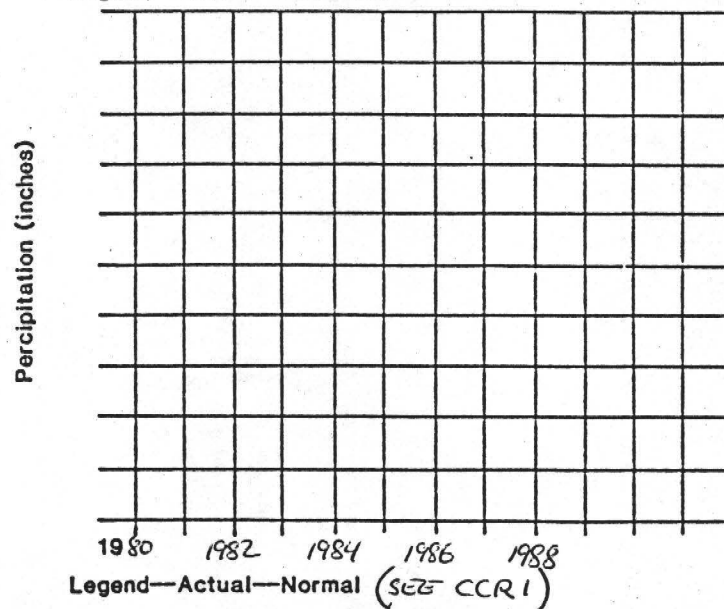
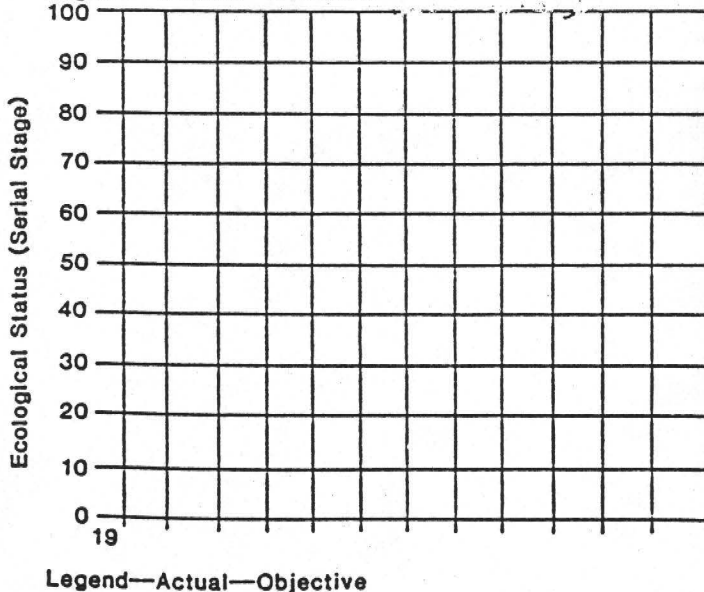
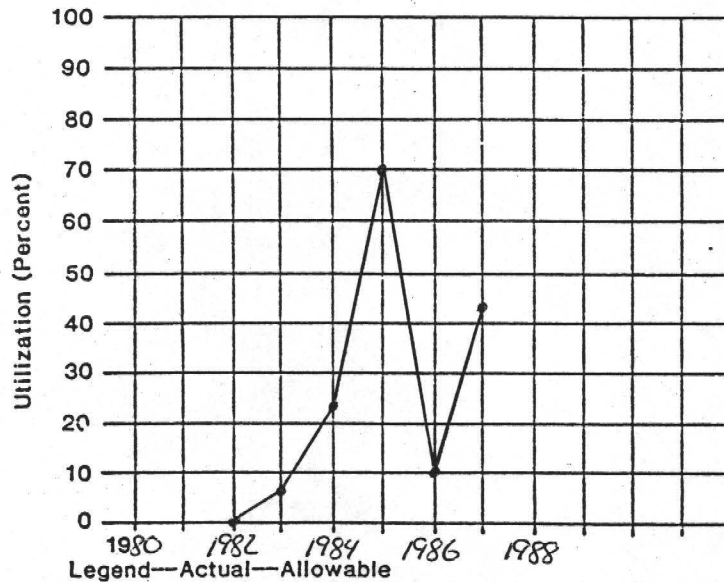
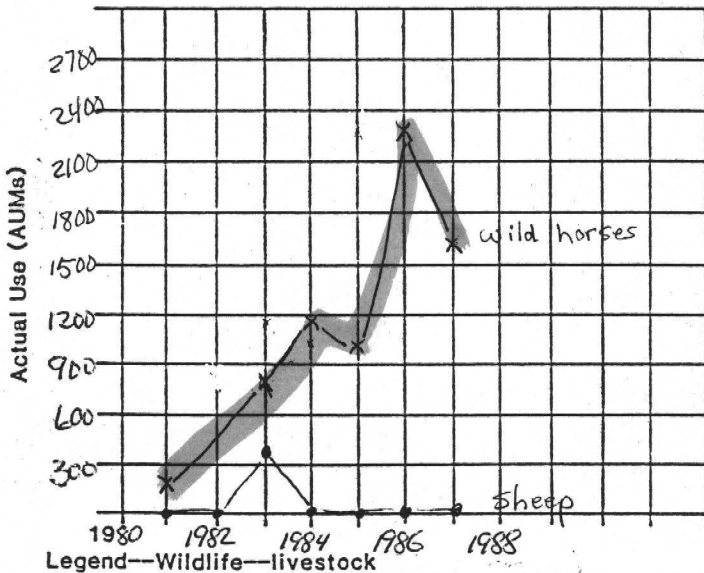
Allotment CHIN CREEK

Key Management Area CCR4

Trend Index (Frequency)



BLACK HILLS



APPENDIX IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
KEY MANAGEMENT AREA
EVALUATION SUMMARY

District

ELY

Planning Area

MORIAH

Date

5/12/88

Allotment

CHIN CREEK

Key Management Area

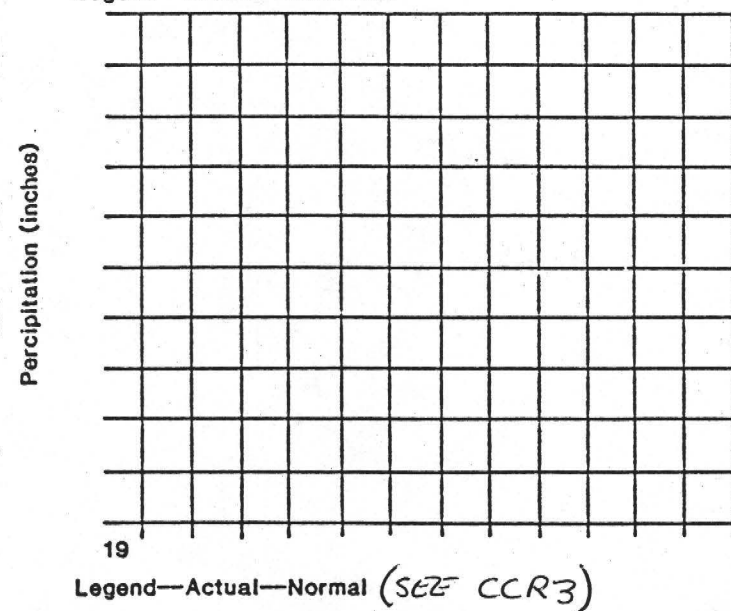
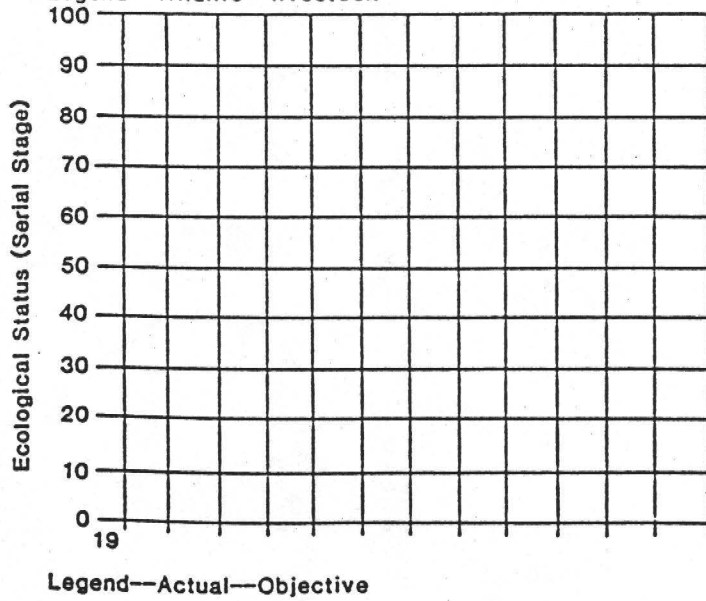
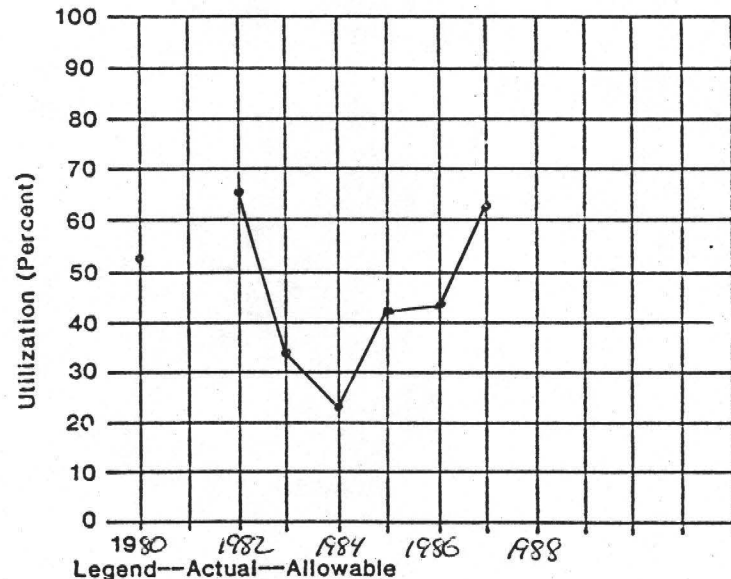
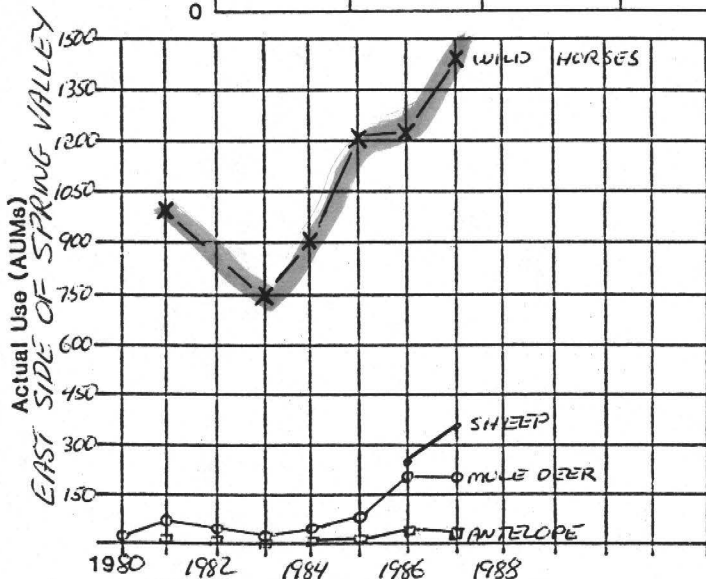
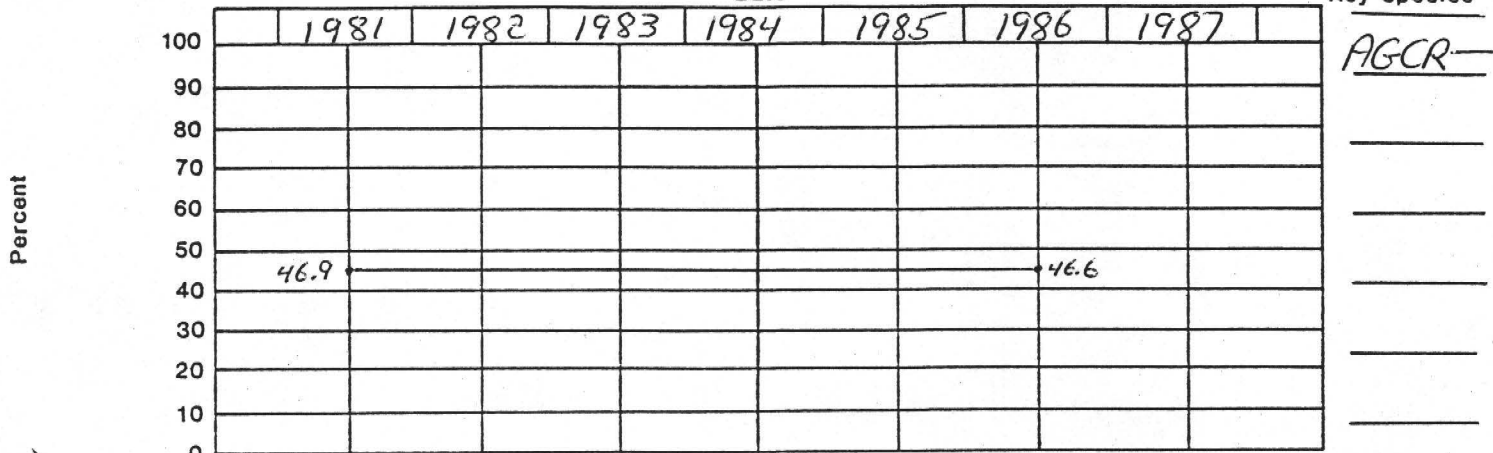
CCR5

Trend Index (Frequency)

Date

Code

Key Species



APPENDIX IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
KEY MANAGEMENT AREA
EVALUATION SUMMARY

District

ELY

Planning Area

MORIAH

Date

5/12/88

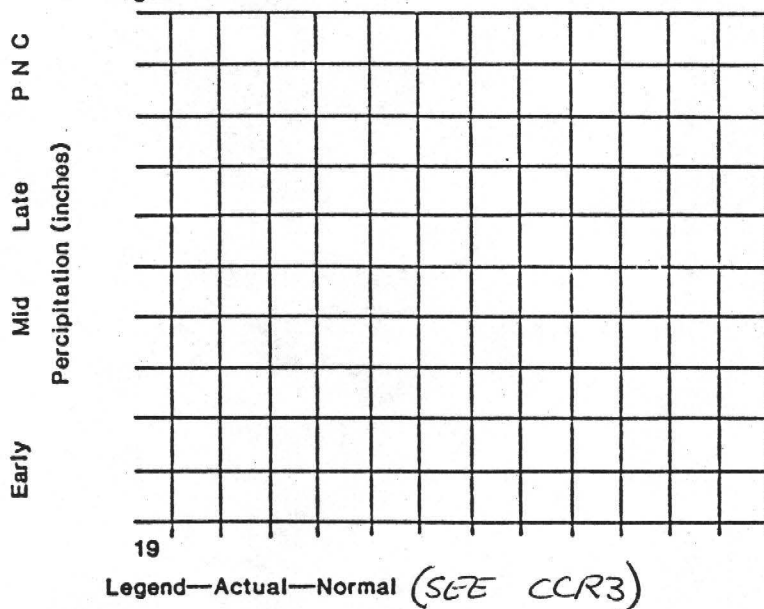
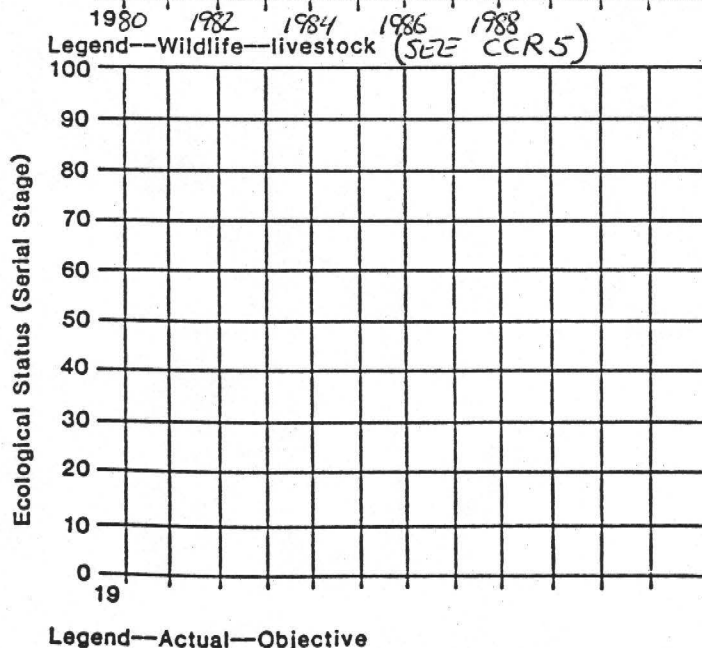
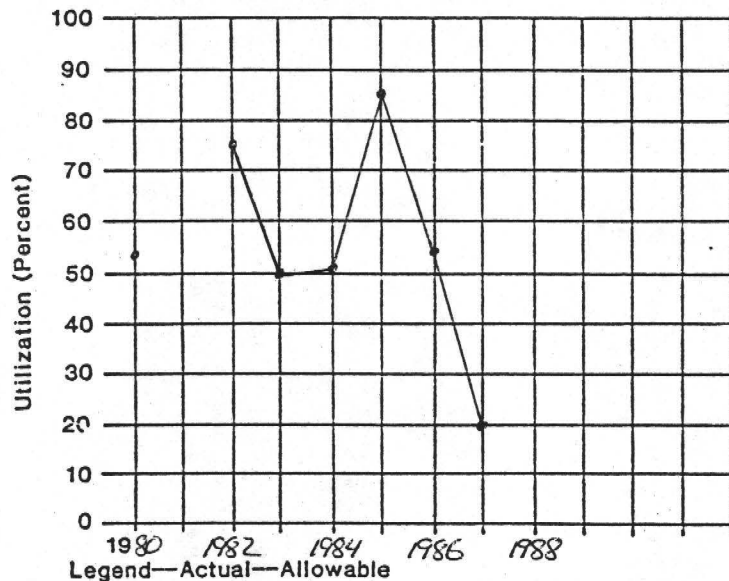
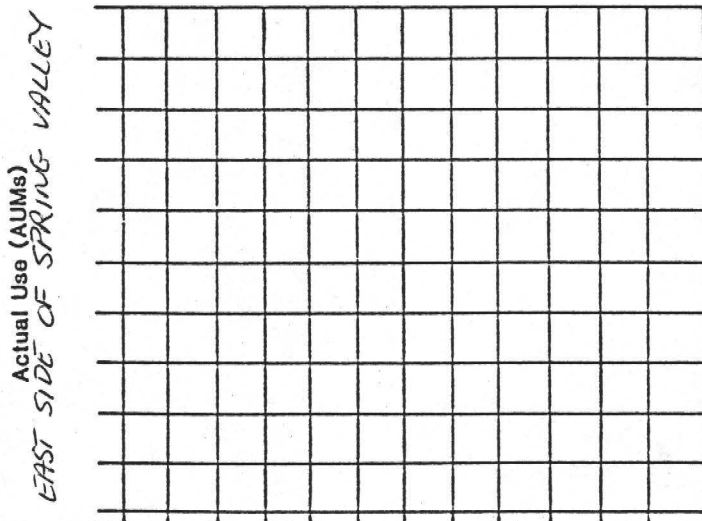
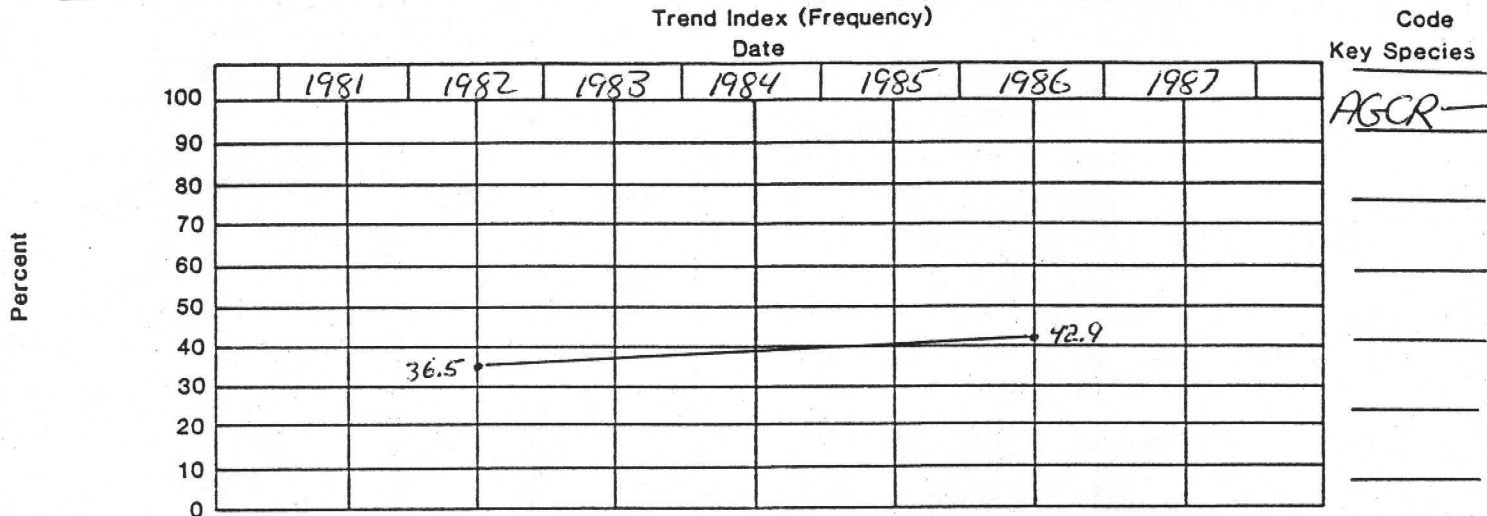
Allotment

CHIN CREEK

Key Management Area

CCR6

Trend Index (Frequency)



APPENDIX IV

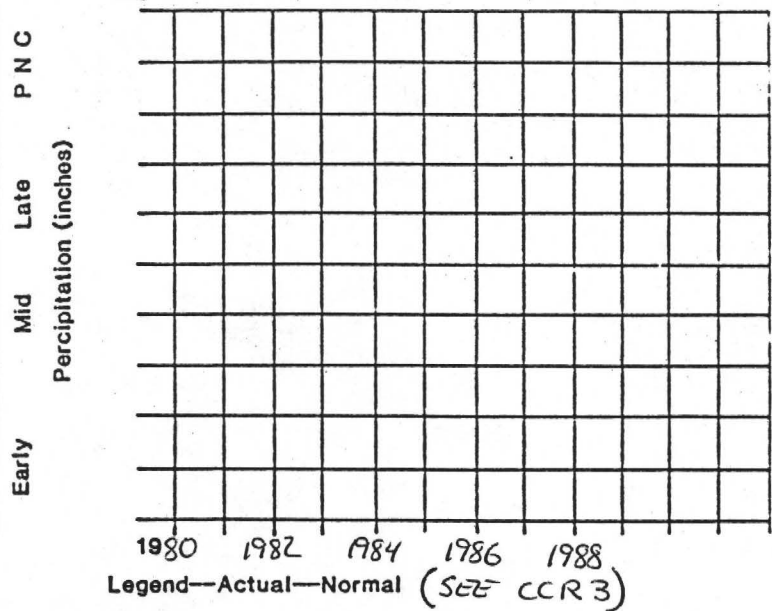
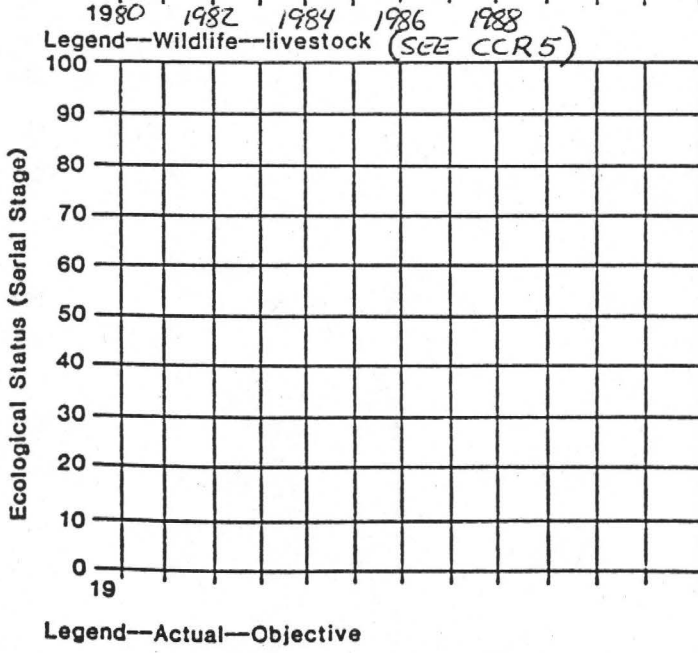
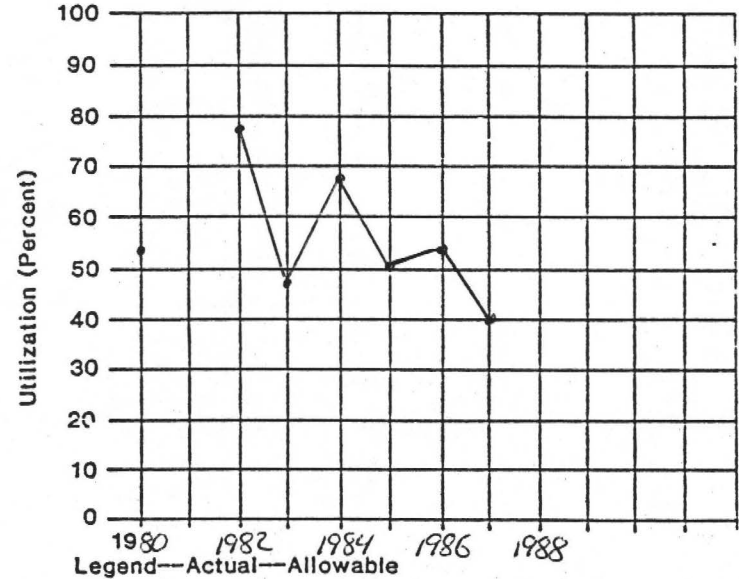
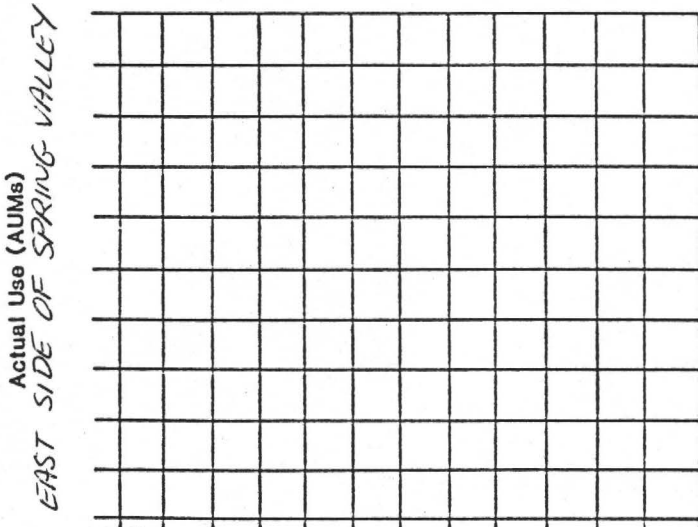
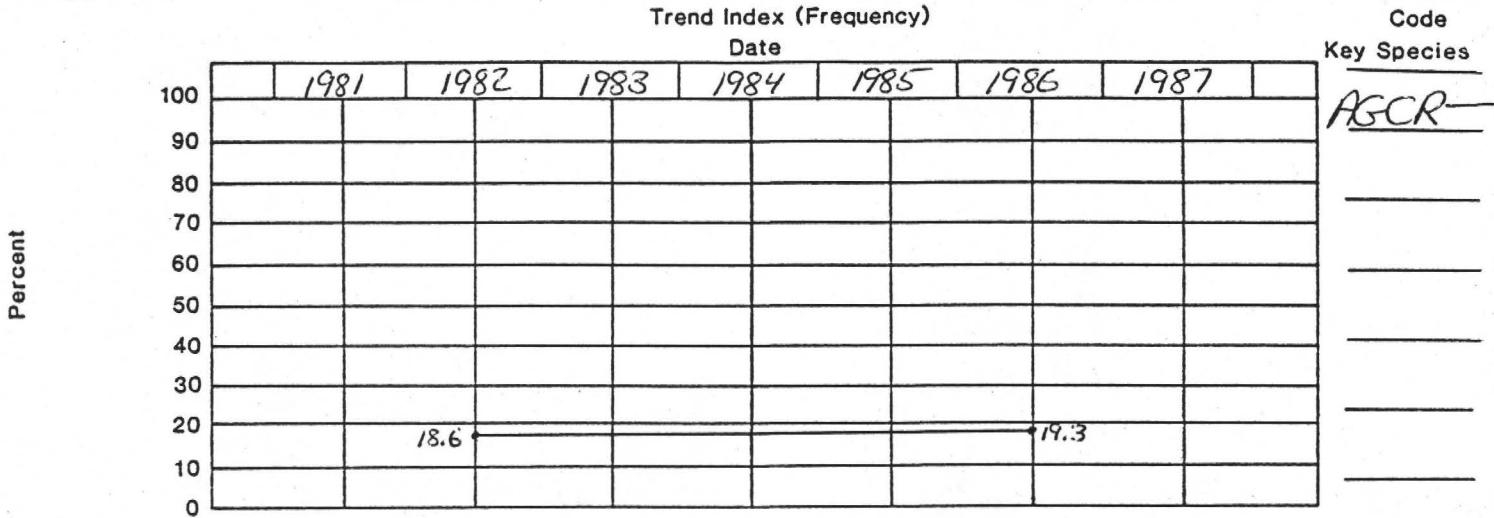
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
KEY MANAGEMENT AREA
EVALUATION SUMMARY

District ELY
Planning Area MORIAH Date 5/12/88

Allotment CHIN CREEK

Key Management Area CCR 7

Trend Index (Frequency)



APPENDIX IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
KEY MANAGEMENT AREA
EVALUATION SUMMARY

District

ELY

Planning Area

MORIAH

Date

5/12/88

Allotment

CHIN CREEK

Key Management Area

CCR8

Trend Index (Frequency)

Date

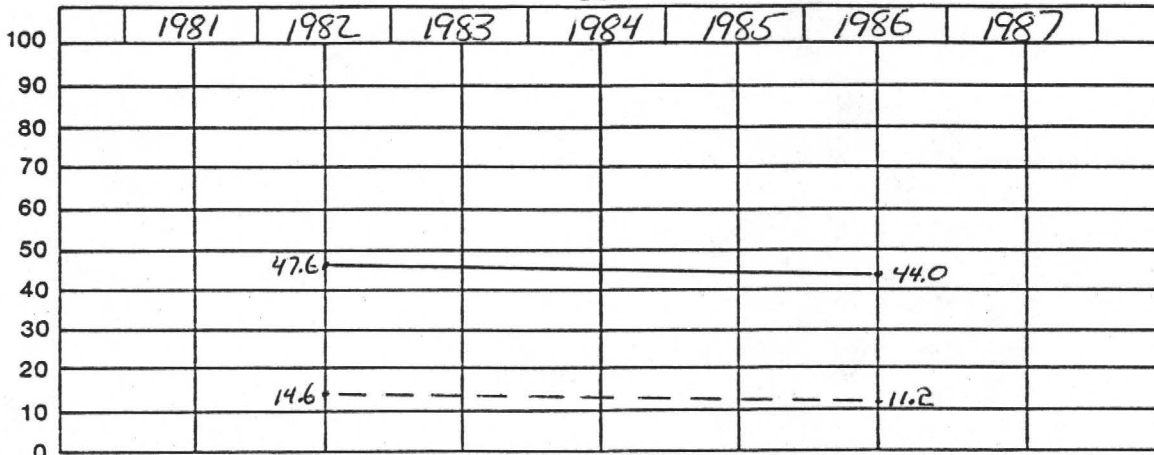
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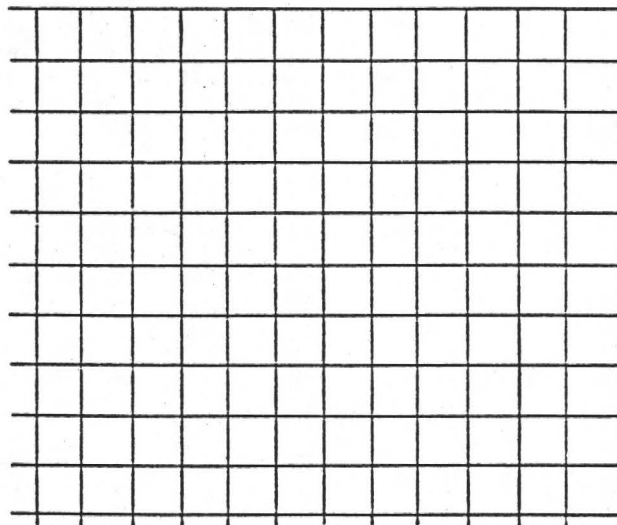
EVLA —

ORHY --

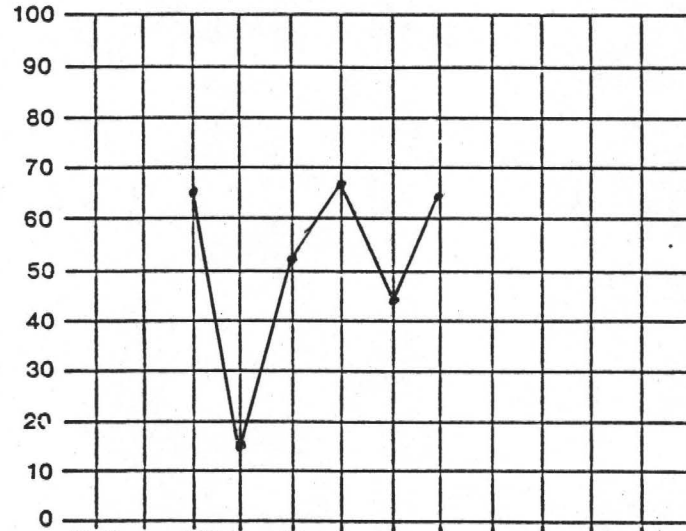
Percent



Actual Use (AUMs)
ANTZLOPE VALLEY



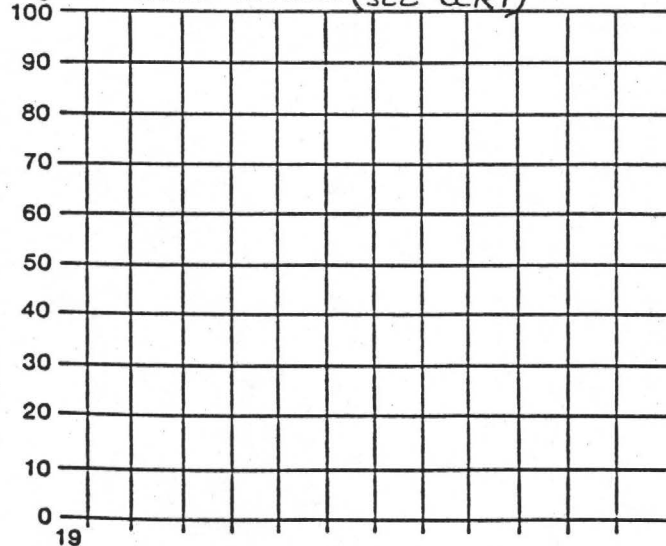
Utilization (Percent)



Legend—Wildlife—livestock (SEE CCR1)

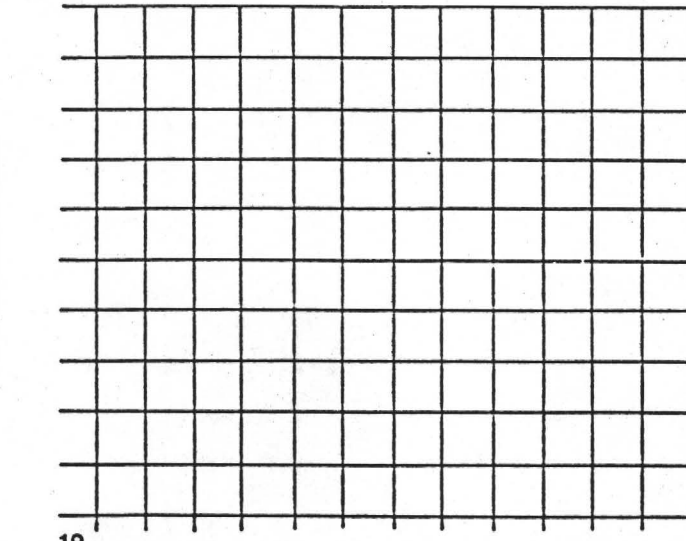
Legend—Actual—Allowable

Ecological Status (Serial Stage)



P N C
Late
Mid
Early

Precipitation (inches)



Legend—Actual—Objective

Legend—Actual—Normal (SEE CCR1)

APPENDIX V

Year	Estimated Livestock(AUMs)		Estimated Wildlife (AUMs)		Estimated Wild Horse (AUMs)	Total Estimated Use (AUMs)	Key Management Area Actual Utilization
	Sheep	Cattle	Deer	Antelope			
1980	-0-	1,687	483	61	No Data	3,095	Overall AGCR 53% ARARN 29%
1981	527	1,780	770	81	2,904	6,062	1. EULA 38% 2. EULA 24% 3. AGSP -- 4. ORHY -- 5. AGCR -- 6. AGCR -- 7. AGCR -- 8. EULA --
1982	669	3,595	637	30	No Data	6,281	1. EULA 3% 2. EULA 7% 3. AGSP -- 4. ORHY 0% 5. AGCR 66% 6. AGCR 76% 7. AGCR 78% 8. EULA 66%
1983	397 <u>1/</u>	5,119	527	66	1,896	8,005	1. EULA 36% 2. EULA 18% 3. AGSP -- 4. ORHY 7% 5. AGCR 34% 6. AGCR 50% 7. AGCR 47% 8. EULA 15%

1/ Includes 132 AUMs of sheep use made from 3/1/84 thru 3/7/84.

APPENDIX V

Year	Estimated Livestock (AUMs)		Estimated Wildlife (AUMs)		Estimated Wild Horse (AUMs)	Total Estimated Use AUMs)	Key Management Area Actual Utilization
	Sheep	Cattle	Deer	Antelope			
1984	611	6,346	852	84	2,772	10,665	1. EULA 58% 2. EULA 49% 3. AGSP -- 4. ORHY 23% 5. AGCR 23% 6. AGCR 51% 7. AGCR 68% 8. EULA 52%
1985	-0-	7,580	1,015	70	4,128	12,793	1. EULA 64% 2. EULA 40% 3. AGSP 50% (Use Mapping) 4. ORHY 70% 5. AGCR 42% 6. AGCR 86% 7. AGCR 51% 8. EULA 68%
1986	264	5,388	1,668	145	7,236	14,701	1. EULA 46% 2. EULA 21% 3. AGSP 49% 4. ORHY 10% 5. AGCR 44% 6. AGCR 54% 7. AGCR 54% 8. EULA 44%
1987	360	3,480	2,285	114	7,872	14,111	1. EULA 60% 2. EULA 11% 3. AGSP -- 4. ORHY 43% 5. AGCR 62% 6. AGCR 20% 7. AGCR 40% 8. EULA 65% 9. EULA 26% 10. EULA 21% 11. ORHY 38%

Established
in
1987

APPENDIX VI: CALCULATED STOCKING RATES FOR CHIN CREEK (4 USE AREAS)

SHORT TERM OPTIONS 3 AND 4 (GRAZING SYSTEM)

SPRING VLLY

CCR6		ACTUAL USE (AUMS)						MEAS YIELD ADJUS DESIR DESIRED WEATHER				
YEAR/KEY SP	CATTLE	SHEEP	W.HORSES	DEER	ANTELO	TOTAL	UTIL	INDEX	UTIL	UTIL	USE(AUMS)	STATION
1982/AGCR	0	0	876			876	76%	1.39	105.6%	50%	415	ELY
1983/AGCR	0	0	756			756	50%	2.34	117.0%	50%	323	ELY
1984/AGCR	0	0	900			900	51%	0.96	49.0%	50%	919	ELY
1985/AGCR	0	0	1212			1212	86%	1.48	127.3%	50%	476	ELY
1986/AGCR	0	264	1236			1500	54%	1.32	71.3%	50%	1052	ELY
1987/AGCR	0	360	1464			1824	20%	1.04	20.8%	50%	4385	ELY
AVE AGCR/CCR6											1262	

ANTELOPE RG

CCR3		ACTUAL USE (AUMS)						MEAS YIELD ADJUS DESIR DESIRED WEATHER				
YEAR/KEY SP	CATTLE	SHEEP	W.HORSES	DEER	ANTELO	TOTAL	UTIL	INDEX	UTIL	UTIL	USE(AUMS)	STATION
1985/AGSP	0	0	690	0		690	50%	1.48	74.0%	55%	513	ELY
1986/AGSP	0	0	1495	0		1495	49%	1.32	64.7%	55%	1271	ELY
AVE. AGSP											892	

ANTEL. VLLY

CCR8		ACTUAL USE (AUMS)						MEAS YIELD ADJUS DESIR DESIRED WEATHER				
YEAR/KEY SP	CATTLE	SHEEP	W.HORSES	DEER	ANTELO	TOTAL	UTIL	INDEX	UTIL	UTIL	USE(AUMS)	STATION
1983/EULA	5119	397	216	0	55	5787	15%	2.32	34.8%	45%	7483	IBAPAH
1984/EULA	6346	611	320	0	64	7341	52%	1.66	86.3%	45%	3827	IBAPAH
1985/EULA	7580	0	1104	0	55	8739	68%	1.02	69.4%	45%	5670	IBAPAH
1986/EULA	5388	0	2392	0	113	7893	44%	1.39	61.2%	45%	5807	IBAPAH
AVE EULA/CCR8											5697	

BLACK HILLS

CCR4		ACTUAL USE (AUMS)						MEAS YIELD ADJUS DESIR DESIRED WEATHER				
YEAR/KEY SP	CATTLE	SHEEP	W.HORSES	DEER	ANTELO	TOTAL	UTIL	INDEX	UTIL	UTIL	USE(AUMS)	STATION
1983/DRHY	0	0	816	0	0	816	7%	2.32	16.2%	55%	2764	IBAPAH
1984/DRHY	0	0	1188	0	0	1188	23%	1.66	38.2%	55%	1711	IBAPAH
1985/UPM	0	0	984	0	0	984	30%	1.02	30.6%	55%	1769	IBAPAH
1986/UPM	0	0	2292	0	0	2292	50%	1.39	69.5%	55%	1814	IBAPAH
1987/DRHY	0	0	1608	0	0	1608	43%	1.64	70.5%	55%	1254	IBAPAH
AVE DRHY/CCR4											1862	

APPENDIX VI: CALCULATED STOCKING RATES FOR CHIN CREEK (4 USE AREAS)

SHORT TERM OPTION 1 (REDUCE STOCKING LEVELS)

SPRINGS VLLY

YEAR/KEY	SP	ACTUAL USE (AUMS)				ANTELO	TOTAL	MEAS YIELD ADJUS			DESIR	DESIRED	WEATHER
		CATTLE	SHEEP	W.HORSES	DEER			UTIL	INDEX	UTIL			
1982/AGCR		0	0	876		876	76%	1.39	105.6%	50%	415	ELY	
1983/AGCR		0	0	756		756	50%	2.34	117.0%	50%	323	ELY	
1984/AGCR		0	0	900		900	51%	0.96	49.0%	50%	919	ELY	
1985/AGCR		0	0	1212		1212	86%	1.48	127.3%	50%	476	ELY	
1986/AGCR		0	264	1236		1500	54%	1.32	71.3%	50%	1052	ELY	
1987/AGCR		0	360	1464		1824	20%	1.04	20.8%	50%	4385	ELY	
AVE. AGCR											1262		

ANTELOPE RG

YEAR/KEY	SP	ACTUAL USE (AUMS)				ANTELO	TOTAL	MEAS YIELD ADJUS			DESIR	DESIRED	WEATHER
		CATTLE	SHEEP	W.HORSES	DEER			UTIL	INDEX	UTIL			
1985/AGSP		0	0	690	0	690	50%	1.48	74.0%	55%	513	ELY	
1986/AGSP		0	0	1495	0	1495	49%	1.32	64.7%	55%	1271	ELY	
AVE. AGSP											892		

ANTEL. VLLY

YEAR/KEY	SP	ACTUAL USE (AUMS)				ANTELO	TOTAL	MEAS YIELD ADJUS			DESIR	DESIRED	WEATHER
		CATTLE	SHEEP	W.HORSES	DEER			UTIL	INDEX	UTIL			
1983/EULA		5119	397	216	0	55	5787	15%	2.32	34.8%	35%	5820	IBAPAH
1984/EULA		6346	611	320	0	64	7341	52%	1.66	86.3%	35%	2977	IBAPAH
1985/EULA		7590	0	1104	0	55	8739	68%	1.02	69.4%	35%	4410	IBAPAH
1986/EULA		5388	0	2392	0	113	7893	44%	1.39	61.2%	35%	4517	IBAPAH
AVE EULA/CCR8											4431		

BLACK HILLS

YEAR/KEY	SP	ACTUAL USE (AUMS)				ANTELO	TOTAL	MEAS YIELD ADJUS			DESIR	DESIRED	WEATHER
		CATTLE	SHEEP	W.HORSES	DEER			UTIL	INDEX	UTIL			
1983/DRHY		0	0	816	0	0	816	7%	2.32	16.2%	55%	2764	IBAPAH
1984/DRHY		0	0	1188	0	0	1188	23%	1.66	38.2%	55%	1711	IBAPAH
1985/UPM		0	0	984	0	0	984	30%	1.02	30.6%	55%	1769	IBAPAH
1986/UPM		0	0	2292	0	0	2292	50%	1.39	69.5%	55%	1814	IBAPAH
1987/DRHY		0	0	1608	0	0	1608	43%	1.64	70.5%	55%	1254	IBAPAH
AVE DRHY/CCR4											1862		

APPENDIX VI: CALCULATED STOCKING RATES FOR CHIN CREEK (4 USE AREAS)

SHORT TERM OPTION 2 (CHANGE SEASON OF USE)

SPRING VLLY

YEAR/KEY	SP	ACTUAL USE (AUMS)				ANTELO	TOTAL	MEAS YIELD ADJUS			DESIR	DESIRED	WEATHER
		CATTLE	SHEEP	W.HORSES	DEER			UTIL	INDEX	UTIL			
1982/AGCR		0	0	876		876	76%	1.39	105.6%	60%	498	ELY	
1983/AGCR		0	0	756		756	50%	2.34	117.0%	60%	388	ELY	
1984/AGCR		0	0	900		900	51%	0.96	49.0%	60%	1103	ELY	
1985/AGCR		0	0	1212		1212	86%	1.48	127.3%	60%	571	ELY	
1986/AGCR		0	264	1236		1500	54%	1.32	71.3%	60%	1263	ELY	
1987/AGCR		0	360	1464		1824	20%	1.04	20.8%	60%	5262	ELY	
AVE AGCR/CCR6											1514		

ANTELOPE RG

YEAR/KEY	SP	ACTUAL USE (AUMS)				ANTELO	TOTAL	MEAS YIELD ADJUS			DESIR	DESIRED	WEATHER
		CATTLE	SHEEP	W.HORSES	DEER			UTIL	INDEX	UTIL			
1985/AGSP		0	0	690	0	690	50%	1.48	74.0%	60%	559	ELY	
1986/AGSP		0	0	1495	0	1495	49%	1.32	64.7%	60%	1387	ELY	
AVE. AGSP											973		

ANTEL. VLLY

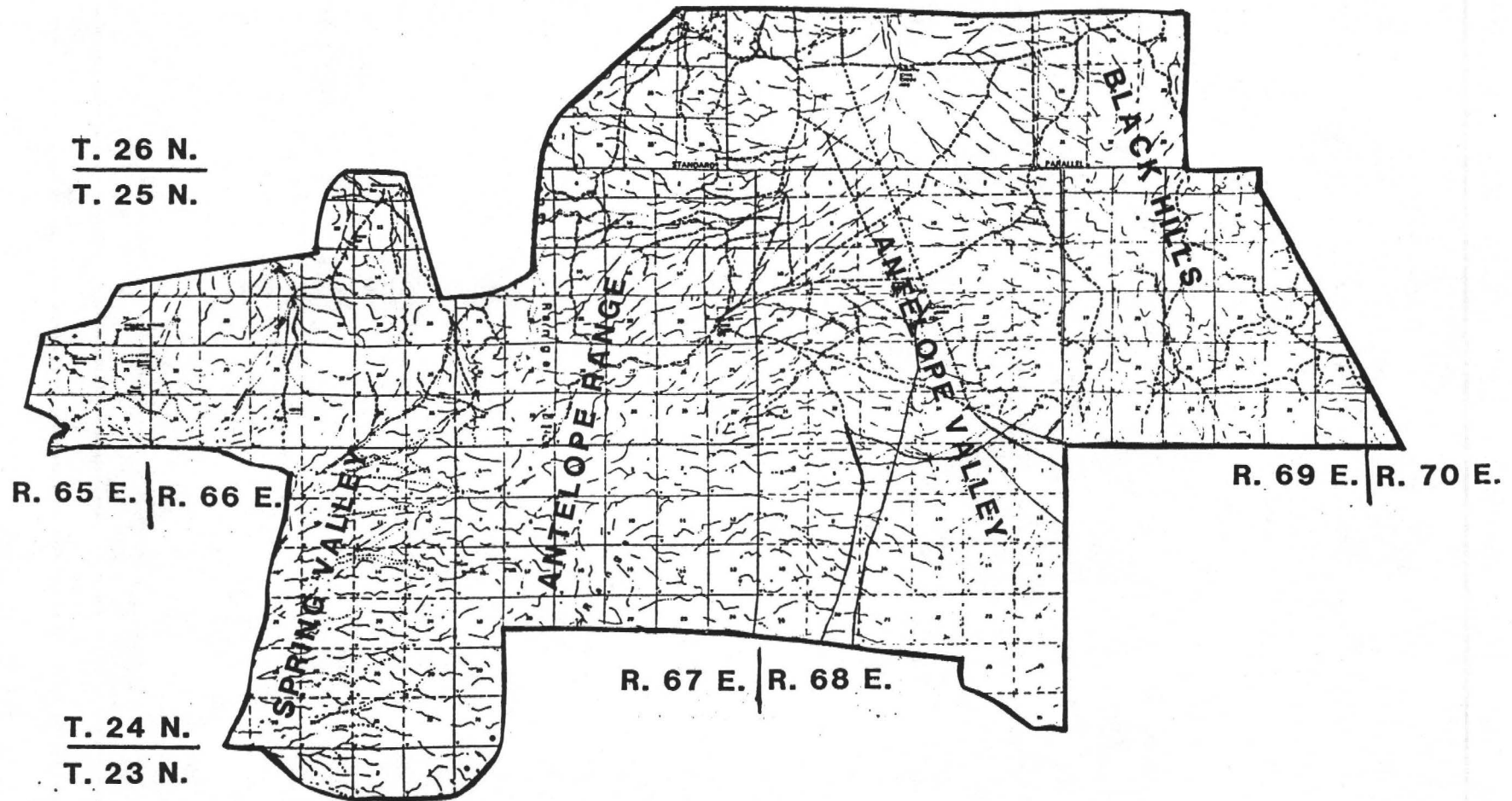
YEAR/KEY	SP	ACTUAL USE (AUMS)				ANTELO	TOTAL	MEAS YIELD ADJUS			DESIR	DESIRED	WEATHER
		CATTLE	SHEEP	W.HORSES	DEER			UTIL	INDEX	UTIL			
1983/EULA		5119	397	216	0	55	5787	15%	2.32	34.8%	50%	8315	IBAPAH
1984/EULA		6346	611	320	0	64	7341	52%	1.66	86.3%	50%	4252	IBAPAH
1985/EULA		7580	0	1104	0	55	8739	68%	1.02	69.4%	50%	6300	IBAPAH
1986/EULA		5388	0	2392	0	113	7893	44%	1.39	61.2%	50%	6453	IBAPAH
AVE EULA/CCR8											6330		

BLACK HILLS

YEAR/KEY	SP	ACTUAL USE (AUMS)				ANTELO	TOTAL	MEAS YIELD ADJUS			DESIR	DESIRED	WEATHER
		CATTLE	SHEEP	W.HORSES	DEER			UTIL	INDEX	UTIL			
1983/ORHY		0	0	816	0	0	816	7%	2.32	16.2%	60%	3015	IBAPAH
1984/ORHY		0	0	1188	0	0	1188	23%	1.66	38.2%	60%	1867	IBAPAH
1985/UPM		0	0	984	0	0	984	30%	1.02	30.6%	60%	1929	IBAPAH
1986/UPM		0	0	2292	0	0	2292	50%	1.39	69.5%	60%	1979	IBAPAH
1987/ORHY		0	0	1608	0	0	1608	43%	1.64	70.5%	60%	1368	IBAPAH
AVE ORHY/CCR4											2032		

CHIN CREEK ALLOTMENT

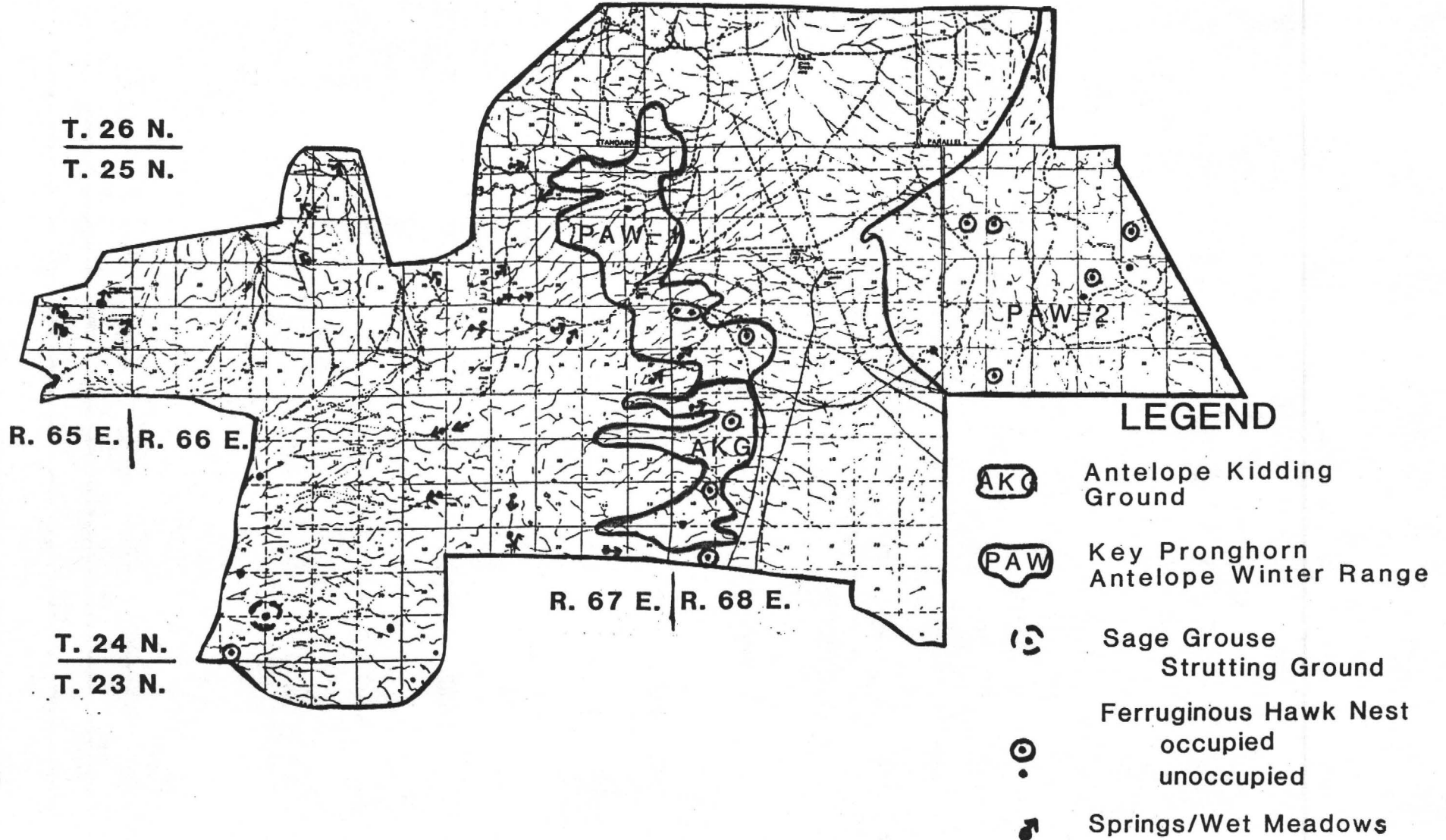
Map 1



CHIN CREEK ALLOTMENT

WILDLIFE USE AREAS

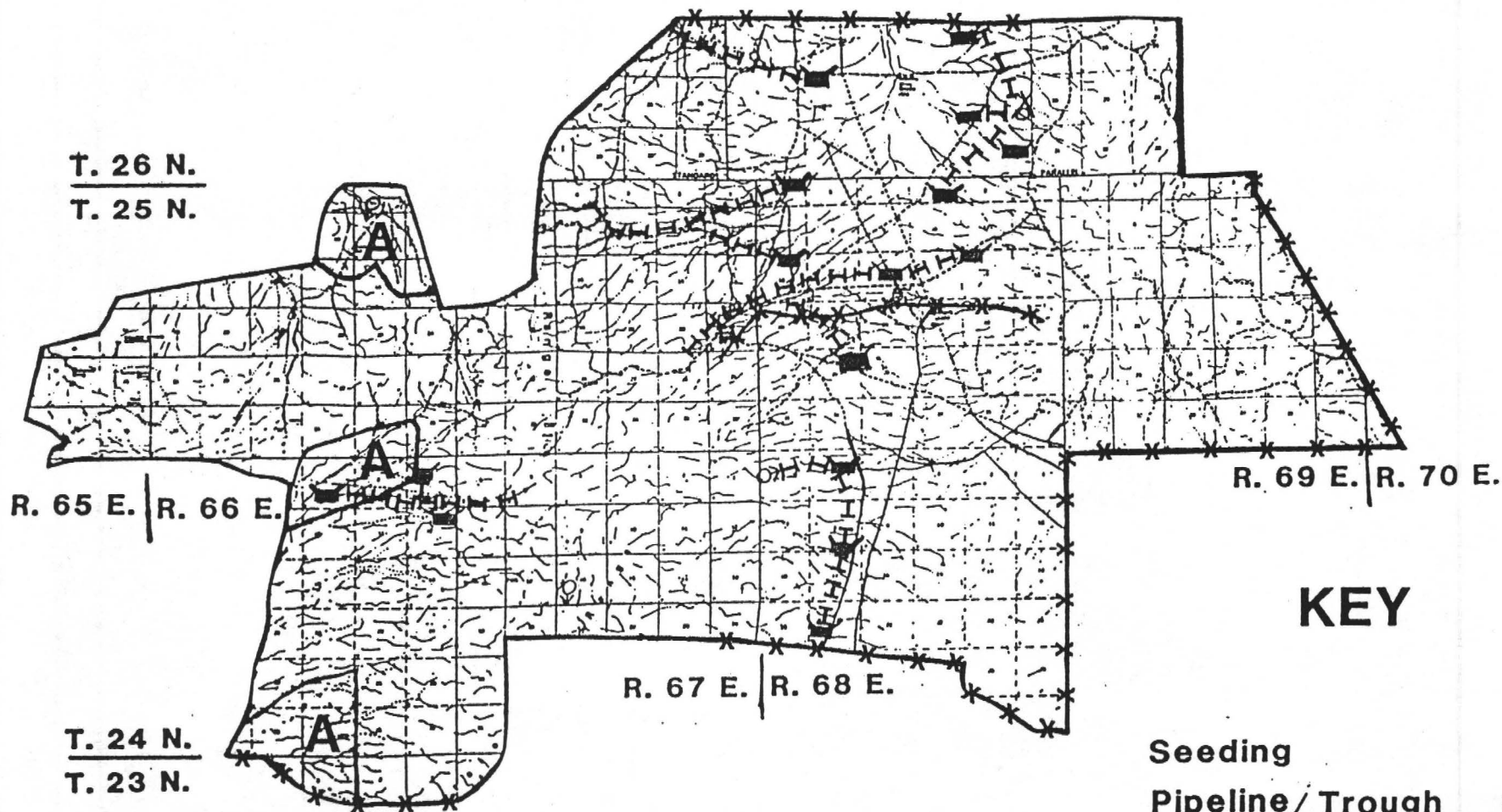
Map 2



CHIN CREEK ALLOTMENT

EXISTING RANGE IMPROVEMENTS

MAP 3



KEY

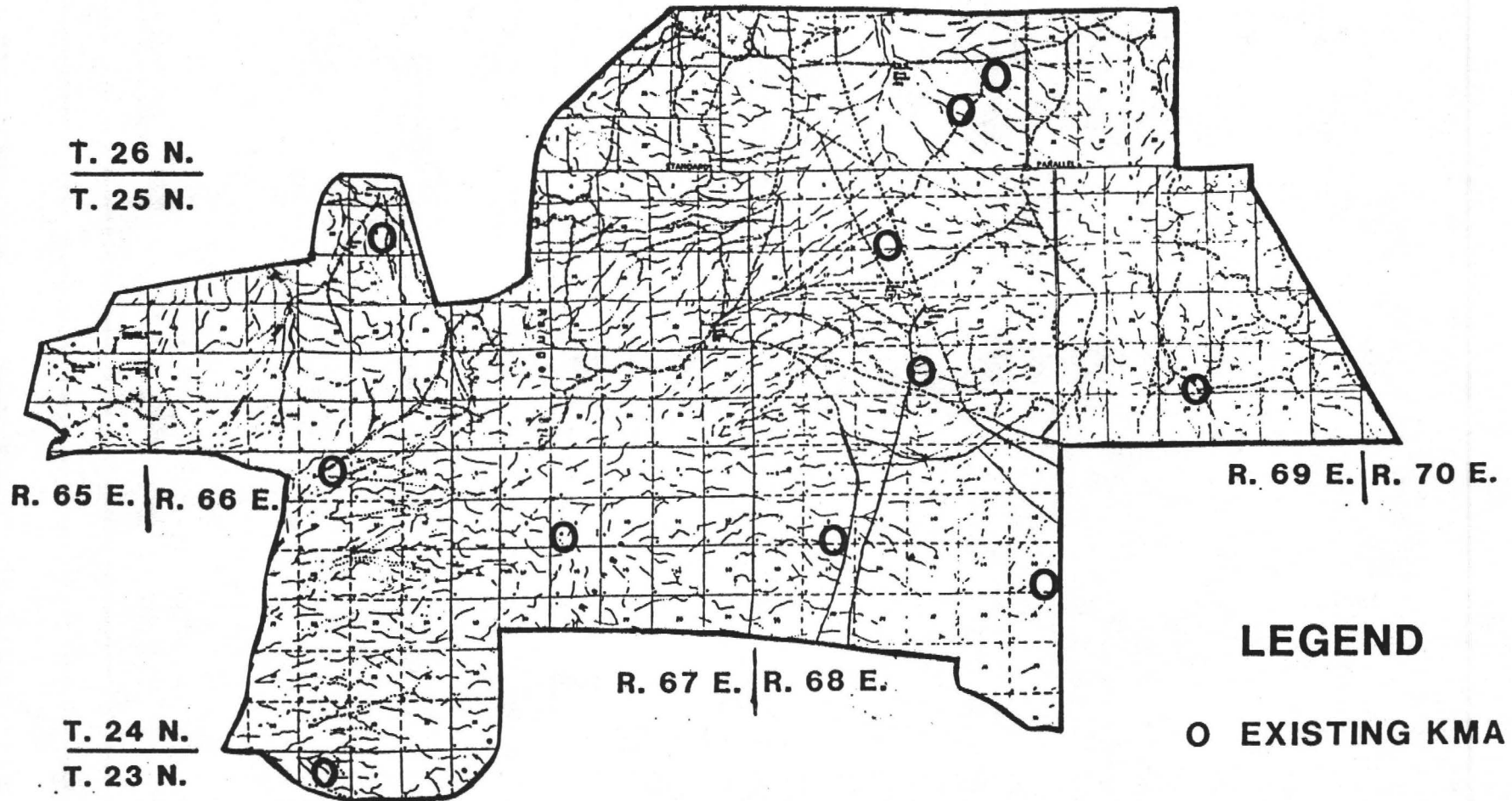
Seeding
Pipeline/Trough
Fenceline

A
HHH
XXX

CHIN CREEK ALLOTMENT

KEY AREAS

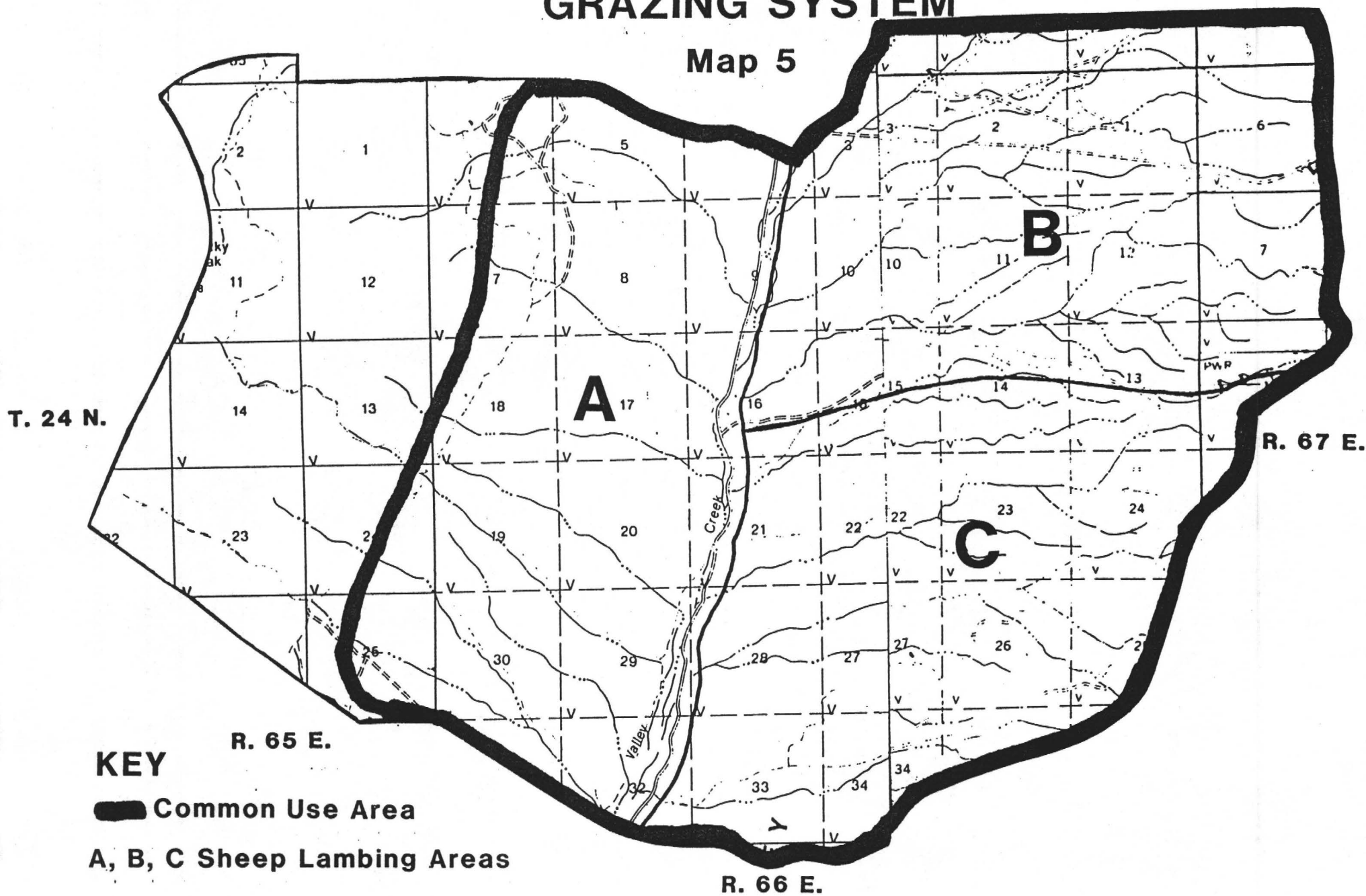
Map 4



SAMPSON CREEK ALLOTMENT CHIN CREEK ALLOTMENT

GRAZING SYSTEM

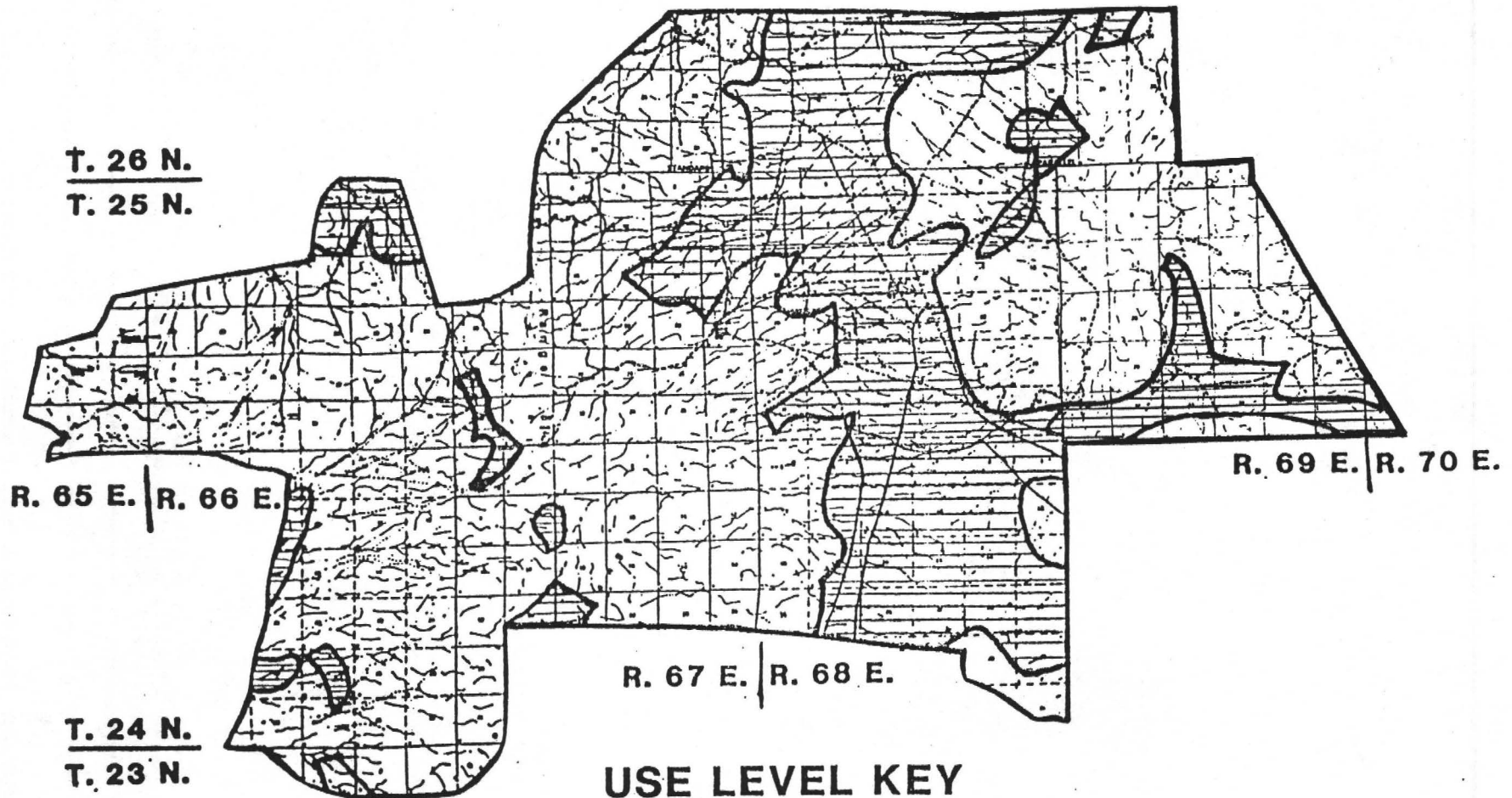
Map 5



CHIN CREEK ALLOTMENT

1985 UTILIZATION PATTERN MAP

Map 6

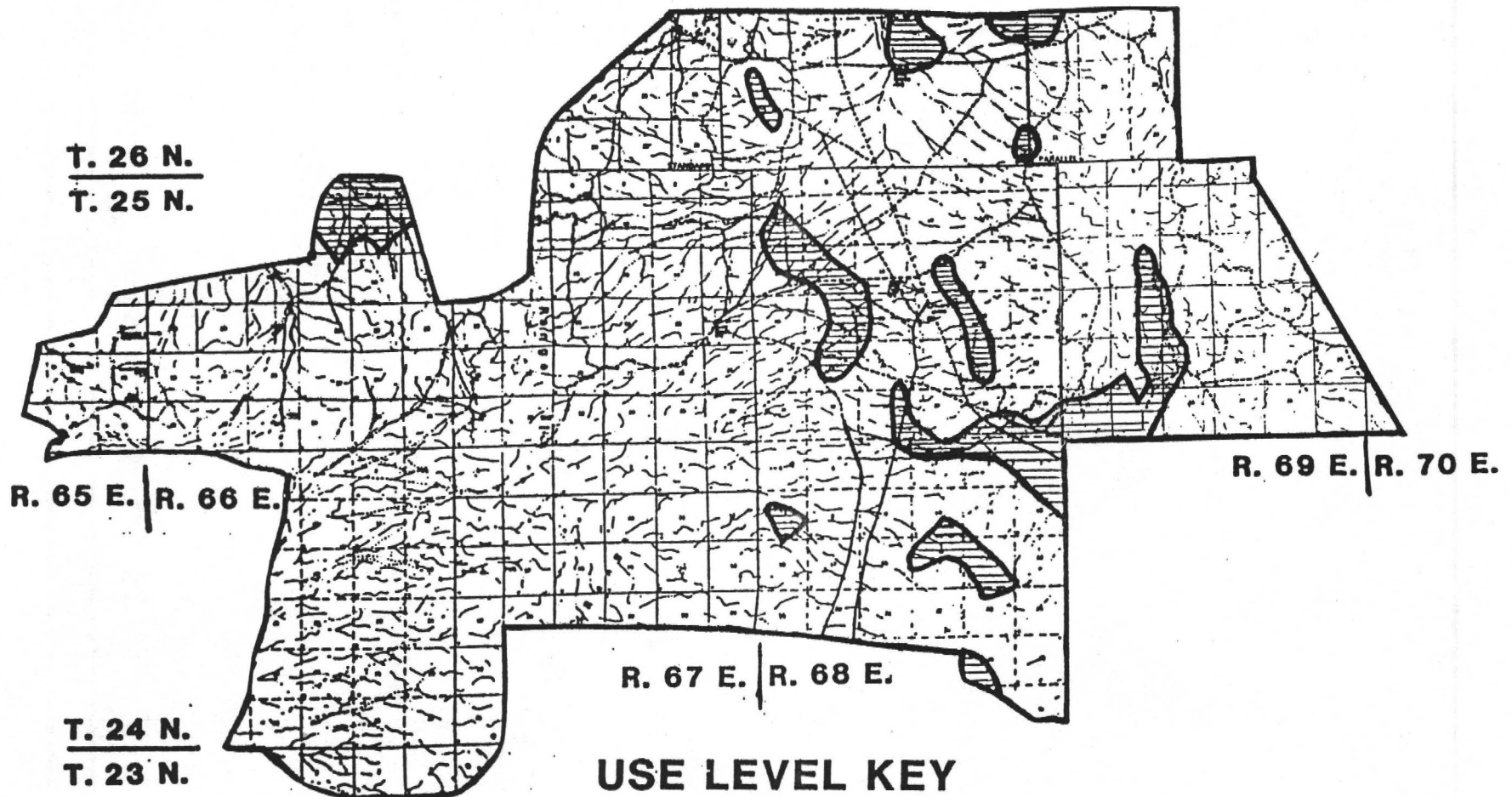


 Severe-Heavy (61-100%)

CHIN CREEK ALLOTMENT

1986 UTILIZATION PATTERN MAP

Map 7



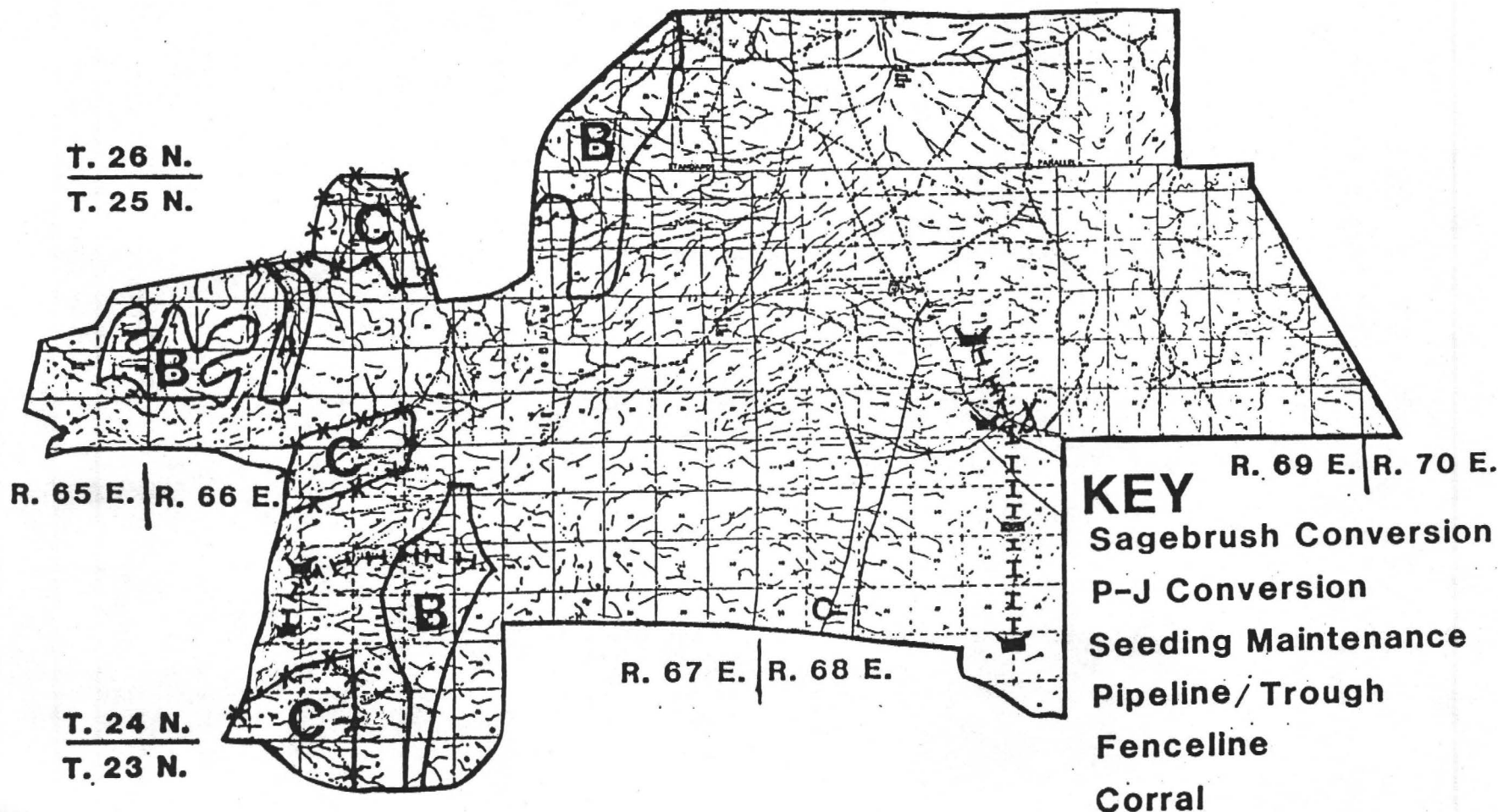
USE LEVEL KEY



Severe-Heavy (61-100%)

CHIN CREEK ALLOTMENT PROPOSED RANGE IMPROVEMENTS

Map 8



BOB MILLER
Acting Governor

STATE OF NEVADA

9/21/89
TERRI JAY
Executive Director



**COMMISSION FOR THE
PRESERVATION OF WILD HORSES**

Stewart Facility
Capitol Complex
Carson City, Nevada 89710
(702) 885-5589

COMMISSIONERS

Deloyd Satterthwaite, Chairman
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Tuscarora, Nevada 89834

Dawn Lappin
15640 Sylvester Road
Reno, Nevada 89511

Michael Kirk, D.V.M.
P.O. Box 5896
Reno, Nevada 89513

September 21, 1989

Gerald Smith, Area Manager
Schell Resource Area
Ely District Office
Star Route 5, Box 1
Ely, Nevada 89301

Dear Mr. Smith,

Thank you for the opportunity to comment on the Chin Creek Allotment Monitoring Evaluation.

In the Allotment Profile, under Allotment Specific Objectives, neither your short term or long term objectives for wild horses, specify habitat requirements for the horses.

I feel that at this time, in looking at allotments that contain wild horses as an integral part of the ecosystem, it is important to integrate the Draft Wild Horse And Burro Habitat Evaluation Procedures Users Guide. This guide has already been used by the Carson City District.

In order to best determine how to manage a multiple-use allotment, the needs of the horses must be taken into consideration just as the needs of critical wildlife habitat are considered. This may help to better define key horse use areas.

In your Activity Plan Objectives, please explain how you are going to manage horses by season of use.

In your Summary of Studies Data, under wild horses, please provide the following information:

- 1) Dates and locations of wild horse censuses
- 2) Census results
- 3) Dates of horse gathers and numbers removed

Another concern that I have with this document, is the use of the "Yeild Index" to produce an adjusted utilization. To the best of my knowledge, if you eat 90% of a plant, you have eaten 90% of the plant. No amount of rain and sunshine is going to save it.

In some cases your "normalized utilization" exceeds 100%. Does this mean that the dirt surrounding the roots has also been consumed?

I hereby request that you use only measured utilization and actual use to make adjustments in grazing on the public lands.

Gerald Smith
September 21, 1989
Page 2

On page 10, you have noted a pinion/juniper problem which has decreased available forage by 2,160 AUM's. What do you plan on doing to mitigate this problem?

On page 12, under wild horse habitat, you state that "Wild horse and burro habitat ratings have not been determined and will not be available...pending approval." As stated on the previous page, since Carson City District is already using the Habitat Evaluation Users Guide, and since determinations of habitat are crucial to management, you must institute use of the Guide at this time.

On page 14, Under Activity Plan Objectives, you state that trend is down in four out of eight key areas, all of which are in areas used by wild horses. Please add that the key areas are also used by livestock and wildlife.

On page 15, please change the stocking level formula to remove Normalized Utilization.

On page 16, you state that horses "could go around the ends of the fence" that was installed in 1987. Do you have evidence that the horses were able to go around the fence? Has the fence impacted the free-roaming behavior of the horses? Has the fence possibly compounded the grazing problem for the horses by limiting their distribution?

On page 17, you state that managing wild horses at reduced levels is the most effective way to manage the riparian areas. This is not acceptable. Riparian areas should be fenced for protection; reducing horses to meet a riparian objective is a lame way to justify a reduction.

On page 18, under option 2, how are you proposing to "control wild horse numbers?" If you are proposing to control horses by controlling waters, how are you going to insure that no horses die from lack of water?

On page 19, you state that you have no use pattern mapping for the last two years. How can you make determinations on grazing and wild horse management without the necessary data? Also, if you are intending to make grazing available for primarily livestock in Spring Valley, are you going to close other areas of the allotment to livestock grazing to supply the horses with segregated grazing areas?

On page 21, under b. Water Developments, I encourage all of the proposed actions. Since this is in a herd area, the Commission may be interested in funding some of these projects. If I can provide you with a grant application for this purpose, please feel free to contact me and I will assist you in this matter.

Gerald Smith
September 21, 1989
Page 3

On page 22, I support implementation of the sheep grazing system as I would oppose an allotment boundary fence which would impact wild horse movement. Also on page 22, under Additional Monitoring Required, I feel it is important to have the data regarding wild horses before any adjustments are made.

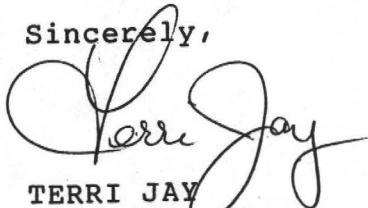
In the Summary of Problem Resolution by Use Area, I object to a proposed reductions of horses in lieu of riparian exclosures.

Since I have asked for several items of information pertinent to this Allotment Monitoring Evaluation, I hereby request an extension of time to allow for modification of my comments pending receipt of the requested information.

In conclusion, I appreciate the opportunity to comment on the Chin Creek Allotment Monitoring Evaluation, and look forward to working with you further.

Thank you for your time.

Sincerely,

A handwritten signature in cursive script that reads "Terri Jay". The signature is written in dark ink and is positioned above the typed name and title.

TERRI JAY
Executive Director

TJ/cb