7/4/94

United States Department of the Interior

TAKE PRIDE IN AMERICA

BUREAU OF LAND MANAGEMENT
ELKO DISTRICT OFFICE
3900 E. IDAHO STREET
P.O. BOX 831
ELKO, NEVADA 89801

IN REPLY REFER TO:

4400/4120 (NV-015)

APR - 4 1994

3 dup

Mr. Reed B. Robison
HCR 33, Box 33940
Ely, NV 89301

Dear Mr. Robison:

The Antelope Valley Allotment Evaluation is enclosed for your review. Please direct your comments, if any to the following subjects:

A) Monitoring information that should be added to the evaluation, and

B) Other ideas to achieve the multiple use objectives, as alternatives to the technical recommendation already described in the enclosed evaluation.

Please provide me with your formal written comments by May 2, 1994 and make your comments clear and concise as possible.

Sincerely yours,

BILL BAKER, Manager
Wells Resource Area

Enclosure: As stated

cc: NV Div. of Wildlife
American Horse Protection
Humane Society-US
Animal Protection Institute
Natural Resources Defense Council
Mr. Kenneth Jones
Ely District Schell Resource Area
Commission for the Preservation of Wildhorses
Mr. Von Sorenson
Ms. Kathryn Cushman
HTT Resources
U.S. Fish and Wildlife Service
Federal Land Bank
Ms. Metta Richins
Holtz Inc.
Ms. Rose Strickland
NV Dept. of Agriculture
The Nature Conservancy
Wild Horse Organized Assistance
Wells Resource Area Grazing Association
Rutgers Law School

BOB MILLER
Governor

STATE OF NEVADA

CATHERINE BARCOMB
Executive Director

COMMISSION FOR THE PRESERVATION OF WILD HORSES
255 W. Moana Lane
Suite 207A
Reno, Nevada 89509
(702) 688-2626

October 3, 1994

Rodney Harris, District Manager
Elko District Office
3900 E. Idaho St.
Box 831
Elko, Nevada 89801

RE: Maverick-Medicine Wild Horse Gather Decision

Dear Mr. Harris,

We were in receipt of a full force and effect decision for the gather of the Maverick-Medicine Wild Horse Herd. It was the intent of the Wells Amendment to adjust HMA's based upon conflicts with private lands and to establish initial herd levels for new HMA's. These new herd areas, Antelope and Maverick-Medicine, were to have AML's established based on achieving a thriving natural ecological balance with other uses. This determination of AML's were to be based upon LUP criteria and monitoring data as described in the 1989 IBLA Decision.

We have reviewed, through the consultation process, the Wells Amendment, Wells Amendment Environmental Assessment and Maverick-Medicine Gather Plan/EA, and cannot determine how the AML of this decision was determined. For example, the District contends that use pattern mapping was weight averaged, 10% desired utilization for winter forage, and yield indexing were applied in the carrying capacity computations. These computations were not found in the Wells Amendment EA nor Medicine Gather Environmental Assessment.

The decision and gather plan implements actions to re-structure the wild horse herd. Issues pertinent to age, sex and reproduction have not be adequately addressed.

We encourage you to provide us with the specific information regarding this AML at you earliest convenience. If you have any questions, please feel free to call.

Sincerely,

CATHERINE BARCOMB
Executive Director

ANTELOPE VALLEY
ALLOTMENT EVALUATION
April 1994

Bureau of Land Management
Elko District
Wells Resource Area

Prepared by:
Bruce W.C. Thompson
Range Conservationist

ANTELOPE VALLEY ALLOTMENT EVALUATION
WELLS RESOURCE AREA

I. INTRODUCTION

A. Allotment Name/Number: Antelope Valley - 4301
B. Permittee: Reed Robison
C. Evaluation Period: 1988 to 1992
D. Selective Management Category and Priority: "M" (maintain) category. This allotment has no priority assigned under the current planning efforts in the Rangeland Program Summary (RPS)
E. Completed AMPs: No AMP (Allotment Management Plan) has been completed for the Antelope Valley allotment; however the Antelope Valley Allotment is under an interim grazing system in conjunction with the adjoining Chin Creek Allotment. The Ely District will incorporate the Antelope Valley Allotment into an AMP which is scheduled for completion during FY94.

The Antelope Valley Allotment within the Elko District (Wells Resource Area) adjoins the Chin Creek Allotment within the Ely District (Schell Resource Area) in which Reed Robison also has grazing privileges. Livestock that graze the Chin Creek Allotment also graze the Antelope Valley Allotment for a portion of the year-round operation.

On July 16, 1990, the Schell Resource Area issued a final multiple use decision regarding management within the Chin Creek Allotment. Resolution of appeals to that decision culminated in a "Stipulation to Withdraw Appeals" in September 1991 which outlined an interim 3 pasture rotation grazing system that incorporated the Antelope Valley Allotment. The Elko District, Wells Resource Area continues to administer the Antelope Valley Allotment.

II. INITIAL STOCKING LEVEL

A. Livestock Use

1. Active Preference (AUMs) Antelope Valley Allotment

a.	Total Preference:	5,202
b.	Suspended:	130
c.	Active:	5,072
d.	TNR:	0

2. Season of Use/Grazing System:
The season of use is winter and early spring. The season of use prior to the "Stipulation to Withdraw Appeals" was 11/01 to 5/31 with spring use after 4/01 being allowed only every other year (odd numbered years) as per the a grazing agreement signed 7/29/74. The present grazing system is outlined in the "Stipulation to Withdraw Appeals" settling the appeal of Reed Robison, which spells out the grazing system and other terms and conditions for use in the Antelope Valley Allotment. The Antelope Valley Allotment is in an interim (as per the "Stipulation to Withdraw Appeals") three pasture deferred-rotation grazing system with the North and South Pastures which are administered by the Ely District. The grazing system outlined below in tables 1 and 2 should be reviewed before continuing (also see Appendix 6).

The basic livestock operation for the Antelope Valley Allotment as outlined in the "Stipulation to Withdraw Appeals" is as follows;

a. An interim three pasture deferred-rotation system is in effect for the Antelope Valley use area.

Antelope Valley Use Areas
Antelope Valley Allotment (Elko District)
North Pasture (Ely District)
South Pasture (Ely District)

Table 1. Grazing Treatments		
Treatments		**Aums**
A	718 Cattle 11/01 to 01/15 100%	1,794 AUMs
B	718 Cattle 01/16 to 03/31 100%	1,770 AUMs
C	718 Cattle 04/01 to 05/31 100%	1,440 AUMs
Total		5,004 AUMs

The Grazing System outlined below is per the treatments outlined above:

Table 2. Grazing System			
Year	**South Pasture Ely District**	**North Pasture Ely District**	**Ant. Valley Allot. Elko District**
1	A	B	C
2	C	A	B
3	B	C	A

3. **Kind of livestock:** Cow/calf pairs.

4. **Percent Federal Range:** 100%

5. Other Information:
The permittee also holds an active preference of 1,240 AUMs (sheep) in the Badlands Allotment located in the Elko District immediately southeast of the Antelope Valley Allotment.

B. Wild Horse and Burro Use:

1. Herd Use Areas Within the Antelope Valley Allotment

The allotment falls within the Antelope Valley Herd Management Area (HMA). This HMA consists of 279 horses and no burros as of the last count in August 1993. See Appendix 3 for a map of the HMA.

2. Determination of Appropriate Management Level (AML)

The initial management level for wild horses, as specified in the RPS, was to provide forage to sustain 480 AUMs of wild horse use,

12 40 Allotment

maintain current use and monitor. Since the RPS was issued, the Interior Board of Land Appeals (IBLA) rendered a decision which clarified that a wild horse herd size is to be established based on the concept of maintaining a thriving natural ecological balance.

It must be determined through the resource management planning process what the appropriate mix of competing forage consumers is. In 1992, the Wells Resource Area began a Wild Horse Amendment to the Wells RMP. This Amendment was necessary to establish HMAs, clarify boundaries and to set initial herd sizes within the HMAs. The Amendment became final on August 2, 1993 and an initial herd size for the Antelope Valley HMA was determined to be 240 horses.

The initial wild horse AML will be established in the Antelope Valley Allotment based on the initial herd size for the Antelope Valley HMA as per the amendment. Using existing inventory and monitoring data it will be determined what percentage of horses inhabiting the Antelope Valley HMA reside in the allotment and for how many months. If, through continued monitoring, the initial herd size in the Antelope Valley HMA is determined to be incorrect, it will be changed and the AML within the Antelope Valley Allotment will be adjusted accordingly.

The following table represents actual horse use in the allotment based on census data:

Table 3. Antelope Valley Allotment

YEAR	TOTAL HMA POP. SUMMER	# OF HORSES IN ALLOTMENT SUMMER	# OF AUMS USED BY HORSES SUMMER	TOTAL HMA POP. WINTER	# OF HORSES IN ALLOTMENT WINTER	AUMS USED BY HORSES WINTER	TOT. # OF AUMS USED BY HORSES
1988	131	10	60	ND	ND	ND	60*
1989	ND	ND	ND	ND	ND	ND	ND
1990	ND	ND	ND	418	35	210	210**
1991	350	10	60	366	5	30	90
1992	446	8	48	545	32	192	240
1993	279	4	24	327	19	114	138

Avg. AUMs Avg. AUMs Summer - 48 Avg. AUMs Winter - 137
AVG. TOTAL # AUMS UTILIZED BY WILD HORSES - 185

ND = No Data
* = summer use only
** = winter use only

1993 S 1674 W 1962 3636 Aum

138 Aums Antelope

3.8% Aums of total Aums

As can be seen in Table 3, the actual use made by wild horses in 1993 was 138 AUMs. After the Antelope Valley HMA is reduced to the initial herd size of 240 (as per the Wells RMP Wild Horse Amendment), wild horse use would be approximately 90 AUMs within the allotment. This was determined by analyzing aerial census data and calculating that an average of 4.1% of the Antelope Valley HMA horses utilize the Antelope Valley Allotment for approximately 9 months (see Table 5). Thus, 4.1% x 240 = 9.84 horses (or 10) for 9 months giving 90 AUMs for wild horse use.

C. Wildlife Use

A. Mule Deer:

1. Existing numbers: 27 deer (34 AUMs)
2. Reasonable numbers: 51 deer (64 AUMs)
3. Key/Crucial mgmt. areas: At the time the Wells RMP was written, the Antelope Valley Allotment was utilized by deer primarily during winter months (seasonal use area DW-K). Updated information from the Nevada Division of Wildlife (NDOW) indicates the Antelope Valley Allotment is mule deer yearlong range Appendix 2 outlines mule deer yearlong range. Table 4 outlines the acres of each seasonal use area within the Antelope Valley Allotment.

B. Pronghorn Antelope:

1. Existing numbers: 8 antelope (19 AUMs)
2. Reasonable numbers: 22 antelope (53 AUMs)
3. Key/Crucial mgmt. areas: antelope yearlong range (AY-2,AY-3) At the time the Wells RMP was written, crucial antelope kidding areas were identified in the Antelope Valley Allotment. Although not delineated on NDOW's updated big game range maps, antelope are still using these kidding areas. Table 4 outlines the acres of each seasonal use area within the Antelope Valley Allotment.

Table 4 Big Game Seasonal Use Areas

Seasonal Use Area	Acres
DW-K	600
AY-2	10,472
AY-3	19,624

C. Endangered, Threatened and Candidate Species:

The following endangered, threatened, or candidate species are known to occur within the Antelope Valley Allotment:

1. Bald Eagle: common - winter resident, spring/fall migrant. Status: Endangered.

2. Ferruginous Hawk: common - summer resident. No nesting has been observed within the allotment, but potential habitat exists. Status: Candidate-C2

D. Other:

Various species of nongame mammals, birds, and reptiles.

III. ALLOTMENT PROFILE

A. Description (see allotment map in Appendix 2)

The Antelope Valley Allotment is located in the southeast corner of the Elko District, in Antelope Valley. The Elko-White Pine County Line serves as the allotment's southern boundary with the Kingsley Mountains, Boone Spring Allotment and Alternate Hwy.93 as the west, and northwest boundary. The West White Horse Allotment and the Goshute Mountains serve as the allotment's north and east boundaries respectively.

The elevation of the allotment ranges from around 5,700 feet in Antelope Valley to 7,882 feet at the crest of the Kingsley Mountains. The topography varies from the relatively flat valley floor in Antelope Valley to the rolling hills and foothills of the Goshute Mountains, to steep mountain lands of the Kingsley Mountains.

B. Acreage

The allotment totals 45,458 acres of which 45,367 acres (99.8%) are public lands and 91 acres (0.2%) are private lands not controlled by the permittee. The allotment is currently licensed at 100% federal range.

1. **Pastures:** None. The allotment is not cross fenced and the entire allotment is used throughout the season for grazing. For purposes of this evaluation, the entire allotment will be treated as one pasture.

C. Allotment Specific Objectives

See Appendix 5

IV. MANAGEMENT EVALUATION

A. Purpose

The purpose of this evaluation is to document the progress being made towards attainment of the multiple use objectives for the allotment. Specific measurements of progress such as use pattern mapping, utilization at the key area locations for livestock, wildlife and wild horses, permittee actual use records, wildlife habitat condition studies, wild horse census counts and distribution flights, Nevada Division of Wildlife surveys, and weather station data have been collected.

B. Summary of Studies Data

1. Actual Use

a. Livestock

Actual use data for the allotment has been submitted annually by the permittee since 1988. The 1989 actual use is questionable due to gates being left open on the county line. During the evaluation period the actual use ranged from a high of 3,114 AUMs to a low of 610 AUMs with the average use being 1,438 AUMs. No livestock use occurred from June 1, 1992 through November 10,

1993. Actual use data is summarized with the utilization data (see Appendix 4).

2. Wild Horse Use

(a) Census Data

Actual use by wild horses is sometimes difficult to determine due to their wild and free-roaming behavior. **The Antelope Valley** Allotment is fenced on the northern boundary and only partially fenced on its southern boundary, thus horses are able to move in and out of the allotment at will.

The numbers of horses that actually use the allotment varies greatly with the time of year and the availability of water. In 1991, the BLM began intensive seasonal distribution flights in order to determine the location of horses at different times of the year, the results of which can be seen in Table 3. Using this data, it was determined that an average of 4.1% of the Antelope Valley herd use the Antelope Valley Allotment for an average of 9 months (Fall, Winter and Spring months). Although horses may be found in the allotment year round, the majority of the use occurs in the fall, winter, and spring months when water is more readily available. These figures were determined by analyzing the three seasonal census maps completed per year since 1991. The maps identify the locations of horses and are available for review upon request.

Table 5 gives the results of aerial distribution monitoring from 1975 to the present; the type of aircraft used was a helicopter.

Table 5.

AERIAL CENSUS DATA FOR ANTELOPE VALLEY ALLOTMENT

Year	# of horses in Ant. Val. HMA	# of horses in Ant. Val. Allot.	% in Ant. Val. Allotment
01/75	ND	83	ND
04/78	449	117[1]	26%
03/80	191[2]	85	45%
03/81	164	39[1]	24%
06/83	249	0	0%
06/85	267	108	40%
02/87	341	96	28%
07/88	131	10[3]	8%
03/90	418	35	8%
02/91	366	8	2%
09/91	350	10	3%
02/92	545	32	6%
06/92	446	8	2%
09/92	576	7	1%
11/92	543	31	6%
01/93	327[4]	19	6%
05/93	312	6	2%
08/93	279	4	1%
avg. from 1988-1993			4.1%

1 - In these years, Antelope Valley and Ferber Flat Allotments were

counted together and there are no maps available to separate them.

2 - This census took place after the claiming period, during which hundreds of horses were claimed, and removed from the HMA.

3 - This was a post removal census. A large gather in which 644 horses were removed from the Goshute and Antelope Valley HMAs occurred in 1988. The horse numbers have never reached their pre-88 levels in the Antelope Valley Allotment. The overall average percent of horses utilizing the allotment was determined using post 1988 data.

4 - A gather in which 100 horses were removed occurred in December 1992.

(b.) Removals

Small removals of horses from the range have taken place for as long as horses have roamed the west. Often, homesteaders, ranchers, and miners would turn horses out on the range during the winter when they were not needed and then round them up in the spring. Large scale gathers by the BLM to control excessive horse numbers, began after the passage of the Wild Horse and Burro Act in 1971. Table 6 summarizes the removals in the Antelope Valley HMA.

Table 6.

Date	Number of Horses Removed
1/80	361
2/87	340
1/88	118
7/88	175
12/92	100

Due to the nature of horse herding, we have no way of knowing what proportion of the horses were actually gathered out of the Antelope Valley Allotment.

In December of 1992, the BLM began a pilot fertility control project in the Antelope Valley/Antelope HMAs in the Elko and Ely Districts. A total of 107 mares from the Antelope Valley HMA were used in the study. The fertility control project should slightly reduce the 1994 foaling rate in the allotment.

(c.) Key Area Utilization Data

Within the Antelope Valley allotment, there are four key areas which receive wild horse use. Key areas 1012 and 1013 have only been read prior to livestock turnout in 1990 and 1991. Attempts to collect utilization data at key areas within the allotment prior to livestock turnout began in earnest in 1991. Tables 7-10 show the actual use and utilization made by wild horses.

Upon conducting horse removals to reach the initial management

level, within the Antelope Valley HMA utilization will be monitored to determine how much use wild horses are making prior to livestock turnout. If utilization goals are not being met, adjustments in the wild horse management level will be made.

Table 7. Antelope Valley - Key Area 1011

YEAR	TOTAL HMA POP.*	# OF HORSES IN ANT. VAL ALLOTMENT[1]	# OF MONTHS HORSES ARE IN ALLOT[1]	TOT. # OF AUMS USED BY HORSES	TOTAL UTILIZATION BY HORSES
1990	418	35	9	315	ND
1991	366	8	9	72	10%
1992	545	32	9	288	46%
1993	279	4	9	36	0-5%

1. Based on census data and estimates derived from census data.
ND - No Data
* - Initial herd size in the HMA is 240 as per the Amendment.

Table 8. Antelope Valley - Key Area 1012

YEAR	TOTAL HMA POP.*	# OF HORSES IN ANT. VAL. ALLOTMENT[1]	# OF MONTHS HORSES ARE IN ALLOT[1]	TOT. # OF AUMS USED BY HORSES	TOTAL UTILIZATION BY HORSES
1990	418	35	9	315	ND
1991	366	8	9	72	10%

1. Based on census data and estimates derived from census data.
ND - No Data
* - Initial herd size in the HMA is 240 as per the Amendment.

Table 9. Antelope Valley - Key Area 1013

YEAR	TOTAL HMA POP.*	# OF HORSES IN ANT. VAL ALLOTMENT[1]	# OF MONTHS HORSES ARE IN ALLOT[1]	TOT. # OF AUMS USED BY HORSES	TOTAL UTILIZATION BY HORSES
1990	418	35	9	315	25%
1991	366	8	9	72	18%

1. Based on census data and estimates derived from census data.
* - Initial herd size in the HMA is 240 as per the Amendment

Table 10. Antelope Valley - Key Area 1014

YEAR	TOTAL HMA POP.*	# OF HORSES IN ANT. VAL ALLOTMENT[2]	# OF MONTHS HORSES ARE IN ALLOT[2]	TOT. # OF AUMS USED BY HORSES	TOTAL UTILIZATION BY HORSES
1990	418	35	9	315	31%
1991	366	8	9	72	10%
1992	545	32	9	288	28%
1993	279	4	9	36	0-5%

1. Based on census data and estimates derived from census data.
* - Initial herd size in the HMA is 240 as per the Amendment

(d.) Use Pattern Mapping Data

The allotment has had one pre-livestock use pattern map made and this was in April 1991. The map showed that overall, the allotment was slightly used by wild horses. There was water in two of the three reservoirs and use around the water was light (21-40%). Water occurs within the allotment sporadically and accordingly, utilization levels seem to be sporadic. More use pattern mapping data needs to be collected.

3. Precipitation

The normal growing season is from April to mid June. At the higher elevations the growing season may extend into late June. The precipitation data from September of one year to June of the following year is used to calculate the "yield index" or climatic adjustment factor (CAF). This information is used to adjust current years production data to that which would be expected to occur during an average year. A "yield index" or CAF of 1 is considered to be an average precipitation year, above 1 is above average, and below 1 is below average. Precipitation data and yield indexes were derived from data collected at Lages Junction for the period 1987 to 1992.

Table 11 summarizes the CAF from 1987 through 1992. Calculations are based on the precipitation data from Lages Junction.

yield index

Table 11 Climate Adjustment Factors 1987 to 1992	
1987	1.05*
1988	0.96*
1989	0.62*
1990	0.78
1991	0.62
1992	0.67
* estimated crop yield index	

The calculated carrying capacities (found in this evaluation) adjusted by the yield index are compared with the capacity calculated without the yield index, and a representative capacity is selected. However, the final recommended carrying capacity includes an assessment of frequency, trend, and ecological status data (when available) and a determination as to whether or not the multiple use objectives for the allotment have been met.

4. Utilization

a. Key Area

During the evaluation period utilization data has been recorded at four key areas in the Antelope Valley Allotment. See Appendix 2 for location of the key areas.

Utilization has been recorded annually, by the Elko District since key areas were established in 1987. Utilization data was normally gathered within 10 days of livestock removal; however, some utilization data was collected prior to entry by livestock in order to measure wild horse utilization.

Utilization data is summarized in the studies summary matrix which is located in Appendix 4. Actual use data is also included in the studies summary matrix.

LUP Adj 50%

Utilization levels have generally been below the objective level of 60% for indian ricegrass during 1991, and 1992. In 1988-1990 the utilization on indian ricegrass (ORHY) exceeded the 60% utilization. Utilization levels exceeded the 50% level for white sage (EULA5) in 1988-90 but did not exceed in 1991, and 1992. The use pattern maps (UPMs) correlate with utilization transects on current years growth and key area locations. The allowable use or objective levels for ORHY and EULA5 is the degree of utilization considered desirable. The allowable use is based on winter grazing only (i.e. utilization is recorded as previous years growth).

b. Use Pattern Mapping

Use pattern mapping has been conducted annually since 1987 in the entire allotment. Use pattern mapping has revealed that:

1. Use patterns have been somewhat constant from year to year regardless of winter and spring use.

2. The majority of the allotment receives no more than light to moderate use. The majority of the use occurs in the valley bottom near the reservoirs. The use is concentrated due to the location of water in valley bottom. The upper benches receive less use due to the distance to water.

3. The far northern, northeastern, and eastern portions of the allotment are slightly to lightly used in most years due to the scarcity of water. Table 12 provides a summary of utilization by livestock in the Antelope Valley Allotment.

Table 12. Antelope Valley Use Pattern Summary

% Area of Allotment within each utilization category

Utilization Category	1987	1987-88	1989	1992	Average[2]	High	Low
Slight	44%	39%	13%	32%	32%	44%	13%
Light	12%	16%	21%	25%	19%	25%	13%
Moderate	8%	10%	36%	20%	18%	36%	8%
Heavy	5%	7%	16%	2%	7%	16%	2%
Severe	0%	0%	.3%[1]	1%	.5%	1%	.3%
Not Mapped	31%	28%	14%	20%	23%	31%	14%
Total	100%	100%	99.7%*	100%	99.5%		

[1] Severe use accounted for .3% of the total acres in the allotment
% is the percent of total acres in the allotment
[2] average is based on 1987-1992

Use pattern maps are available for review in Section 4 of the Antelope Valley Allotment Monitoring File, in the Wells Resource Area Office.

c. Desired Utilization Level/Carrying Capacity for Grazing

The actual use and utilization data were used to estimate the livestock and wild horse carrying capacity needed to achieve the desired utilization level. The following equation will be used to determine the carrying capacity of each pasture.

$$\frac{\text{Actual use (AUMs)}}{\text{K.A. Utilization}} = \frac{\text{Desired use of AUMs}}{\text{Desired Utilization}}$$

or

Actual Use X Desired Utilization =*Desired Use of AUMs*
K.A. Utilization

The livestock and wild horse grazing capacity estimates are then adjusted (divided) by a climate adjustment factor to approximate an average year. Desired use of AUMs divided by the Climatic Adjustment Factor multiplied by the percent Federal range equals the Estimated Carrying Capacity.

The livestock and wild horse carrying capacity for the allotment was calculated using the limiting factor method. The limiting factor method is based on the concept that if plant A is receiving 20% use and plant B is receiving 50% use and the carrying capacity is adjusted based on an average utilization level of 35% then the use on plant B will exceed the desired use level of 55%. Therefore, utilization on plant B acts as the limiting factor. The limiting factor was determined by reviewing the utilization data for each year and determining the highest use level at each key area within a pasture. This data is presented in Appendix 4 (Estimated Carrying Capacity).

The Antelope Valley Allotment is a single pasture allotment with four key areas, and one actual use figure for the entire pasture/allotment. Therefore the limiting factor theory has to be carried further to utilize the limiting (highest percent use) key area. Three out of the four key areas have different utilization objectives (i.e. 60% use on ORHY, and 50% use on EULA5 "winter use only"). Utilization was greatest on EULA5 at Key Area 1013 and will be the limiting factor used in this evaluation. Appendix 4A, and 4B provide additional data on the limiting factors and utilization.

5. Trend

Frequency trend plots were established at two of the four key areas in 1988. These two key areas are 1011 and 1012. Trend information has not been re-read. The frequency plots will be read prior to the allotment re-evaluation, and a determination of trend may be possible at that time. The frequency data is located in the studies summary matrix (Appendix 4).

6. Range Survey Data

The allotment was originally adjudicated for sheep use and historically used by sheep, until the early 1960's when cattle use was allowed. The allotment was rated at 5,202 AUMs, of which 5,072 are available for active use.

7. Ecological Site Inventory.

In 1992 an ecological site inventory was completed on the Antelope Valley Allotment. Table 13 and 13A summarizes the results of the inventory.

Table 13. Summary of Ecological Site Inventory			
A. Total Acres Surveyed and Classified			
Description	**Acres**	**% of Total Ac. Surveyed**	**% of Total Ac. in Allot.**
Early Seral	**6,200**	**18%**	**14%**
Mid Seral	15,286	44%	34%
Late Seral	10,870	32%	24%
PNC	2,179	6%	5%
Total	34,535	100%	77%

Table 13A.			
B. Total Acres Unclassified			
Description	**Acres**	**% of Total Ac. Unclassified**	**% of Total Ac. in Allot.**
Woodland	2,520	25%	6%
Inclusions	6,570	65%	14%
Rock Outcrop	737	7%	2%
Barren/Playa	304	3%	1%
Total	10,131	100%	23%
Total (a+b) =	44,666		100%

Ecological site inventory data reveals that 77% of the total acres in the Antelope Valley Allotment were surveyed and classified into seral stages. In general, the potential natural communities (PNC) occur at the higher elevations of the portion of the Kingsley Mountains that occur within the allotment.

The early and mid seral stages generally occur in the valley bottoms.

The data reveals that 23% of the total acres in the allotment were unclassified. Unclassified acres refers to the acres that were not classified or cannot be classified into seral stages.

8. Key Area Condition

Production transects completed in 1989 at two of the four key areas on native range were used to determine ecological status at the key area location. These production transects will be reread prior to the next allotment evaluation to ascertain if ecological condition objectives are being attained. The following table summarizes ecological status information.

Table 14.		
Key Area	Soil	Eco. Status 1989
KA-1011	Silty 5-8"	56 pts. (low late seral)
KA-1012	Shallow Calcareous Loam 8-10"	53 pts. (low late seral)

The range site description for KA-1011 states that the community is dominated by indian ricegrass and white sage.

The range site description for KA-1012 states that the community is dominated by indian ricegrass, needleandthread, and black sage.

9. Wildlife Habitat

a. Mule Deer

One big game habitat condition study has been established in the Kingsley Mountains adjacent to the Antelope Valley Allotment to evaluate seasonal mule deer habitat. Both the 1979 and 1991 data showed the deer range to be in good condition. The most limiting factor on seasonal mule deer range at this key area is poor age class structure of bitterbrush, a key browse species in mule deer range. Some decadent bitterbrush plants are present, while seedlings and young plants are lacking. There are too few seedlings and young plants present to ensure the long term survival of the bitterbrush population. Browse production in this area has been influenced by several years of drought. Table 15 outlines habitat study results in the Antelope Valley Allotment.

Table 15. Antelope Valley Allotment Big Game Habitat Condition Summary

	Transect Number	Seasonal Use Area	Habitat Rating*	% of Area
Mule Deer Yearlong	T-01	DW-K	76-GOOD	100%
Antelope Yearlong	4301-02	AY-02	45-FAIR	50%
Antelope Yearlong		AY-02	Not Rated	50%
		AY-03	Not Rated	100%

*Mule deer: 10-50=POOR; 51-60=FAIR; 61-80=GOOD; 81-100=EXCELLENT
*Antelope: 0-30=POOR; 31-60=FAIR; 61-105=GOOD

b. Pronghorn Antelope

One big game habitat condition study has been established within the Antelope Valley Allotment at range key area 1012 (4301-02) to evaluate seasonal pronghorn antelope habitat. Data from this

study indicates that 50% of the habitat in the Antelope Valley Allotment is in fair condition. Table 15 outlines habitat study results in the Antelope Valley Allotment. Poor forage diversity is the most limiting factor within pronghorn habitat represented by this key area data. Forb and grass composition at key area 4301-02 is 4.4% and 19.4% respectively. Table 16 compares existing percent composition and diversity data for habitat condition studies in seasonal antelope range with optimum conditions.

Table 16. Forage Composition on Antelope Range

	Grasses		Forbs		Shrubs	
	%Comp	#Spp	%Comp	#Spp	%Comp	#Spp
%Optimum	40-60	5-10	10-30	20-40	5-20	5-10
Transect#						
4301-02	19.4	5	4.4	3	76.3	3

V. CONCLUSIONS

The following conclusions are referred to by objectives as listed in Appendix 5 of this evaluation.

1. Rangeland Program Summary (RPS) Objectives

a. Manage livestock to maintain present ecological status and trend.

(1) Additional data is needed to draw a conclusion about ecological conditions. Ecological data from 1989 shows low late seral conditions at the two key areas at which condition data was collected. However, a second reading of condition is needed to determine if these conditions are being maintained.

(2) Additional data is needed to draw a conclusion about trend. Only one year of frequency trend data has been completed. A second reading is needed to determine trend.

b. Provide forage to sustain 5,072 AUMs for livestock grazing.

Additional data is needed to draw a conclusion. Although there is a poor correlation that exists, the best available data (1988 - 1990) appears to show the carrying capacity is at or below the use identified in the "Stipulation to Withdraw Appeals".

c. Periodically evaluate the monitoring data for the allotment to reinstate 130 AUMs of suspended non-use when they become available.

Additional data is needed to draw a conclusion. Production and trend data are only available for one year and existing actual use and utilization data does not show sufficient correlation to make a determination at this time.

d. Coordinate season of use with the Ely District BLM.

Met. The season of use was outlined in the "Stipulation to Withdraw Appeals" prepared by the Ely District in consultation with the Elko District.

e. Improve or maintain all seasonal big game habitat in the Antelope Valley Allotment to good or excellent condition to provide forage and habitat capable of supporting the following reasonable numbers:

51 mule deer; 64 AUMs
22 pronghorn antelope; 53 AUMs

(1) Mule deer: Met. Mule deer seasonal habitat conditions are good. The most limiting factor on seasonal mule deer habitat in the Antelope Valley Allotment is poor age class structure of key browse species.

(2) Pronghorn: Not Met. Seasonal pronghorn habitat conditions in the Antelope Valley Allotment are fair. Poor forage diversity is the most limiting factor throughout antelope habitat. The potential native plant community for this site is capable of meeting antelope habitat requirements for forage diversity. However, historic grazing during the critical growing season may have contributed to the decline in forage diversity, resulting in an increase in black sagebrush and rabbitbrush and a decline in grasses and forbs. More recent grazing during the growing season may be contributing to the maintenance of poor forage diversity.

f. Facilitate big game movements by modifying 2.6 miles of existing fences in the Antelope Valley Allotment to Bureau standards.

Not met. There have been no fences modified in the Antelope Valley Allotment to date. Unless the need or opportunity for fence reconstruction develops sooner, priorities for fence modification will be established via the Spruce/Goshute HMP which is currently scheduled to be completed in 1995 or 1996.

g. Manage for a wild horse herd size which will maintain a thriving natural ecological balance consistent with other multiple uses while remaining within the wild horse herd boundary.

This objective is discussed under the HMAP objective B.

h. Construct the Antelope Water Catchment for wild horses.

Not Met. To date there has been no action to construct the proposed water catchment in the Antelope Valley Allotment.

2. Activity Plan Objectives

A. AMP-None

B. HMP-None

C. Herd Management Area Plan (HMAP) Objectives

1. Multiple Use: The objective in the Antelope Valley HMA is to maintain a healthy, viable population of wild horses in a thriving natural ecological balance with all other resources and users.

Some progress is being made towards this objective. Census data indicates that wild horse numbers fluctuate depending on the time of year. This is partly due to the availability of feed and water. During the summer months (June through August) the number of horses on the allotment is significantly lower than the rest of the year. In 1991, intensive seasonal distribution flights were started in order to determine the location of horses at different

times of the year. The results of the census flights can be found on Table 6.

The Wells RMP Wild Horse Amendment identified that horses would be removed to initial herd size within the Antelope Valley HMA. Upon reduction of horses within the HMA, the number of horses will probably decline within the allotment based on the fact that an average of 4.1% of the HMA population use the Antelope Valley allotment (Table 5).

Once the wild horse numbers within the Antelope Valley HMA are brought to the initial herd size of 240 as determined in the Wells RMP Wild Horse Amendment, more data would be needed to determine if an initial AML of 10 horses within the Antelope Valley Allotment is correct. A thriving, natural ecological balance may or may not be achieved with 10 horses within the allotment boundaries.

2. Appropriate Management Level (AML): When the allotment evaluations are complete, a total AML for the Antelope Valley HMA will be determined. The number of horses will be maintained within ± 15% of AML.

Progress is being made towards this objective.
Wild horses appear to use the Antelope Valley Allotment for approximately 9 months per year. They are in the allotment as long as there is water available and this seems to be the limiting factor. There can be as many as 35 horses in the allotment in the spring and as few as 0 in mid summer.

As can be seen on Tables 7-10, when the population of horses within the allotment is between 5-10 horses, the utilization levels are close to the goals established for each key area prior to livestock turnout (i.e. not to exceed 10%). These tables provide further documentation that the initial management level of the Antelope Valley HMA at 240 horses, as established in the Wells RMP Wild Horse Amendment, is correct, based on all available monitoring data.

All available data indicates that only 4.1% of the Antelope Valley HMA herd utilize the Antelope Valley Allotment throughout the year (Table 5). When the herd size in the HMA is reduced to initial herd size of 240, then approximately 10 horses may be using the allotment at any given time (4.1% of 240). AML within the Antelope Valley HMA will be maintained using one or more of the following options: periodic removals with no selectivity, selective removals targeting specific age groups, or fertility control. The objective of the selective removals and fertility control is to decrease the reproductive rate in the wild horse population so removals are not necessary more than once every four years. The reproductive rate is between 15-20% annually; the objective is to reduce the rate by 10%.

3. Free-Roaming Characteristics: The wild horses within the Antelope Valley HMA will be managed in a manner to maintain their wild and free-roaming characteristics.

Progress is being made towards this objective. Progress has been made towards this objective by only proposing let-down fences within the allotment. Wild horses would continue to be allowed free movement in and out of the allotment.

4. Coloration and Conformation: The wild horses within the Antelope Valley HMA which exhibit the "Spanish Barb" characteristics will be maintained within the population. Fertility control treatments and or removals in the future will exclude those horses that obviously exhibit those traits. No other characteristics or conformations will be selected. Only those animals with gross deformities or disease will be eliminated from the herd.

Act deficiency

Progress is being made towards this objective. Removals and fertility control measures have excluded the Spanish Barb characteristic in the past and would continue in the future.

3. Key Area Objectives

The key areas were established in 1987. Evaluation of the attainment of the key area objectives for condition and trend will not be possible until the studies at each of these key areas are reread prior to the allotment re-evaluation.

Limited analysis of the overall utilization objectives for the allotment is possible, based on the utilization transect and use pattern mapping that has been completed to date. The rationale for 60% utilization on perennial grasses and 50% on shrubs is located in the table on page 23 in the Nevada Rangeland Monitoring Handbook, and is based on winter use periods. Utilization transects have been completed at the key areas in the allotment.

The following are the key area objectives established consistent with the Wells RMP and RPS objectives.

Key Area	Key Species	Utilization	Trend	Ecological Status
KA-1011	Indian Ricegrass White Sage	60%* 50%*	maintain or improve trend	maintain late seral status 56 pts.
KA-1012	**White Sage** **Indian Ricegrass** **Bluegrass**	**50%*** **60%*** **60%***	**maintain or improve trend**	**maintain late seral status 53 pts.**

* 10% use allowable on key forage species including ORHY and POA++ by wild horses prior to entry by livestock and a combined 60% on grasses and 50% on shrubs by the end of winter dormancy.

Trend and Ecological Condition
For condition and trend objectives refer to section V 1.a. (1) & (2).

Utilization objectives for livestock were Not Met from 1988-1990, However utilization objectives for livestock were met during 1991 & 1992: Utilization objectives have only been met for all of the key species during 1991, and 1992, but use exceeded the objectives for ORHY in 1988, 1989 and EULA5 in 1988 through 1990.

10%

Utilization objectives for wild horses were Not Met in 1990 at 1013, 1014, 1991 at key area 1013 and key area 1014 in 1992. However Utilization objectives were met for key areas 1011, 1012, 1014 in 1991

VI. TECHNICAL RECOMMENDATIONS

A. LIVESTOCK GRAZING SYSTEM.

Continue to implement the interim livestock grazing system and associated stipulations outlined in the September 1991 "Stipulation to Withdraw Appeals" which includes use on the Antelope Valley Allotment within the Elko District in conjunction with the Chin Creek Allotment within the Ely District. The "Stipulation to Withdraw Appeals" includes a light prescription level of use (35%) on white sage, and water hauling as interim practices. The livestock grazing system and associated stipulations are described as follows:

35% utilization

ANTELOPE VALLEY USE AREAS			
Grazing Fee Year*	SOUTH PASTURE Ely District	NORTH PASTURE Ely District	ANTELOPE VALLEY Elko District
1994	3/1-3/31 11/1-1/15	4/1-5/31 1/16-2/28	***REST***
1995	***REST***	3/1-3/31 11/1-1/15	4/1-5/31 1/16-2/28
1996	4/1-5/31 1/16-2/28	***REST***	3/1-3/31 11/1-1/15
Repeat 3 year grazing cycle.			
* Fee year is March of one year through the end of February of the next year. Example is 3/1/94 - 2/28/95			

* The above grazing system results in each pasture receiving a complete rest during one out of three fee years (3/01 - 2/28) and grazing use during the critical growth period one out of three years. i.e. one growing season out of three would be rest. This is due to the timing of the grazing fee year. For example, when a pasture is grazed from 11/1/96 - 1/15/97, the period of use for that same pasture is 4/1-5/31/98, therefore no use is scheduled during the 1997 fee year (3/1/97 - 2/28/98).

FEE YEAR 3/1/94 - 2/28/95											
MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB

FEE YEAR 3/1/95 - 2/28/96											
MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN*	FEB

** Grazing starts on the 16th of January.*
Shaded areas indicates periods of grazing use in the Antelope Valley Allotment.

FEE YEAR 3/1/96 - 2/28/97											
MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN*	FEB

** Grazing ends on the 15th of January.*
Shaded areas indicates periods of grazing use in the Antelope Valley Allotment.

Based on the schedule above, the AUMs scheduled by fee year for the Antelope Valley Allotment are as follows:

Cattle #'s	FEE YEAR	AUMs
718	1994	-0-
718	1995	2,517
718	1996	2,512

Rationale: Livestock grazing during the critical growth period of key forage plants will be limited to one year during the three year grazing cycle. Grazing during the other two years will end by March 31 which is the beginning of significant critical growth. This change to less frequent livestock grazing during the critical growth period of key forage plants and a light grazing use prescription should provide for more opportunities for the establishment of new plants towards a more diverse plant community, as well as increase production of existing plants. Poor forage diversity is the most limiting factor on antelope seasonal range within the Antelope Valley Allotment. An improvement of the overall average percent forb and grass composition would significantly improve habitat conditions and facilitate attainment of big game habitat objectives.

B. LIVESTOCK GRAZING PREFERENCE.

Adjust active use (AUMs) to the maximum level that would be authorized during the grazing fee year (March-Feb.) based on the grazing system described above as follows:

Permittee	No.	Kind	%PL	Active	Suspend.	Nonuse
Reed Robison	718	C	100	2,517	130	2,555(CP)
(CP) Nonuse for Conservation and Protection of Federal Range						

Rationale: Adjusting active preference to this level would be consistent with the grazing system outlined in the "Stipulation to Withdraw Appeals". In addition, adjusting active use to this level appears to be consistent with the best available studies data. However, a conclusion about carrying capacity based on utilization and actual use requires additional information. Therefore, the livestock grazing levels outlined in the September 1991 "Stipulation to Withdraw Appeals" would establish the level of authorized livestock use until additional monitoring information is available to support further adjustments of the carrying capacity. Active preference is based on the number of AUMs that would be licensed during the fee year. However, the AUMs that are scheduled for any one pasture during the grazing season (11/1 - 5/31) would be 1,794 AUMs for winter use & 1,440 AUMs for spring use, as shown on page 2 of this evaluation.

C. TERMS AND CONDITIONS WILL BE AS FOLLOWS.

(1) Supplemental feeding is limited to salt, mineral and/or protein supplements in block, granular or liquid form. Such supplements will be placed at least 1/4 mile from live waters (springs, streams, and troughs), wet or dry meadows, and aspen stands.

Rationale: Placement of salt and other supplements should be used to encourage more even distribution of livestock.

(2) The livestock actual use report (form 4130-5) will be turned in within 15 days after completing annual grazing use.

Rationale: The prompt submission of the permittees actual use is important to determine carrying capacity in the future and whether suspended AUMs and or AUMs placed in non-use for conservation and protection of Federal Range can be activated.

(3) All range improvements will be maintained/repaired prior to livestock turn out.

Rationale: Maintaining and repairing range improvements would facilitate livestock management and distribution in the Antelope Valley Allotment.

D. THE PERMITTEE WILL BE REQUIRED TO HAUL WATER DURING THE CRITICAL GROWING PERIOD AND DURING ESPECIALLY DRY PERIODS AS DESCRIBED IN THE "STIPULATION TO WITHDRAW APPEALS" FOR THE ANTELOPE VALLEY ALLOTMENT AT BUREAU DESIGNATED HAUL SITES ON THE UPPER VALLEY BENCHES UNTIL PERMANENT WATER SOURCES ARE DEVELOPED.

Rationale: Livestock grazing in Antelope Valley is often dependent on the presence of snow to facilitate better livestock distribution. Hauling water, during dry periods, will allow the grazing system to be followed more consistently. It will also draw livestock away from the heavily used existing water sources, valley bottoms, and promote more even grazing of the allotment.

E. ADMINISTRATION AND MANAGEMENT OF THE ANTELOPE VALLEY ALLOTMENT.

Enter into an interdistrict agreement which would permit the Ely District to license livestock use in the Antelope Valley Allotment, and

cooperate on the development of an AMP which would include this allotment. The Ely District would provide copies of licenses and actual use reports to the Elko District. The Ely District would consult with the Elko District if changes to the established management are proposed. The Elko District, Wells Resource Area would continue to administer all other aspects of livestock administration and other resources.

Rationale: The current livestock permittee also licenses with the Ely District and has requested that one district be responsible for all of his licensing. It would be more efficient for the permittee to license in one district only.

F. DEVELOP ADDITIONAL PERMANENT WATER RESOURCES WITHIN THE EASTERN HALF OF THE ALLOTMENT WHERE NECESSARY AND FEASIBLE. WATER WELLS WOULD BE THE PREFERRED METHOD.

Rationale: Developing permanent water within the eastern half of the allotment will improve livestock distribution by encouraging cattle use away from the bottoms of the valley. This water would also be available for wildlife and wild horses while livestock are in the allotment. Water would be left in troughs/storage tanks when cattle are removed from the allotment. Water wells are preferred because they provide a higher degree of control over the availability of water and localized grazing pressure. Development of permanent water sources would also satisfy the objective to provide water for wildhorses.

G. EXTEND THE FENCE, LOCATED ON THE ELKO/WHITE PINE COUNTY LINE, TO THE WEST. THIS WOULD BE A LET-DOWN FENCE.

Rationale: The fence extension would stop any cattle drift from White Pine County into the southern part of the allotment. No fence would be built until permanent water is developed in the Antelope Valley Allotment. The let-down type of fence would be used to reduce obstacles to wild horse movements when livestock are not present.

H. EXTEND THE FENCE AT KINGSLEY POINT. THIS WOULD BE A LET-DOWN FENCE.

Rationale: This fence would stop cattle drift in the northern part of the allotment. The let-down type of fence would be used to reduce obstacles to wild horse movements when livestock are not present.

I. ESTABLISH A WILD HORSE APPROPRIATE MANAGEMENT LEVEL (AML).
Establish an AML of 10 wild horses for an average of 9 months in the Antelope Valley Allotment.

Rationale: Wild horses appear to use the Antelope Valley Allotment for approximately 9 months per year. They are in the allotment as long as there is water available and this seems to be the limiting factor. There can be as many as 35 horses in the allotment in the spring and as few as 0 in the mid summer. All available data indicates that when there are between 5-10 horses in the allotment, utilization levels are at or below the objective levels of 10% prior to livestock entry.

All available data indicates that only 4.1% of the Antelope Valley HMA herd utilize the Antelope Valley Allotment throughout the year. When the herd size in the HMA is reduced to initial herd size of 240, then approximately 10 horses may be using the allotment at any given time (4.1% of 240), and this amounts to 90 AUMs (10 horses x 9 months).

J. REDUCE WILD HORSES IN THE ANTELOPE VALLEY HMA TO INITIAL HERD SIZE OF 240 HEAD AS PER THE RMP AMENDMENT.

Rationale: The only way to achieve initial AML within the allotment is to reduce horses in the HMA.

K. RECONSTRUCT THE EXISTING WHITEHORSE PIPELINE

Rationale: Upgrading the Whitehorse pipeline would provide permanent water in the northern part of the Antelope Valley Allotment for livestock, wild horses, and wildlife.

L. FENCE MODIFICATIONS

Identify and prioritize needed fence modifications through development of the Spruce/Goshute HMP scheduled for completion in 1995/1996 or sooner if the need or opportunity arises. Fence modifications will also be identified in the Chin Creek AMP which is scheduled for completion in FY94.

Rationale: Completion of these projects will help achieve the multiple use objectives identified for the Antelope Valley Allotment.

M. ANTELOPE KIDDING AREAS

Ensure that the impacts of proposed management actions on antelope kidding areas are considered prior to their implementation.

Rationale: Successful kidding is necessary for a healthy productive herd. Disturbing antelope on the kidding areas may result in a lower recruitment rate.

N. THREATENED AND ENDANGERED/CANDIDATE SPECIES.

Ensure that the impacts of proposed management actions on threatened, endangered, or candidate species known to inhabit the Antelope Valley Allotment are considered prior to their implementation as per Federal Regulation and Bureau Policy.

Rationale: The Endangered Species Act and Bureau policy for management of Federal candidate and state-sensitive species obligates the Bureau to ensure actions authorized, funded, or carried out do not contribute to the need to elevate current T/E status or the need to list any candidate species as threatened or endangered.

O. ESTABLISH NEW KEY AREAS/CONTINUE TO GATHER DATA ON WILD HORSE USE

Establish key areas on the upland sites such as the south end of White Horse Mountain and the east side of Antelope Valley.

Continue to gather wild horse distribution and utilization data on the existing key areas in the Antelope Valley Allotment, to assist in the next allotment evaluation to determine attainment of multiple use objectives.

Rationale: The current key areas are confined to the valley bottom and may not be representative of all the sites used by wild horses.

Data is limited on wild horse use in the Antelope Valley Allotment. Utilization needs to be read prior to livestock turnout and after livestock come off each year to determine if a thriving natural ecological balance is being maintained between wild horses and other resource users.

P. CHANGES TO OBJECTIVES

(1). Delete RPS objective d. which states "Coordinate season of use with the Ely District BLM".

Rationale: **This objective was accomplished during the consultation on the September 1991 "Stipulation to Withdraw Appeals" which incorporated the Antelope Valley Allotment in a deferred rotation system which established seasons of use.**

(2) Revise the utilization objectives for key areas 1011, 1012, and establish utilization objectives for 1013 and 1014 follows:

(a) Manage for a maximum use of current years growth at 35% on key grass species and 25% on white sage by the end of the spring use period for livestock (i.e. at the end of grazing).

(b) In areas grazed in common by wild horses and livestock, manage for an average of 10% use on key forage species by wild horses prior to entry by livestock on winter range.

Note: Future evaluations will determine if this utilization objective is still appropriate, especially during those years when livestock graze during the spring use period.

(c) Manage for a maximum average combined utilization by livestock and wild horses on previous years growth at 55% on key grass species and 35% on white sage by the end of winter dormancy. Combined use not to exceed 60% on key grass species and 50% on key shrub species in any one year.

Rationale: **The livestock grazing system includes periodic use during the winter and spring use periods. Wild horses graze the allotment for approximately 9 months out of the year. Adding utilization objectives for spring use is important because vegetation can be most adversely affected by grazing during the growing season. The Wells Resource Area** Wild Horse Amendment approved in August of 1993 established the objective of 10% average use by wild horses on key forage species prior to entry by livestock on winter range so that grazing by both wild horses and livestock would not exceed the utilization objective established for the end of winter dormancy. The "Stipulation to Withdraw Appeals" of September 1991 included a light utilization prescription (35%) on white sage which applies to grazing through the end of winter dormancy. The revised utilization levels, coupled with the rotation cycle described in the grazing system, is expected to improve ecological conditions and wildlife habitat conditions.

Q. CHANGES TO KEY AREA OBJECTIVES

The wildlife habitat objectives and ecological status objectives for KA-1012 will be combined and modified to be a desired plant community objective. The ecological status objective on KA-1011 will also be modified to be a desired plant community objective. The desired plant community objectives for each key area are expected to be achieved by 2005 and are outlined below:

Desired Plant Community Objectives	
Key Area	**Desired Plant Community**
KA-1011	Increase perennial grass composition from 1% to 3% or more** Maintain or increase perennial forb composition from 3% or more** Maintain or increase white sage composition at 53% or more.**
KA-1012	Increase perennial grass composition from 11% to 15% or more** Maintain or increase perennial forb composition at 4% or more** Maintain the percent composition of black sage at 55%**
** As measured by percent composition of dry weight	

Rationale: Halogeton, an annual weed toxic to livestock, occupies a significant amount of the ground at key area 1011, which indicates this plant community has openings for the establishment of perennial plants. There is sufficient desirable grasses to produce seed for new plant establishment. Recommended management actions should allow a modest increase in grass composition by 2005.

The plant community at key area 1012 also has openings for new plant establishment. Recommended management actions should allow desirable grasses to increase by 2005.

R. FUTURE EVALUATION

Continue to monitor, and complete the next evaluation in accordance with the Wells Resource Monitoring and Evaluation Schedule.

VII. CONSULTATIONS

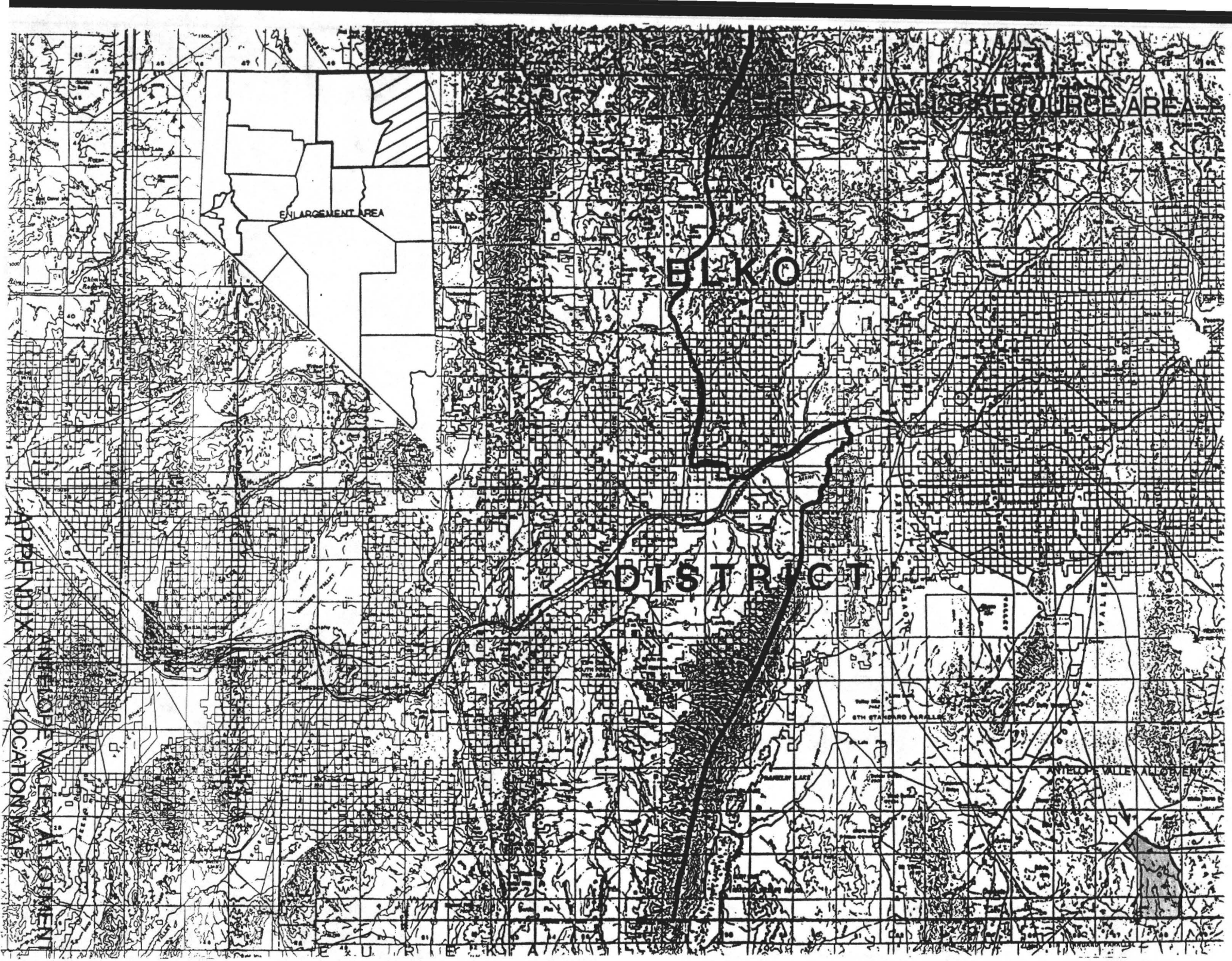
The following organizations, agencies, and individuals, including the permittee, were involved in the "Stipulation to Withdraw Appeals" which outlined the grazing system in the Antelope Valley Allotment.

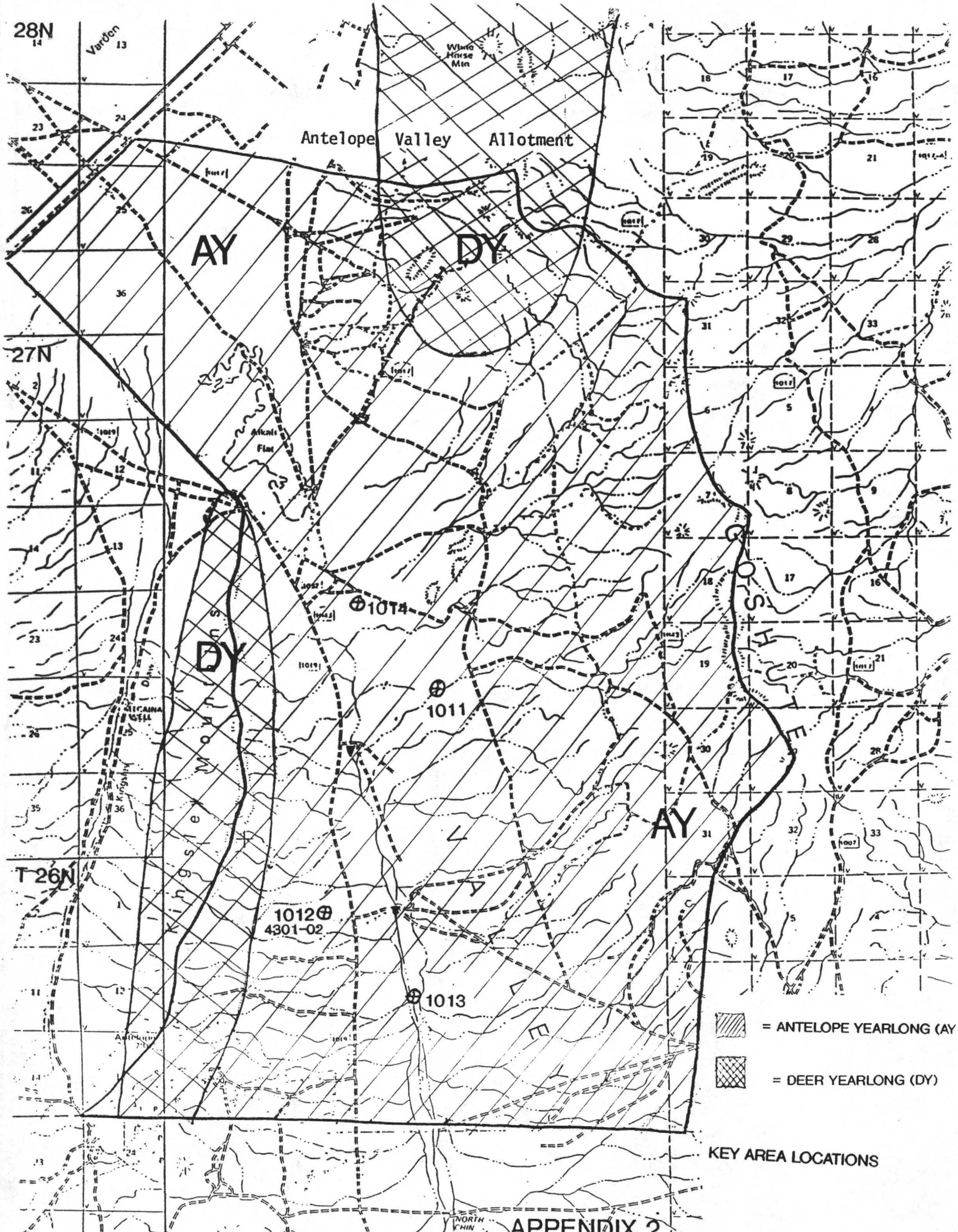
Elko District BLM
Ely District BLM
Reed Robison, Permittee
Natural Resources Defense Council
U.S. Fish and Wildlife Service
Nevada Division of Wildlife, Region II
Animal Protection Institute of America
Wild Horse Organized Assistance
Commission for the Preservation of Wild Horses
Resource Concepts, Inc.
Nevada Cattlemen's Association
Nevada State Grazing Board, N-4
Nevada Outdoor Recreation Association
Marvel and Hansen, Attorneys at Law
Nevada Department of Agriculture
University of Nevada Reno
Sierra Club, Toiyabe Chapter
Zions First National Bank

BLM Reviewers of the Antelope Valley Evaluation
Laura Gutzwiller, Biologist Wells Resource Area (R.A.)
Ray Lister, District Range Staff Specialist, Elko District Office (D.O.)
Karl Scheetz, Supervisory Range Conservationist, Wells R.A.
Bill Baker, Area Manager, Wells R.A.
Roy Price, Wildlife Biologist/T&E Species, Elko D.O.
Kathy McKinstry, Wild Horse Specialist, Wells R.A.

VIII. APPENDIX

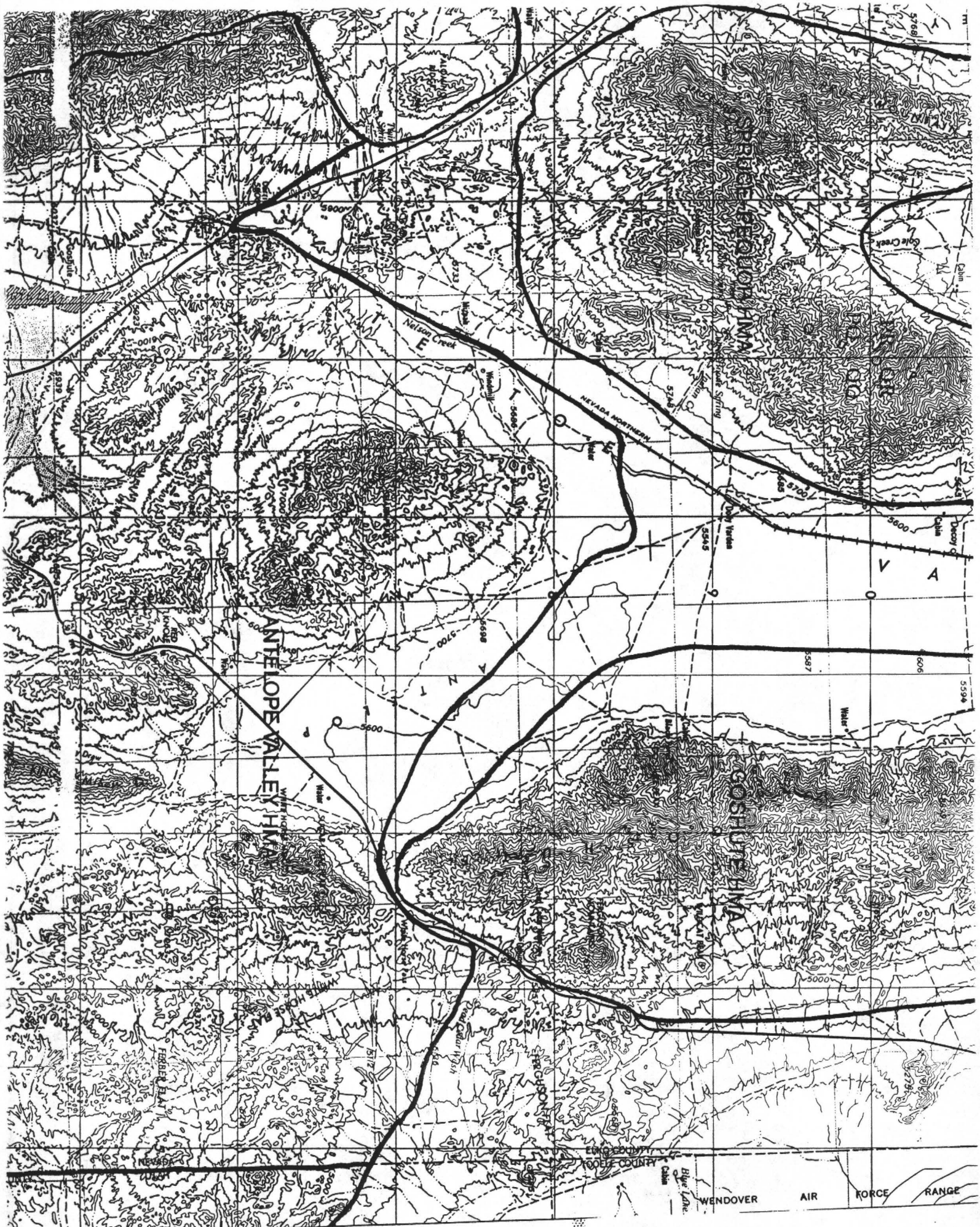
1.Wells Resource Area Map/Allotment Location Map
2.Antelope Valley Allotment Map
3.Antelope Valley HMA Map
4.Studies Summaries Matrix
4A.Summary of all Data
4B.Summary/Limiting Factors
5.Allotment Objectives/Key area Objectives
6.Order to Dismiss Appeal Of Reed Robinson


ENLARGEMENT AREA
WELLS RESOURCE AREA
ELKO
DISTRICT
ANTELOPE VALLEY ALLOTMENT
APPENDIX I
ANTELOPE VALLEY ALLOTMENT
LOCATION MAP
EUREKA



Antelope Valley Allotment
AY
DY
DY
AY
1014
1011
1012
4301-02
1013
= ANTELOPE YEARLONG (AY
= DEER YEARLONG (DY)
KEY AREA LOCATIONS

APPENDIX 2



ANTELOPE VALLEY HMA BOUNDARY MAP APPENDIX 3

ANTELOPE VALLEY ALLOTMENT STUDIES SUMMARY MATRIX
ANTELOPE VALLEY ALLOTMENT
KEY AREA 1011+

KEY SPECIES: Indian Ricegrass(ORHY), White sage(EULA5)

Year	Actual Use AUMs	Periods of Use	KA Util. (Percent)	Dates Read	KMA Use-Pattern Results	Dates Mapped	Pre-CAF Cap.(AUMs)	CAF	Post-CAF Cap.(AUMs)	Ecological Stat./Prod.	Key Species Freq.
1989	1251[1]	1/28-4/21	ORHY - N/A EULA5 - 59%	5/17/89[3]	Moderate	5/17/89	N/A	0.62	N/A	late, 51% 864 lbs/acre	ORHY - 0% EULA5 - 49%
1990	1096	2/12-3/31	ORHY - 61% EULA5 - 56%	4/24/90[3]	Not Mapped	Not Mapped	913 AUMs	0.78	1171 AUMs	Not Read	
1991	610	4/27-6/9	ORHY - N/A EULA5 - N/A	Not Read	Not Mapped	Not Mapped	N/A	0.62	N/A		
1992	1120	2/10-5/15	ORHY - 49% EULA5 - 37%	5/18/92[2]	Moderate	5/18/92	1167 AUMs	0.67	1741 AUMs		
AVE.&	1019		ORHY - 55% EULA5 - 51%				1040 AUMs		1456 AUMs		

[1] Actual use in 1989 is questionable due to gates open on the county line; [2] Utilization read was current years growth. [3] Utilization read was on growth that occured the previous growing season.
[+] Key areas 1011 and 1012 were established in 1987. The utilization objectives for ORHY is 60% and EULA5 is 50% this is based on winter use.

ANTELOPE VALLEY ALLOTMENT STUDIES SUMMARY MATRIX
ANTELOPE VALLEY ALLOTMENT
KEY AREA 1012+

KEY SPECIES: Bluegrass(POA++), White sage(EULA5)

Year	Actual Use AUMS	Periods of Use	KA Util. (Percent)	Dates Read	KMA Use-Pattern Results	Dates Mapped	Pre-CAF Cap. (AUMs)	CAF	Post-CAF Cap. (AUMs)	Ecological Stat./Prod.	Key Species Freq.
1989	1251[1]	1/28-4/21	POA++ - 13% EULA5 - 65%	5/17/89[3]	Heavy	5/17/89	N/A*	0.62	N/A*	late 53% 457 lbs/acre	POA++ - 6% EULA5 - 3%
1990	1096	2/12-3/31	POA++ - 34% EULA5 - 37%	4/24/90[3]	Not Mapped	Not Mapped	913 AUMs	0.78	1171 AUMs	Not Read	
1991	610	4/27-6/9	POA++ N/A EULA5 N/A	Not Read	Not Mapped	Not Mapped	N/A	0.62	N/A		
1992	1120	2/10-5/15	POA++ - 31% EULA5 - 27%	5/18/92[2]	Moderate	5/18/92	1167 AUMs	0.67	1741 AUMs		
AVE.&	1019		POA++ - 26% EULA5 - 43%				1040 AUMs		1456 AUMs		

[1] Actual use in 1989 is questionable due to gates open on the county linet; [2] Utilization read was on current years growth. [3] Utilization read was on growth that occured the previous growing season.
+ key areas 1011 and 1012 were established in 1987. The utilization objectives for ORHY is 60%, POA is 60% and EULA5 is 50%, this is based on winter use.

ANTELOPE VALLEY ALLOTMENT STUDIES SUMMARY MATRIX
ANTELOPE VALLEY ALLOTMENT
KEY AREA 1013+

KEY SPECIES: White sage(EULA5)

Year	Actual Use AUMs	Periods of Use	KA Util. (Percent)	Dates Read	KMA Use-Pattern Results	Dates Mapped	Pre-CAF Cap.(AUMs)	CAF	Post-CAF Cap.(AUMs)
1988	3114	3/1-5/31	EULA5 - 68%	5/17/88[3]	Heavy	5/17/89	2290 AUMs	0.96	2385 AUMs
1989	1251[1]	1/28-4/21	EULA5 - 75%	5/24/89[2]	Heavy	Not mapped	N/A*	0.62	N/A*
1990	1096	2/12-3/31	EULA5- 60%	4/24/90[3]	Not mapped	4/16/91	913 AUMs	0.78	1171 AUMs
1991*	610	4/27-6/9	EULA5 - 18%	4/16/91[3]	Slight	4/16/91	N/A	0.62	
1992	1120	2/10-5/15	EULA5 - 48%	5/18/92[2]	Moderate	5/19/92	1167 AUMs	0.67	1741 AUMs
AVE.&	1438		EULA5 - 49%				1457 AUMs		1767 AUMs

[1] Actual use in 1989 is questionable due to gates open on the county line; [2] Utilization read was current years growth.
[3] Utilization read was on the previous years (growing season) growth. * Key Areas 1013 and 1014 are read for utlization only.
The utilization objectives for ORHY is 60% and EULA5 is 50% this is based on winter use.

ANTELOPE VALLEY ALLOTMENT **STUDIES** SUMMARY MATRIX
ANTELOPE **VALLEY ALLOT**MENT
KEY AREA **1014+**

KEY SPECIES: Indian Ricegrass**(ORHY),** White sage**(EULA5)**

Year	Actual Use AUMs	Periods of Use	KA Util. (Percent)	Dates Read	KMA Use-Pattern · Results	Dates Mapped	Pre-CAF Cap.(AUMs)	CAF	Post-CAF Cap.(AUMs)
1988	3114	3/1-5/31	ORHY - 66% EULA5 - 60%	5/17/88[2]	Heavy	5/17/89	2290 AUMs	0.96	2385 AUMs
1989	1251[1]	1/28-4/21	ORHY - 70% EULA5 - 50%	5/24/89[2]	Heavy	Not mapped	N/A*	0.62	N/A*
1990	1096	2/12-3/31	ORHY - 52% EULA5 - 50%	4/24/90[3]	Not mapped	Not Mapped	913 AUMs	0.78	1171 AUMs
1991	610	4/27-5/9	ORHY - N/A EULA5 - N/A	Not Read	Not Mapped	Not Mapped	N/A	0.62	
1992	1120	2/10-5/15	ORHY -35% EULA5 - 20%	5/18/92[2]	Moderate	5/18/92	1167 AUMs	0.67	1741 AUMs
AVE.&	1438		ORHY - 56% EULA5 - 45%				1457 AUMs		1766 AUMs

[1] Actual use in 1989 is questionalble due to gates open on the county line; [2] Utilization read was on current years growth.
[3] Utilization read was on previous years growth; * Key Area 1013 and 1014 are read for utilization only; The utilization objectives for ORHY is 60% and EULA5 is 50%, this is based on winter use.

APPENDIX 4A

Summary of Actual Use & Utlization Data by Year					
Year	**Actual Use (AUMs)[1]**	**Season**	**K.A.**	**% Utilization[2]**	**% Util. of Previous years or Current years growth**
1988	3,144	spring	1		
		spring	2		
		spring	*3*	*68% EULA5 (LF)*	Previous
		spring	4	66% -ORHY 60% -EULA5	Previous
1989	1,251?	winter	1	59% -EULA5	Previous
			2	13% -POA++ 65% -EULA5	Previous
			3	*75% - EULA5 (LF)*	Previous
			4	70% - ORHY 50% - EULA5	Previous
1990	1,096	winter	1	61% -ORHY 56% -EULA5	Previous
			2	34% -POA++ 37% -EULA5	Previous
			3	*60% -EULA5 (LF)*	Previous
			4	52% -ORHY 50% -EULA5	Previous
1991	610	spring	1	N/A -ORHY N/A -EULA5	
			2	N/A	
			3	*18% -EULA5* (LF)	Previous
			4	N/A	
1992	1,120	spring	1	49% -ORHY 37% -EULA5	Current
			2	31% -POA++ 27% -EULA5	Current
			3	*48% -EULA5* (LF)	Current
			4	25% -ORHY 20% -EULA5	Current
Objectives =		ORHY =60%* POA+ =60%* EULA5=50%*	* All objectives are for winter use only.		
[1]Livestock AUMs only			[2]Combined use by wild horses and livestock.		
The limiting factor (LF) for each year used to calculate carrying capacity. The key areas were read in the month of May in 1988, 1989, and 1992. In 1990 and 1991 the key areas were read in April.					
? in 1989 the actual use is questionable due to gates being left open on the county line.					

APPENDIX 4B

Summary of Limiting Factors by Year

Year	Actual Use (AUMs)	Util./Limiting Factor	Desired Use %	(Pre-CAF)[4]	(CAF)	(Post-CAF)[4]
1988	1,144	60% -EULA5	50%	1,684	0.96	2,796
1989	1,251	75% -EULA5	50%	N/A[1]		
1990	1,096	60% -EULA5	50%	913	0.78	1,158
1991	610	18% -EULA5	50%	N/A[2]		
1992	1,120	48% -EULA5	50%	N/A[3]		

[1] Actual use in 1989 is questionable due to gates being left open on the county line.
[2] In 1991 utilization was measured prior to livestock use.
[3] In 1992 utilization measured was on use to date.

[4] Pre-CAF and Post CAF is the calculated carrying capacity (AUMs)

APPENDIX 4B

Summary of Limiting Factors by Year						
Year	**Actual Use (AUMs)**	**Util./Limiting Factor**	**Desired Use %**	**(Pre-CAF)[4]**	**(CAF)**	**(Post-CAF)[4]**
1988	**3,144**	**68% -EULA5**	**50%**	**2,684**	**0.96**	**2,796**
1989	1,251	75% -EULA5	50%	N/A[1]		
1990	1,096	60% -EULA5	50%	913	0.78	1,158
1991	610	18% -EULA5	50%	N/A[2]		
1992	1,120	48% -EULA5	50%	N/A[3]		

[1] Actual use in 1989 is questionable due to gates being left open on the county line.
[2] In 1991 utilization was measured prior to livestock use.
[3] In 1992 utilization measured was on use to date.

[4] Pre-CAF and Post CAF is the calculated carrying capacity (AUMs)

APPENDIX 5

1. General Allotment Objectives Listed in the Wells Rangeland Program Summary:

1. Conserve and/or enhance wildlife habitat to the maximum extent possible.

2. Eliminate all of the fencing hazards in crucial big game habitat and most of the fencing hazards in non-crucial big game habitat.

3. Eliminate all of the high and medium priority terrestrial riparian habitat conflicts in coordination with other resource uses.

4. Manage livestock to maintain present ecological status and trend.

5. Provide forage to sustain 5,072 AUMs for livestock grazing.

6. Periodically evaluate the monitoring data for the allotment to reinstate 130 AUMs of suspended non-use when they become available.

7. Coordinate season of use with the Ely District BLM.

8. Improve or maintain all seasonal big game habitat in the Antelope Valley Allotment to good or excellent condition to provide forage and habitat capable of supporting the following reasonable numbers:

51 mule deer; 64 AUMs
22 pronghorn antelope; 53 AUMs

9. Facilitate big game movements by modifying 2.6 miles of existing fences in the Antelope Valley Allotment to Bureau standards.

10. Manage for a wild horse herd size which will maintain a thriving natural ecological balance consistent with other multiple uses while remaining within the wild horse herd boundary.

11. Construct the antelope water catchment for wild horses.

3. Activity Plan Objectives

An interim grazing system has been developed for the allotment via the "Stipulation to Withdraw Appeals" enclosed as Appendix 6. However, neither an AMP or Habitat Management Plan has not been developed for the allotment, A Wild Horse Herd Management Area Plan has been developed for the Antelope Valley Herd Management Area.

A. AMP - None

B. Herd Management Plan Objectives

a. Multiple Use: The objective in the Antelope Valley HMA is to maintain a healthy, viable population of wild horses in a thriving natural ecological balance with all other resources and users.

b. Appropriate Management Level (AML): When the allotment evaluations are complete (prior to 1994), a total AML for the HMA will be determined. The number of horses will be maintained within of ± 15% of AML.

AML will be maintained using one or more of the following options: periodic removals with no selectivity, selective removals targeting specific age groups, or fertility control. The objective of the selective removals and fertility control is to decrease the reproductive rate in the wild horse population so removals are not necessary more than once every four years. The reproductive rate is now at 18% annually; the objective is to reduce the rate by 10%.

c. Free-Roaming Characteristics: The wild horses within the Antelope Valley HMA will be managed in a manner to maintain their wild and free-roaming characteristics.

d. Coloration and Conformation: The wild horses within the Antelope Valley HMA which exhibit the "Spanish Barb" characteristics will be maintained within the population. Fertility control treatments and or removals in the future will exclude those horses that obviously exhibit those traits. No other characteristics or conformations will be selected. Only those animals with gross deformities or disease will be eliminated from the herd.

4. Key Area Objectives

Key Area	Key Species	Utilization*	Trend	Ecological Status
KA-1011	Indian Ricegrass White Sage	60%* 50%*	maintain or improve trend	maintain late seral status 56 pts.
KA-1012	White Sage Indian Ricegrass Bluegrass	50%* 60%* 60%*	maintain or improve trend	maintain late seral status 53 pts.

* 10% use allowable on key forage species including ORHY and POA++ by wild horses prior to entry by livestock.

5. Key Species Identification

1. Uplands: Indian ricegrass (ORHY)
   White sage (EULA5)
   Bluegrass (POA++)

2. Wildlife: forbs (various species)
   Black sage (ARARN)
   Bitterbrush (PUTR2)

4/29/94

WHOA
WILD HORSE ORGANIZED ASSISTANCE
P.O. BOX 555
RENO, NEVADA 89504

. . . a note from

Dawn Y. Lappin

April 29, 1994

Mr. Bill Baker
Wells Resource Area
Bureau of Land Management
3900 East Idaho Street
P.O. Box 831
Elko, Nevada 89801

Subject: Antelope Valley Allotment Evaluation - April 1994

Dear Mr. Baker:

WHOA continues to be concerned with the implementation of the Wells Resource Plan Wild Horse Amendment and Decision Record, August 1993. Any action or management decision affecting the welfare of the Antelope Valley Herd Area is a priority issue.

We wish to make the following specific comments:

Page 1, Introduction

The District agreed to the "Stipulation to Withdraw Appeals, September 25, 1991" with the permittee that directly effects the welfare of the Antelope Valley Herd. This agreement set allotment specific objectives and water hauling conditions that will affect the appropriate management level and free roaming nature of the existing herd, respectively. Failure to disclose the stipulation and seek consultation from the Commission violated Bureau of Land Management policy and regulation.

Page 1, A. Livestock Use

The purpose of this allotment evaluation is to review monitoring data and make necessary management decisions to meet multiple use objectives. The stipulation for Chin Creek Allotment influences the Antelope Allotment which had no standing in the appeal.

Page 3, Land Use Plan Amendment

The wild horse amendment set initial herd sizes based upon the proportions of the herd management areas reduced by excluding the checkerboard lands. Based upon our review of the land use plan amendment and allotment evaluation, we cannot find the adjustment to the herd management area to support the initial herd size of 240 horses. The land use plan amendment is arbitrary.

Page 4, Table 3 Antelope Valley Allotment

Data presented in this Table exhibits actual use based upon herd census. Summer and winter horse actual use is based upon six months occupation of the allotment. Actual use data on Table 9 express horse use as nine months. These assumptions are not consistent and are essential to establishing a carrying capacity.

Page 5, Herd Distribution

Data presented in the allotment evaluation indicates the historical and current distribution of wild horses on the Antelope Allotment. Distribution data collected prior to 1988 indicated that up to 45 percent of the herd has used the Antelope Valley Allotment for winter range. It is unreasonable to assume that only 4.1 percent of the initial herd will occupy this allotment.

Page 6, Management Evaluation

Allotment specific objectives are required for an allotment evaluation. Presently, the land use plan amendment sets a limiting factor or objective of 10% use of indian ricegrass prior to livestock turnout and 55% overall for perennial grasses. The stipulation sets a 35% use objective for winter fat. The Nevada Rangeland Handbook sets further limitations on shrubs. These objectives must be presented and evaluated with monitoring data to establish the carrying capacity and appropriate management level.

Page 7, Wild Horse Use

Data presented in Table 5 indicates that wild horse gathers prior to 1990 disrupted the natural distribution of the Antelope Valley Wild Horse Herd. Prior to 1988, the wild horse herd's winter use of the Antelope Allotment exceed 45 percent. Due to past gathers, less that seven percent of the herd winter in the Antelope Valley Allotment.

Page 10, Table 9

Wild horse utilization of key species for 1990 do not correspond to utilization data depicted in Table 7 of the Well Resource Management Plan Wild Horse Amendment and Environmental Assessment.

Also, the data suggests that the 1991 estimate of 366 horses in the Antelope Valley Wild Horse Herd met the new land use plan amendment objective.

Page 11, Key Area

There is some confusion to the allotment specific objectives for this allotment. We suggest that the objectives be based upon sound resource management for the key species.

Page 12, Carrying Capacity

Carrying capacities must be established with existing monitoring data. We cannot support the practice of weight averaging utilization data or yield indexing precipitation data to establish a carrying capacity.

Page 13, Range Survey Data

It would appear no monitoring data is available to support additional AUMs for domestic sheep.

Page 16, Conclusions

Data presented in this allotment evaluation are adequate to establish a carrying capacity. We fail to find how a stipulation affecting the adjacent allotment can serve as a conclusion to support active preference for the Antelope Valley Allotment.

Data presented in Table 5 indicate that the distribution and seasonal use of the Antelope Valley Wild Horse Herd has been significantly affected by past gathers. These actions should be assessed concerning the free-roaming mandates of the law.

Page 18, Appropriate Management Levels

This allotment evaluation fails to show rationale and justification to adjust the Antelope Valley Wild Horse Herd to the initial land use plan level of 240 horses. No adjustments were made to the herd management area. No carrying capacity was set for the allotment.

No assessment of fertility control or herd re-structuring were presented.

SUMMARY

This allotment evaluation implements the Wells Resource Management Plan Wild Horse Amendment and Stipulation to Withdrawal Appeals for the Chin Creek Allotment. We fail to find supportive rationale or procedure to adjust wild horse numbers to meet the multiple use or sustained yield capabilities of the land.

Revision of this allotment evaluation should include the following:

* Allotment specific objectives.
* Actual livestock use data.
* Actual wild horse use data.
* Actual wildlife use data
* Carrying capacity computations.
* Fair allocation of available forage to users.

It is obvious that WHOA has difficulty accepting the land use plan amendment affecting wild horse herds in the Wells Resource Area. We were unable to seek administrative remedies to the arbitrary limitations set in the land use plan. It is our understanding and pursuit, that the multiple use decision and herd gather plans are subject to appeal. Therefore, we encourage the District to fully consider these concerns prior to any decision.

Sincerely,

Dawn Y. Lappin

DAWN Y. LAPPIN
Executive Director

c.c: Nevada State Office

4/29/94

BOB MILLER
Governor

STATE OF NEVADA

CATHERINE BARCOMB
Executive Director

COMMISSIONERS

Paula S. Askew, *Chairperson*
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Dawn Lappin
Reno, Nevada

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

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Catherine Barcomb

CATHERINE BARCOMB
Director