12/1/89

United States Department of the Interior

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

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
4120 (NV-014)

DEC 1 1989

Ms. Terri Jay
Commission for the Preservation
of Wild Horses
Stuart Facility
Capitol Complex
Carson City, NV 89710

Dear Ms. Jay:

This letter is in regards to the conversation we recently had regarding your interest in reviewing our allotment evaluations with wild horse herd management areas within their boundaries.

Enclosed for your review are both the Rock Creek and Owyhee allotment Evaluations which meet this criteria. We would appreciate receiving your comments back within 30 days.

We will soon be sending you a letter asking if you want to be involved in the allotment evaluations scheduled for FY90.

If you have any further questions please contact me at this office.

Sincerely yours,

LES SWEENEY, Manager
Elko Resource Area

Enclosure

738-4071

OWYHEE ALLOTMENT
Grazing Management Evaluation

I. NAME, NUMBER, AND MANAGEMENT CATEGORY OF ALLOTMENT

Owyhee (No. 1024) - User is Roaring Springs Associates
Management Category - "I" Improve

II. LIVESTOCK USE

A. Preference:

Total -	31,917 AUMs
Suspended -	1,692 AUMs
Active -	30,225 AUMs

B. Season of Use: March 1 through October 31

C. Kind and Class of Livestock: Cattle - Pairs
Horses

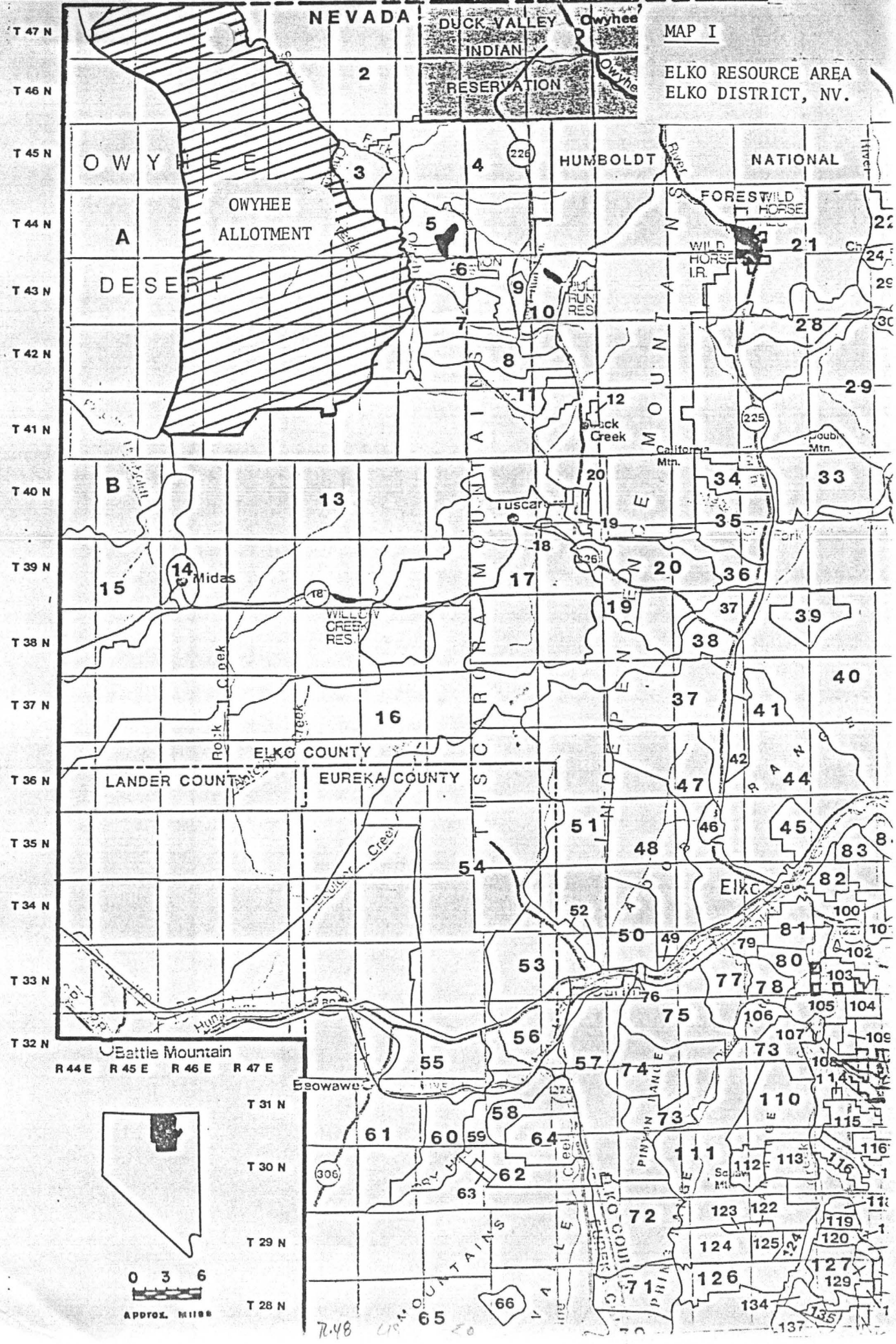
D. Percent Public Land: 98%

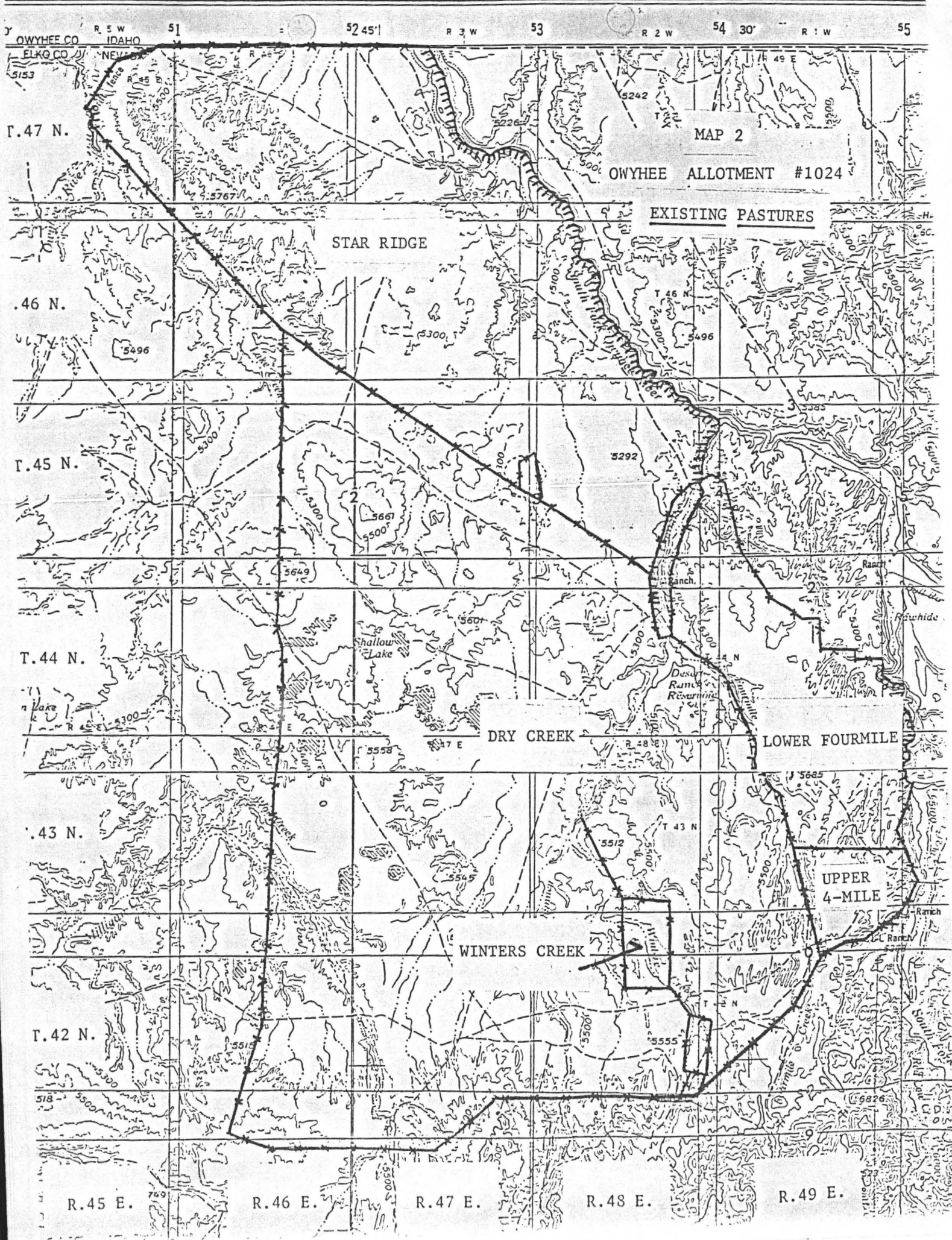
E. Other: In 1979, a grazing system was written for the Owyhee Allotment relying on natural boundaries and the existing fences to define areas of use for the cattle. However, the natural boundaries did not hold the cattle and waters were insufficient to support the system. The system has never been successfully followed. The permittee has tried to rotate rest to different areas of the allotment each year.

III. ALLOTMENT PROFILE

A. The Owyhee Allotment is located in the northwest corner of the Elko Resource Area against the Idaho-Nevada border (Map 1). The majority of the allotment's boundaries are fenced, however a few portions are formed by natural barriers. The South Fork of the Owyhee River forms the northeastern boundary of the allotment while the Little Owyhee River forms a short section of the northwestern boundary. Most of the lands along the Fourmile and Winters Creeks are privately owned and are fenced separately from the allotment. The allotment (Map 2) is presently divided into four native pastures (Upper Fourmile, Lower Fourmile, Star Ridge, and Dry Creek) and one seeded pasture (Winters Creek).

This area is part of the Columbia Plateau physiographic region. It is characterized by a high rolling plateau underlain by basalt flows which are occasionally cut by deep, vertically walled canyons. Elevation ranges from about 5,100 to 5,600 feet. Vegetation is sagebrush-bluegrass-squirreltail with scattered bluebunch wheatgrass, Indian ricegrass, and needlegrass.


MAP I
ELKO RESOURCE AREA
ELKO DISTRICT, NV.
NEVADA
DUCK VALLEY INDIAN RESERVATION
Owyhee
OWYHEE
ALLOTMENT
A
B
DESERT
HUMBOLDT NATIONAL FOREST
WILD HORSE I.R.
WILD HORSE
Duck Creek
California Mtn.
Double Mtn.
Tuscarora
Midas
WILLOW CREEK RES.
Rock Creek
ELKO COUNTY
LANDER COUNTY
EUREKA COUNTY
Elko
Battle Mountain
Beowawe
R44E R45E R46E R47E
T47N T46N T45N T44N T43N T42N T41N T40N T39N T38N T37N T36N T35N T34N T33N T32N T31N T30N T29N T28N
0 3 6
APPROX. MILES


MAP 2
OWYHEE ALLOTMENT #1024
EXISTING PASTURES
STAR RIDGE
DRY CREEK
LOWER FOURMILE
UPPER 4-MILE
WINTERS CREEK
OWYHEE CO IDAHO
ELKO CO NEVADA
T.47 N.
T.46 N.
T.45 N.
T.44 N.
T.43 N.
T.42 N.
R.45 E.
R.46 E.
R.47 E.
R.48 E.
R.49 E.
Shallow Lake
Desert Ranch Reservoir
Rawhide
Ranch

The 1986 Resource Management Plan (RMP) for the Elko Resource Area placed the Owyhee Allotment in the "I" or Improve category. The RMP projected a 17% increase (7,203 AUMs) in active preference on the allotment to 37,428 AUMs. The need for a grazing management plan was identified to improve the various resources on the allotment.

Planning and resource issues within the Owyhee Allotment are as follows:

1. Livestock forage.
2. Mule deer winter and yearlong habitat.
3. Antelope yearlong and crucial yearlong habitat.
4. Potential California bighorn sheep reintroduction site.
5. Wild horse herd area.
6. White-water rafting.
7. South Fork Owyhee River Special Recreation Management Area.
8. Parts of two wilderness study areas (WSA's).
9. Two sensitive plant species.
10. One designated utility corridor and two planning corridors.
11. Riparian areas.

B. Acreage (1985 Inventory):

Pasture	Federal	Private	Total
Star Ridge	111,652	291	111,943
Dry Creek	219,117	1,368	220,485
Lower Four Mile	28,765	2,118	30,883
Upper Four Mile	5,817	245	6,062
Winters Seeding	5,588	0	5,588
Fenced Federal and Private Hay Meadows	492	28,044	28,536

Total Federal	371,431 acres
Total Private	32,066 acres
Total for Allotment	403,497 acres

C. Rangeland Program Summary Objectives:

1. Livestock

a. In the long-term (through 2007), provide forage to sustain 37,428 AUMs for livestock grazing.
b. By 2007, improve ecological status from mid to late on 5130 acres and late to PNC on 12,526 acres. (The late to PNC improvement would be accomplished through vegetation manipulation).
c. In the short term, maintain or enhance the current forage value condition on non-native range.
d. In the short-term, maintain or enhance native vegetation with utilization levels not to exceed 50% on the key species.

2. Wildlife

a. In the long term (through 2007), manage rangeland habitat and forage condition to support 242 AUMs for reasonable numbers of mule deer, 485 AUMs for reasonable numbers of pronghorn antelope and 24 AUMs for reasonable numbers of California bighorn sheep.
b. In the long term (through 2007), maintain or improve to at least good condition all crucial mule deer, California bighorn sheep and pronghorn antelope habitat.
c. In the short term, manage rangeland to protect or enhance crucial sage grouse strutting or nesting habitat.
d. In the short term, improve and maintain meadow and riparian areas for mule deer, pronghorn antelope and sage grouse.
e. In the short term, utilization levels will not exceed 50 percent on meadow and riparian areas.

3. Wild Horses

a. Through 2007, maintain management levels at 58 horses (695 AUMs) within the Owyhee Herd Management Area (located entirely within the Owyhee Allotment).

D. Key Forage Species:

Bluebunch wheatgrass, Thurbers needlegrass, Indian ricegrass, Great basin wildrye and (in crucial antelope habitat) mat muhly are key forage species in the native pastures. Crested wheatgrass is the key forage species in the seeded pasture.

E. Grazing System:

No grazing system is being followed at present. The permittee attempts to rotate rest to different areas of the allotment each year.

A grazing system has been proposed for the allotment with two pastures (Star Ridge and Dry Creek) being grazed under a rest-rotation system and two pastures (Lower Fourmile and the proposed Chimney Creek) under a deferred-rotation system.

IV. MANAGEMENT EVALUATION:

A. The purpose of this evaluation is to determine the proper stocking rate of the allotment, to evaluate present grazing management and to determine if the multiple use objectives for the allotment are being met.

B. Summary of Studies Data:

1. Actual Use (see Figure 1) - Made by cattle (pairs) and horses

Actual use has been under Roaring Springs Associates' active preference every year since 1981. The average annual use for 1981 through 1987 is 14,104 AUMs. Actual use has ranged from a low of 10,773 AUMs in 1983 to a high of 19,745 AUMs in 1981.

2. Climate (See Figure 2)

Good climate data for the allotment is scarce. From 1963 through 1967 the Weather Bureau maintained a climate station at the IL Ranch adjacent to the allotment. Over this period annual precipitation amounts ranged from 5.83 inches to 20.75 inches. The average was 12.46 inches per year. Presently the best source of climate data for the allotment is from the Tuscarora Station, approximately 15 miles to the south-east from the southern boundary of the allotment. During the same 1963 to 1967 period, the Tuscarora Station averaged 12.92 inches of precipitation per year with annual amounts ranging from 7.20 inches to 18.91 inches (Appendix A). The long-term (1958 through 1987) annual mean for the Tuscarora Station is 12.81 inches. Total amounts at the station have ranged from a high of 22.32 inches in 1983 to a low of 7.2 inches in 1966.

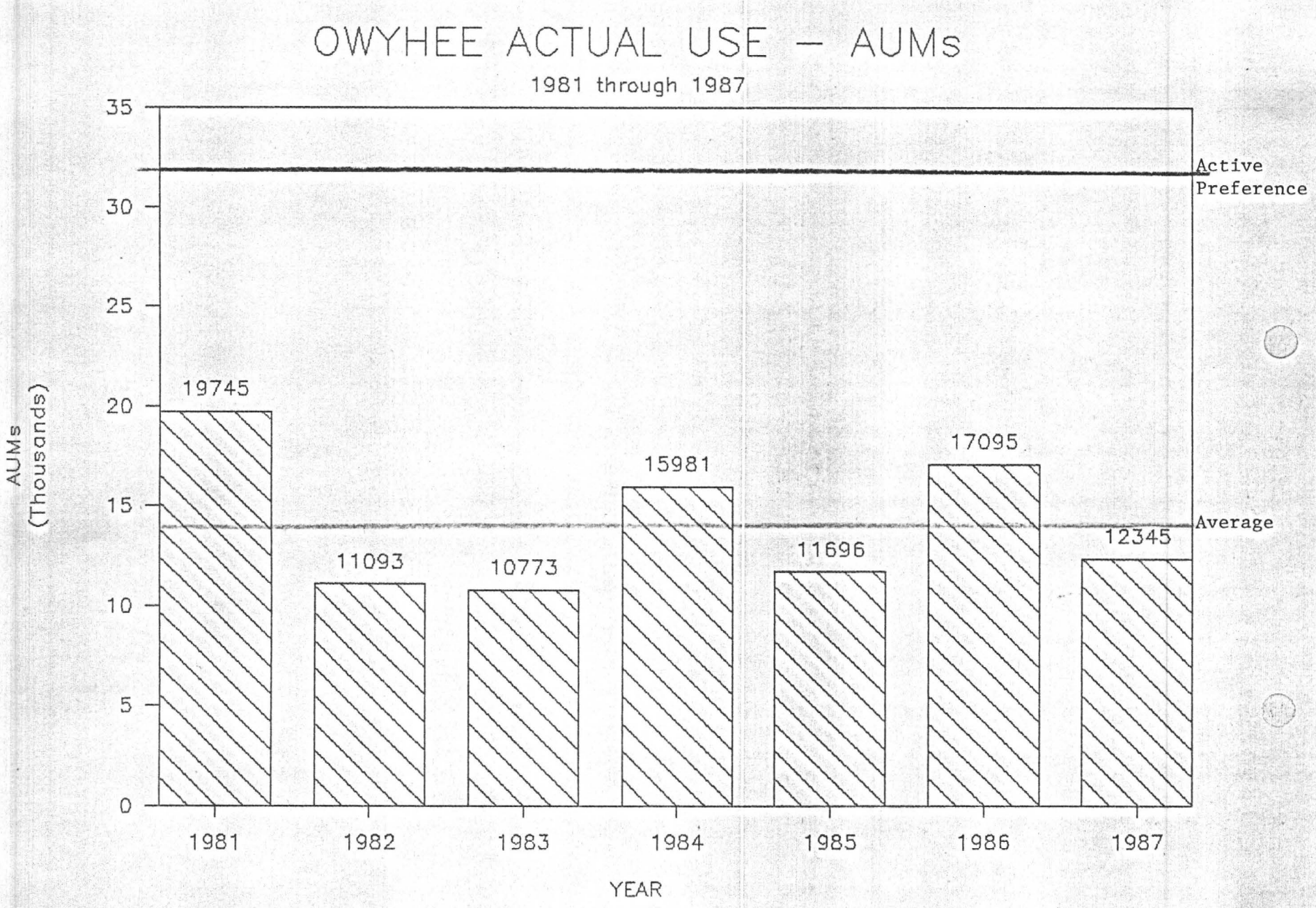


Figure 1. Actual use (AUMs) for 1981 through 1987 on the Owyhee Allotment.

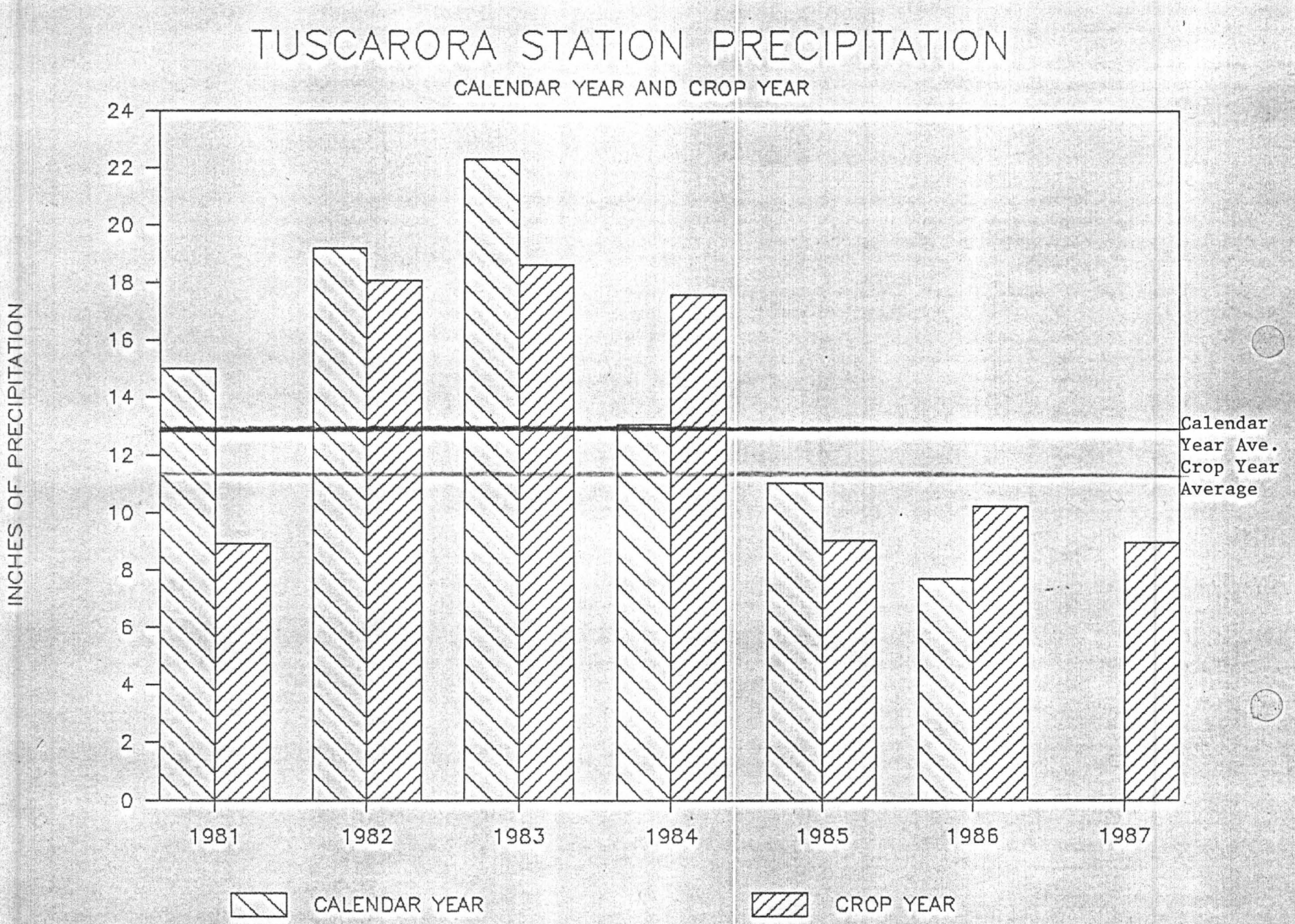


Figure 2. Calendar and crop year precipitation data for 1981 through 1987 for the Tuscarora Station.

Crop year precipitation (September through June) is used for interpreting monitoring data rather than calendar year precipitation because of its closer tie to annual fluctuations in plant growth. The long term (1958 through 1987) average annual crop year precipitation level at the Tuscarora Station is 11.33 inches (Appendix A). Total amounts have ranged from a low of 6.29 inches in 1974 to a high of 18.62 in 1983.

3. Utilization

Utilization data is shown in Table 1. Very few utilizations have been read on the allotment's key species between 1982 and 1987, the period of this evaluation. Since this evaluation is based on key species, only those utilizations done on key species can be used. None of the utilizations read on the allotment exceeded the desired use level of 50% on native key species or 65% on introduced species.

Table 1. Percent utilization on key species for key areas on the Owyhee Allotment for 1982 through 1987.

		YEAR					
Key Area	Key Species	1982	1983	1984	1985	1986	1987
01	Indian ricegrass/ Thurber needlegrass*	51%+	5%+				17%
02	Indian ricegrass/ Thurber needlegrass*	10%				4%	2%
03	Crested wheatgrass	43%	46%			48%	
04	Bluebunch wheatgrass/ Thurber needlegrass/ Great basin wildrye*	28%	8%				39%
05	Bluebunch wheatgrass/ Thurber needlegrass/ Great basin wildrye*	10%	5%	6%		10%	
06	Bluebunch wheatgrass/ Thurber needlegrass/ Great basin wildrye*	7%	4%	4%			12%
07	Indian ricegrass	37%+	6%+	2%+	rest	12%	rest
08	Indian ricegrass		20%	30%	rest	4%	rest

\+ Utilizations not read on key species.
* Data shown is for key species with the highest utilization.

4. Calculated Carrying Capacity -

Carrying capacities for an allotment are calculated from actual use and utilization data. Utilization data on this allotment is insufficient to reliably calculate carrying capacity on the native pastures which make up the majority of the allotment. Actual use and utilization data for 1982, 1983, and 1986 can be used to calculate a carrying capacity for the Winters Seeding pasture.

A calculated carrying capacity (CC) for the seeded pasture can be found using the following formula:

$$\frac{\text{Actual Use AUMs}}{\text{Actual Utilization}} * \text{65\% Desired Utilization} = \text{CC}$$

The "CC" for the seeding was 2,491 AUMs in 1982, 3,097 AUMs in 1983 and 3,991 AUMs in 1986. To account for yearly variations in forage production on the allotment due to differences in precipitation, the "CC" is corrected using the "Yield Index" for a particular year (see Sneva and Britton, 1983). The Yield Index was 174% of normal in 1982, 179% of normal in 1983 and 88% of normal in 1986 based on Tuscarora Station data (Appendix A). The adjusted "CC" for the seeding is 1432 AUMs in 1982 (2,491 AUMs divided by 1.74), 1,730 AUMs in 1983 (3,097 AUMs divided by 1.79), and 4535 AUMs in 1986 (3,991 AUMs divided by .88).

5. Trend -

There are seven key areas on the allotment in native pastures and one key area in the seeded pasture. These key areas were established in 1982 and have had frequency and weight-estimate data collected on them in both 1982 and 1987.

Frequency data is presented in Appendix B by key area. Data from the seeded pasture key area showed a significant ($P<.10$) increase in crested wheatgrass and Sandberg bluegrass frequencies between 1982 and 1987. Bluebunch wheatgrass has increased significantly on two of the seven key areas in the native pastures. No other significant changes in frequencies of key species were recorded.

Significant changes in frequencies of non-key species between 1982 and 1987 were as follows:

a. Wyoming big sagebrush increased on five of the seven plots.
b. Sandberg bluegrass increased on three plots and decreased on one.
c. Nevada bluegrass increased on one plot.
d. Bottlebrush squirreltail increased on three plots and decreased on one.
e. Hoods phlox increased on two plots and longleaf phlox increased on one.
f. Pale agoseris increased on one plot and declined on two.
g. Lupine, locoweed and globemallow all increased on one plot.
h. Desert parsley declined on one plot.

Six of the seven transects recorded more species of perennial forbs in 1987 than in 1982, the seventh plot had no change in numbers of perennial forbs recorded.

In addition to the above changes, numerous changes in annual forbs and grasses were recorded. Since these are affected more by yearly climate variation rather than by management they are not detailed here.

Weight-estimate data is presented in Appendix C. None of the plots have moved into a higher or lower seral stage since sampling in 1982. Three plots are in early-seral condition and four are in mid-seral condition. Ecological status has increased slightly on four of the seven native pasture key areas and decreased on the other three.

Total pounds/acre production was higher on all native pasture key areas in 1987 than it was in 1982 despite a much lower crop year precipitation in 1987 (18.08 inches in 1982 and 10.21 inches in 1987). Production was lower on the crested wheatgrass seeding in 1987 than in 1982 (664 lbs/ac and 761 lbs/ac, respectively). However, when production is corrected using the yield index for each year (lbs/ac divided by the YI from Appendix A), adjusted production in 1987 was 897 lbs/ac and 437 lbs/ac in 1982.

6. Ecological Inventory

Fourteen different ecological sites were recorded on the Owyhee Allotment during an ecological inventory in the fall of 1985. The ecological sites shown in Table 2 comprise 95% of the allotment. Eighty-five percent (85%) of the allotment is in mid-seral condition. The apparent trend for vegetation condition on the allotment, as identified in the RMP, is "upward".

TABLE 2. Ecological sites, response potential*, condition of ecological sites, and percent of each within the Owyhee Allotment.

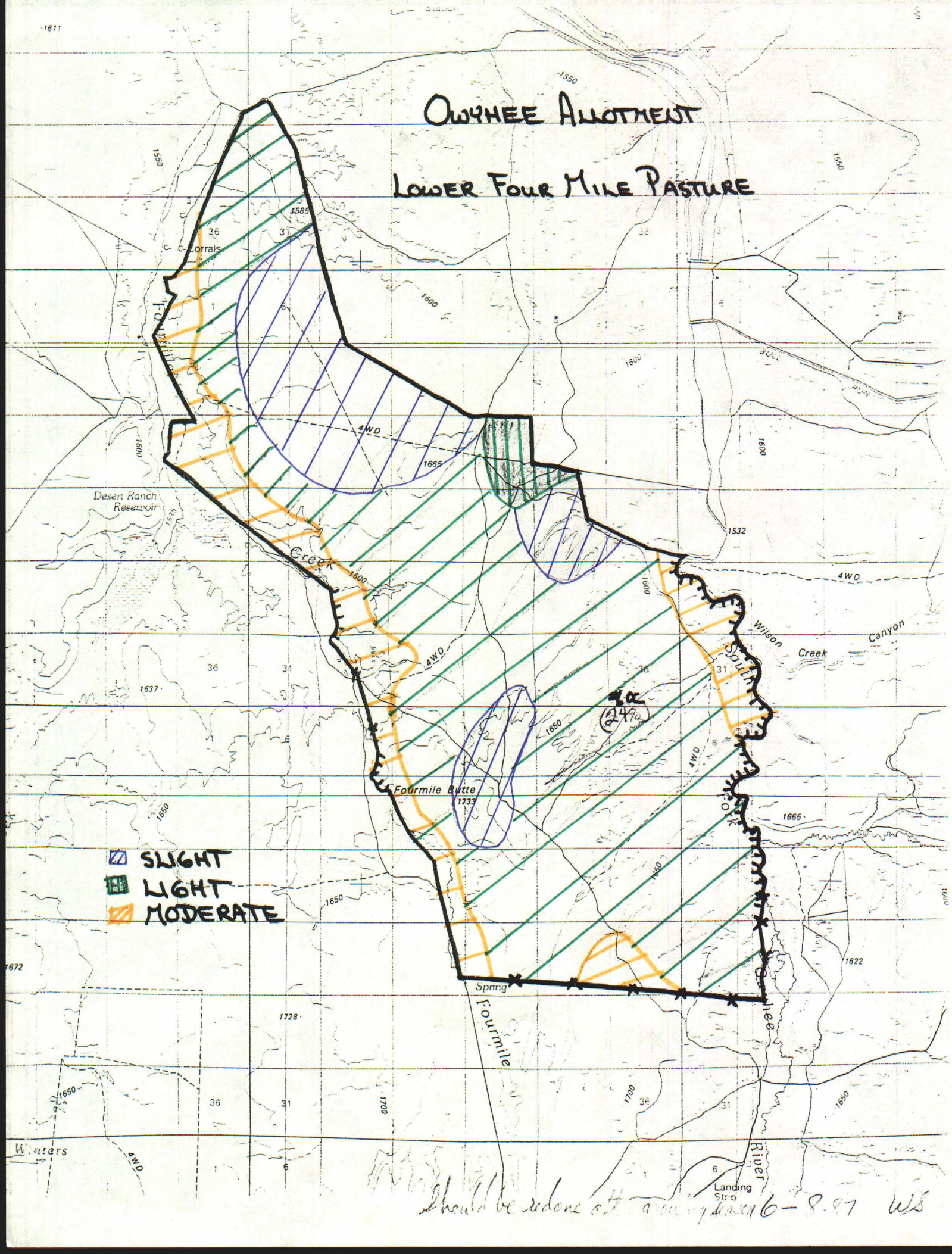
Ecological Site (Number)	Response Potential	Condition	Percent of Allotment
Loamy 10-12" (25-14)	High	Late-Seral	3
		Mid-Seral	T**
South Slope 8-12" (25-15)	Medium	Potential	T
		Late-Seral	1
		Mid-Seral	T
Claypan 10-12" (25-18)	Medium	Late-Seral	2
Loamy 8-10" (25-19)	Medium	Late-Seral	2
		Mid-Seral	84
		Early-Seral	2
Seeding (N/A)	N/A	N/A	1

* Response potential is based upon the capacity of an ecological site to improve in condition within 20 years, in response to grazing and/or mechanical treatments.

** T = less than 1%.

7. Wildlife Habitat Evaluation

Pronghorn Antelope In 1982, three habitat evaluation areas were established in the "crucial yearlong" antelope use area (Map 3). At that time, one area (Figure 3, AY1-03) was rated as poor (25 points, see Appendix D) condition while the other two (Figure 3, AY1-01 and AY1-02) were rated as fair (27 and 51 points). These areas were resampled in 1985 and all three were rated as fair condition (33, 33, and 50 points). Frequency data taken in 1982 and 1985 at the evaluation area that went from a poor to fair condition rating, showed a significant ($P<.10$) increase in frequencies of phlox and wild buckwheat (Appendix E). Two annual forb species decreased significantly between the two readings.


OWYHEE ALLOTMENT
LOWER FOUR MILE PASTURE
SLIGHT
LIGHT
MODERATE
Corrals
Fourmile
Desert Ranch Reservoir
Creek
4WD
Fourmile Butte
1733
Wilson Creek Canyon
South Fork
Owyhee
Spring
Fourmile
Waters
River
Landing Strip
1550
1585
1600
1650
1665
1532
1637
1672
1728
1622
1700
Should be redone at a later date 6-8-87 WS

NO USE
SLIGHT
LIGHT
MODERATE
HEAVY
SEVERE

PARALLEL

NORTH

WINTERS SEEDING

PRIVATE

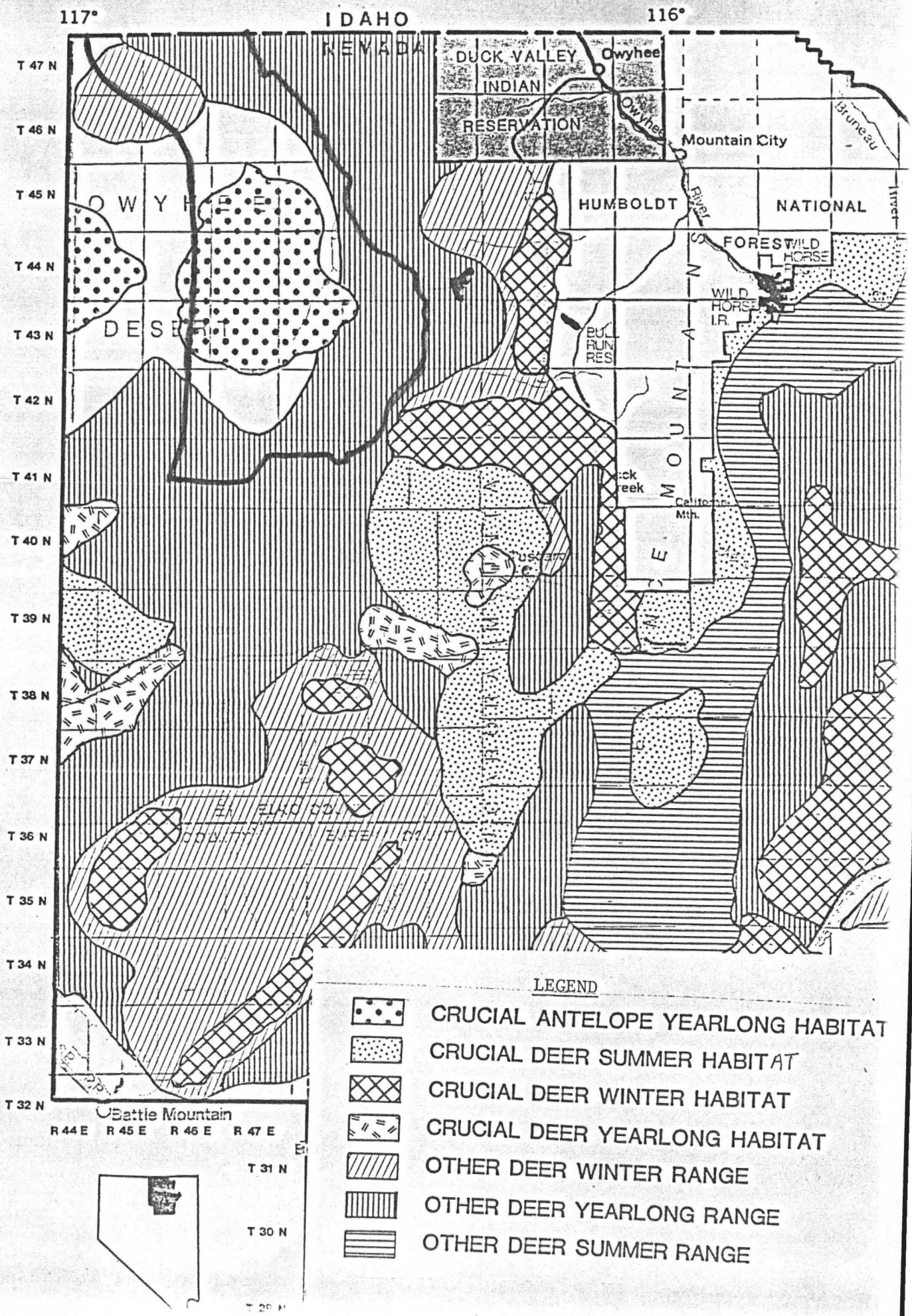
T 44 N

T 43 N

T 42

(WHITEROCK)

Map 3. Wildl[illegible] Habitat Areas on the Owyhee A[illegible]tment.



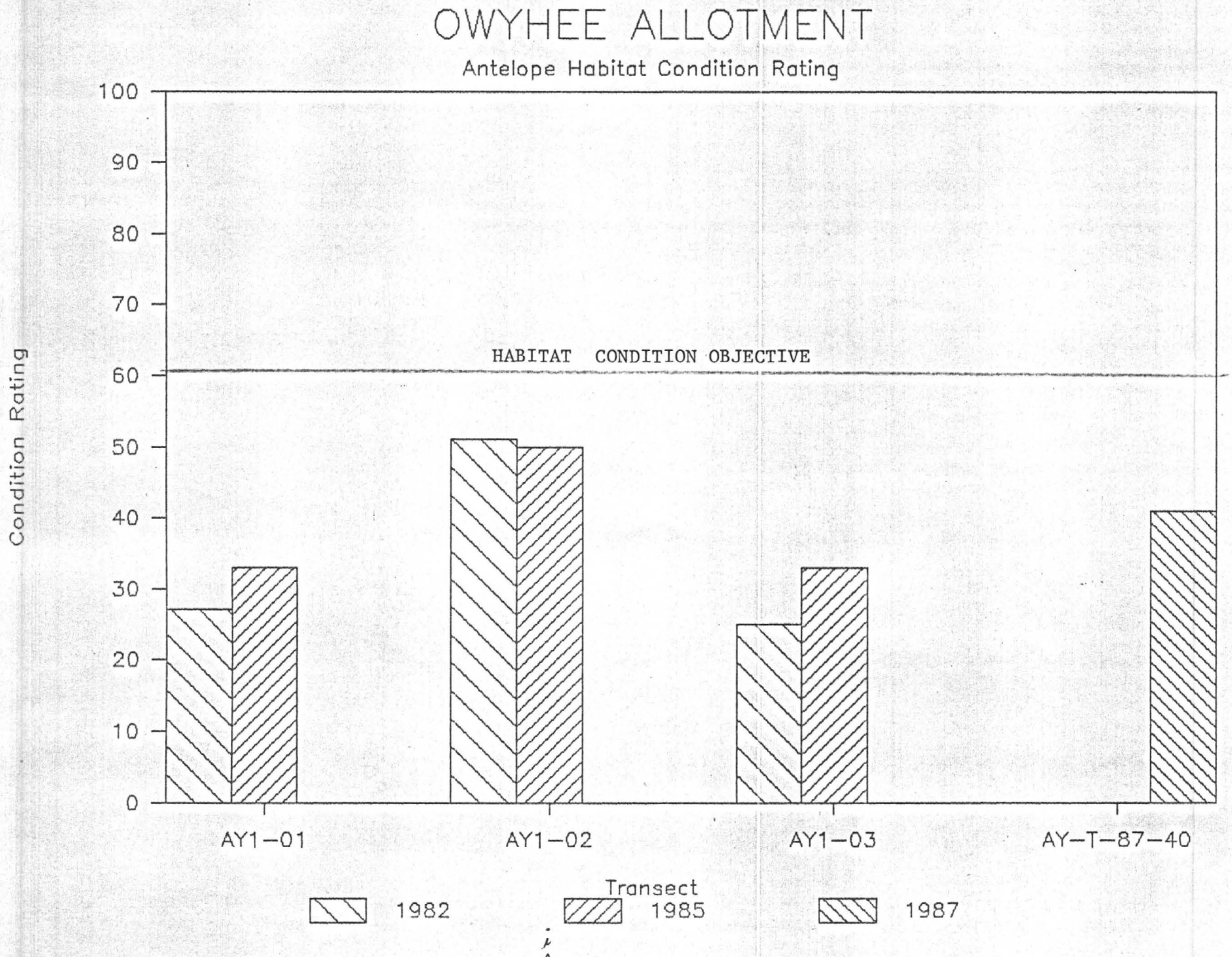


Figure 3. Antelope habitat condition ratings from four sites on the Owyhee Allotment.

In 1987, a habitat evaluation area was established in an area of "yearlong" antelope habitat. This area was also in fair (41 points) condition (Figure 3, AY-T-87-40).

On all four areas, percent composition of preferred forbs is below the desired level of 10-30% (Appendix D). Percent composition of grasses exceeds the desired range of 40-60% on one sample area and is below the desired range on the other three areas. Shrubs are lacking on one sample area and, on the other three areas, exceed the desired composition of 5-20%.

Mule Deer Current information from the Nevada Department of Wildlife shows no "crucial" mule deer habitat in the allotment. In 1987, four big game monitoring studies were established within the Nevada Department of Wildlife designated "mule deer yearlong" habitat (Map 3). All areas rated out as fair (50 to 58 points) condition (Figure 4). On all four key areas, the percent composition of shrubs (Wyoming big sagebrush) exceeded the desired level of 45% shrub composition for mule deer habitat (see Appendix D).

California Bighorn Sheep No resident population exists within the suitable habitat area (the South Fork of the Owyhee River) of the allotment so no habitat condition or trend data exist.

Sagegrouse Current information from the Nevada Department of Wildlife shows no crucial sagegrouse habitat in the allotment. No data on condition and trend of sagegrouse habitat exists.

8. Wildhorse Population Evaluation

One hundred eighty (180) excess wildhorses were gathered from the Owyhee Herd Management Area in 1981. Aerial censuses since then recorded 55 horses in 1982, 57 in 1984 and 63 in 1986.

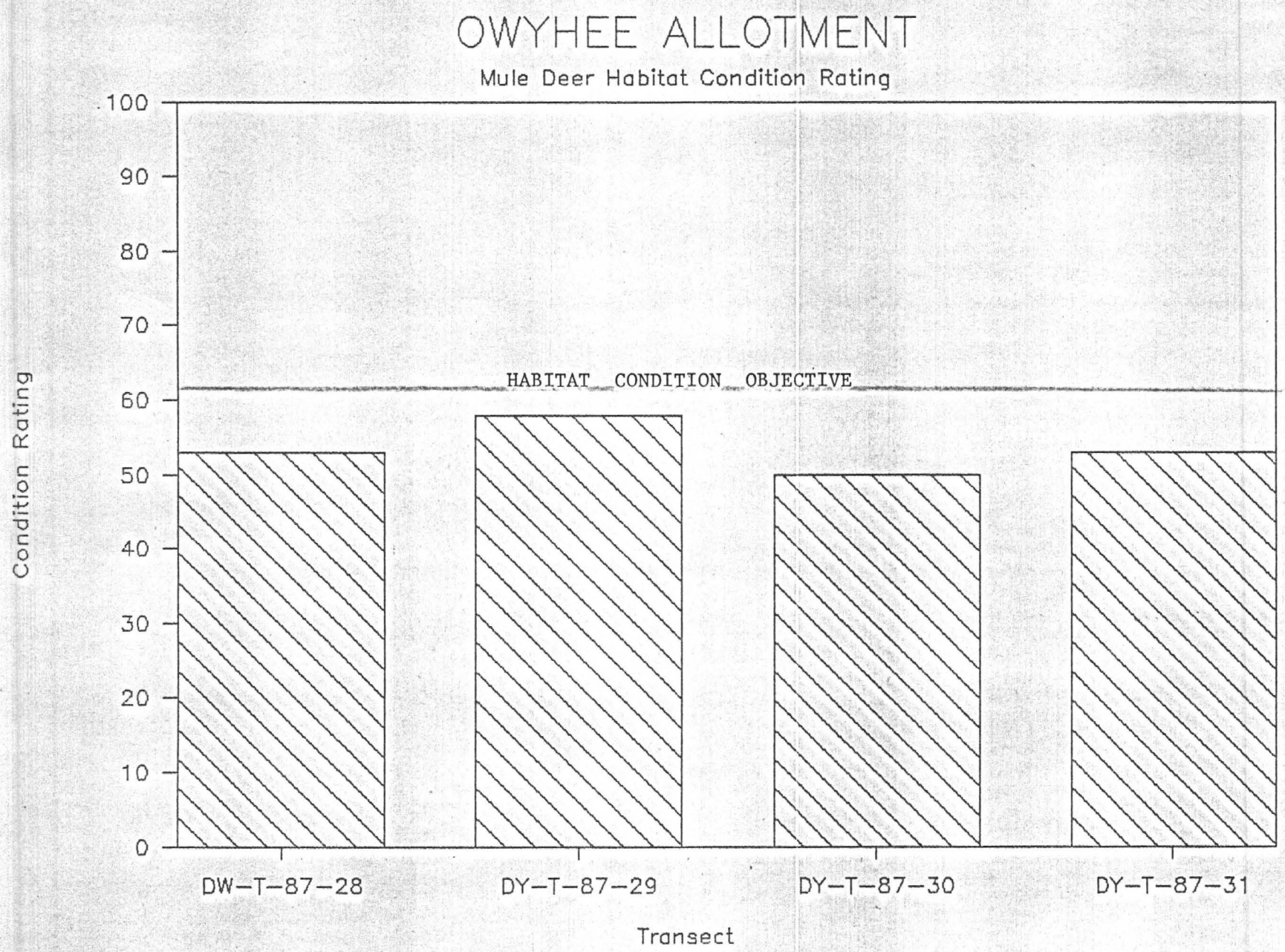


Figure 4. Mule deer yearlong habitat condition ratings from four sites on the Owyhee Allotment (1987 data).

V. CONCLUSIONS

A. Rangeland Program Summary Objectives
(Referred to by number shown in III.C.)

1. Livestock

a. Data is insufficient at this point to determine if this objective is being met or not. Actual use data is very good but one or more years of utilization data on key species in each of the pastures is needed to reliably calculate a carrying capacity for the entire allotment.

b. This objective has not been met. There has not been an improvement in ecological status from mid to late or from late to PNC on any of the key areas based on the 1982 and 1987 weight estimate data. Trend is "upward" on at least two of the key areas as shown by the significant increase in frequency of bluebunch wheatgrass between 1982 and 1987. The increase in perennial forb diversity found on six of the seven frequency transects is also an indication of "upward" trend. Increases in Wyoming big sagebrush are an indication of "downward" trend on five of the areas which will cause decreases in ecological condition in the future by crowding out forbs and grasses.

c. This objective is being met. Adjusted weight-estimate data showed that twice as much was being produced on the crested wheatgrass seeding in 1987 as in 1982. Also, the calculated carrying capacity for the seeding was 4,535 AUMs in 1986 compared to only 1,432 AUMs in 1982. Trend data also showed a significant increase in crested wheatgrass frequency in the seeding.

d. This objective is being met. None of the utilization readings on native key species have exceeded 50% (see Table 1).

2. Wildlife

a. This objective is not being met. Mule deer and antelope habitat is in fair condition. To meet the reasonable number objective for these two species, their habitat must be improved to good condition. The Nevada Department of Wildlife has indicated that the population condition and trend for antelope is static on the Owyhee Allotment.

Since there are no California bighorn sheep on the allotment at present, and no evaluation of their potential habitat, there is no way to determine if the habitat would support the reasonable number objective.

b. This objective is not being met.

Mule Deer Current information from the Nevada Department of Wildlife shows no crucial mule deer habitat within the allotment. Mule deer yearlong and winter range habitat were rated as fair on the 1987 monitoring transects. The overall limiting factors for both habitat areas are the lack of quality forage and lack of preferred shrubs (ie antelope bitterbrush).

California Bighorn Sheep Currently there are no bighorn sheep on the allotment. Evaluation of the potential habitat will depend upon Nevada Department of Wildlife reevaluating their priorities for bighorn sheep reintroduction onto the Owyhee Allotment.

Antelope Both crucial yearlong and yearlong habitat are in fair condition. The composition of preferred forbs and grasses in these habitat areas must be increased to meet the goal of good condition antelope habitat. Frequency data shows there has been some improvement in perennial forb diversity but not a sufficient amount.

c. This objective can not be met since there is no "crucial" sagegrouse habitat on the allotment.

d. This objective is not being met. Meadows throughout the allotment are restricted to a few shallow lake beds and the riparian zones along Four Mile Creek (mostly privately owned) and the South Fork of the Owyhee River. The meadow areas associated with the shallow lake beds are considered to be in poor condition due to the lack of quality vegetation (% composition of forbs = 1%, of grasses = 7% and of shrubs = 92%; Appendix D, Transect AY1-01) and low amounts of forage production averaging 280 pounds/acre. These lake beds are usually overutilized by livestock, wild horses and antelope.

Four Mile Creek has no riparian monitoring established (other than 1987 photos) since little public land occurs within its boundaries. It is a low priority stream and subject to intermittent flows. The South Fork of the Owyhee River will be evaluated under a future evaluation of the YP allotment. The South Fork acts as a boundary between the Owyhee and YP Allotments and the majority of the impacts are associated with the YP Allotment's livestock.

e. There is insufficient data to determine if this objective is being met. The large majority of such areas are on private land along Four Mile Creek. The areas which are on public land are in steep, inaccessible canyons.

3. Wild Horses

a. This objective is being met. The wild horse population on the allotment is only 5 head over (less than 10%) the target herd size of 58.

VI. CONSULTATION

Jeff Gardetto, Elko Resource Area Wildlife Biologist (BLM)
Steve Ashworth, Elko Resource Area Outdoor Recreation Planner (BLM)
Stan Jaynes, Elko Resource Area Archeologist (BLM)
Nick Rieger, Soil Scientist (BLM)
Bruce Portwood, Elko District Wild Horse and Burro Specialist (BLM)
Nevada Department of Wildlife

VII. RECOMMENDATIONS

A. Rangeland Program Summary Objectives
(Referred to by number shown in III.C.)

1. Livestock

a. Maintain the active preference on the allotment at the present level of 30,225 AUMs. Data is insufficient at this point to determine if the active preference should be adjusted. Continue annual actual use and utilization studies on the allotment by pasture and reevaluate the need for an adjustment in 1991.

b. Through cooperation, coordination, and consultation with the permittee, implement rest- and deferred rotation grazing systems on the allotment to provide alternate years of growing season rest. This growing season rest will improve ecological status from mid to late on the 5130 acres by improving vigor and production of existing grasses and forbs. Sagebrush will need to be reduced through vegetation treatment to meet the ecological improvement goal from late to PNC on 12,526 acres.
c. This objective is being met so no recommendation is needed. Continue monitoring studies to ensure this objective is met under the grazing system.
d. This objective is being met so no recommendation is needed. Continue annual utilization studies to ensure this objective is met under the grazing system.

2. Wildlife
a. and b. Through implementation of a grazing system (see Recommendation 1.b.), provide alternate years of growing season rest to improve vigor and production of forbs and grasses. Forage quality and diversity will be improved in these areas to support reasonable numbers of mule deer, antelope, and bighorn sheep and to meet the goal of good condition habitat. Percent composition of preferred forbs must be increased to 12% from the present 7% average. In areas of yearlong mule deer habitat, percent shrub canopy cover must be increased to 50% from the present 27% average by providing alternate years of rest from livestock grazing.

Objective 2.b. should be changed to read "In the long term (through 2007), maintain or improve to at least good condition all crucial California bighorn sheep and pronghorn antelope habitat.
c. This objective should be deleted from the RPS. At this time there is no known "crucial" sagegrouse habitat on the allotment.
d. Implementation of a grazing system (see Recommendation 1.b.) will provide alternate years of growing season rest from livestock grazing on these areas. This rest would improve the composition of grasses and forbs in the riparian communities. e. The large majority of such areas are on private land along Four Mile Creek. Most areas which are on public land are in steep, inaccessible canyons. Appropriate areas on public land will be located and utilization studies will be established.

3. Wild Horses

a. This objective is being met so no recommendation is needed.

LITERATURE CITED

Sneva, F. and Britton, C. M. 1983. Adjusting and Forecasting Herbage Yields in the Intermountain Big Sagebrush Region of the Steppe Province. Agricultural Experiment Station Oregon State University, Corvallis. Station Bulletin 659. 61 pp.

APPENDIX A

Tuscarora Precipitation Records for 1958 Through 1987.

TUSCARORA PRECIPITATION RECORDS

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL	CROP YEAR	PI	YI
1958	1.59	1.63	1.22	0.97	0.52	1.93	0.4	0.91	0.25	0.05	1.72	0.54	11.73			
1959	1.07	1.11	0.53	0.28	1.89	1.48	0.3	0.31	2.13	0.3	0.02	0.48	9.9	8.92	0.79	74
1960	1.61	2.5	1.88	0.74	0.65	0.06	0.3	0.79	0.45	1.22	1.79	0.88	12.87	10.37	0.92	90
1961	0.06	1	1.46	0.18	0.82	1.62	0.24	1.93	0.39	1.78	0.5	0.86	10.84	9.48	0.84	80
1962	0.95	1.83	1.5	0.93	2.74	0.59	0.29	0.2	0.05	0.33	1.06	0.15	10.62	12.07	1.07	109
1963	1.9	1.58	1.18	1.94	2.36	4.78	0	0.39	0.74	1.51	1.8	0.73	18.91	15.33	1.35	143
1964	1.67	0.21	0.93	0.68	0.67	1.54	0.08	T	0.4	0.83	1.49	5.17	13.67	10.48	0.92	90
1965	0.92	0.59	0.2	1.7	2.42	1.09	0.35	1.88	0.35	0.35	1.29	1.24	12.38	14.81	1.31	138
1966	0.42	0.99	0.36	0.25	0.18	0.61	0.43	0.07	0.51	0.05	0.79	2.04	7.2	6.54	0.58	48
1967	2.19	0.07	1.19	1.33	1.88	2.2	0.93	0.06	0.3	0.77	0.36	1.18	12.46	12.25	1.08	110
1968	0.48	1.55	0.44	0.22	1.05	1.79	0.1	3.05	0.04	0.18	3.22	2.49	14.61	8.14	0.72	66
1969	1.48	0.9	0.33	0.27	0.97	2.93	0.68	0	0.55	1.08	0.1	2.32	11.61	12.81	1.13	116
1970	1.95	0.15	1.35	0.72	1.08	3.54	1.17	0.35	0.8	0.43	2.1	1.42	15.06	12.84	1.13	116
1971	1.18	0.61	0.92	0.68	1.81	1.7	T	0.16	0.4	0.49	1.1	1.64	10.69	11.65	1.03	104
1972	0.58	0.59	1.01	0.45	0.88	1.58	T	0.03	1.47	1.55	1.16	1.13	10.43	8.72	0.77	72
1973	1.09	0.3	0.66	0.4	0.68	0.49	1.68	0.53	1	0.37	1.63	1.2	10.03	8.93	0.79	74
1974	0.95	0.17	0.51	0.46	T	0	0.7	T	0					6.29	0.56	46
1975	1.7	0.81	1.58	1.7	0.57	1.05	1.09	0.04	0.28	2.49	0.92	0.56	12.79			
1976	0.26	0.83	0.45	0.31	0.76	0.67	1.09	1.6	3.17	0.54	0.31	T	9.99	7.53	0.66	58
1977	0.6	0.37	0.75	0.41	1.17	1.17	0.73	0.64	0.48	0.06	1.92	1.66	9.96	8.49	0.75	69
1978	1.16	1.28	1.33	2.68	0.62	0.13	2.49	0.02	3.09	0.11	0.94	0.75	14.6	11.32	1	100
1979	2.37	1.47	0.85	0.89	1.55	0.53	1.22	1.08	0.32	2.56	1.53	0.18	14.55	12.55	1.11	114
1980	3.21	1.67	1.12	0.97	3.29	1.53	0.31	0.19	0.94	0.65	0.95	0.71	15.54	16.38	1.45	155
1981	0.83	0.43	1.77	0.33	2.15	0.16	T	0.1	0.48	1.75	2.64	4.4	15.04	8.92	0.79	74
1982	2.13	0.93	2.41	1.09	0.89	1.36	1.26	0.41	2.44	2.53	2.35	1.39	19.19	18.08	1.6	174
1983	1.9	2.05	2.02	1.52	1.32	1.1	0.1	1.16	1.52	1.36	3.76	4.51	22.32	18.62	1.64	179
1984	0.28	1.5	1	1.14	0.9	1.61	1.03	0.69	0.16	1.54	2.49	0.71	13.05	17.58	1.55	168
1985	0.45	0.21	1.43	0.4	1.21	0.43	1.44	0	1.76	1.12	1.26	1.33	11.04	9.03	0.8	75
1986	0.49	1.56	1.18	0.79	0.66	0.06	0.7	0.1	1.09	0.46	0.57	0.01	7.67	10.21	0.9	88
1987	0.46	0.95	1.23	0.22	3.01	0.94	0.17	0	0				6.98	8.94	0.79	74
1988																
AVERAGE	1.21	0.88	1.15	0.81	1.24	1.1	0.83	0.37	1.05	1.12	1.51	1.41	12.81	11.33		

APPENDIX B

Owyhee Allotment Frequency Data By Key Species.

OWYHEE FREQUENCY DATA Key Area #1024-01 - Loamy 8-10" R.S.

SPECIES	1982 Data	1987 Data	SIGNIFICANT CHANGE
Indian ricegrass	2.0	3.0	
Sandberg bluegrass	5.5	10.0	
Bottlebrush squirreltail	69.0	86.5	*
Cheatgrass brome		3.0	
Wild onion	0.5	0.0	
Hoods phlox	19	17	
Oblongleaf bluebells		28	
Hawksbeard		0.5	
Wild buckwheat		0.5	
Penstemon		1.0	
Pale agoseris		1.0	
Tansy mustard	13.5		
Littleflower collinsia	46.5	0.5	*
Thelypody	52		
Annual forb #2	69.5		
Annual forb #3	2.5		
Annual forb #4		7.5	
Annual forb #5		0.5	
Annual forb #6		0.5	
Wyoming big sagebrush	76.0	91.5	*

OWYHEE FREQUENCY DATA Key Area #1024-02 - Loamy 8-10" R.S.

SPECIES	1982 Data	1987 Data	SIGNIFICANT CHANGE
Indian ricegrass	6.0		
Sandberg bluegrass	65.0	30.0	*
Bottlebrush squirreltail	35.5	28.5	
Unknown grass	2.0		
Rockcress		14	
Longleaf phlox		2.5	
Desert parsley		1.0	
Hairy fleabane		0.5	
Pale agoseris		0.5	
Littleflower collinsia	23.5	0.0	*
Tansy mustard	2.0		
Thelypody	0.5		
Annual forb #1	0.5		
Annual forb #2	3.5		
Annual forb #3	1.5		
Wyoming big sagebrush	67.0	79.0	*
Winterfat		0.5	

OWYHEE FREQUENCY DATA Key Area #1024-03 - Chrested Wheatgrass Seeding

SPECIES	1982 Data	1987 Data	SIGNIFICANT CHANGE
Crested wheatgrass	71.0	90.0	*
Sandberg bluegrass	16.5	35.0	*
Bottlebrush squirreltail	4.0	3.5	
Unknown grass	1.5		
Phlox	1.0	2.0	
Wild onion	1.0		
Hawksbeard		0.5	
Perennial forb		0.5	
Annual forb#1	21.0		
Thelypody	0.5		
Wyoming big sagebrush	4.0	5.0	

OWYHEE FREQUENCY DATA Key Area #1024-04 - Loamy 8-10" R.S.

SPECIES	1982 Data	1987 Data	SIGNIFICANT CHANGE
Bluebunch wheatgrass	39.5	64.0	*
Thickspike wheatgrass	2.0	3.5	
Bluebunch X Squirreltail	2.5	1.0	
Thurber's needlegrass	1.5		
Indian ricegrass	4.0		
Sandberg bluegrass	58.0	48.5	
Bottlebrush squirreltail	35.5	40.0	
Cheatgrass brome		1.0	
Hoods phlox	39.5	52.0	*
Locoweed	23.5	14.0	
Wild onion	38.0		
Rockcress	1.0		
Pale agoseris	11.5	0.5	*
Lupine	10.5	8.5	
Low pussytoes	1.5	0.5	
Larkspur	3.5		
Desert parsley	4.5	0.5	*
Longleaf phlox	3.0	3.5	
Oblongleaf bluebells		0.5	
Hawsbeard		0.5	
Pursh locoweed		2.5	
Littleflower collinsia	37.5		
Tansy mustard	6.0		
Thelypody	5.0		
Annual forb #2	26.5		
Wyoming big sagebrush	59.5	54.0	

OWYHEE FREQUENCY DATA Key Area #1024-05 - Loamy 10-12" R.S.

SPECIES	1982 Data	1987 Data	SIGNIFICANT CHANGE
Bluebunch wheatgrass	22.5	26.5	
Great basin wildrye	1.0	1.0	
Western wheatgrass	2.0	1.0	
Sandberg bluegrass	75.0	92.0	*
Bottlebrush squirreltail	39.0	45.5	
Cheatgrass brome		18.5	
Hoods phlox	27.5	30.0	
Locoweed	17.0	18.5	
Longleaf phlox	41.5	35.5	
Wild onion	33.5		
Lupine	18.0	23.5	
Pale agoseris	9.5	2.5	*
Dusty maiden	2.0		
Desert parsley	35.0	35.5	
Fleabane	4.0	4.0	
Larkspur	2.5		
Hawksbeard	1.0		
Penstemon		1.0	
Low pussytoes		11.5	
Spring parsley		2.5	
Nevada lomatium		1.0	
Oblongleaf bluebells		4.5	
Pursh locoweed		4.5	
Rockcress		5.0	
Hairy fleabane		2.5	
Littleflower collinsia	37.5		
Tansy mustard	4.0		
Thelypody	2.5		
Annual forb#1	1.0		
Annual forb #2	20.5		
Annual forb #3	1.0		
Annual forb #4		1.0	
Wyoming big sagebrush	41.5	54.5	*

OWYHEE FREQUENCY DATA Key Area #1024-06 - Loamy 8-10" R.S.

SPECIES	1982 Data	1987 Data	SIGNIFICANT CHANGE
Bluebunch wheatgrass	35.5	61.5	*
Nevada bluegrass	2.5	14.0	*
Great basin wildrye	1.5	2.0	
Thurber's needlegrass		2.5	
Sandberg bluegrass	55.5	77.0	*
Bottlebrush squirreltail	56.0	72.0	*
Cheatgrass brome		25.0	
Pale agoseris	1.5	12.5	*
Hoods phlox	40.0	48.5	*
Lupine	33.5	72.0	*
Wild onion	9.5		
Locoweed	3.5	20.5	*
Larkspur	1.0		
Hawksbeard		0.5	
Pursh locoweed		5.0	
Cous biscuitroot		1.0	
Low pussytoes		1.0	
Hairy fleabane		0.5	
Rockcress		1.5	
Thistle		1.5	
Longleaf phlox		1.5	
Pigweed	4.5		
Pepperweed	0.5		
Tansy mustard		2.5	
Annual forb #1	44.0		
Annual forb #2		1.0	
Wyoming big sagebrush	25.5	36.5	*
Low rabbitbrush		0.5	

OWYHEE FREQUENCY DATA Key Area #1024-07 - Loamy 8-10" R.S.

SPECIES	1982 Data	1987 Data	SIGNIFICANT CHANGE
Bluebunch wheatgrass	0.5	0.5	
Indian ricegrass	9.5	9.0	
Sandberg bluegrass	66.5	76.0	*
Bottlebrush squirreltail	48.5	65.5	*
Cheatgrass brome		27.0	
Globemallow	1.0	5.5	*
Bitterroot lewisia	0.5		
Locoweed	4.5	3.5	
Longleaf phlox	25.0	42.5	*
Hawksbeard	4.5	4.5	
Hoods phlox	23.5	25.0	
Low pussytoes	1.5	1.0	
Fleabane	1.5		
Pale agoseris	2.5	2.5	
Dusty maiden	1.0	2.0	
Crag aster	1.0	2.5	
Pursh locoweed		4.5	
Wild buckwheat		0.5	
Rockcress		3.5	
Pepperweed	18.0	21.0	
Stickseed	15.5		
Tumble mustard	1.0		
Tansy mustard	11.0		
Littleflower collinsia	61.5	2.0	*
Thelypody	2.0		
Owl clover	4.0		
Annual forb #1	23.5		
Annual forb #2		0.5	
Wyoming big sagebrush	53.5	56.5	
Winterfat	3.5	2.0	

OWYHEE FREQUENCY DATA Key Area #1024-08 - Loamy 8-10" R.S.

SPECIES	1982 Data	1987 Data	SIGNIFICANT CHANGE
Indian ricegrass	33.5	28.5	
Sandberg bluegrass	2.0	2.5	
Bottlebrush squirreltail	65.0	30.5	*
Cheatgrass brome		2.0	
Longleaf phlox	1.5		
Hoods phlox		0.5	
Wild buckwheat		4.0	
Oblongleaf bluebell		1.0	
Pale agoseris		9.0	
Penstemon		1.0	
Hawksbeard		1.0	
Thelypody	1.0		
Pepperweed		14.0	
Annual forb #1	8.5		
Annual forb #2		2.0	
Annual forb #3		22.0	
Wyoming big sagebrush	34.5	63.0	*
Winterfat	1.5	1.0	

APPENDIX C

Owyhee Allotment Weight-Estimate Data by Key Area.

OWYHEE PRODUCTION DATA — Key Area #1024-01 - Loamy 8-10" R.S.

SPECIES	1982 DATA				1987 DATA			
	LBS/AC	%COMP	CLIMAX	ALLOWABLE	LBS/AC	% COMP	CLIMAX	ALLOWABLE
Bottlebrush squirreltail	3.76	1	5	1	50.15	8	5	5
Sandberg bluegrass	.49	T	2-10	T	5.9	1	2-10	1
Oblongleaf bluebells					2.39	T	1	T
Littleflower collinsia	T	T	0	0				
Tansy mustard	11.64	3	0	0				
Pepperweed	9.7	2	0	0				
Thelypody	59.63	13	0	0				
Annual forb	1.27	T	0	0				
Wyoming big sagebrush	363.43	81	10-15	15	558.45	91	10-15	15
TOTAL	449.92			16	616.89			21

GRASS TOTAL	1	65	1	56.05	9	65	9
FORB TOTAL	18	10	10	2.39	T	10	T
SHRUB TOTAL	81	25	25	558.45	91	25	25
			36				34

OWYHEE PRODUCTION DATA Key Area #1024-02 - Loamy 8-10" R.S.

SPECIES	1982 DATA				1987 DATA			
	LBS/AC	%COMP	CLIMAX	ALLOWABLE	LBS/AC	%COMP	CLIMAX	ALLOWABLE
Indian ricegrass	2.40	1	2-10	1				
Bottlebrush squirreltail	6.37	2	5	2	39.75	8	5	5
Sandberg bluegrass	1.70	T	2-10	T	7.25	2	2-10	2
Littleflower collinsia	T	T	0	0				
Hoods phlox					1.96	T	1	T
Longleaf phlox					4.90	1	1	1
Wyoming big sagebrush	317.55	97	10-15	15	417.98	89	10-15	15
TOTAL	328.02			18	471.84			23
GRASS TOTAL		3	65	3		10	65	10
FORB TOTAL		T	10	T		1	10	T
SHRUB TOTAL		97	25	25		89	25	25
				28				35

OWYHEE PRODUCTION DATA — Key Area #1024-03 - Crested wheatgrass seeding

SPECIES	1982 DATA				1987 DATA			
	LBS/AC	%COMP	CLIMAX	ALLOWABLE	LBS/AC	%COMP	CLIMAX	ALLOWABLE
Crested wheatgrass	629.87	83			627.44	95		
Bottlebrush squirreltail	1.68	T						
Sandberg bluegrass	4.19	T						
Thickspike wheatgrass	5.22	1						
Thelypody	2.82	T						
Hoods phlox	.71	T			.63	T		
Wyoming big sagebrush	116.16	15			35.77	5		
TOTAL	760.65				663.84			
GRASS TOTAL		84				95		
FORB TOTAL		T				T		
SHRUB TOTAL		15				5		

OWYHEE PRODUCTION DATA — Key Area #1024-04 - Loamy 8-10" R.S.

SPECIES	1982 DATA				1987 DATA			
	LBS/AC	%COMP	CLIMAX	ALLOWABLE	LBS/AC	%COMP	CLIMAX	ALLOWABLE
Bluebunch wheatgrass	82.35	14	10-40	14	52.69	7	10-40	7
Thickspike wheatgrass	61.15	10	5	5				
Bottlebrush squirreltail	71.27	12	5	5	31.29	4	5	4
Sandberg bluegrass	45.34	8	2-10	8	13.92	2	2-10	2
Lupine	22.57	4	1	1				
Hoods phlox	45.98	8	1	1	142.41	20	1	1
Longleaf phlox	7.80	1	1	1				
Wild onion	.89	T						
Pale agoseris	T	T						
Thelypody	2.55	T						
Annual forb	1.27	T						
Larkspur	T	T						
Littleflower collinsia	T	T						
Locoweed	2.35	T			.47	T		
Tansy mustard	T	T						
Wyoming big sagebrush	251.60	42	10-15	15	465.50	66	10-15	15
Low rabbitbrush	1.63	T	2	T	2.50	T	5	T
TOTAL	596.75			50	708.78			29
GRASS TOTAL		44	65	44		13	65	13
FORB TOTAL		14	10	10		20	10	10
SHRUB TOTAL		42	25	25		67	25	25
				79				48

OWYHEE PRODUCTION DATA — Key Area #1024-05 - Loamy 10-12" R.S.

SPECIES	1982 DATA				1987 DATA			
	LBS/AC	%COMP	CLIMAX	ALLOWABLE	LBS/AC	%COMP	CLIMAX	ALLOWABLE
Bluebunch wheatgrass	8.10	1	20-30	1	71.70	12	20-30	12
Thurber's needlegrass	2.62	T	15-25	T				
Sandberg bluegrass	49.82	9	5	5	43.49	7	5	5
Bottlebrush squirreltail	56.43	10	5	5	70.90	12	5	5
Cheatgrass brome					2.76	T	0	
Phlox	178.59	31	2	2	32.66	5	2	2
Lupine	40.54	7	2-5	5	8.37	1	2-5	1
Locoweed	13.63	2	2	2	2.01	T	*	
Wild onion	2.68	T	2	T				
Larkspur	3.80	1	2	1				
Thelepody	1.64	T						
Littleflower collinsia	T	T						
Pale agoseris	T	T	2	T	1.95	T	*	2
Rockcress					.88	T	*	
Cous biscuitroot					1.05	T	*	
Oblongleaf bluebells					.45	T	*	
Wyoming big sagebrush	209.35	37	10-15	15	371.62	61	10-15	15
TOTAL	567.20			36	607.84			42
GRASS TOTAL		21	65	21		31	65	31
FORB TOTAL		42	15	15		8	15	8
SHRUB TOTAL		37	20	20		61	20	20
				56				59

* 2-5% total in the climax community for these species

ONYHEE PRODUCTION DATA — Key Area #1024-06 - Loamy 8-10" R.S.

SPECIES	1982 DATA				1987 DATA			
	LBS/AC	%COMP	CLIMAX	ALLOWABLE	LBS/AC	%COMP	CLIMAX	ALLOWABLE
Bluebunch wheatgrass	22.01	14	10-40	14	50.04	8	10-40	8
Great basin wildrye	5.88	4	5-15	4	4.71	1	5-15	1
Sandberg bluegrass	22.27	14	2-10	10	10.56	2	2-10	2
Bottlebrush squirreltail	7.16	4	5	4	46.34	7	5	5
Cheatgrass brome	3.25	2			22.54	3		
Wild onion	2.67	2	1	1	.49	T	*	
Lupine	14.08	9	1	1	5.74	1	1	1
Phlox	14.67	9	1	1				
Hoods phlox					16.17	2	1	1
Longleaf phlox					2.86	T	*	
Pale agoseris					1.18	T	*	
Locoweed					3.72	T	*	2
Rockcress					2.77	T	*	
Wyoming big sagebrush	68.73	43	10-15	15	370.01	57	10-15	15
Low rabbitbrush					111.61	17	2	2
TOTAL	160.72			50	648.74			37
GRASS TOTAL		38	65	38		21	65	21
FORB TOTAL		20	10	10		5	10	5
SHRUB TOTAL		42	25	25		74	25	25
				73				51

This year's data is suspect - only 10 plots sampled, inadequate sample size.

* 2-5% total in the climax community for these species

OWYHEE PRODUCTION DATA Key Area #1024-07 - Loamy 8-10" R.S.

SPECIES	1982 DATA				1987 DATA			
	LBS/AC	%COMP	CLIMAX	ALLOWABLE	LBS/AC	%COMP	CLIMAX	ALLOWABLE
Indian ricegrass	2.24	1	2-10	1	35.54	10	2-10	10
Sandberg bluegrass	5.93	3	2-10	3	6.83	2	2-10	2
Bottlebrush squirreltail	36.70	17	5	5	74.47	21	5	5
Cheatgrass brome	T	T			9.12	3		
Locoweed	.47	T	1	T	1.45	T	1	T
Hoods phlox					3.91	1	1	1
Longleaf phlox	.98	T	1	T	7.48	2	1	1
Pepperweed	47.08	22			9.45	3		
Littleflower collinsia	T	T						
Hawksbeard	3.51	2	1	1				
Tansy mustard	T	T						
Annual forb #1	T	T						
Annual forb #2					8.50	2		
Wyoming big sagebrush	118.19	55	10-15	15	189.4	55	10-15	15
Winterfat	1.69	1	2	1				
Low rabbitbrush					.63	T	2	T
TOTAL	216.79			26	346.78			34
GRASS TOTAL		21	65	21		36	65	36
FORB TOTAL		24	10	10		9	10	9
SHRUB TOTAL		55	25	25		55	25	25
				56				70

OWYHEE PRODUCTION DATA Key Area #1024-08 - Loamy 8-10" R.S.

SPECIES	1982 DATA				1987 DATA			
	LBS/AC	%COMP	CLIMAX	ALLOWABLE	LBS/AC	%COMP	CLIMAX	ALLOWABLE
Indian ricegrass	2.4	2	5	2	2.39	T	5	T
Bottlebrush squirreltail	42.95	27	5	5	4.88	1	5	1
Pepperweed					1.94	T		
Pale agoseris					2.54	1		
Annual forb					1.07	T	2	T
Wyoming big sagebrush	111.7	71	10-15	15	475.53	97	10-15	15
Winterfat					2.20	1	2	1
TOTAL	157.05			22	490.55			17
GRASS TOTAL		29	65	29		1	65	1
FORB TOTAL		0	10	0		1	10	1
SHRUB TOTAL		71	25	25		98	25	25
				54				27

APPENDIX D

Antelope and Mule Deer Habitat Monitoring Data for the Owyhee Allotment

APPENDIX D. Antelope and mule deer habitat monitoring data for the Owyhee Allotment.

PRONGHORN ANTELOPE STUDIES

Transect	Location	Habitat Condition Rating 1982	1985	1987	Percent Composition Forbs 1982	1985	1987	Percent Composition Grasses 1982	1985	1987	Percent Composition Shrubs 1982	1985	1987
AY1-01	T44N,R47E,Sec22,NESW	Poor (27%)	Fair (33%)		0	1		8	7		61	92	
AY1-02	T44N,R47E,Sec35,NESE	Fair (51%)	Fair (50%)		8	10		91	83		0	0	
AY1-03	T44N,R46E,Sec24,SWSE	Poor (25%)	Fair (33%)		0	1		9	14		91	85	
AY-T-87-40	T47N,R46E,Sec36,SWSW			Fair (41%)			3			34			46

MULE DEER STUDIES

Transect	Location	1987 Habitat Condition Rating	1987 Percent Composition Forbs	1987 Percent Composition Grasses	1987 Percent Composition Shrubs
DW-T-87-28	T43N,R49E,Sec 1,NWNW	Fair (53%)	3	38	58
DW-T-87-29	T43N,R49E,Sec26,NWSE	Fair (58%)	7	30	63
DW-T-87-30	T42N,R49E,Sec20,SWNE	Fair (50%)	18	13	69
DW-T-87-31	T46N,R48E,Sec29,NENE	Fair (53%)	2	47	50

APPENDIX E

Owyhee Allotment Frequency Data
From Crucial Antelope Habitat Evaluation Areas

OWYHEE FREQUENCY DATA Key Area #1024-AY1-03 - Loamy 8-10"

SPECIES	1982 DATA	1985 DATA	SIGNIFICANT CHANGE
Indian ricegrass	5.5	5.0	
Nevada bluegrass	11.5	14.5	
Bottlebrush squirreltail	67.5	73.5	
Sandberg bluegrass	28.5	31.5	
Phlox	10.5	22.5	*
Wild buckwheat	0.0	5.5	*
Locoweed	0.0	1.5	
Littleflower collinsia	49.0	0.0	*
Thelypody	7.5	6.0	
Tumblemustard	0.0	9.5	*
GUIT?	0.0	0.5	
Annual forb #1	2.5		
Annual forb #2		6.0	
Wyoming bigsagebrush	81.5	80.5	

OWYHEE FREQUENCY DATA Key Area #1024-AY1-01 - Loamy 8-10" R.S.

SPECIES	1982 DATA	1985 DATA	SIGNIFICANT CHANGE
Indian ricegrass	6.0	0.0	*
Sandberg bluegrass	65.0	59.5	
Bottlebrush squirreltail	**	**	
Unknown grass	1.5		
Desert parsley	0.0	2.0	*
Littleflower collinsia	**	**	
Tansy mustard	2.0	1.5	
Thelypody	0.5		
Tumble mustard		1.5	
Annual forb #1	0.5		
Annual forb #2	3.5		
Annual forb #3	1.5		
Annual forb #4		11.0	
Wyoming bigsagebrush	66.5	67.0	

** Different frame sizes used in 1982 and 1985 - data cannot be analyzed.

BOB MILLER
Acting Governor

STATE OF NEVADA

TERRI JAY
Executive Director

COMMISSIONERS

Deloyd Satterthwaite, *Chairman*
Spanish Ranch
Tuscarora, Nevada 89834

Dawn Lappin
15640 Sylvester Road
Reno, Nevada 89511

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

COMMISSION FOR THE PRESERVATION OF WILD HORSES
Stewart Facility
Capitol Complex
Carson City, Nevada 89710
(702) 885-5589

December 19, 1989

Les Sweeney, Manager
Elko Resource Area
3900 E. Idaho Street
P.O. Box 831
Elko, Nevada 89801

Dear Mr. Sweeney,

Thank you for the opportunity to review and coment on the Owyhee Allotment Evaluation.

II. Livestock Use

C. Kind and Class of Livestock:

Under this heading you have "horses." Why are domestic horses permitted in a Wild Horse Herd Area? Are they branded to prevent confusion? Since your own document states that natural boundaries don't hold the cattle, how is intermingling with the herd prevented?

E. Other:

This section states that waters are insufficient to support the system, yet your "Recommendations" say nothing about development of additional waters.

C. R.P.S. Objectives

3. Wild Horses

In light of the recent IBLA decision, the RPS should be amended to denote that horses should be managed to achieve and maintain a thriving natural ecological balance.

IV. Management Evaluation

A. "...to evaluate present grazing management..." It is unfortunate that the "data is insufficient at this point to determine if the objective is being met or not."

B. Summary of Studies Data

1. Actual Use - Again, I raise the question of use by domestic horses in a Wild Horse Herd Area.

8. Wild Horse Population Evaluation - Is evaluation of numbers the only evaluation? As I stated previously, habitat requirements and a viable population should be barometers of successful wild horse population management. The RPS should be amended.

V. Conclusions

3. Wild Horses

a. The objective needs to be amended as stated previously.

VII. Recommendations

A. RPS Objectives

1. Livestock - a. What is the sense of preparing an allotment evaluation if you are not going to gather sufficient data to make recommendations?

b. If no fences are propsed and the natural barriers are "insufficient to hold the cattle," how will the permittee be able to implement the proposed system?

As stated previously, where are the recommendations for water developments?

It is obvious from this evaluation that:

1) The domestic horse permit needs to be changed.
2) The RPS needs to be amended to reflect IBLA.
3) Sufficient data must be gathered in a timely manner.

If I can assist in the amendment of the wild horse objectives, please feel free to contact me.

Thank you for the opportunity to provide comments.

Sincerely,

Terri Jay

TERRI JAY
Executive Director

TJ/cb

12/19/89

BOB MILLER
Acting Governor

STATE OF NEVADA

TERRI JAY
Executive Director

COMMISSION FOR THE PRESERVATION OF WILD HORSES
Stewart Facility
Capitol Complex
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December 19, 1989

Les Sweeney, Manager
Elko Resource Area
3900 E. Idaho Street
P.O. Box 831
Elko, Nevada 89801

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C. Kind and Class of Livestock:

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E. Other:

This section states that waters are insufficient to support the system, yet your "Recommendations" say nothing about development of additional waters.

C. R.P.S. Objectives

3. Wild Horses

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IV. Management Evaluation

A. "...to evaluate present grazing management..." It is unfortunate that the "data is insufficient at this point to determine if the objective is being met or not."

B. Summary of Studies Data

1. Actual Use - Again, I raise the question of use by domestic horses in a Wild Horse Herd Area.

8. Wild Horse Population Evaluation - Is evaluation of numbers the only evaluation? As I stated previously, habitat requirements and a viable population should be barometers of successful wild horse population management. The RPS should be amended.

V. Conclusions

3. Wild Horses

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VII. Recommendations

A. RPS Objectives

1. Livestock - a. What is the sense of preparing an allotment evaluation if you are not going to gather sufficient data to make recommendations?

b. If no fences are propsed and the natural barriers are "insufficient to hold the cattle," how will the permittee be able to implement the proposed system?

As stated previously, where are the recommendations for water developments?

It is obvious from this evaluation that:

1) The domestic horse permit needs to be changed.
2) The RPS needs to be amended to reflect IBLA.
3) Sufficient data must be gathered in a timely manner.

If I can assist in the amendment of the wild horse objectives, please feel free to contact me.

Thank you for the opportunity to provide comments.

Sincerely,

Terri Jay

TERRI JAY
Executive Director

TJ/cb

1 of 2 4/20/90

United States Department of the Interior

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

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
4120(NV-014)

APR 2 0 1990

Ms. Teri Jay
Commission for the Preservation
of Wild Horses
Stuart Facility
Capitol Complex
Carson City, Nevada 89710

Dear Ms. Jay:

The following constitutes my response to your letter dated December 19, 1989 (copy enclosed) regarding your review and comment on the Owyhee Allotment Evaluation:

Comment:
II.C. Why are domestic horses permitted in a Wild Horse Herd Area? Are they branded to prevent confusion? Since your own document states that natural boundaries don't hold the cattle, how is intermingling with the herd prevented?

Response:
II.C. Domestic horses are not licensed to graze within the Owyhee Wild Horse Herd Area. They are permitted to graze within the four-mile pasture which is fenced separate from the Wild Horse Herd Area.

Comment:
II.E. This section states that waters are insufficient to support the system, yet your "Recommendations" say nothing about development of additional waters.

Response:
II.E. The proposed water developments are addressed in the Owyhee Allotment Management Plan written in 1987 which would be sufficient to support the proposed grazing system (see enclosed copy of Owyhee AMP).

Comment:
II.C.3. In light of the recent IBLA decision, the RPS should be amended to denote that horses should be managed to achieve and maintain a thriving natural ecological balance.

Response:
II.C.3. When the RPS is updated, the Wild Horse and Burro objective will reflect verbiage similar to "... manage to achieve and maintain a thriving natural ecological balance...".

Comment:
IV.A. It is unfortunate that the "data is insufficient at this point to determine if the objective is being met or not".

Response:
IV. A. The purpose of the evaluation is to determine if the objectives are being met or not being met and whether the data is adequate in that determination.

Prior to the allotment evaluation, it was felt that sufficient monitoring data existed to adequately analyze the data to determine if all the allotment objectives were being met. However, shortages of available personnel, changes in workload priorities, and the inability to collect utilization data caused by early snowfall hampered the data collecting efforts.

Comment:
IV.B.8. Wild Horse Population Evaluation - Is evaluation of numbers the only evaluation? Habitat requirements and a viable population should be barometers of successful wild horse population management.

Response:
IV.B.8. An evaluation of numbers is currently the only evaluation. An aerial census is conducted annually to determine numbers of wild horses in the herd area.

Comment:
VII. Recommendations
A.1.b. RPS Objectives - If no fences are proposed and the natural barriers are "insufficient to hold the cattle", how will the permittee be able to implement the proposed system?

Response:
VII.A.1.b. Currently, the allotment and pastures (four native and one seeded) within the allotment are all fenced, and a system is being followed. The additional proposed range improvements are shown within the enclosed AMP.

Hopefully we have adequately addressed your concerns.

If we can be of further assistance, please contact Matt Rendace at 738-4071.

Sincerely yours,

Stanley Kemmerer

for LES SWEENEY, Manager
Elko Resource Area

Enclosure