10-26-92

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Winnemucca District Office
705 East 4th Street
Winnemucca, Nevada 89445

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
4120
(NV-026.1)

Dear Interested Reader:

Enclosed is a draft copy of the Buffalo Hills re-evaluation. An interdisciplinary team analyzed monitoring data, actual use, and wild horse numbers to determine if resource objectives were met or not. Based on this analysis the team developed technical and management recommendations to resolve the documented shortcomings.

Please review the document and provide comments by November 13, 1992. I realize this is a short time frame, but in order to implement management actions I need your comments by then. After reviewing the comments, if needed, I will arrange a meeting for all interested parties to exchange additional information.

If you have any questions, please contact Tom Seley or Leigh Redick at (702) 623-1500.

Sincerely yours,

Bud Cribley
Area Manager
Sonoma-Gerlach Resource Area

Enclosure

Received
Oct. 26, 1992

DRAFT

BUFFALO HILLS ALLOTMENT
Re-Evaluation Summary

I. Introduction

The Buffalo Hills Allotment is immediately north of Gerlach, Nevada and is located in a portion of northern Washoe County, the northwestern portion of Pershing County and the southwestern portion of Humboldt County.

The allotment is within the Basin and Range Physiographic province. Typical features of the area are the high elevation north-south trending mountain ranges, numerous buttes and mesas with rim rock bluffs, steep rocky canyons, and gently rolling terrain to the broad flat Hualapai Valley. Elevations vary from 4,000 feet on the desert floors to over 9,000 feet on the higher peaks.

The allotment contains 461,739 acres made up of 431,006 acres of public land and 30,733 acres of private land. Vegetation ranges from greasewood-shadscale, salt grass communities at lower elevations to bitterbrush, mountain mahogany, needlegrass communities in higher elevations.

A. Buffalo Hills Allotment (#00127)

B. Permittee's - A. F. Jackson
Guiseppe Selmi

C. Evaluation Period - 1988 through 1991

D. Selective Management Category and Priority - Category I, Priority 2

E. Livestock Preference, Wild Horse, and Wildlife Numbers

1. Livestock Preference

Operator	Active	Suspended	E.O.U.*	Total	Lvstk	Use Period
A.F. Jackson	3984	0	19	4003	615	4/1 - 10/15
G. Selmi	130	0	26	156	156	4/1 - 10/15

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* Exchange -of- Use AUMs are authorized on unfenced private lands which are accessible and suitable for all authorized livestock grazing during the same periods as the public lands. Grazing use allowed cannot exceed the livestock

grazing capacity of the private lands offered.

2. **Recommended** Wild Horse Numbers from the 1988 Evaluation

HMA	AML*	AUMs
Buffalo Hills	272	3264
Granite Range	176	2112
Calico Mountains	149**	1788

* AML refers to the number of wild horses listed in the Sonoma - Gerlach MFP-III Wild Horse and Burro decision 1.1, to be used as a starting point for monitoring purposes. In accordance with the June 7, 1989 Interior Board of Land Appeals Ruling (IBLA 88-591) adjustments to wild horse populations and establishment of AMLs will be based on monitoring data to obtain the optimum number of wild horses which results in a Thriving Natural Ecological Balance and avoids deterioration of the range.

** Buffalo Hills and Calico Allotments combined.

3. Wildlife Numbers

These are reasonable numbers established for wildlife in the Sonoma - Gerlach MFP- III (WL 1.1) and are a combination of the Buffalo Hills and Calico Allotments.

	Number	AUMs
Bighorn Sheep	512	1228
Mule Deer	2113	6340
Pronghorn	479	1060

II. Summary of the 1988 Allotment Evaluation and Objectives

A. The initial allotment evaluation conducted in 1988 concluded that the upland short term utilization objectives were met in the priority mule deer habitat adjoining the Fox Mountain Fire. The short term utilization objectives for stream bank and wetland riparian were not being met. Factors contributing to not meeting the objectives are as follows:

1. Imbalance of livestock distribution due to steep, rocky topography, inadequate water distribution, tendency of livestock, wildlife, and wild horses and burros to concentrate in upland riparian zones, movement of Susanville livestock across the western boundary, and AML's being 95% to 220% above AML allotment wide at various intervals.

2. The lower country of Buffalo Hills, Granite, and Dolly Varden Pastures were not grazed by livestock.

3. Due to the Fox Mountain 1985 burn, which removed approximately half of the priority mule deer area, the mule deer use was concentrated in the unburned habitat. Antelope, horse, and cattle utilization increased in the burned portion of Fox Mountain allowing slow fire recovery.

no livestock there til 1990

4. Current stocking levels and grazing management system provided for a sustained yield on forage in the upland site to benefit all ungulates.

B. Allotment Objectives from the 1988 Evaluation

1. Short Term

a) Utilization of key stream bank riparian plant species shall not exceed 30% in the following streams except where adjusted by an approved activity plan. (WLA-1.3)

Red Mountain Creek
Cottonwood Creek
Wagon Tire Creek
Granite Creek
Rock Creek
Donnelly Creek

b) Total utilization of key plant species in 2,493 acres of wetland riparian habitat shall not exceed 50%.(WL-1.10)

c) Utilization of key plant species in upland habitats shall not exceed 50% except where adjusted by an activity plan. (WL 1.7, WL 1.9, RM 1)

d) Combine the Buffalo Hills Allotment with the Calico Allotment to be grazed as the Buffalo Hills grazing management system.

2. Long Term

a) Improve and maintain the overall stream habitat from the percent of optimum indicated to 60% or better. (WLA-1.3)

Red Mountain Creek	36%	9 miles
Cottonwood Creek	49%	3 miles
Wagon Tire Creek	23%	3 miles
Granite Creek	45%	2 miles

Rock Creek	65%	3 miles
Donnelly Creek	53%	2 miles

b) Improve or maintain the condition of 2,493 acres of wetland riparian habitat to good or higher. (WL-1.10)

c) Improve or maintain riparian habitat at good condition from the condition indicated. (WLA-1.3 & WL-1.9)

Red Mountain Creek	109 acres	poor
Cottonwood Creek	36 acres	good
Wagon Tire Creek	36 acres	poor
Granite Creek	24 acres	good
Rock Creek	36 acres	good
Donnelly Creek	24 acres	fair

d) Protect sage grouse strutting grounds and brooding habitat and improve nesting and wintering habitat by: (WL-1.11)

(1) Following NDOW's guidelines for Vegetal Control Programs in Sage Grouse Habitat in Nevada.

(2) Maintain sagebrush canopy at 30% in sage grouse nesting areas where sagebrush does not exceed three (3) feet in height.

e) Maintain or improve 565 acres of aspen woodland and 349 acres of mountain mahogany thicket to good or equivalent. This includes acres burned in the Fox Mountain and Middle Fork Fires during 1985. (WL-1.9)

f) Manage, maintain, or improve public rangeland habitat condition to provide forage on a sustained yield basis with an initial forage demand for big game of 6,340 AUMs for mule deer, 1,060 AUMs for pronghorn and 1,228 AUMs for bighorn sheep by:

(1) Improving 7,680 acres of priority mule deer habitat to excellent.

(2) Improving overall mule deer habitat as follows:

(a) From good to excellent 61,945 acres: Granite Range DS-1; Poodle Mtn. DS-2; GraniteRange DS-6; Crutcher Canyon DW-4; Donnelly Peak DS-5.

(b) From fair to good 4,713 acres: Buffalo Hills DW-2.

(3) Maintaining mule deer habitat as follows:

(a) Good condition 93,402 acres: Buffalo Hills DS-2; Horse Canyon DS-2; Sawmill Canyon DS-2; Granite Basin DS-5; Granite Range DW-6.

(b) Excellent condition 5,249 acres: Granite Range DW-7; Rock Creek DW-8; Granite Creek DW-9.

(4) Improving pronghorn habitat as follows:

(a) From fair to good 140,068 acres: Buffalo Hills AS-3; Granite Range AS-8; Middle Fork AS-8; Granite Basin AS-9; Crutcher Canyon AW-1; South Buffalo Hills AW-2; Middle Fork AW-8; Rock Creek AW-9; Donnelly Peak AS-1; Division Peak AS-6.

(b) From poor to fair 3,845 acres: Clear Creek AW-5; Granite Point AW-10.

(5) Maintain pronghorn habitat as follows:

Good condition 57,298 acres: Buffalo Hills AW-3.

(6) Improving 26,376 acres of priority bighorn sheep habitat (Granite Range BY-1) and Division Peak BY-5 from 70% to 90% of optimum.

g) Manage, maintain or improve ecological status to provide forage on a sustained yield basis with an initial stocking level of 4,114 AUMs. The goal is to provide forage on a sustained yield basis with a stocking level of 11,920 AUMs.

h) Improve range/ecological 1/ condition from:

Poor to Fair on 267,748 acres.
Fair to Good on 74,138 acres.
Good to Excellent on 37,764 acres.

1/ The range/ecological conditions in this document are forage conditions that will be replaced with ecological status condition as information becomes available. The objective will be redefined or

quantified to obtain a particular ecological status when site potential and identified uses are combined to meet vegetative objectives.

i) Manage, maintain and improve public rangeland conditions to provide an initial level of 6,660 AUMs of forage on a sustained yield basis for 555 (AMLs) 1/ wild horses in the following Herd Use Areas (WH&B 1.1):

	AML	AUMs
Buffalo Hills	272	3264
Granite Range	176	2112
Calico Mountains	107	1284

1/ AML refers to adult horses (i.e. two years and older)

j) Manage, maintain and improve public rangeland conditions to provide an initial level of 504 AUMs of forage on a sustained yield basis for 42 (AMLs) 1/ wild horses in the Calico Mountains Herd Use Areas (WH&B 1.1).

1/ AML refers to adult horses (i.e. two years and older)

k) Maintain and improve the free-roaming behavior of wild horses and burros by protecting and enhancing their home ranges.

l) Maintain/improve wild horse/burro habitat by assuring free access to water.

m) Improve or maintain the water quality of the following streams to State criteria set for livestock drinking water, cold water aquatic life, water contact recreation (wading), and wildlife propagation:

Red Mountain Creek
Cottonwood Creek
Wagon Tire Creek
Granite Creek
Rock Creek
Negro Creek
Donnelly Creek

n) Maintain the water quality of Negro Creek from its origin to the first irrigation diversion to the State Class A water quality standards.

III. Management Actions from 1988 Agreement or Decision

A. Grazing System

The two allotments, Calico and Buffalo Hills, were combined to one allotment and divided into four grazing pastures. The following chart shows the grazing system that was used.

Year	Calico Pasture	Dolly Varden Pasture	Buffalo Hills Pasture	Granite Pasture
1989	Graze 4/1 to 7/31	Graze 8/1 to 10/15	Rest	Rest
1990	Graze 4/1 to 7/31	Graze 8/1 to 10/15	Rest	Rest
1991	Rest	Rest	Graze 4/1 to 7/31	Graze 8/1 to 10/15
1992	Rest	Rest	Graze 4/1 to 7/31	Graze 8/1 to 10/15

Livestock (639 cows) shall be turned out on 4/1 into one of four pastures where they remain until 8/1. The livestock are then moved into the summer pasture and remain from 8/1 until 10/15 and then trail to private land. Two of the pastures are rested for the entire season. This rotation is repeated the 2nd year, then grazing is switched to the two rested pastures for two years. Any use above 639 cows, if authorized, would be made during the winter 10/16 to 2/28. This is effective until such time as monitoring confirms that there is proper livestock distribution.

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B. Monitoring Program

1. Refer to the monitoring section of the Buffalo Hills AMP for specific details. This plan is designed to describe the rangeland monitoring program and methodology that will be implemented in the Buffalo Hills and Calico Allotments. Standardized monitoring studies have been established on the Buffalo Hills and Calico Allotments and the gathering of data was initiated in 1984. Rangeland monitoring was conducted prior to 1984. The earliest studies conducted were 3 x 3 photo trend plots. These earlier studies will either be updated to present standards or if unsuitable, files will be maintained for future reference.

2. The process for establishing initial and subsequent levels of livestock grazing use and the rangeland monitoring program are discussed in the Rangeland Program Summary (RPS). The method for implementing the rangeland management program in the planning area will occur through monitoring and the selective management approach.

3. The monitoring program in the Buffalo Hills and Calico Allotments is designed to determine if the established management objectives are being met. Grazing is one of the tools being used to meet these objectives. Monitoring will indicate if grazing use is following the annual operations. The objectives will be evaluated on a long-term basis utilizing permanent transects in key and/or critical areas. Short and long term management actions adjustments and/or decisions will be based on the evaluation of the results of these monitoring studies.

IV. Management Re-evaluation (1989 - 1991)

A. Summary of Studies

1. Actual Use

a) Livestock

(1) Operator

A.F. Jackson		G. Selmi	
Year	AUMs1/	Year	AUMs1/
1988	4003	1988	156
1989	4003	1989	156
1990	4003	1990	156
1991	4003	1991	156

1/Derived from grazing license.

(2) AUMs per season of use by pasture:

Year	Calico Pasture 4/1 to 7/31	Dolly Varden Pasture 8/1 to 10/15	Buffalo Hills Pasture 4/1 to 7/31	Granite Pasture 8/1 to 10/15
1988	Rest	Rest	2563 AUMs	1596 AUMs
1989	2563 AUMs	1596 AUMs	Rest	Rest
1990	2563 AUMs	1596 AUMs	Rest	Rest
1991	Rest	Rest	2563 AUMs	1596 AUMs

b) Wildlife

The Nevada Department of Wildlife (NDOW) does not provide wildlife population data by allotment. BLM has calculated population estimates for mule deer, bighorn sheep, and antelope based on NDOW's annual report.

The pronghorn antelope population has been increasing during the evaluation period. The population increase has been attributed to mild winters that allows easier access to forage, which leads to improved body condition and survival of adults, and increased kid survival.

BLM Population Estimates:

Deer Population			Pronghorn Population		
Year	#'s	AUMs	Year	#'s	AUMs
1988	1794	4306	1988	722	1733
1989	1194	2866	1989	371	890
1990	2701	6482	1990	1303	3127
1991	1227	2945	1991	1280	3072

Big Horn Sheep Population		
Year	#'s	AUMs
1988	58	139
1989	58	139
1990	114	274
1991	114	274

c) Wild Horses

The following table shows the number and AUM demand of wild horses in the allotment.

Calico Pasture - Calico HMA

Year	Population - Head	AUM's
1988	358	3,324*
1989	375	4,500
1990	416	4,992
1991	462	5,544

* actual use has been adjusted to reflect the removal of 81 wild horses in December 1988

Dolly Varden Pasture - Granite HMA

Year	Population - Head	AUM's
1988	443	5,316
1989	469	5,628
1990	521	6,252
1991	578	6,936

Buffalo Hills Pasture - Buffalo Hills HMA

Year	Population - Head	AUM's
1988	602	7,224
1989	704	8,448
1990	781	4,476*
1991	414	4,968

* actual use has been adjusted to reflect the removal of 402 wild horses in January 1990

Granite Pasture - Granite HMA

Year	Population - Head	AUM's
1988	181	2,172
1989	307	3,684
1990	341	4,092
1991	379	4,548

The 1988 and 1989 population levels are from helicopter census data collected in September 1988 and July 1989. The 1990 and 1991 population level is an estimate based on an 11% increase of the 1989 census population.

d) The following tables show a summary of the forage demand from the 1988 allotment evaluation and a summary of the actual use made in the allotment during this evaluation period.

1988 -Forage Demand Summary - Aum's

Pasture	Livestock	Wild Horses and Burros	Wildlife	Pasture Totals
Calico	2563	1788	-	4351
Dolly Varden	1596	1512	-	3108
Buffalo Hills	2563	3264	-	5827
Granite	1596	600	-	2196
Allot. Total	8318 1/	7164	8628 2/	24110

1/ A total of 19551 Aum's of use by livestock, wild horses and wildlife each year were identified in the 1988 allotment evaluation. The 1988 allotment evaluation limited livestock use to the carrying capacity allowed for livestock in each

pasture. The remaining 4159 Aum's in the rest pastures would not be used in order to promote increased vigor and health in the plant communities and maintain a Thriving Natural Ecological Balance.

2/ Initial AUM demand for the allotment from the 1988 allotment evaluation. Wildlife Aum's were not broken down to a pasture level basis.

Actual Use Summary - Aum's

		Year			
Pastures		1988	1989	1990	1991
	Livestock	0	2563	2563	0
Calico (spring)	WH/B	3324*	4500	4992	5544
	Livestock	0	1596	1596	0
Dolly Varden (summer)	WH/B	5316	5682	6252	6936
	Livestock	2563	0	0	2563
Buffalo Hills (spring)	WH/B	7224	8448	4476*	4968
	Livestock	1596	0	0	1596
Granite (summer)	WH/B	2172	3684	4092	4548
	Livestock	4159	4159	4159	4159
Yearly Allot. Totals	WH/B	18036	22314	19812	21996
	Wildlife	6178	3895	9883	6291
TOTALS		28373	30368	33854	32446

* Actual use has been adjusted to reflect the removal of 81 wild horses from the Calico pasture in 1988, and 408 wild horses from the Buffalo Hills pasture in 1990.

2. Wild Horse Removal Data

December 1988	81	head	Calico HMA
January 1990	408	head	Buffalo Hills HMA

3. Climatological Data

There are six weather stations that collect climatological data that are relatively close to the Buffalo Hills Allotment. Four of the stations are well established National Oceanic and Atmospheric Administration (NOAA) sites and two are BLM Remote Automated Weather System (RAWS) sites.

a) NOAA

The following table describes the amount of growing season, annual, departure from normal, and percent of normal precipitation recorded at the Denio, Duferrena, Gerlach, and Leonard Creek Ranch NOAA weather stations from 1988 through 1991. Annual precipitation is recorded from October to September and growing season precipitation is March through August. This is provisional data supplied by the SCS Climatic Data Facility.

Precipitation Data

	Precip - Inches		Departure from Normal		Percent of Normal	
1988	Grow Ssn	Annual	Grow Ssn	Annual	Grow Ssn	Annual
Denio	3.14	6.56	-1.46	-2.66	68.3	71.1
Duferrena	2.74	5.46	-1.03	-1.54	72.7	76.5
Gerlach	2.72	5.32	-0.80	-2.08	77.3	71.9
Leonard Crk	2.94	7.21	-0.68	-0.89	81.2	89.0
1989						
Denio	4.37	9.04	-0.23	-0.18	95.0	98.0
Duferrena	2.91	5.60	-0.86	-1.54	77.2	78.4
Gerlach	3.80	8.09	0.28	0.69	108.0	109.9
Leonard Crk	3.89	9.43	0.27	1.33	107.5	116.4

1990						
Denio	4.38	6.60	-0.22	-2.62	95.2	71.6
Duferrena	3.37	4.93	-0.40	-2.21	89.4	69.0
Gerlach	6.28	8.15	2.76	0.75	178.4	110.1
Leonard Crk	4.67	7.74	1.05	-0.36	129.0	95.6
1991						
Denio	6.37	9.58	1.77	0.36	138.5	103.9
Duferrena	5.72	7.85	1.95	0.71	151.7	109.9
Gerlach	4.27	7.08	0.75	-0.32	121.3	95.7
Leonard Crk	5.06	7.90	1.44	-0.20	139.8	97.5

The following table shows the average precipitation normally received at each station.

Station	Growing Season	Annual
Denio	4.60"	9.22"
Duferrena	3.77"	7.14"
Gerlach	3.52"	7.40"
Leonard Crk	3.62"	8.10"

NOTE: The above tables were based on best available data.

b) RAWS

The following table lists the amount of growing season, annual, departure from normal, and percent of normal precipitation recorded at the Dry Canyon Remote Automated Weather System (RAWS) from 1987 through 1990. Due to a change in RAWS archival procedures, 1991 precipitation data is not available at this time. The Fox Mountain Remote Automated Weather System was not fully operational until 1989. It shows the data collected in 1989 and 1990 and the changes in precipitation.

Dry Canyon Elevation - 5249'

	Precipitation -Inches		Departure From Normal		Percent of Normal	
Year	Grow Ssn	Annual	Grow Ssn	Annual	Grow Ssn	Annual
1987	6.00	7.90	2.32	1.82	163.0	129.9
1988	2.60	5.70	-1.08	-0.38	70.7	93.8
1989	3.10	6.10	-0.58	0.02	84.2	100.3
1990	3.00	4.60	-0.68	-1.48	81.5	75.7

Normal = 4 year average (1987 - 1990) = 3.68 in. growing season
= 4 year average (1987 - 1990) = 6.08 in. annual

Fox Mountain

Month	Precipitation - Inches 1989*	1990	Changes in Precipitation-In.
January	-	.20	NA
February	-	.30	NA
March	-	.80	NA
April	-	1.10	NA
May	-	1.40	NA
June	-	.30	NA
July	.00	.50	+ .50
August	.70	.50	- .20
September	1.40	.30	-1.10
October	1.00	.00	-1.00
November	.00	.10	+ .10
December	.10	.00	- .10
Total	3.10	5.50	

* station not operational until July 1989

4. Utilization

The following is a list of plant symbols, their common name and scientific name used in key area transects and use pattern mapping.

PLANT LIST

Symbol	Common Name	Scientific Name
ACMIL	Western Yarrow	Achillea millefolium
AGSP	Bluebunch Wheatgrass	Agropyron spicatum
AMEL	Serviceberry	Amelanchier spp.
BAHO	Hooker's Balsamroot	Balsamorhiza hookeri
BRMA4	Mountain Brome	Bromus marginatus
CAREX	Sedge	Carex spp.
CELE3	Curl-leaf Mtn. Mahogany	Cercocarpus ledifolius
CREPI	Hawksbeard	Crepis spp.
ELCI	Basin Wildrye	Elymus cinereus
ERIOG	Buckwheat	Eriogonum spp.
FEID	Idaho Fescue	Festuca idahoensis
HAVE	Velvety Stickseed	Hacklea velutina
JUNCU	Rush	Juncus spp.
LUPIN	Lupine	Lupine spp.
POA++	Bluegrass	Poa spp.
POSE	Sandberg's Bluegrass	Poa secunda
PONE3	Nevada Bluegrass	Poa nevadensis
POTR	Quaking Aspen	Populus tremuloides
PRVI	Common Chokecherry	Prunus virginiana
PUTR2	Antelope Bitterbrush	Purshia tridentata
SALIX	Willow	Salix spp.

SIHY	Bottlebrush Squirreltail	Sitanion hystrix
STCO3	Columbia Needlegrass	Stipa columbiana
STTH2	Thurber's Needlegrass	Stipa thurberiana
SYMPH	Snowberry	Symphoricarpos spp.

a) Key Areas

The 15 existing key areas in the allotment were established in 1982, 1984, and/or 1985. Key area utilization readings were made using the six (6) standard use classes; no use (0%), slight use (1-20%), light use (21-40%), moderate (41-60%), heavy (61-80%) and severe (81-100%).

Rest = Horse and Wildlife Use Only
Pre-Livestock = Horse and Wildlife Use Only
Post-Livestock = Horse, Livestock, and Wildlife Use
Total Use = Horse, Livestock, and Wildlife Use at the end of February (before start of new growing season)

(1) Dolly Varden Pasture

(a) Mahogany Troughs

Rest	08/88	PUTR2 12%, CELE3 3%, FEID 2%
Post-Livestock	11/89	PUTR2 12%, CELE3 4%, FEID 17%
Pre-Livestock	07/90	PUTR2 42%, CELE3 38%, FEID 18%

(b) Potato Patch

Rest	08/88	STCO3 8%, AGSP 4%, CREPI 3%
Post-Livestock	11/89	STCO3 60%, ELCI2 73%, CREPI 30%
Pre-Livestock	07/90	STCO3 43%, ELCI2 36%, CREPI 62%

(c) Scraper Spring

Rest	08/88	STTH2 8%, POA++ 7%, ERIOG 2%
Post-Livestock	11/89	STTH2 5%, POA++ 1%, ERIOG 2%

(d) Negro Creek #1

No transects done

(e) Negro Creek #2

Post-Livestock	11/89	SIHY 64%, POSE 56%
Pre-Livestock	07/90	SIHY 3%

(2) Calico Pasture

(a) Calico #1

Rest	10/88	STTH2 17%, SIHY 12%
Post-Livestock	07/89	STTH2 50%, SIHY 29%

(b) Calico #2

Rest	10/88	FEID 19%, STTH2 15%, SIHY 12%
Post-Livestock	07/89	FEID 68%, STTH2 58%, SIHY 42%

(c) Black Canyon

Rest	10/88	STTH2 17%, POA++ 12%, LUPIN 17%
Post-Livestock	07/89	STTH2 54%, POA++ 16%, LUPIN 54%

(3) Granite Pasture

(a) Rock Creek

Post-Livestock	10/88	SYMPH 11%, ELCI2 7%, BRMA4 5%
Rest	09/89	SYMPH 4%, ELCI2 12%, HAVE 7%

(b) The Banjo

Post-Livestock	10/88	BRMA4 22%, POTR 5%, AMELA 7%
Rest	09/89	BRMA4 4%, ACMIL 2%

(c) Wagon Tire

Post-Livestock	10/88	JUNCU 68%, PONE3 70%
Rest	09/89	JUNCU 3%, PONE3 42%

(4) Buffalo Hills Pasture

(a) Jones Flat

Post-Livestock	08/88	POA++ 4%, STTH2 18%, SIHY 5%
Rest	09/89	POA++ 13%, STTH2 24%, SIHY 26% BAHO 17%

(b) Boulder Flat

Post-Livestock	08/88	POSE 28%, BAHO 22%, STTH2 40%, SIHY 38%
Rest	09/89	POA++ 25%, BAHO 18%, SIHY 17%

(c) Currant Canyon

Post-Livestock	8/88	STTH2 32%, POA++ 34%, LUPIN 36%
Rest	09/89	STTH2 56%, POA++ 30%, LUPIN 38%

(d) Stockade Canyon

Post-Livestock	08/88	STTH2 33%, BAHO 18%, PUTR2 22%, ELCI2 50%
Rest	09/89	PUTR2 6%, AGSP 18%, ELCI2 16%

b) Use Pattern Mapping (Maps available in District Office)

Use pattern mapping data was collected using four (4) use classes; no use (0%), light use (1-40%), moderate use (41-60%), and heavy (61-100%). Maps are available at the Winnemucca District office.

The following use pattern mapping data has been broken down by pasture.

(1) Dolly Varden Pasture

Use Class	08/88	6/89	11/89	7/90	10/90	11/90
Non-Use	2,234	10,900	5,387	0	748	0
Light	11,177	14,162	12,224	15,369	20,804	4,710
Moderate	1,133	902	1,127	7,364	3,919	257
Heavy	0	0	4,057	223	6,841	61
Total	14,544	25,964	22,795	22,956	32,312	5,028

(a) August 1988 - Rest

Non-use 15%, Light 77%, Moderate 8%, Heavy 0%. Light use throughout the pasture, areas near water sources were in the higher light use category (30-40%). Dolly Varden spring and creek both had moderate use.

(b) June 1989 - Pre-livestock Turnout

Non-use 42%, Light 55%, Moderate 3%, Heavy 0%. No use to light over the pasture. Rocky Basin and Dolly Varden Basin showed moderate use. The use in Rocky Basin occurred on the Fox Mtn. burn

area. Moderate use in Dolly Varden Basin occurred primarily near the Dolly Varden spring area. Low elevations between Cottonwood Creek and Negro Creek generally showed no use.

(c) November 1989 - Post-livestock Use

Non-use 24%, Light 53%, Moderate 5%, Heavy 18%. Utilization was generally light over the pasture. The North Fork and Middle Fork of Negro Creek to Potato Patch Spring had no use to slight use. White Rock Spring had heavy use. Scraper, Corner, Mahogany Troughs, and Potato Patch Spring had light use. Heavy use occurred along all forks of Negro Creek drainage down to the Chez Ranch where the use was in the high heavy range. Heavy use was also noted in the burn area, at Heward Reservoir, and at Dolly Varden Spring. Primary vegetation was Mtn. Big Sage (ARVA2), Antelope Bitterbrush (PUTR2), Curl-leaf Mtn. Mahogany (CELE3), and Low Sage (ARAR8).

(d) July 1990 - Pre-livestock Turnout

Non-use 0, Light 67%, Moderate 32%, Heavy 1%. Livestock had been turned out a week prior to use pattern mapping. Antelope Bitterbrush (PUTR2) had been lightly browsed by wildlife. Supply Camp Spring showed moderate use. Use was uniformly moderate from Dolly Varden Basin to Mud Spring on bluegrass (POA++), Thurber's Needlegrass (STTH2), Basin Wildrye (ELCI2), Cheatgrass (BRTE), and Bottlebrush Squirreltail (SIHY). Light use was found at Mud Spring. Wagon Tire Mtn. and Creek showed high moderate use and moderate use respectively. Wagon Tire Pass had light use. Potato Patch Spring had heavy utilization and the Negro Creek drainage showed light use on Shadscale (ATCO), Cheatgrass (BRTE), Thurber's Needlegrass (STTH2), Bluegrass (POA++), and Indian Rice grass (ORHY).

(e) October 1990 - Post-livestock Use

Non-use 2%, Light 64%, Moderate 12%, Heavy 22%.

Use ranged from no use in Crutcher Canyon to heavy use in Negro Creek and Rocky Basin. Most of the pasture had light use (21-40%). The key species used for low elevations were: Bottlebrush Squirrel- tail (SIHY), Bluegrass (POA++), Basin Wildrye (ELCI2), and Willow (SALIX). The high elevation key species were: Bluegrass (POA++), Bluebunch Wheatgrass (AGSP), Idaho Fescue (FEID), Thurber's Needlegrass (STTH2), and Antelope Bitterbrush (PUTR2).

(f) November 1990 - Total Use

Non-use 0%, Light 16%, Moderate 18%, Heavy 66%. Utilization was generally heavy in the riparian areas of the pasture and in the Dolly Varden Basin. The upland areas had light to moderate use.

(2) Calico Pasture

Use Class	10/88	7/89	10/89	3/90	7/90	10/90
Non-Use	0	0	0	0	0	0
Light	14,493	0	1,221	159	0	0
Moderate	0	3,468	1,935	7,513	18,334	93
Heavy	0	17,216	1,777	587	4,100	2,533
Total	14,493	20,684	4,933	8,259	22,435	2,626

(a) October 1988 - Rest

Non-use 0%, Light 100%, Moderate 0%, Heavy 0%. Utilization was near 40% over the area mapped. Most use occurred on the Mountain Big Sage (ARVA2) sites with the Low Sage (ARAR8) sites used to a lesser degree.

(b) July 1989 - Post-livestock

Non-use 0%, Light 0%, Moderate 17%, Heavy 83%. Cattle were being removed during use pattern mapping. Utilization was generally heavy throughout the pasture (61-80%). The higher country between Sheep Buttes and Division Peak had moderate to heavy use. Key species used in the higher elevations were Thurber's Needlegrass (STTH2), Idaho Fescue (FEID), Bottlebrush Squirreltail (SIHY), and Bluegrass (POA++). In the lower country use was heavy in the Donnelly

Flat area and moved towards the moderate category going south to Cane Spring. Key species were Thurber's Needlegrass (STTH2), Cheatgrass (BRTE), Bottlebrush Squirreltail (SIHY), and Bluegrass (POA++). Heavy use was noted on the east side between Mormon Dan Canyon and Petrified Canyon.

(c) October 1989 - Rest

Non use 0%, Light 25%, Moderate 39%, Heavy 36%. Light utilization was shown in the Donnelly Flat area with heavy utilization occurring near water sources. Heavy utilization occurred between Sheep Buttes to Division Peak.

(d) March 1990 - Total Use

Non-use 0%, Light 2%, Moderate 91%, Heavy 7%. Moderate use occurred in the Donnelly Flat area with heavy utilization near water sources and around Harry Spring.

(e) July 1990 - Post-livestock Use

Non-use 0%, Light 0%, Moderate 82%, Heavy 18%. Utilization generally fell within the moderate range. There were three areas of heavy use (61-100%): McCarty Spring, Government/Burro Springs, and Cane Spring. Key species for the lower elevations were Bottlebrush Squirreltail (SIHY) and Indian Ricegrass (ORHY) and the high elevation species were Bluegrass (POA++), Idaho Fescue (FEID), and Thurber's Needlegrass (STTH2).

(f) October 1990 - Total Use

Non-use 0%, Light 0%, Moderate 3%, Heavy 97%. Overall use appears to be heavy between Sheep Buttes and Buck Spring.

(3) **Granite Pasture**

Use Class	10/88	9/89	8/90	11/90	7/91
Non-Use	0	13,506	0	0	0
Light	1,241	13,561	20,237	3,791	4,710
Moderate	0	7,536	269	1,356	257
Heavy	348	327	3,957	6,169	61
Total	1,589	34,930	24,463	11,316	5,028

(a) October 1988 - Post-livestock Use

Non-use 0%, Light 78%, Moderate 0%, Heavy 22%. Overall use appeared to be no use to light on the upland forage. Heavy use was concentrated on the areas near water sources. The mapping effort was concentrated on high summer country and all areas which were accessible by motor vehicle.

(b) September 1989 - Rest

Non-use 38%, Light 39%, Moderate 22%, Heavy 1%. The use on Granite Mtn. was light from the Banjo to Skull Meadows and increased to moderate and heavy use from Skull Meadows to the Tank. The wet and dry meadows south of Skull Meadows to the Tank had heavy utilization. Clear Creek had moderate utilization. From Skull Meadows north to the Banjo and Wagon Tire no use to light use occurred on the upland vegetation; moderate to heavy use on the meadows and the areas near the spring sources. Along the fans on the west side of Granite Mtn., from the Cottonwood drift fence to the Fisk Ranch, utilization was light. From the Fisk Ranch south to Granite Point no use was found, Granite Basin was moderate with some areas of light and heavy use.

(c) August 1990 - Rest

Non-use 0, Light 83%, Moderate 1%, Heavy 16%. From Skull Meadows north utilization was light to slight along the western bench and the steep eastern slopes. Light use occurred in the Rock Creek area. There were two areas with moderate utilization, a high elevation wet meadow and a lower elevation meadow just north of Granite Basin. Heavy use occured at the higher

elevations along the top of Granite Mtn. and in Granite Basin on Basin Wildrye (ELCI2). Clear Creek Meadow to the Tank had light use. Low Sage (ARAR8), Wyoming Big Sage (ARTRW), and Lanceleaf Rabbitbrush (CHVIL4) were all hedged.

(d) November 1990 - Total Use

Non-use 0%, Light 34%, Moderate 12%, Heavy 54%. Overall use appeared to be moderate to heavy. Moderate use occurred in Squaw Valley, Wagon Tire Pass, The Banjo, and north of Rock Creek. Heavy use occurred in two areas under the LAWP power line, at Granite Basin along the drift fence, and south of Hualapai Flat.

(e) July 1991 - Pre-livestock Turnout

Non-use 0%, Light 94%, Moderate 5%, Heavy 1%. Utilization from Skull Meadows to the north end of the pasture was slight to light with heavy use at the headwaters of Little Cottonwood Creek. From Skull Meadows south, light to moderate use occurred. There was moderate use in the dry meadows and light use on the steeper upland sites.

(4) Buffalo Hills Pasture

Use Class	8/88	9/89	9/90	11/90
Non-Use	0	268	0	0
Light	7,752	814	74,059	631
Moderate	7,840	34,844	3,637	4,829
Heavy	345	3,878	571	8,152
Total	15,937	39,804	78,267	13,612

(a) August 1988 - Post-livestock Use

Non-use 0%, Light 49%, Moderate 49%, Heavy 2%. The eastern portion of the pasture had light utilization and the western had moderate use.

(b) September 1989 - Rest

Non-use 1%, Light 2%, Moderate 88%, Heavy 9%. The Poodle Mtn. area had moderate to heavy use and the valley between Cherry Spring and Buck Spring had heavy use on Bluegrass (POA++) and Bottlebrush Squirreltail (SIHY). The was no use to slight use between Tin Spring and Black Buttes. Pauls Camp Canyon had moderate to heavy use on Bluebunch Wheatgrass (AGSP) and Cheat grass (BRTE). From Boulder Flat and White Heifer Springs to the highway, use was determined to be light to moderate with heavy use around water sources. Burnt and Button Mtns. had moderate use with heavy use near water sources and in the wet and dry meadows.

(c) September 1990 - Rest

Non-use 0%, Light 94%, Moderate 5%, Heavy 1%. Utilization was light over most the area. Burnt Mtn. appeared to have moderate use and the water sources had moderate to heavy use.

(d) November 1990 - Total Use

Overall use appeared to be moderate to heavy. Moderate use occurred from Boulder Flat, north to White Heifer Spring and south of Granite Spring. Heavy use occurred from Button Mtn. west to Burnt Mtn. and south of Granite Canyon.

5. Trend

Key areas were established in 1984 for the purpose of trend studies. Data was collected, on most areas, in 1984, 1985, 1986, and 1987 to establish base line data. Data was collected again in 1988.

The frequency and trend data collected during the evaluation period (1988-1991) is not adequate enough to determine an upward, downward, or static trend.

6. Ecological Status

Ecological Site Inventory has not yet been completed for this allotment.

7. Riparian and Fisheries Habitat

The following information was available for each of the streams (in stream inventory) :

a) Red Mountain Creek - Dolly Varden Pasture

Data collected in 1989 revealed that conditions improved significantly from a percent optimum of 37% in 1987 to 65% in 1989. A riparian exclosure was completed on Red Mountain Creek in 1990 to improve degraded stream conditions.

b) Cottonwood Creek - Granite Pasture

Cottonwood Creek has been identified by the Winnemucca District as proposed Lahontan cutthroat trout habitat. This system has also been identified by the Nevada Department of Wildlife (NDOW) as a phase III Lahontan cutthroat trout recovery stream in NDOW's draft Quinn River Basin Management Plan. Riparian data has not been collected since 1987. At that time, the percent overall optimum had declined from 63% in 1977 to 49% in 1987. It is unknown what condition the riparian zone is in along Cottonwood Creek at the present time.

c) Wagon Tire Creek - Granite and Dolly Varden Pastures*

Available information shows that the percent overall optimum for Wagon Tire Creek remains poor at 30% (1989 data). No riparian data has been collected since 1989 to indicate whether conditions have improved. Wagon Tire Creek has been proposed as Lahontan cutthroat trout habitat by the Winnemucca District of the B.L.M.

*The portion of Wagon Tire Creek falling in the Granite Pasture will be managed with Cottonwood Creek.

d) Granite Creek - Granite Pasture

No data has been collected on the condition of the riparian zone for Granite Creek since 1977. At that time, the percent overall optimum was poor at 45%. Granite Creek has been proposed as Lahontan cutthroat trout habitat by the Bureau of Land Management.

e) Rock Creek - Granite Pasture

Data collected in 1988 indicated that the percent overall optimum had decreased from 65% in 1977 to 53% in 1988. No additional data has been collected since

1988 on the condition of the riparian zone and stream.

f) Donnelly Creek - Calico Pasture

Information collected on Donnelly Creek shows that the percent overall optimum dropped from 53 % in 1977 to 48% in 1988. No additional data on the condition of Donnelly Creek in the Buffalo Hills Allotment has been collected. Donnelly Creek has been identified by NDOW as a phase II Lahontan cutthroat trout recovery stream in NDOW's draft Quinn River Basin Management Plan.

g) Negro Creek - Dolly Varden Pasture

No data available.

8. Wild Horse and Burro Distribution

Data on the distribution of wild horses has been collected from the ground and by aircraft (helicopter and fixed-wing) since 1988. Distribution of horses in the allotment appears to be primarily affected by weather conditions and forage availability. During the period covered by this evaluation there was very little snow pack on the mountains, which allowed the horses to occupy all habitats from the lower to higher elevations. In general, horses occupy the flats and lower elevations during the winter and spring months, and higher elevation areas during the summer and fall.

a) Aerial Distribution Mapping (Maps available in D.O.)

<u>Dolly Varden Pasture</u>

September 1988 Census

During this flight, horses were concentrated around the three forks of Negro Creek, and east of the north fork to Leadville Canyon in the higher elevations. There was also a large number of groups from Melody Mtn. to Heward Reservoir.

July 1989 Census

The horses were found at higher elevations concentrated from Wagon Tire Mtn. to Heward Reservoir, Rocky Basin to Melody Mtn., Scraper Spring to the north fork of Negro Creek, and at Potato Patch Spring.

February 1990 Distribution

Horses were scattered from Mahogany Troughs south east to Iverson Reservoir with a small concentration at Dolly Varden Basin at both high and low elevations.

July 1991 Distribution

Horses were found in the higher elevations with Wagon Tire Mtn. was the only area of high concentration.

March 1992 Distribution

Horses were distributed mainly in the low elevations from Warm Spring south east along Negro Creek. There was a small concentration at Right Hand Canyon, and from Red Mtn. Creek to the south fork of Negro Creek.

Year	Number Observed	Aircraft
9/88*	443	Belle 47
7/89*	469	Belle 47
2/90	190	Cessna 210
7/91	428	Maule M-5
3/92	498	Cessna 210

Calico Pasture

September 1988 Census

The horses were concentrated at the higher elevations in the northern portion of the pasture from Mormon Dan Canyon, north to the pasture boundary with a large concentration around Division Peak.

July 1989 Census

The northern portion of the pasture in the higher elevations is where the horses were found. The highest concentration occurred around S. Donnelly Peak, Division Peak, and Harry Spring.

February 1990 Distribution

Again, the horses appear to prefer the northern areas of the pasture and were concentrated around Leadville Canyon, Donnelly Creek, McCarty Spring, and Harry Spring but were also found at lower elevations.

August 1990 Aerial Recon

All the horses were found from Cow Creek, north to

Harry Spring at the higher elevations.

January 1991 Distribution

Horses were observed from the southern tip of the Calico Mtns. to Petrified Canyon and at Donnelly Flat mainly in the lower elevations.

July 1991 Distribution

The horses were found in the higher elevations from Cane Springs to the northern pasture boundary with a small concentration around Division Peak and Sheep Buttes.

March 1992 Distribution

The horses were found in the lower elevations from Mormon Dan Canyon to Petrified Canyon, at Donnelly Flat, south of Razor Canyon, and from Harry Spring to the northern pasture boundary.

Year	Number Observed	Aircraft
9/88*	358	Belle 47
7/89*	375	Belle 47
2/90	68	Cessna 210
1/91	76	Cessna 210
7/91	337	Maule M-5
3/92	256	Cessna 210

Granite Pasture

September 1988 Census

Horses were concentrated from Rock Creek to Granite Basin. They were found at the higher elevations.

July 1989 Census

During this census horses were distributed in the higher elevations from The Banjo to Granite Point with high concentrations in Skull Meadows and south of Granite Basin.

February 1990 Distribution

Horses were found mainly on the eastern side of the pasture, north of Granite Basin to Little Cottonwood Creek. The horses were distributed evenly throughout the low and high elevations.

July 1991 Distribution

The horses were concentrated along the east side of Granite Peak and south towards Granite Basin at higher elevations.

March 1992 Distribution

Horses were found from Granite Creek to Little Cottonwood Creek and in Granite Basin along the lower elevations.

Year	Number Observed	Aircraft
9/88*	181	Belle 47
7/89*	307	Belle 47
2/90	108	Cessna 210
7/91	332	Maule M-5
3/92	225	Cessna 210

Buffalo Hills Pasture

July 1988 Census

The helicopter census in July 1988 showed that horses were concentrated from Stockade Canyon, north to Jenkins Spring in the northern portion of the pasture. In the southern area the horses were found from Boulder Flat, southeast to Wall Canyon and from Wall Canyon, west to Horse Canyon.

July 1989 Census

Horses were distributed throughout the pasture with high concentrations in the following areas: Burnt Mtn., south to Granite Spring, between Wrangler and Stockade Canyons, from Cherry Spring to Indian Rock Spring, and in the Poodle Mtn. and Boulder Flat area.

December 1989 Distribution

The horses were distributed evenly throughout the pasture at all elevations.

February 1990 Census

Horses were distributed evenly throughout the pasture with the highest concentration between Little Sawmill Canyon and Big Sawmill Canyon. They were found at the lower elevations.

January 1991 Distribution

Horses were found from Wrangler Canyon, north to Jenkins Spring and from Poodle Mtn. south to Five Springs Canyon, and at Antelope Spring.

August 1991 Distribution

The highest concentrations of horses were found from Black Butte to Wrangler Canyon, Five Springs Canyon to Button Mtn., and at White Heifer Spring.

March 1992 Distribution

During this distribution flight most of the horses were found in the northern portion of the pasture. They were found between Five Springs Canyon to Antelope Spring and from Wrangler Canyon to Jenkins Spring.

Year	Number Observed	Aircraft
9/88*	602	Belle 47
7/89*	704	Belle 47
12/89	332	Cessna 210
2/90	207	Cessna 210
1/91	181	Cessna 210
7/91	326	Maule M-5
3/92	296	Cessna 210

* Census Flights

b) On the ground Distribution Mapping

On the ground distribution mapping has been conducted since 1989, however terrain and access does not allow for a thorough check of the allotment. In general horses were observed at lower elevations in the

winter/spring months and at higher elevations during the summer/fall months.

V. Conclusions

A. Short Term Objectives

1. Utilization of key stream bank riparian plant species shall not exceed 30% in the following streams except where adjusted by an approved activity plan. (WLA-1.3)

Data was not collected on these streams in 1988 and 1989 to determine whether or not the objective was met in these years. Data was collected for most of the streams in 1990 and 1991 with the following results:

Red Mountain Creek

This objective was not met in 1990 on a small segment of the stream which was outside the exclosure. Utilization on Salix (Willow) in this segment ranged from 35% to 74%. This objective was met in 1991 with 7% use on Salix.

Cottonwood Creek

This objective was met for 1990, with 5% use on Salix (Willow), but was not met in 1991 when utilization on Salix and Carex (Sedges) was 39% and 78% respectively.

Wagon Tire Creek

This objective was not met in 1990 as the 30% utilization level was exceeded on Salix (55% use). This objective was met in 1991 with 22% use on Salix.

Granite Creek

There was no data collected in 1990 or 1991 to determine whether this objective was met or not met.

Rock Creek

There was no data collected in 1990 or 1991 to determine whether this objective was met or not met.

Donnelly Creek

This objective was not met in 1990 or 1991. Use on Populus (Aspen) was 90% in 1990 and use on Salix was 77% in 1991.

Use Pattern Mapping data and distribution flights show that when this objective was not met it could be attributed to a combination of poor livestock distribution and excessive wild horse numbers. Cottonwood and Wagon Tire Creeks did not meet the objective due to poor livestock distribution. Donnelly Creek did not meet the objective due to excessive wild horse numbers and poor livestock distribution.

2. Total utilization of key plant species in 2,493 acres of wetland riparian habitat shall not exceed 50%. (WL -1.10)

Dolly Varden Pasture

This objective was met in 1988 (livestock rest year), however, utilization by wild horses at the Crutcher Springs complex and Dolly Varden Spring was in the moderate use category. Light use (1-40%) was found at Scraper, Potato Patch, Mud, and Supply Camp Springs. In 1989 this objective was not met in the meadows along Negro Creek, meadows adjacent to Heward Reservoir, and around White Rock and Dolly Varden springs. In 1990 it was not met in the Crutcher Springs Complex, meadows along Negro Creek, meadows adjacent to Heward Reservoir, wetland riparian adjacent to Wagon Tire Creek, and at Dolly Varden, Warm, Supply Camp, White Rock, Potato Patch, and Mud Springs. The objective was not met in 1989 and 1990 as a result of the number of wild horses in the pasture and poor livestock distribution. There was no data collected in 1991.

Calico Pasture

This objective was met in 1988 (livestock rest year), however, light use (1-40%) was recorded at Donnelly, McCarty and Harry Springs, and in the wetland riparian habitat associated with Donnelly Creek. In 1989 this objective was not met in the meadows above Black Canyon, meadows associated with the head waters of Donnelly

Creek, and in the areas around McCarty, Harry, and Donnelly springs. In 1990, it was not met in the meadows around the head waters of Donnelly Creek, meadows above Black Canyon, and in the areas around Harry, Burro, and Cane springs. The objective was not met in 1989 and 1990 due to the number of wild horses in the pasture and poor livestock distribution. There was no data collected in 1991.

Granite Pasture

This objective was not met during the evaluation period from 1988 to 1991. In 1988 it was not met in the meadows adjacent to the south fork of Wagon Tire Creek, meadows adjacent to Cottonwood Creek, in The Banjo, and in Skull Meadows. Utilization in 1989 exceeded the 50% level in the meadows adjacent to the south fork of Wagon Tire Creek, meadows adjacent to Granite Peak, and around the spring sources in Granite Basin. In 1990 it was not met in the meadows in the vicinity of Granite Peak, The Tank, Skull Meadows, Granite Basin, and the meadows adjacent to the south fork of Wagon Tire Creek. It was not met in the meadows associated with the head waters of Cottonwood Creek in 1991.

In the northern part of the pasture the objective was not met in the meadows associated with Cottonwood Creek, the south fork of Wagon Tire Creek and the Banjo due to poor livestock distribution. There were few horses found in these areas during census and distribution flights conducted during the evaluation period.

South of the Banjo the objective was not met in wetland riparian habitat found at Skull Meadows, the Tank, in the vicinity of Granite Peak and Granite Basin as a result of the number of wild horses using the area. There were few livestock utilizing this area during the evaluation period.

Buffalo Hills Pasture

This objective was not met in 1988, 1989 and 1990. In 1988 it was not met in the meadows adjacent to Burnt Mtn. In 1989 utilization exceeded the 50% level in the meadows from Button to Burnt Mtn., meadows north of Granite

Spring, meadows adjacent to the south fork of Frog Creek, and in the areas around Cherry, Buck, Pauls Camp, and White Heifer springs. In 1990 it was not met in the meadows north of Granite Spring, in areas adjacent to Buck Spring, meadows from Button to Burnt Mtn., and in meadows adjacent to Twin Springs Canyon.

This objective was not met in 1988 due to the number of wild horses using the area and poor livestock distribution. In 1989 (rest year) the objective was not met as a result of the number of wild horses living in the pasture. Following the January 1990 removal, utilization data found that the objective was still not being met in 1990 (rest year) due to the number of wild horses inhabiting the area. There was no data collected in 1991.

3. Utilization of key plant species in upland habitats shall not exceed 50% except where adjusted by an activity plan. (WL 1.7, WL 1.9, RM 1)

Dolly Varden Pasture

This objective was met in the Dolly Varden pasture in 1988, which was a rest year, but not met in 1989 or 1990. In 1989 the pre-livestock use pattern map showed moderate use at Dolly Varden Spring and Rocky Basin. The post-livestock map showed that these areas had developed into heavy use and other areas had developed into moderate use. In 1990 there were several areas of moderate to heavy utilization. There was no data collected in 1991. (Reference page 18)

Calico Pasture

The objective was met in this pasture during 1988. It was not met in 1989, 1990, or 1991. In 1989 there was heavy use from Donnelly Flat to the northern boundary fence and from Petrified Canyon to Mormon Dan Canyon. In 1990 the use was moderate to heavy from Cane Springs north to the pasture boundary fence. There was heavy use from Donnelly Peak, north in 1991. (Ref. pp. 20)

Granite Pasture

The objective was not met in this pasture from 1988 to 1991. There was heavy use from Skull Meadows to Cottonwood Creek in 1988. In 1989, there were several areas of moderate to heavy use in the Granite Peak area and around Granite Ranch. Heavy use occurred in 1990 in Granite Basin, Skull Meadows, The Tank, and in two areas along the LAWP power line. In 1991, prior to livestock turnout there were areas of moderate use around Granite Peak and one small area of heavy use at the head of Cottonwood Creek. (Ref. pp. 22)

Buffalo Hills Pasture

The objective was not met in areas of the Buffalo Hills pasture. In 1988 there were several areas of light to moderate use and moderate use around Button Mtn. In 1989, which was a livestock rest year, there was moderate to heavy use scattered throughout the pasture due to excessive wild horse numbers. In 1990 the objective was not met from Boulder Flat to Burnt Mtn. There was no data collected in 1991. (Ref. pp. 23)

With the exception of 1988 (rest year) in the Calico and Dolly Varden pastures, this objective was not met as a result of the number of wild horses inhabiting the allotment and poor livestock distribution. Although this objective was met in the Calico and Dolly Varden pastures in 1988, it was not met in subsequent years when the pastures were used by livestock and wild horses which suggests that the existing population of wild horse are making a disproportionate use of the forage resource prior to livestock turnout.

4. Combine the Buffalo Hills Allotment with the Calico Allotment to be grazed as the Buffalo Hills grazing management system.

This objective was met when the Buffalo Hills Grazing Agreement was signed on November 2, 1988.

B. Long Term Objectives

1. Improve and maintain the overall stream habitat from the

percent of optimum indicated to 60% or better. (WLA-1.3)

Stream/Riparian Habitat Condition Classification
(% of Habitat Optimum)

70-100% = Excellent
60-69% = Good
50-59% = Fair
0-49% = Poor

The stream condition rating (expressed as percent habitat optimum) is based on the evaluation of factors considered limiting to trout. These include pool-riffle ratio, pool-quality, percent gravel and rubble on the streambottom, bank cover and bank stability.

	Percent Optimum	Year	Public Land Surveyed
Red Mountain Creek	36%	1987	9 miles

Data collected in 1989 shows that this objective was met in Red Mountain Creek at 65%. With the completion of the Red Mtn. Creek exclosures in 1990 it is expected that this objective will be maintained.

Cottonwood Creek	49%	1987	3 miles

There was no data collected during the evaluation period to determine if we are progressing towards achievement of this objective. The last data collected was in 1987.

Wagon Tire Creek	23%	1987	3 miles

We are progressing towards the achievement of this objective for this creek. During the last evaluation, the condition was at 23% optimum, and improved to 30% in 1989. No further data has been collected.

Granite Creek	45%	1977	2 miles

Data collected in 1988 shows that the condition of the creek has remained static at 45%. No further data has been collected.

Rock Creek	65%	1977	3 miles

Data collected in 1988 indicates that we are not progressing toward this objective as percent of optimum decreased from 65% to 53%. No additional data has been collected.

Donnelly Creek	53%	1977	2 miles

Data collected in 1988 indicates a slight downward trend from 53% in 1977, to 48% in 1988. No additional data has been collected. We are not progressing toward this objective.

This objective will be requantified in the technical recommendations with long term objective #3.

2. Improve or maintain the condition of 2,493 acres of wetland riparian habitat to good or higher. (WL-1.10)

Data is insufficient to determine whether or not we are moving towards this objective. No ESI data has been collected, areas have not been specifically identified, and the condition class of the areas was not noted in the objective in order to determine if the wetland riparian habitat is progressing toward or away from good condition.

3. Improve or maintain riparian habitat at good condition from the condition indicated. (WLA 1.3 & WL 1.9)

Red Mountain Creek	109 acres	poor
Cottonwood Creek	36 acres	good
Wagon Tire Creek	36 acres	poor
Granite Creek	24 acres	good
Rock Creek	36 acres	good
Donnelly Creek	24 acres	fair

No data was collected to determine whether or not we are progressing toward this objective. This objective will be requantified in the technical recommendations.

4. Protect sage grouse strutting grounds and brooding habitat and improve nesting and wintering habitat by: (WL 1.11)

a) Following NDOW's guidelines for Vegetal Control Programs in Sage Grouse Habitat in Nevada.

This objective has been met. There were no fires or vegetative manipulation to impact the habitat.

b) Maintain sagebrush canopy at 30% in sage grouse nesting areas where sagebrush does not exceed three

(3) feet in height.

No data was collected to determine whether or not we are progressing toward this objective.

5. Maintain or improve 565 acres of aspen woodland and 349 acres of mountain mahogany thicket to good or equivalent. This includes acres burned in the Fox Mountain and Middle Fork Fires during 1985. (WL 1.9)

It is undeterminable if we are progressing toward this objective because the past condition was not stated in the objective and no ESI data has been collected during the evaluation period.

Aspen stands are considered a woodland site and are given a woodland suitability index rather than a seral stage and mountain mahogany sites are considered mahogany savannas and not thickets. It would therefore be more appropriate to address age class structure rather than a seral stage for aspen stands in future evaluations.

This objective will be requantified in the technical recommendations.

6. Manage, maintain, or improve public rangeland habitat condition to provide forage on a sustained yield basis with an initial forage demand for big game of 6,340 AUMs for mule deer, 1,060 AUMs for pronghorn, and 1,228 AUMs for bighorn sheep by:

a) Improving 7,680 acres of priority mule deer habitat to excellent.

b) Improving overall mule deer habitat as follows:

1) From good to excellent 61,945 acres: Granite Range DS-1; Poodle Mtn. DS-2; Granite Range DS-6; Crutcher Canyon DW-4; Donnelly Peak DS-5.

2) From fair to good 4,713 acres: Buffalo Hills DW-2.

c) Maintaining mule deer habitat as follows:

1) Good condition 93,402 acres: Buffalo Hills DS-2; Horse Canyon DS-2; Sawmill Canyon DS-2; Granite Basin DS-5; Granite Range DW-6.

2) Excellent condition 5,249 acres: Granite Range DW-7; Rock Creek DW-8; Granite Creek DW-9.

d) Improving pronghorn habitat as follows:

1) From fair to good 140,068 acres: Buffalo Hills AS-3; Granite Range AS-8; Middle Fork AS-8; Granite Basin AS-9; Crutcher Canyon AW-1; South Buffalo Hills AW-2; Middle Fork AW-8; Rock Creek AW-9; Donnelly Peak AS-1; Division Peak AS-6.

2) From poor to fair 3,845 acres: Clear Creek AW-5; Granite Point AW-10.

e) Maintain pronghorn habitat as follows:

1) Good condition 57,298 acres: Buffalo Hills AW-3.

f) Improving 26,376 acres of priority bighorn sheep habitat (Granite Range BY-1) and Division Peak BY-5 from 70% to 90% of optimum.

There was no habitat or ESI data collected during the evaluation period to determine whether or not long term objectives #6(a-f) are progressing toward achievement.

7) Manage, maintain or improve ecological status to provide forage on a sustained yield basis with an initial stocking level of 4,114 AUMs (for livestock). The goal is to provide forage on a sustained yield basis with a stocking level of 11,920 AUMs.

This objective was not met due to the number of wild horses inhabiting the allotment and poor livestock distribution. The utilization levels for the combined use was greater than 50% in all pastures. Utilization levels greater than 50% before August 31 (end of the growing season) each year tends to lead to a static or downward trend. At this level of combined use a sustainable yield of forage will not be maintained.

8) Improve range/ecological 1/ condition from:

Poor to Fair on 267,748 acres.
Fair to Good on 74,138 acres.
Good to Excellent on 37,764 acres.

1/ The range/ecological conditions in this document

are forage conditions that will be replaced with ecological status condition as information becomes available. The objective will be redefined or quantified to obtain a particular ecological status (desired plant community) when the ecological site inventory has been completed on the allotment.

No ESI data has been collected to determine whether or not we are achieving this objective.

9) Manage, maintain and improve public rangeland conditions to provide an initial level of 6,660 AUMs of forage on a sustained yield basis for 555 (AMLs) 1/ wild horses in the following Herd Use Areas:

	AML	AUMs
Buffalo Hills	272	3264
Granite Range	176	2112
Calico Mountains	107	1284

1/ AML refers to adult horses (i.e. two years and older)

This objective has not been met as a result of the number of horses inhabiting the allotment and poor livestock distribution. Total AUM demand by wild horses within the allotment ranged from a low of 18,036 AUMs in 1988 to a high of 22,314 AUMs in 1989. In 1988 AUM demand in the Buffalo Hills, Granite Range, and Calico Mountains Herd Management Areas exceeded the recommended AUM level identified in the 1988 evaluation by 221%, 355%, and 186% respectively. The initial AUM demand in 1989 was exceeded in all three Herd Management Areas in the Buffalo Hills Allotment by 260% in the Buffalo Hills, 443% in the Granite Range, and 252% in the Calico Mountains. In 1990, the initial AUM demand was exceeded by 137% in the Buffalo Hills, 490% in the Granite Range, and 279% in the Calico Mountains. The initial AUM demand in 1991 was exceeded by 152% in the Buffalo Hills, 544% in the Granite Range, and by 310% in the Calico Mountains. Initial AUM levels were exceeded for all years in each Herd Management Area.

Although we may have provided more than 6,660 AUMs of forage, it was not provided on a sustained yield basis. By not meeting the 50% utilization level (short term objective #3; Ref. pp. 33) we have not improved or maintained public rangeland condition to provide forage on a sustained yield basis.

10) Manage, maintain and improve public rangeland conditions to provide an initial level of 504 AUMs of forage on a sustained yield basis for 42 (AMLs) 1/ wild horses in the Calico Mountains Herd Use Areas.

1/ AML refers to adult horses (i.e. two years and older)

This objective was addressed in long term objective #9.

11) Maintain and improve the free-roaming behavior of wild horses and burros by protecting and enhancing their home ranges.

Aerial distribution mapping and on the ground distribution data collected during the evaluation period indicates that wild horses have freedom of movement within the HMAs and are maintaining their free roaming behavior. This objective is being met.

12) Maintain/improve wild horse/burro habitat by assuring free access to water.

This objective has been met. Wild horses have free access to all water sources within the allotment.

13) Improve or maintain the water quality of the following streams to State criteria set for livestock drinking water, cold water aquatic life, water contact recreation (wading), and wildlife propagation:

Red Mountain Creek
Cottonwood Creek
Wagon Tire Creek
Granite Creek
Rock Creek
Negro Creek
Donnelly Creek

There was no data collected during the evaluation period to determine whether or not we are achieving this objective.

14) Maintain the water quality of Negro Creek from its Class A water quality standards.

There was no data collected during the evaluation period to determine whether or not we are achieving this objective.

B. Summary of Conclusions

The stocking level of the allotment during the evaluation period exceeded the recommended levels established in the 1988 evaluation by 45% in 1988, 55% in 1989, 73% in 1990 and 66% in 1991 (refer to actual use summary). During the evaluation period livestock use remained constant at 4159 AUM's, wildlife use was below the recommended carrying capacity except for 1990, and the wild horse population was above the recommended level for the entire evaluation period.

The short term utilization objectives for stream bank riparian habitat were met during rest years except for the Calico pasture. The objective was not met in the Calico pasture due to the high numbers of horses and livestock utilization. This indicates poor livestock distribution which in part may be the result of poor water availability in some areas, insufficient herding of livestock within pastures, and competition for forage, space, and water with wild horses.

Short term utilization objectives for wetland riparian and upland habitats were not met during the evaluation period due to wild horses exceeding the recommended carrying capacity in all pastures and poor livestock distribution. Wild horses made a disproportionate use of the forage resource during the evaluation period due to the high population levels found in each pasture.

There was not sufficient data collected during the evaluation period to determine if we are progressing toward the achievement of long term stream habitat, wildlife or water quality objectives. However, since the short term utilization objectives were not met it is probable that progress toward achievement of these objectives did not occur.

The long term stocking level objectives for livestock and wild horses were not met during the evaluation period due to wild horses exceeding recommended levels. With the exception of 1988, the AUM's utilized by wild horses exceeded the total stocking level of 19,551 AUM's recommended in the 1988 allotment evaluation. In 1988, wild horses used 18,036 AUM's, just 1515 AUM's less than the total stocking level for all users in the allotment. At the current level of use in the allotment, a sustained forage yield and maintenance or improvement of rangeland condition (ecological status) will not occur and a Thriving Natural Ecological Balance cannot be achieved. It is difficult to determine if the livestock grazing strategy set up in the 1988 evaluation is working due to the large number of horses in the allotment.

VI. Recommendations

A. Technical Recommendations

1) Establish the stocking level for livestock and wild horses.

Pasture	Carrying Capacity by Pasture Available AUMs	Allocated - AUMs*
Calico	4166	3935
Dolly Varden	5074	4115
Buffalo Hills	6722	6327
Granite	2519	2503
TOTAL	18,481	16,880

*AUMs to be utilized by livestock and wild horses

a) Livestock

Operator	Active	Suspended	E.O.U.*	Total	Lvstk	Use Period
A.F. Jackson	3984	0	19	4003	615	4/1- 10/15
G. Selmi	130	0	26	156	156	4/1- 10/15

* Exchange -of- Use AUMs are authorized on unfenced private lands which are accessible and suitable for all authorized livestock grazing during the same periods as the public lands. Grazing use allowed cannot exceed the livestock grazing capacity of the private lands offered.

b) Wild Horses

HMA	AML	AUMs
Buffalo Hills	314	3768
Granite Range	258	3096
(Granite pasture)	(76)	(912)
(Dolly Varden past.)	(182)	(2184)
Calico Mountains*	142	1704
Total	714	8568

*Only 36% of the horses in the Calico Mountains HMA fall within the Buffalo Hills Allotment

The following table shows a summary of the stocking level by pasture for livestock and wild horses.

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Forage Demand - Aum's

Pasture	Livestock	Wild Horses	Pasture Totals
Calico	2226	1704	3930
Dolly Varden	1933	2184	4117
Buffalo Hills	2563	3768	6331
Granite	1596	912	2508
Allot. Total	8318	8568	16886

A total of 12,727 AUM's of use by livestock and wild horses will be authorized each grazing year. The stocking level for livestock and wild horses was calculated on a pasture level basis. Each year livestock will use only 4159 AUM's of the 8318 AUM's shown in the above table. The AUM's in excess of the stocking level (VI.A.1.) and the 4159 AUM's not utilized by livestock in rest pastures will not be allocated to any user (livestock, wild horses or wildlife) in order to attain allotment objectives and achieve a Thriving Natural Ecological Balance in the allotment.

2) Interim Management Plan

Due to wild horse numbers and the inability to reduce to AML, an interim management plan has been developed. This plan will be followed until wild horse numbers can be reduced to AML and the proposed grazing strategy can be implemented. It will consist of maintaining the present livestock numbers, changing on/off dates, and moving livestock to pastures with available AUMs. The scheduled rest pastures will also be grazed if there are available AUMs, and some of the pastures scheduled for livestock use will not be used until wild horses are brought to AML. The ensuing table summarizes the grazing strategy to be followed during the interim if the proposed gathers take place.

Interim Grazing Strategy

	Calico	Dolly Varden	Buffalo Hills	Granite
1993	No Use	7/16 to 10/15	4/1 to 6/15	6/15 to 7/16
	Horses only. 5412 AUMs	1933 AUMs for livestock. 2688 AUMs for horses.	2226 AUMs for livestock. 2184 AUMs for horses.	752 AUMs for livestock. 1752 AUMs for horses.
1994	No Use	7/16 to 10/15	4/1 to 6/15	6/15 to 7/16
	Horses only. 2148 AUMs	1933 AUMs for livestock. 2832 AUMs for horses.	2226 AUMs for livestock. 2352 AUMs for horses.	707 AUMs for livestock. 1812 AUMs for horses.

This plan consists of grazing the Buffalo Hills pasture in 1993 and 1994 from 4/1 to 6/15, or when overall utilization levels reach 35%. At this point livestock will be moved to the Granite pasture and grazed from 6/16 to 7/15. From 7/16 to 10/15 livestock will be grazed in the Dolly Varden pasture. The Calico pasture will be rested from livestock use during 1993 to accommodate wild horses; in 1994 it will be rested to allow recovery from previous overuse by wild horses. We will examine the situation in 1995 to determine if it is feasible to progress with the proposed grazing system or continue with an ammended version.

B. Requantified Objectives

Objectives 1, 2 and 3 listed below will be used to guide management on the allotment in the interim between completion of this allotment re-evaluation and the completion of the ecological site inventory. Upon completion of the ecological site inventory, desired plant community objectives with specific management actions will be developed for each pasture. The utilization levels shown in these objectives will change to management actions to be used to meet the desired plant community objectives.

1) The objective for wild horse utilization is 20% in livestock rest pastures by July 15 (seed dissemination).

2) The objective for combined utilization on grass species, upland browse species, and meadows by wild horses and livestock is 50% at the end of the livestock use period and 60% by February 28 or start of the new growing season. (Utilization on grass species from 50% to 60% by wild horses will occur during the dormant season and should not have a detrimental impact to plant health and vigor).

3) The objective for utilization of current year's growth on key stream bank riparian plant species1/ is 30% at the end of the livestock use period and 40% by February 28 or the start of the new growing season for the following streams:

Red Mountain Creek
Cottonwood Creek
Wagon Tire Creek
Granite Creek
Rock Creek
Donnelly Creek
Covert Creek

1/ Key riparian plant species will be: Aspen (Populus tremuloides), Willow (Salix spp.), Nevada Bluegrass (Poa nevadensis), Sedges (Carex spp.), Rushes (Juncus spp.), and Tufted Hairgrass (Deschampsia cespitosa).

4) Fisheries/Riparian

Stream/Riparian Habitat Condition Classification
(% of Habitat Optimum)

70-100% = Excellent
60-69% = Good
50-59% = Fair
0-49% = Poor

The stream condition rating (expressed as percent habitat optimum) is based on the evaluation of factors considered limiting to trout. These include pool-riffle ratio, pool-quality, percent gravel and rubble on the streambottom, bank cover and bank stability.

a) Requantify long term objectives #1 and #3 by combining these objectives into the following:

(1) Red Mountain Creek

(a) In the short term maintain/improve stream and riparian habitat conditions on 9 miles of Red Mountain Creek at 60% or higher.

(b) In the long term improve stream and riparian habitat conditions on 9 miles of Red Mountain Creek to a rating of excellent.

Short and long-term objectives for improvement of stream and riparian habitat conditions on Red Mountain

Creek within the Buffalo Hills Allotment are shown below.

		OBJECTIVE LEVEL	
	1989	SHORT TERM (2001)	LONG TERM (2017)
STREAM CONDITION (% HABITAT OPTIMUM)	65	>65	>70

Based on data collected in 1977 from stations 2, 3 and 4 located on public land.

(2) Cottonwood Creek

(a) In the short-term improve stream and riparian habitat conditions on 3 miles of Cottonwood Creek by 11% (or to a rating of good as defined previously).

(b) In the long-term improve stream and riparian habitat conditions on 3 miles of Cottonwood Creek to a rating of 60% or better.

Short and long-term objectives for improvement of stream and riparian habitat conditions on Cottonwood Creek within the Buffalo Hills Allotment are shown below.

		OBJECTIVE LEVEL	
	1987	SHORT TERM (2001)	LONG TERM (2017)
STREAM CONDITION (% HABITAT OPTIMUM)	49	>60	>60

Based on data collected in 1987 by BLM from survey stations located on public land.

(3) Wagon Tire Creek

(a) In the short-term improve stream and riparian habitat conditions on 3 miles of Wagon Tire Creek by 15%

(b) In the long-term improve stream and riparian habitat conditions on 3 miles of Wagon Tire Creek to a rating of 60% or better.

Short and long term objectives for improvement of stream and riparian habitat conditions on Wagon Tire Creek within the Buffalo Hills Allotment.

		OBJECTIVE LEVEL	
		SHORT TERM	LONG TERM
	1989	(2001)	(2017)
STREAM CONDITION (% HABITAT OPTIMUM)	30	>45	>60

Based on data collected in 1989 by BLM from survey stations located on public land.

(4) Granite Creek

(a) In the short-term improve stream and riparian habitat conditions on 2 miles of Granite Creek by 15% (or to a rating of good as defined previously).

(b) In the long-term improve stream and riparian habitat conditions on 2 miles of Granite Creek to a rating of 60% or better.

Short and long-term objectives for improvement of stream and riparian habitat conditions on Granite Creek within the Buffalo Hills Allotment are shown below.

		OBJECTIVE LEVEL	
		SHORT TERM	LONG TERM
	1977	(2001)	(2017)
STREAM CONDITION (% HABITAT OPTIMUM)	45	>60	>60

Based on data collected in 1977 by BLM from survey stations located on public land.

(5) Rock Creek

(a) In the short-term improve stream and riparian habitat conditions on 3 miles of Rock Creek by 7% (or to a rating of good as defined previously).

(b) In the long-term improve stream and riparian habitat conditions on 3 miles of Rock Creek to a rating of 60% or better.

Short and long-term objectives for improvement of stream and riparian conditions on Rock Creek within the Buffalo Hills Allotment are shown below.

		OBJECTIVE LEVEL	
	1988	SHORT TERM (2001)	LONG TERM (2017)
STREAM CONDITION (% HABITAT OPTIMUM)	53	>60	>60

Based on data collected in 1988 by BLM from survey stations located on public land.

(6) Donnelly Creek

(a) In the short-term improve stream and riparian habitat conditions on 2 miles of Upper Donnelly Creek by 10% (or to a rating of good as defined previously).

(b) In the long-term improve stream and riparian habitat conditions on 2 miles of Upper Donnelly Creek to a rating of 60% or better.

Short and long-term objectives for improvement of stream and riparian habitat conditions on Upper Donnelly Creek within the Buffalo Hills Allotment are shown below.

		OBJECTIVE LEVEL	
	1988	SHORT TERM (2001)	LONG TERM (2017)
STREAM CONDITION (% HABITAT OPTIMUM)	50	>60	>60

Based on data collected in 1988 by BLM from survey stations located on public land.

4) Requantify long term objectives #2, #5, #6(a-f), #7, #8, #9, and #10 upon completion of ESI, to establish Desired Plant Community objectives on wetland riparian and upland areas for wildlife, wild horses, and livestock. Develop specific management actions to attain the desired plant community resource objectives.

5) Manage the wild horse population to achieve a Thriving Natural Ecological balance within the allotment by:

a) Short term: Reducing the wild horse population within the allotment to the AML's shown below by 1998.

HMA	AML	AUMs
Buffalo Hills	314	3768
Granite Range	258	3096
(Granite pasture)	(76)	(912)
(Dolly Varden past.)	(182)	(2184)
Calico Mountains*	142	1704
Total	714	8568

b) Long term: Maintain the population of wild horses in allotment within the ranges shown below to ensure that the AML's (carrying capacity) are not exceeded.

HMA	- 25% to AML	AUM's
Buffalo Hills	235 to 314	2820 to 3768
Granite Range	193 to 258	2316 to 3096
(Granite pasture)	(57) to (76)	(684) to (912)
(Dolly Varden past.)	(136) to (182)	(1632) to(2184)
Calico Mountains	106 to 142	1272 to 1704
Total	534 to 714	6408 to 8568

This is based on gathering horses every three years. If gathering schedule changes, these ranges may also change.

C. Management Actions

1) Change the existing livestock grazing strategy.

FROM:

Year	Calico Pasture 4/1 to 7/31	Dolly Varden Pasture 8/1 to 10/15	Buffalo Hills Pasture 4/1 to 7/31	Granite Pasture 8/1 to 10/15
1989	2563 AUMs	1596 AUMs	Rest	Rest
1990	2563 AUMs	1596 AUMs	Rest	Rest
1991	Rest	Rest	2563 AUMs	1596 AUMs
1992	Rest	Rest	2563 AUMs	1596 AUMs

TO:

Year	Calico Pasture 4/1 to 7/15	Dolly Varden Pasture 7/16 to 10/15	Buffalo Hills Pasture 4/1 to 7/31	Granite Pasture 8/1 to 10/15
1993	2226 AUMs	1933 AUMs	Rest	Rest
1994	2226 AUMs	1933 AUMs	Rest	Rest
1995	Rest	Rest	2563 AUMs	1596 AUMs
1996	Rest	Rest	2563 AUMs	1596 AUMs

2) Improve Livestock Distribution

Meet with the permittees in 1993 to develop a movement strategy for livestock in each pasture so the short term utilization objectives for stream bank riparian, wetland riparian and upland habitats are achieved. The strategy should include the initial distribution of livestock within the pasture at the beginning of the use period, herding of livestock during the use period, the final location of livestock just prior to moving out of a pasture, and an outline of any water development projects that are needed to facilitate proper use of each pasture.

3) Limit utilization on important streams (Long Term Objective #1. pp 35) to:

(a) 30% use on key species at the end of the livestock use period or livestock will be moved.

(b) 15% on key species by wild horses at any time during livestock rest years. If this level of use and the 20% level on uplands (Mangement Action #4) cannot be met then the AML will be adjusted.

(c) If monitering indicates that utilization levels cannot be kept below 30% during combined livestock and wild horse use periods (after the grazing stategy is implemented and wild horse numbers are at AML) then the streams wil be fenced.

4) To realize the benefit of the rest treatment it is necessary that wild horse use not exceed 20% utilization on key species by July 15 in the rest pastures. If use exceeds 20%, the AML for wild horses will be adjusted so that this management criteria can be met.

The 20% utilization limit on key species by July 15 will limit use sufficiently so that the key species will be able to reach seed ripe and receive the benefits of a rest treatment. This allows the plants to gain vigor through building of carbohydrate reserves and allows seed production and dispersal for reproduction. If wild horse use is not limited in the rest pastures then benefits of a rest rotation grazing system will not be realized and the plant communities will not maintain or improve in condition.

5) Prevent the wild horse population from exceeding AML in order to keep utilization levels within established limits to achieve a Thriving Natural Ecological Balance and to provide for a healthy and thriving wild horse population. The stocking rate for livestock and establishment of an AML for wild horses is based on calculations from monitoring studies. If numbers of either animal were to exceed the calculated carrying capacity it would not be possible to meet utilization goals and to maintain or improve the condition of plant communities thereby not providing for a Thriving Natural Ecological Balance.

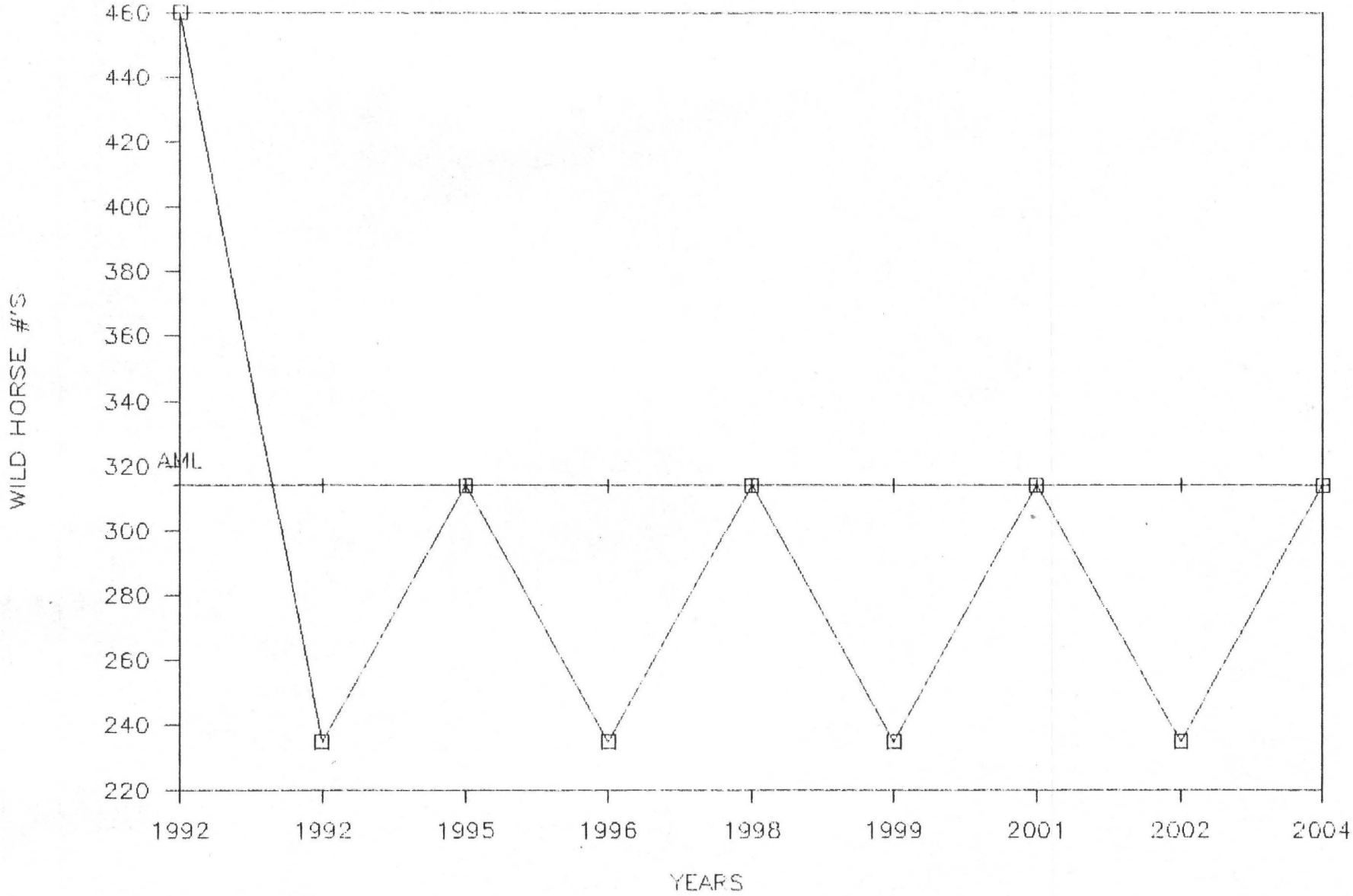
To accomplish this goal it is necessary to calculate the number of wild horses to be removed based on the cycle of gathers. Presently, BLM is planning to gather HMAs every three years as set by the Wild Horse and Burro Strategic Plan. Based on this gather cycle and using existing information on herd recruitment from reproduction, the number to gather would be calculated so that the horses would be at AML when the next gather occurred three years later. See attachment #1 for an example of how this gather schedule would work.

If the cycle of horse gathers is changed from three years, then the numbers of wild horses would be adjusted to fit the gather cycle so that numbers do not exceed AML before a scheduled gather date.

It may not be possible to implement this population strategy initially because of the excessive numbers of wild horses on the range and the age structure limitations (horses 6 years or older are turned back out) set by the Wild Horse and Burro Strategic Plan. This strategy will be implemented as numbers are brought into line with AML. By managing the wild horse populations in this manner it should be possible

ATTACHMENT #1

GATHER SCHEDULE EXAMPLE



to guarantee a healthy population of wild horses for the future while maintaining and improving the ecological sites.

6) Reconstruct the following projects to wildlife specifications as outlined below.

(1) Granite Mountain Drift Fence, project number 520307, will be modified to pronghorn antelope or bighorn sheep standards at locations to be identified by the area wildlife biologist.

(2) Leadville and Coyote fence, project number 524172, from Frog Creek to Crutcher Canyon will be modified to pronghorn antelope standards.

(3) C-2-N Fence at Corner Spring will be reconstructed to pronghorn antelope standards.

D. Monitoring

1) Complete ecological site inventory field data collection in 1993. Complete data entry into the IDSU and GIS data base by 1994 and establish key areas.

2) Complete Use Pattern Maps after livestock are removed and prior to start of next growing season. After key areas are identified key area utilization will be used instead of Use Pattern Mapping.

3) On livestock rest years complete Use Pattern Maps at seed dissemination or around July 15 to determine if the 20% utilization level by wild horses is being met.

4) Stream surveys and water quality testing will be scheduled as follows:

1992	1993
Cottonwood Creek	Red Mountain Creek
Wagon Tire Creek	Rock Creek
Granite Creek	Negro Creek
Covert Creek	Donnelly Creek

5) Identify sage grouse strutting grounds and brooding habitat in the spring of 1993 with the assistance of NDOW.

6) Establish canopy cover transects for sage grouse, where sagebrush does not exceed three feet in height, in each pasture of the allotment in the spring of 1993.

7) Establish key areas in stream bank riparian areas, for key forage transect monitoring and photo trends by 1994.

8) Establish at least one mahogany savanna monitoring site in each pasture for age class and vigor by 1994.

9) Establish aspen woodland monitoring sites for age class, vigor, and density in each pasture by 1994.

10) Establish key management areas in each pasture on upland habitat and wetland riparian habitat identified by the ecological site inventory by 1995.

11) Continue collecting wild horse and burro census and seasonal distribution data to determine population trends (reproductive rate, recruitment rate, etc.) and seasonal use areas. Wild horse monitoring should be conducted on alternate years as follows:

   a) Census every three years in July.(First year)

   b) Aerial distribution mapping every three years with flights conducted in January, April, July, and October.(Second year)

   c) Conduct on the ground distribution mapping in July and October every three years to supplement aerial distribution mapping and provide more specific population information on band size and composition. (Third year)

12) Project inspection should be completed in accordance with the project maintenance inspection schedule to insure that range improvements are being maintained to Bureau standards.

E. Conduct a re-evaluation in 2001 analyzing Resource Objectives developed from the ecological site inventory to determine if desired plant community objectives are being met. If resource problems are identified a re-evaluation will be conducted sooner.

F. Conduct a re-evaluation in 2017 to determine if long term desired plant community objectives have been achieved.

F. NEPA Review

The selected management action for grazing in the Buffalo Hills Allotment conforms with the environmental analysis of grazing impacts described in the Final Sonoma-Gerlach Environmental Impact Statement dated September 18, 1981.

G. FONSI (Finding of No Significant Impact)

I have reviewed the Buffalo Hills Allotment Evaluation including any potentially significant environmental impacts. I have determined that any technical recommendations and/or proposed management actions will not have any significant impacts on the human environment and that an EIS (Environmental Impact Statement) is not required. I have determined that the allotment evaluation is in conformance with the approved land use plan. It is my decision to implement the management actions identified within the Buffalo Hills Allotment Evaluation.

_____ _____

Area Manager Date

_____ _____

Environmental Coordinator Date

DRAFT

APPENDIX 1 Stocking Level Calculations and Procedures

To determine stocking levels the Weighted Average Utilization and Desired Stocking Level calculations were used.

Weighted Average Utilization =

$$\frac{(\text{\# acres Zone A} \times \text{midpoint of use class}) + (\text{\# acres Zone B} \times \text{midpoint of use class})}{\text{Total \# of Acres}}$$

Desired Stocking Level =

$$\frac{\text{Actual Use}}{\text{Weighted Average Utilization}} = \frac{\text{Desired Actual Use}}{\text{Desired Average Utilization}}$$

The Desired Stocking Level calculation was used to determine the number of AUMs available for use by wild horses and livestock in each pasture that would lead to the achievement of allotment objectives. The desired end of grazing season (February 28) utilization for all pastures is 60% on upland perennial grasses and 50% on upland browse species.

After the total carrying capacity was determined for each pasture, the AUMs were allocated to livestock and wild horses using the following ratios recommended in the last allotment evaluation.

1988 Allotment Evaluation AUMs and Ratios

Pasture	Livestock	Wild Horses
Calico	2563 (59%)	1788 (41%)
Dolly Varden*	1596 (57%)	1200 (43%)
Buffalo Hills	2563 (44%)	3264 (56%)
Granite*	1596 (64%)	912 (36%)

* to facilitate the management of the priority mule deer and bighorn sheep habitat in the Granite Range the AML for wild horses in the Granite Range Herd Management Area were divided so 76 head (912 AUMs) would be in the Granite pasture and 100 head (1200 AUMs) would be in the Dolly Varden pasture.

APPENDIX 2 Weather Station Information (Years of incomplete data)

Denio Elevation - 4185'

Growing season based on 38 years (1952-1991); incomplete for 1964 & 1965.
Annual based on 37 years (1952 -1991); incomplete for 1964, 65 & 87.

Duferrena Elevation - 4800'

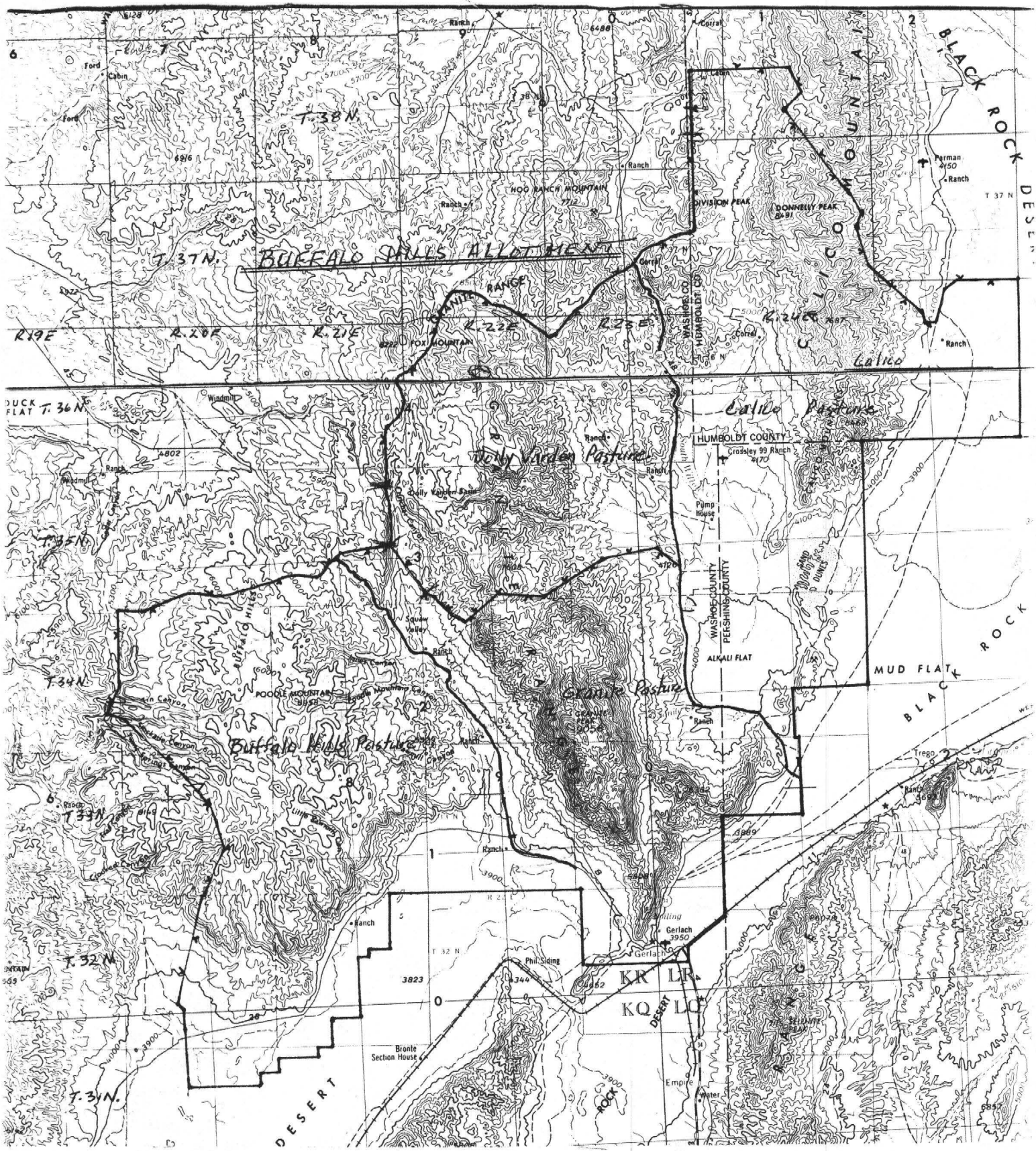
Growing season based on 32 years (1960 -1991).
Annual based on 28 years (1960 -1991); incomplete for 1974, 82, 84 & 86.

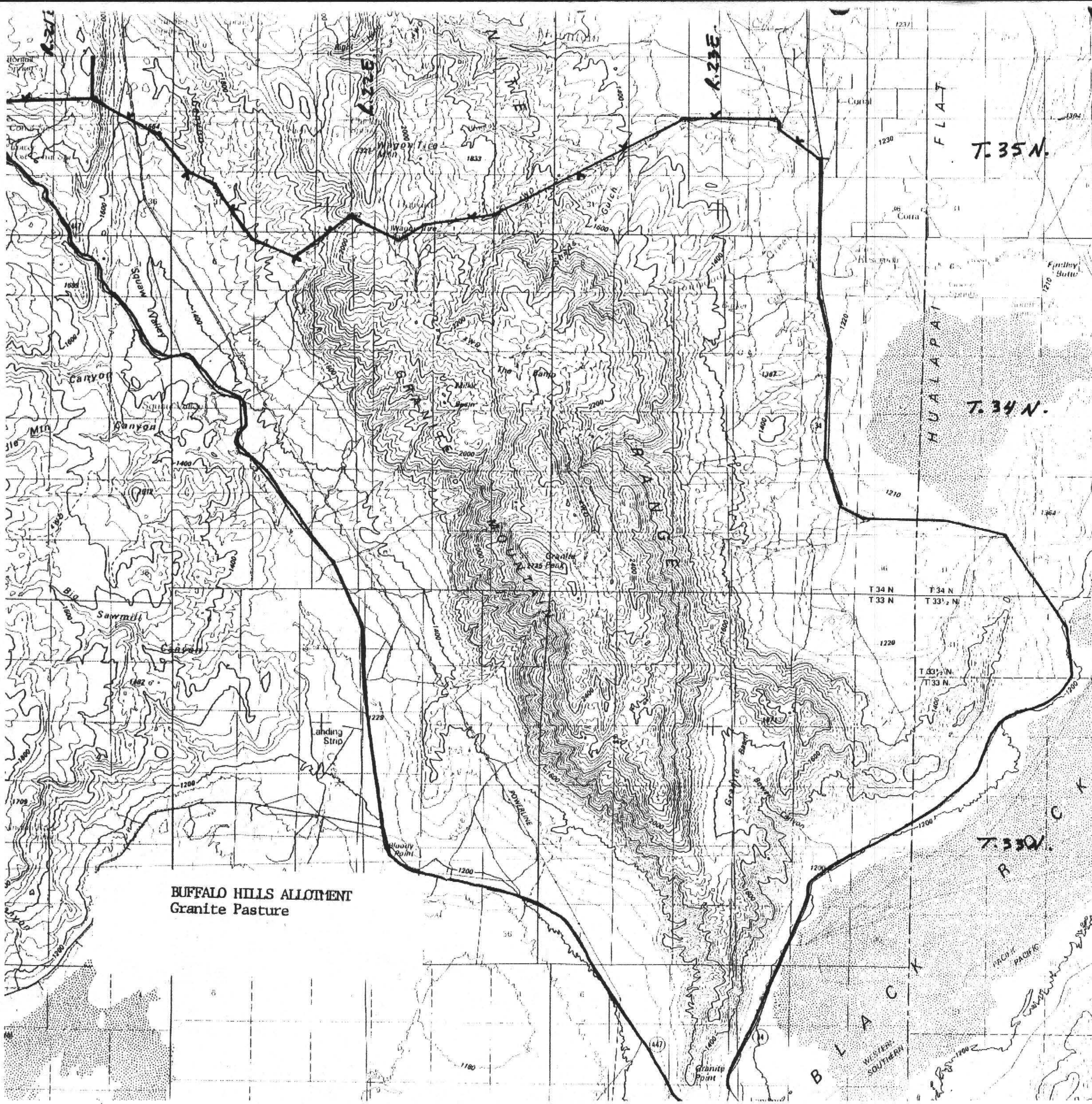
Gerlach Elevation - 3950'

Data from stations at two different locations, but in the same general area. Growing season based on 25 years (1949 - 1991); incomplete for 1950, 58-62, & 73-85. Annual based on 21 years (1949 - 1991); incomplete for 1950, 51, 58-62, & 72-86.

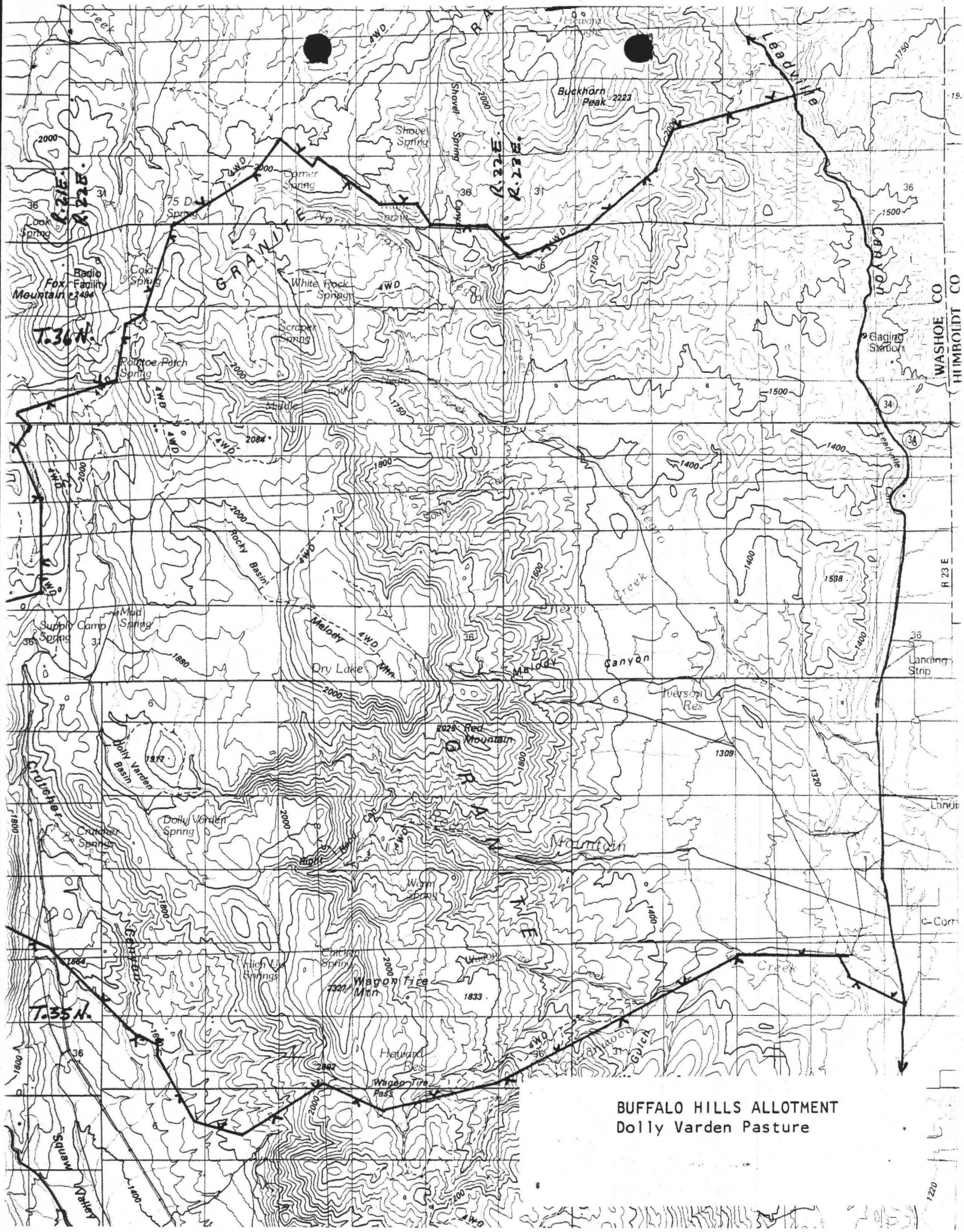
Leonard Crk Elevation - 4220'

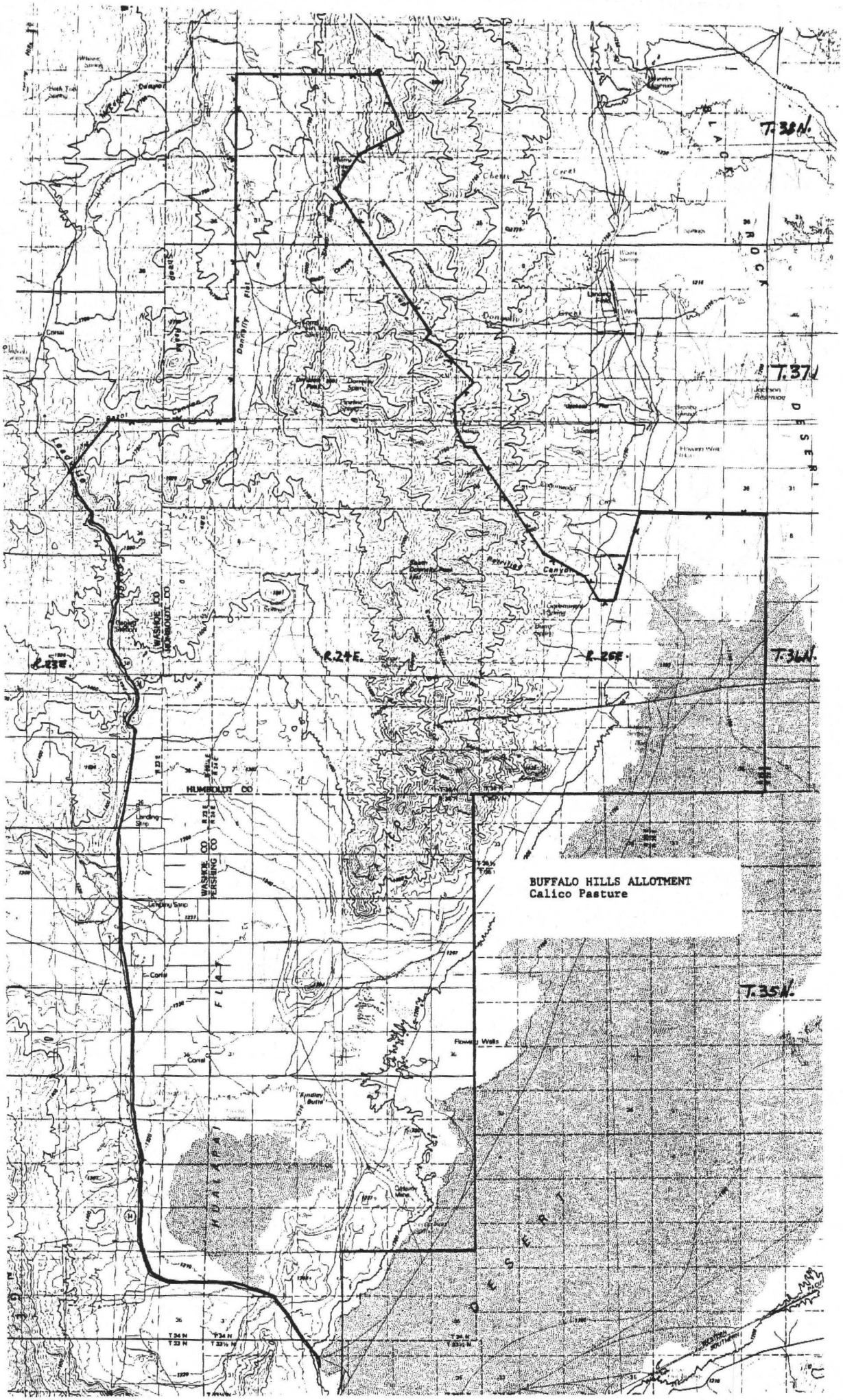
Growing season based on 36 years (1955 - 1991); incomplete for 1980.
Annual based on 32 years (1956 - 1991); incomplete for 1980 - 83.

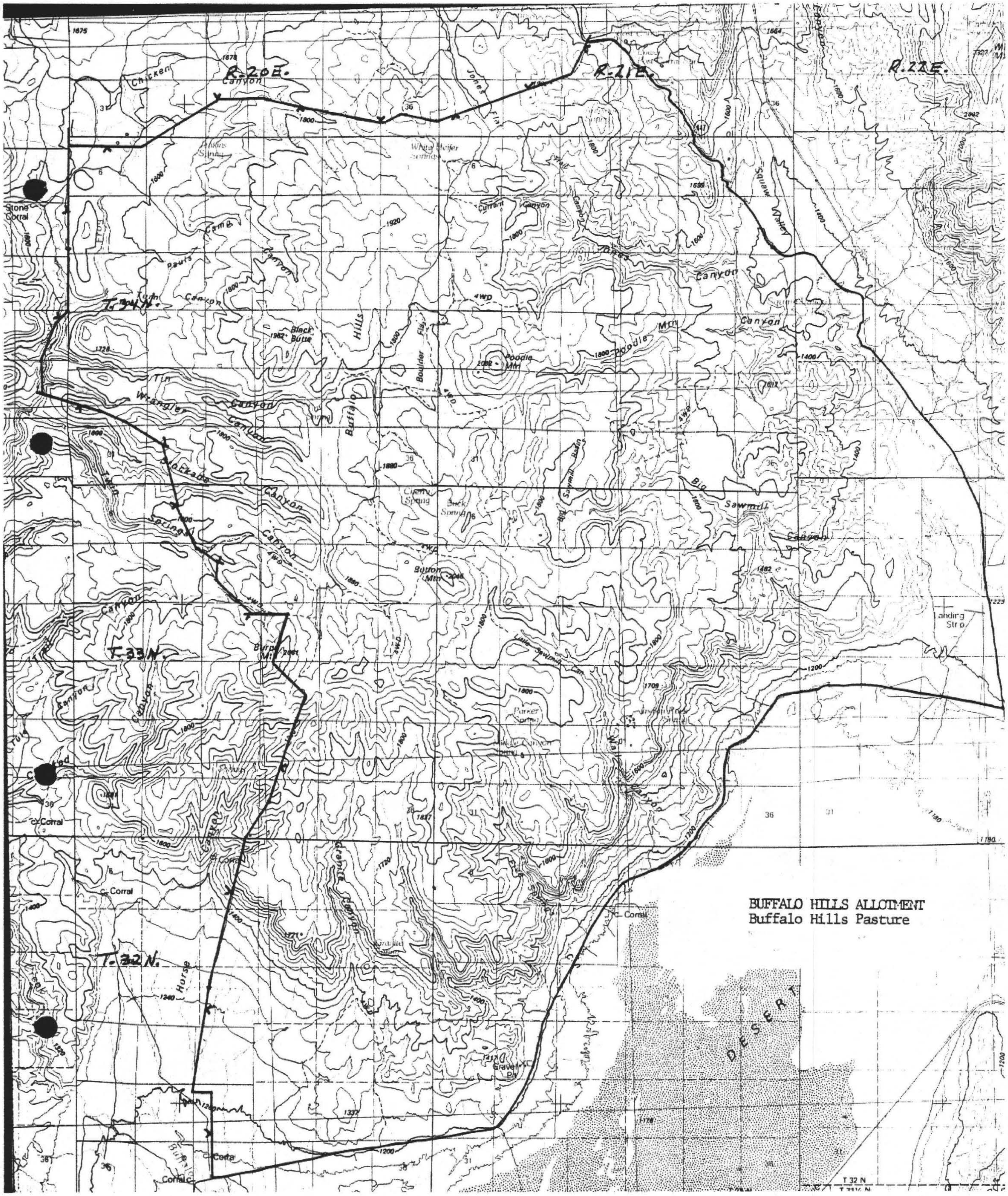

BUFFALO HILLS ALLOTMENT
Calico Pastures
Dolly Varden Pasture
Granite Pasture
Buffalo Hills Pasture
T. 38 N.
T. 37 N.
T. 36 N.
T. 35 N.
T. 34 N.
T. 33 N.
T. 32 N.
T. 34 N.
R. 19 E.
R. 20 E.
R. 21 E.
R. 22 E.
R. 23 E.
R. 24 E.
R. 25 E.
HUMBOLDT COUNTY
WASHOE COUNTY
PERSHING COUNTY
HOG RANCH MOUNTAIN
DIVISION PEAK
DONNELLY PEAK
FOX MOUNTAIN
GRANITE RANGE
BUFFALO HILLS
POODLE MOUNTAIN
GRANITE PEAK
SELDOM SEEN PEAK
ALKALI FLAT
MUD FLAT
BLACK ROCK DESERT
Gerlach
Empire
Bronte
Trego
Crosley 99 Ranch
Pump House
Squaw Valley
Phil Siding
Bronte Section House
KR LR
KQ LQ



BUFFALO HILLS ALLOTMENT
Granite Pasture
T. 35 N.
T. 34 N.
T. 33 N.
R. 22 E.
R. 23 E.
GRANITE RANGE
HUALAPAI FLAT
BLACK ROCK
Granite Peak
The Basin
Wagon Tire Mtn
Canyon
Big Sawmill Canyon
Landing Strip
Bloody Point
Granite Point
Coral
Corral
Findley Butte
T 34 N
T 33 N
T 33½ N
POWERLINE
WESTERN PACIFIC
SOUTHERN PACIFIC
Granite Basin
Bower Canyon


BUFFALO HILLS ALLOTMENT
Dolly Varden Pasture
T.36N.
T.35N.
R.21E.
R.22E.
R.23E.
GRANITE RANGE
Buckhorn Peak 2223
Fox Mountain 2494
Radio Facility
75 Dry Spring
Cold Spring
Corner Spring
Shovel Spring
White Rock Spring
Scraper Spring
Rottoe Patch Spring
Middle Fork Willow Creek
Rocky Basin
Mud Spring
Supply Camp Spring
Melody
Dry Lake
Red Mountain 2025
Dolly Varden Basin
Dolly Varden Spring
Crutcher Springs
Crutcher
Right Fork Willow Creek
Warm Spring
Chicken Spring
High Line Springs
Wagon Tire Mtn 7321
Wagon Tire Pass
Squaw Gulch
Leadville Canyon
Gaging Station
Tuerson Res
Landing Strip
WASHOE CO
HUMBOLDT CO
4WD


T. 38 N.
T. 37 N.
T. 36 N.
T. 35 N.
R. 23 E.
R. 24 E.
R. 25 E.
HUMBOLDT CO
WASHOE CO
PERSHING CO
LOVELOCK VALLEY
HUMBOLDT RIVER
BUFFALO HILLS ALLOTMENT
Calico Pasture


BUFFALO HILLS ALLOTMENT
Buffalo Hills Pasture
R.20E.
R.21E.
R.22E.
T.34N.
T.33N.
T.32N.
Chicken Canyon
Jones Flat
White Heifer Spring
Stone Corral
Pauls Canyon
Black Butte
Buffalo Hills
Boulder Flat
Poodle Mtn
Tin Canyon
Wrangler Canyon
Big Sawmill Canyon
Button Mtn
Little Sawmill Can
Parker Spring
Landing Strip
Squaw Valley
Granite Canyon
Horse Canyon
Gravel Pit
DESERT
Corral

11/5/92

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

WILLIAM A. MOLINI
Director

November 5, 1992

Mr. Bud Cribley
Sonoma-Gerlach Resource Area
Bureau of Land Management
705 East Fourth Street
Winnemucca, Nevada 89445

RE: Buffalo Hills Allotment Re-Evaluation

Dear Bud:

The Buffalo Hills Allotment Evaluation is one of the second generation allotment evaluations and manager decisions in the Sonoma-Gerlach Resource Area. Nevada Department of Wildlife has participated in the allotment planning for the Buffalo Hills since the initiation of the Sonoma-Gerlach land use plan in August of 1982. Our participation began with the Buffalo Hills Coordinated Resource Management Planning Committee in October of 1981 and continued until a committee impasse in 1983. The existing Buffalo Hills Allotment Management Plan did not receive formal review by the Department. The Department reviewed and commented on the Buffalo Hill Allotment Evaluation and Livestock Agreement of October 5, 1988. On January 17, 1989 our agencies entered in to a cooperative agreement of the Fox Mountain Habitat Management Plan. These planning efforts set specific allotment objectives, scheduled monitoring, scheduled range improvement projects, scheduled necessary management actions and coordinated activities to restore, protect and maintain fish and wildlife habitats in the Buffalo Hills Allotment. We view this allotment evaluation as an analysis document for multiple use decisions that will resolve long term resource conflicts that have persisted prior to the Federal Land Policy and Management Act of 1976.

Our review of this document will focus upon the binding obligations of the Bureau's planning processes, the content of its monitoring studies and its recommendations to meet the needs of Nevada's wildlife resources. As stated above, the Department has over ten years of faithful commitment to the Bureau's planning processes for the Buffalo Hills Allotment. Our agency's position must protect our investment and protect our natural resources that

have long awaited meaningful changes in management practices known to cause adverse impacts to critical fish and wildlife habitats.

SPECIFIC COMMENTS

Page 1, Livestock Preference

The Sonoma-Gerlach Final Grazing Environmental Impact Statement's Proposed Action and the Range Program Summary (1988) have different animal unit months assigned to active preference for this allotment. Please explain how and why the livestock preferences were adjusted to the levels stated in this allotment evaluation.

Page 2, II. Summary of 1988 Allotment Evaluation

The 1988 allotment evaluation concluded that "browse utilization is increasing and exceeds key plant species utilization objectives"; and further states: "Browse utilization studies indicate this objective is not being met for bitterbrush, serviceberry, and snowberry in those sites adjoining the Fox Mountain and Middle Fork Fires."

These statements found in the 1988 allotment evaluation are contrary to the statement found in the 1992 allotment evaluation stating: "upland short term utilization objectives were met in the priority mule deer habitat adjoining the Fox Mountain Fire".

We are unaware of any study that supports the concept that wild horses forage on key mountain browse species critical to big game. Bitterbrush is heavily used by livestock during and after seed ripe. It is reasonable to conclude from the findings of the 1988 data and known phenology of bitterbrush, that the past seasons of use for livestock were in direct conflict with short term upland objectives for the allotment.

We recommend that section be expanded to explain the conclusions of the 1988 allotment evaluation in relationship to this evaluation.

Page 3, Allotment Objectives from the 1988 Evaluation

We were not consulted regarding the Buffalo Hill Allotment Management Plan. If allotment specific objectives are within the allotment management plan and consistent with other activity plans, they should be included in this section.

The Fox Mountain Habitat Management Plan was signed on January 20, 1989 by the Winnemucca District Manager. This activity plan followed the 1988 Allotment Evaluation. We recognize this habitat management plan as a binding activity plan for the Buffalo Allotment. Allotment specific objectives found on pages seven through ten must be included for this evaluation.

Page 7, Management Actions

The 1988 Allotment Evaluation resulted in a Livestock Agreement. This agreement set allotment specific objectives, re-authorized active preference, set seasons of use, prescribed a grazing system, set key species, set allowable use levels, described monitoring, set adjustment procedures and schedule this allotment evaluation.

Conditions of the 1988 Livestock Agreement were to be the terms and conditions of annual grazing licenses. The Department recognizes these conditions to be binding on the permittee and the Bureau. We suggest that this section of the allotment evaluation better describe the 1988 management actions beyond just a "grazing system" for the permittee.

Planned actions to meet the specific allotment objectives of the Fox Mountain Habitat Management Plan, Buffalo Hills Allotment Management Plan and Buffalo Hills Allotment Evaluation (1988) are found on pages ten through 14 of the habitat management plan. These actions include the Bureau's obligation to monitor, do cooperative projects, allow for species reintroduction and do livestock mitigation projects. These management actions must be listed into this section for this evaluation.

Page 10, Wild Horses

Please provide the methodology and data to establish wild horse populations.

Until quantitative data and analysis can verify the wild horse population estimates the actual use cannot be estimated.

Page 15, Utilization

The Fox Mountain Habitat Management Plan identified tufted hair grass, aster, wild rose and clover as key species. These species were not included in the list of key species.

Key areas for fish and wildlife were identified in the Fox Mountain Habitat Management Plan. These key areas included

mountain browse species in the Fox Mountain Area. In addition to key species and key area monitoring studies, the habitat management plan stated methodologies and schedules. These specific allotment monitoring studies must be included for this evaluation.

Page 25, Riparian and Fisheries Habitat

The Habitat Inventory and Evaluation Section of previous allotment evaluations has been excluded. The 1988 Buffalo Hills Allotment Evaluation and the Fox Mountain Habitat Management Plan provided the detail and methodology to complete a habitat evaluation. We suggest this section be included.

Riparian analysis should include the status of Planned Actions found in the Fox Mountain Habitat Management Plan. It appears that specific allotment objectives, key areas, key species and monitoring methodologies of our cooperative agreement were not implemented according to schedule and were not considered in this allotment evaluation. This matter must be addressed.

Page 26, Wild Horse and Burro Distribution

Survey data should be analyzed to illustrate seasonal use and movement of wild horses. It is reasonable to assume that these feral animals behave like wild ungulates and move according to forage, water and cover conditions. Key summer ranges and winter ranges should be delineated to properly estimate carrying capacities and conduct meaningful monitor studies. Without detailed distribution data and accountable population estimates, monitoring studies cannot be established to evaluate the effectiveness of management decisions.

Page 34, Conclusions

Mountain browse species were not addressed. Allowable use levels, key species, key areas and specific monitoring studies have all been identified to the Bureau. All these essential elements are required for the Bureau to evaluate its management practices effectiveness in meeting its land use plan. The land use plan MFP III Decisions go as far as to set aside 7,680 acres of this allotment for the primary purpose of mule deer. Without full consideration of key mule deer habitats in this allotment evaluation, we can only assume that the continuation of adverse management practices will contribute to the ongoing loss of critical mountain browse communities.

Riparian and stream environments are being overgrazed. Stream and wetland riparian short term objectives are not being met. Riparian protection fences scheduled in the Fox Mountain Habitat Management Plan are not completed. These fences are the long term solutions to mitigate livestock and wild horse damage to critical wildlife habitats. Interim measures to limit livestock and wild horse use to 30 or 50 percent on these key areas have not been monitored or enforced. These limits were established in the Draft Environmental Impact Statement, Buffalo Hill Allotment Evaluation, Buffalo Hills Allotment Management Plan, Fox Mountain Habitat Management Plan and the Livestock Agreement. The grazing system of the Livestock Agreement was intended to resolve the livestock distribution problems and meet the short term vegetation utilization limits.

Wild horse populations have not been managed within the carrying capacity of the Buffalo Hill Allotment. Monitoring data indicated that wild horses were consuming significant proportions of available forage of this allotment for over five years. Despite the over use of available forage by wild horses, the District continue to authorize livestock grazing for forage that was not available.

Page 43, Recommendations

Carrying capacities for livestock and wild horses were not established upon monitoring studies pertinent to key fish and wildlife habitats. Seasons of use for livestock did not consider phenology and the findings of monitoring data. For example, summer/fall use of Dolly Varden Pasture will increase livestock use of bitterbrush on the Middle Fire. Summer stocking levels will not meet short term objectives for streams. Monitoring data has shown that two years rest does not allow for recovery of two consecutive seasons of use. Fencing of Red Mountain Creek is the only example of meeting allotment objectives.

Requantified objectives to management actions were perceived as the assurances in the 1988 Livestock Agreement that riparian damage would cease. We supported this concept in 1988 and find that the failure to monitor by the Bureau and the failure to comply by the permittee have resulted in four additional years of damage to riparian vegetation.

Extending time frames to meet short term and long term objectives to the year 2017 is unreasonable. The Federal Land Management and Policy Act of 1976 mandated sustained yield and multiple use management of public lands. After fifteen years of this Act, and ten years of the land use plan, it would be

reasonable to expect some achievement of land use plan objectives rather than extending time frames.

We do not recognize "desired plan community". It appears to be a new concept to divert land use planning and prolong decisions to resolve conflicts.

Monitoring studies of the 1988 and 1992 Buffalo Hills Allotment Evaluations indicate that 30 percent utilization of stream bank riparian cannot be met. Failure to monitor these streams since 1989 is contrary to the Livestock Agreement and Fox Mountain Habitat Management Plan. The decision to fence these and other riparian areas was made in the habitat management plan. Many of the fences were to be built by 1992. We suggest that the Bureau does not have the ability to build protective fences or monitor adequately to enforce compliance with existing terms and conditions of livestock grazing licenses. Additionally, wild horse numbers and distribution data cannot assure that the proposed removal will stop damage to critical fish and wildlife habitats.

The proposed monitoring studies do not support the proposed requantified allotment objectives. For example, if the management action is to prevent livestock and wild horses from exceeding 30 percent of streambank riparian vegetation, then monitoring must occur during the grazing season. Also, if mid-season monitoring indicates current grazing is approaching 30%, it is reasonable that livestock would have to be removed. We fail to find meaningful monitoring or management actions that will assure that resource damage will cease in a forthcoming decision.

We strongly suggest the Bureau present alternatives or selective management options to address these concerns. We hope our comments will assist the District with the final allotment evaluation and manager's multiple use decisions.

Sincerely,

WILLIAM A. MOLINI, DIRECTOR

Roy Leach

Roy Leach
Acting Regional Manager
Region I

REL:rl/
CC: Habitat, Reno
Mike Dobel, Mark Warren

11-25-92

BOB MILLER
Governor

STATE OF NEVADA

CATHERINE BARCOMB
Executive Director

COMMISSIONERS

Dan Keiserman,
Las Vegas, Nevada

Michael Kirk, D.V.M., *Chairman*
Reno, Nevada

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Carson City, Nevada

Steven Fulstone
Smith Valley, Nevada

Dawn Lappin
Reno, Nevada

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

November 25, 1992

Bud Cribley, Area Manager
BLM Sonoma Gerlach Resource Area
705 East Fourth Street
Winnemucca, Nevada 89445

RE: Buffalo Hills Allotment Re-Evaluation

Dear Mr. Cribley,

Thank you for the opportunity to review and comment on the Buffalo Hills Allotment Re-Evaluation and for taking the time from your busy schedule for yourself and your staff to come to Reno to discuss this evaluation with us.

Issue Land Use Planning and Activity Plans

Draft CRMP proposed to reduce horses to 542 head in FY 86, remove all burros and eliminate horse use of Coyote Allotment and prepare wild horse management plans by FY 85. CRMP Plan was never finalized or implemented.

Since no CRMP or HMAP or formal agreement was prepared to set AML's, the allotment evaluations/multiple use decision must set wild horse numbers wit "adequate and supportable resource data" (MFP III 1.1.1).

Buffalo Hills Allotment has a signed allotment management plan, habitat management plan and livestock agreement to set allotment specific objectives, schedule planned management actions, describe appropriate monitoring studies and schedule allotment evaluations. Failure to prepare the appropriate wild horse activity plans has disregarded the District obligation to set AML's, establish herd parameters, adjust numbers and monitor the effects of its management actions affecting the welfare of wild horses. According to schedules proposed in CRMP, wild horse planning and management has been seriously curtailed.

Specific Comments to Buffalo Hills Allotment Evaluation

Page 10, Actual Use, Wild Horses

From our discussions with the District, wild horse populations were estimated from actual observed numbers with the assumption of 11 percent recruitment. Without the appropriate activity plan to explain population estimates, we request additional data and analysis be presented to support the current wild horse estimates.

For example, if in 1991 the District observed 379 wild horses in the Granite Pasture of the Granite HMA, and if the District assumes 80 to 90% observation, then the percentage of colts observed should support the assumption of 11 percent recruitment made on Page 11.

Page 13, Wild Horse Removal Data

The number and composition of wild horses removed from the allotment is essential for future management of the herd. If the removal in 1990 of 408 horses comprised of young productive mares, then survey data collected in 1991 should quantify the recruitment rate assumption of the population estimate.

Page 15, Utilization

Monitoring studies do not determine wild horse use of key areas and key species. It would appear that the livestock grazing system that allows for two years complete rest would allow for a monitoring system to define specifically the wild horse use of rested pastures. Key areas for wild horses correspond with key areas for wildlife and livestock. Streambank riparian and wetland key areas are defined in existing activity plans and previous allotment evaluations. Utilization data specific to wild horse use should be expressed in this Section. We submit also, that the same criteria for utilization on riparian habitat apply to both wild horses and livestock.

Page 31, Conclusions

Wild Horse numbers and distribution data have been expressed but not analyzed. conclusions must include specific use or effects by wild horses in meeting allotment specific use or effects by wild horses in meeting allotment specific objectives. The fact that allowable use levels or short term objectives (i.e. 30% limit on streambank riparian) have been exceeded by excessive wild horse numbers and poor livestock distribution is not acceptable.

For example, if utilization limits were exceeded at Donnelly Creek in 1990 and 191 by excessive wild horse numbers and poor livestock distribution, then actual use data should determine which Pasture. Calico Pasture received livestock and wild horse use in 1990 and only wild horse use in 1991. Stocking rates and wild horse numbers are known, utilization mapping data are available and the allotment evaluation should analyze these data to propose the necessary adjustments to protect Donnelly Creek.

Utilization limits for key species in key areas should be proportionately allocated to the user. We support existing utilization limits not be increased or decreased without supportive monitoring data. These limits should be applied to livestock, wild horses and wildlife in exactly the same manner.

Utilization limits must be monitored for compliance in both scheduled and rested pastures.

Page 50, Thriving Natural Ecological Balance

Adjusting wild horse numbers to meet a thriving natural ecological balance must include carrying capacity estimates based upon monitoring studies. Since CRMP failed, the District did not

prepare a herd management plan and no formal agreement between affected interests (WHB 1.1) have established herd numbers, the allotment evaluation must set AML's with adequate and supportable data. It would appear that the data exists, but was not analyzed. We request that methodology shown on page 56 be used. We suggest that utilization limits of the short term objectives not be changed and that streambank and wetland riparian habitats be fully considered. We expect the same data and analysis will be applied to wildlife and livestock.

Page 53, Monitoring

In absence of a proper activity plan, we will rely on the District Multiple Use Decision for Wild Horses to implement its land use plans and protect natural resources. We suggest that monitoring be a specific part of this decision. We submit that streambank and wetland meadows be considered key areas for wild horses. Monitoring must include aerial surveys that provide herd composition and distribution data to make population estimates, measure recruitment, quantify actual data to make population estimate mortality rates. Unless meaningful population data can be analyzed with use pattern mapping data the balance or carrying capacity for wild horses cannot be accurately estimated or achieved.

If you have any questions or would care to discuss this further please don't hesitate to call.

Sincerely,

Catherine Barcomb

CATHERINE BARCOMB
Executive Director

11/25/92

WHOA
WILD HORSE ORGANIZED ASSISTANCE
P.O. BOX 555
RENO, NEVADA 89504
(702) 851-4817

Buffalo Hills HMA

November 25, 1992

Bud Cribley, Area Manager
BLM Sonoma Gerlach Resource Area
705 East Fourth Street
Winnemucca, Nevada 89445

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Sincerely,

DAWN Y. LAPPIN
Director

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11/26/92

SIERRA CLUB

Toiyabe Chapter — Nevada and Eastern California
P.O. Box 8096, Reno, Nevada 89507

November 26, 1992

Bud Cribley, Manager
BLM/Sonoma-Gerlach Resource Area
705 E. 4th St.
Winnemucca, NV 89445

Dear Manager Cribley,

Thank you for sending the Sierra Club copies of the Buffalo Hills Allotment Evaluation as well as the Fox Mountains Habitat Mgt. Plan and the Buffalo Hills-Calico Allotment Mgt. Plan. The documents were very useful to us in preparing for the 11/23/92 meeting in Reno on the Buffalo Hills AE. Thank you also for arranging the meeting. While some of our questions were answered in the meeting, we weren't able to raise all of our concerns or get answers to all of our questions. The following comments are submitted on behalf of the 3800+ members of the Toiyabe Chapter of the Sierra Club and on behalf of Johanna Wald and the Natural Resources Defense Council.

Inconsistency with other Plan commitments: First, we include here by reference the 11/5/92 written comment of the NV Dept. of Wildlife as our review uncovered many of the same points on the lack of consistency in objectives, key species and sites, monitoring, and recommendations on necessary management actions between the various planning documents on this allotment, especially the omission of key wildlife habitat elements of the Fox Mountain HMP. **RECOMMENDATION:** Include all of the BLM's prior commitments on objectives, management actions, and monitoring in the re-evaluation.

Progress Report on Allotment Specific Objectives: The Progress Report forms in the Fox Mtn. HMP, starting on p. 15 appears to be an excellent way to present the status of prior BLM commitments. **RECOMMENDATION:** Please list all of the objectives, planned actions, and evaluation/monitoring and dates completed in the reevaluation.

Monitoring: We are extremely dismayed by the Bureau's failure to carry out its monitoring commitments, especially on riparian areas. No data has been collected since 1977 on Granite Creek, 1987 on Cottonwood Creek, 1988 on Donnelly Creek and Rock Creek, and since 1989 on Wagon Tire Creek and Red Mountain Creek. No monitoring was done since 1989 of livestock utilization in Calico, Buffalo Hills, and Granite Pastures. Only the Dolly Varden Pasture was monitored in 1990. No monitoring was done at all in 1991 except for use pattern mapping in the Granite Pasture nor is any reported in 1992. Why didn't the BLM monitor livestock use and riparian areas, as committed to in the 1988 AE,

the AMP, and the HMP? **RECOMMENDATIONS:** 1. If monitoring has occurred in the last two years, it should be included in the reevaluation. Will the BLM continue to fail to honor its monitoring commitments. 2. Add another management action: if required monitoring is not done as scheduled, the BLM will not issue a livestock grazing permit the following grazing season.

Riparian Area Protection: Other than fencing part of Red Mountain Creek, we cannot find any BLM action which will significantly protect riparian areas from degradation by livestock. Removing excess wild horses will lessen the overuse of these critical areas somewhat. However, we believe that the BLM could remove every wild horse and if it took no actions to control livestock (except to talk to the permittee about herding), the riparian areas will continue to be sacrificed. We do support the only exception to this "do nothing with livestock scenario" - your recommendation to move livestock when 30% utilization is reached. However, since the BLM has been unable to conduct required monitoring in the past, we believe it is highly unlikely that BLM staff will be able to monitor whether 30% utilization has been reached and moving livestock therefore will not be triggered. Instead, livestock will continue to devastate riparian areas, in direct violation of land use and allotment plan objectives and the Bureau's Riparian Policy. **RECOMMENDATION:** We therefore request that the fencing of riparian areas which BLM committed to in the Fox Mountain HMP be scheduled in 1993.

Stocking Rates: We totally reject your proposal to base stocking rates on utilization rates of 60% for uplands and 40% for riparians. This is a direct violation of land use plan and area specific utilization objectives. **RECOMMENDATIONS:** Recalculate the stocking rate for livestock and wild horses by basing desired utilization on utilization rates in the land use plan and in area specific plans - 50% for uplands and 30% for riparians. In addition, recalculate stocking rates for certain areas by considering the utilization limits for special areas identified in the Fox Mountain HMP - critical deer and big horn sheep areas.

Conclusions: Basically, we reject your conclusions that excess wild horse numbers are the reason most of your short and long term objectives have not been met. While wild horses are excess in this allotment, wild horses are not the reason BLM has not collected monitoring information on long-term objectives #2, #3, #4, #5, #6, #8, #13, and #14. Wild horses are not the only reason riparian areas are being destroyed, yet the BLM proposes drastic wild horse reductions and status quo on livestock numbers and a promise to "meet with the permittees" to develop a "strategy" to keep livestock out of riparians. We wonder why it has taken 10 years since the Land Use Plan for BLM to decide to "talk to the permittees" about better management. We object and will oppose any "water development project for livestock" until every riparian area in the allotment is in satisfactory

condition. Stocking rates have been incorrectly calculated based on exceeding utilization limits for uplands and riparians and not considering protecting special wildlife habitat areas. Contrary to BLM Riparian Policy, your proposed actions will knowingly sacrifice these critical areas in the Buffalo Hills Allotment.

"**Range Improvements**:" While not unimportant, these three fence changes are not as critical as protecting riparian areas. **RECOMMENDTION:** Substitute the wildlife projects committed to in the HMP for the 3 fence projects on p. 53.

"**Short" and "Long" Term**: Exactly what do you mean by short term and long term (p.47)? In our estimation short term means five years after the land use plan and ROD and/or five years of monitoring. 2001 is 18 years after the LUP: it is not short term. Is the BLM planning to extend its definition of short and long term in order to never have to meet its objectives? **RECOMMENDATION:** Clarify short and long term.

Monitoring Commitments: The list of monitoring promised on pp. 53 and 54 is quite impressive, however, it does not include all of the monitoring commitments in the HMP. Given continuing limited BLM resources and the past track record, we question whether the Bureau will be able to carry out these actions. **RECOMMENDATIONS:** 1. Add HMP monitoring commitments to the reevaluation. 2. Priortize which monitoring actions will definitely occur and which ones will occur if the BLM gets around to it.

FONSI: Under what authority is BLM issuing a FONSI on an Allotment Evaluation? Is this a BLM claim that an AE is the equivalent of an environmental assessment? Please explain.

Other issues: Why weren't domestic sheep trailing and chronic livestock trespass, both known and suspected, included in this AE?

Thank you for considering our concerns. Let us know the BLM response to our recommendations and questions.

Sincerely,

/s/

Rose Strickland, Chair
Public Lands Committee