7/3/91

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:

JUL 0 3 1991

4400
(NV-241)

Mrs. Dawn Lappin
Wild Horse Organ. Assist.
P.O. Box 555
Reno, NV 89505

Dear Mrs. Lappin:

Enclosed please find a copy of the draft Paiute Meadows Allotment Evaluation for your review and comment. Please submit any comments on this evaluation by July 26, 1991.

Following the receipt of comments a final evaluation and a proposed multiple use decision will be developed and sent to you. The proposed decision will indicate the selected action for management of the Paiute Meadows Allotment.

If you have any questions concerning the evaluation or the review process please contact Jeff Rawson of my staff.

Sincerely yours,

Acting Area Manager
Paradise-Denio Resource Area

Enclosures: Draft Paiute Meadows Evaluation

July 1, 1991

PAIUTE MEADOWS DRAFT
ALLOTMENT EVALUATION SUMMARY

I. INTRODUCTION

A. Paiute Meadows Allotment (00057)

B. Permittee - Daniel H. Russell

C. Evaluation Period - 10/14/83 to present

D. Selective Management Category I

II. INITIAL STOCKING LEVEL

A. Livestock Use

1. Grazing Preference (AUMs)

a.	Total Preference	- 9,932
b.	Suspended Preference	- 2,105
c.	Active Preference	- 7,827
d.	Not Scheduled (Nonuse)	- 3,477
e.	Authorized Active Preference	- 4,350

The authorized grazing use for the Paiute Meadows Allotment during 1990 was adjusted to 4,350 AUMs in conjunction with the transfer of grazing preference to Dan Russell dated 01/05/90.

2. Season of Use - 05/01-11/05

During 1990 the season of use was also adjusted in conjunction with the transfer of grazing preference to Dan Russell dated 01/05/90.

3. Kind and Class of Livestock - Cattle, Cow/Calf

4. Percent Federal - 97%

5. Grazing System

During 1990 in conjunction with the transfer of grazing preference to Dan Russell dated 01/05/90, grazing use was authorized north of Paiute Creek with herding practices designed to control drift of livestock south of Paiute Creek. For the years 1988-1989 cattle were also turned out north of Paiute Creek, controlling drift south of Paiute Creek. Prior to 1990 there has not been a stable livestock operation on this allotment since 1981. Grazing use has not been at full active preference during the period 1983-1990. The active preference for the allotment has been 7,827 AUMs since at least 1983. The permittee has turned out in the spring and gathered in the fall. During the period 1983-1990 licensed livestock cattle use has varied as follows:

1983	No use
1984	6,283 AUMs
1985	4,896 AUMs
1986	No use
1987	No use
1988	1,143 AUMs
1989	2,342 AUMs
1990	4,350 AUMs

B. Wild Horse and Burro Use

The Black Rock East Herd Management Area (HMA) encompasses a portion of the allotment. The identified level of use in the Paradise-Denio Land Use Plan is 59 wild horses and 0 burros. In accordance with the June 1989 Interior Board of Land Appeals (IBLA) ruling, future adjustment for wild horses will be made based on monitoring data, similar to adjustments for livestock. Prior to the June 1989 IBLA ruling, the appropriate management levels (AMLs) were established in the Paradise-Denio Land Use Plan and by District Manager's Decision (MFP III) after consultation, coordination and cooperation with affected interests.

C. Wildlife Use

1. Reasonable Numbers by big game species

Mule Deer	Pronghorn Antelope	Bighorn Sheep
1,939 AUMs	307 AUMs	180 AUMs (when introduced)

2. Wildlife Use Areas within the allotment:

Black Rock DY-13	2,134 acres
Black Rock DW-10	41,678 acres
Black Rock DS-6	45,856 acres
Black Rock PS-15	45,965 acres
Black Rock PY-14	35,274 acres
Leonard Creek PW-17 (Concentration)	2,043 acres
Paiute Creek PW-16 (Concentration)	31,466 acres
Black Rock BY-15 (Potential)	69,939 acres

These measurements correspond to the wildlife use areas as of the URA update of 1986-1988. Since then, in consultation with NDOW, the boundaries have been redrawn to reconcile discrepancies at the S-G/P-D Resource Area Boundary along the crest of the Black Rock Range.

3. Sage Grouse

Two sage grouse strutting grounds have been identified in the Paiute Meadows allotment, one at the south end and one at the east end. One additional strutting ground is identified adjacent to the allotment in the Bartlett Creek drainage. However, several brooding areas are identified scattered throughout the allotment which would indicate that additional strutting grounds are present. Two winter use areas for sage grouse have also been identified, one each near the Paiute Creek and Bartlett Creek drainages.

III. ALLOTMENT PROFILE

A. Description

The Paiute Meadows Allotment is located in the western portion of Humboldt County. The allotment is approximately 40 air miles south, southwest of Denio, Nevada and encompasses the east side of

the Black Rock Range. The allotment ranges in elevation from 4,000' to 8,631'. The lower elevations are dominated by shadscale and greasewood vegetation types. As elevation increases vegetation changes to sagebrush; mountain browse; aspen and mountain mahogany vegetation types.

B. Acreage

1. Allotment Acres

a.	Public acres	177,096 acres
b.	Private acres	5,170 acres
c.	Allotment Total	182,266 acres

C. Objectives

1. Land Use Plan Objectives

a. Objective RM-1

To provide forage on a sustained yield basis through natural regeneration. Reverse downward deterioration of public grazing lands by improving 1,000,000 acres in poor condition to fair condition, and 400,000 acres in fair condition to good condition within 30 years.

b. Objective RM-2

Increase existing allocatable livestock forage by artificial methods from the present 103,721 AUMs to approximately 193,472 AUMs (89,751 AUM increase) within 30 years.

c. Objective WLA-1

Improve and maintain the condition of all the aquatic habitat of each stream, lake, or reservoir having the potential to support a sport fishery at a level conducive to the establishment and maintenance of a healthy fish community.

d. Objective WL-1

Improvement and maintenance of a sufficient quantity, quality, and diversity of habitat for all species of wildlife in the planning area.

e. Objective W-1

Preservation and improvement of quality water necessary to support current and future uses.

f. Objective W-2

Provision of adequate water to support public land uses.

g. Objective W-3

Reduction of soil loss and associated flood and sediment damage from public lands caused by accelerated erosion (man-induced) from wind and water.

h. Objective WH/B-1

Maintain wild horses and burros on public lands, where there were wild horses or burro use as of December 15, 1971, and maintain a natural ecological balance on the public lands.

2. Rangeland Program Summary Objectives

a. Livestock Management Objectives

1) Increase available forage for livestock to sustain an active preference of 7,827 AUMs.

2) Improve range condition from poor to fair on 161,158 acres and fair to good on 15,938 acres.

3) Develop a livestock grazing plan that will alleviate the following problems:

a) Inadequate livestock distribution.
b) Excessive stocking rate.
c) Improper season of use.

b. Wildlife Management Objectives

1) Manage rangeland habitat and forage condition to support reasonable numbers of wildlife demand as follows:

Deer	1,838 AUMs
Antelope	307 AUMs
Bighorn Sheep (when introduced)	180 AUMs

2) Improve condition of deteriorating upland meadows.

3) Protect sage grouse breeding complexes.

4) Improve and maintain the condition of aquatic habitat and riparian zones having the potential to support a sport fishery on Battle, Bartlett, and Paiute Creeks.

c. Wild Horse Management Objective

1) Graze 59 (708 AUMs) wild horses in the Black Rock Range - East Herd Use Area.

3. Allotment Objectives

The allotment specific objectives tie the Land Use Plan and RPS Objectives together into quantified objectives for this allotment.

a. Short Term

1) Utilization of key streambank riparian plant species shall not exceed 30% on Paiute, Battle and Bartlett Creeks. [1]

2) Utilization of key plant species in wetland riparian habitats shall not exceed 50%. [1]

3) Utilization of key plant species in upland habitats shall not exceed 50%. [1]

4) Utilization of crested wheatgrass shall not exceed 50%. [1]

b. Long Term

1) Manage, maintain, or improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 1,838 AUMs for mule deer, 307 AUMs for pronghorn, and 180 AUMs for bighorn sheep. (WL-1, W-3, RPS b)

a) Improve to or maintain 2,134 acres in Black Rock DY-13, 41,678 acres in Black Rock DW-10, and 45,856 acres in Black Rock DS-6 in good or excellent mule deer habitat condition.

b) Improve or maintain 45,965 acres in Black Rock PS-15 in good pronghorn habitat condition. Improve to or maintain 35,274 acres in Black Rock PY-14, 2,623 acres in Leonard Creek PW-17, and 31,466 acres in Paiute Creek PW-16 in fair or good pronghorn habitat condition.

c) Improve to or maintain 69,939 acres in Black Rock BY-15 in good to excellent bighorn sheep habitat condition.

2) Manage, maintain, or improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 7,827 AUMs. (RM-1 a, RPS a)

3) Improve range condition from poor to fair on 161,158 acres and from fair to good on 15,938 acres. [2] (RM-1, RM-2, RPS a.2)

4) Maintain and improve the free-roaming behavior of wild horses by protecting and enhancing their home ranges. (WH/B-1)

   a) Manage, maintain, or improve public rangeland conditions to provide an initial level of 708 AUMs of forage on a sustained yield basis for 59 (AML) wild horses and maintain a thriving natural ecological balance. (WH/B-1, RPS c)

   b) Maintain and improve wild horse habitat by assuring free access to water. (WH/B-1, RPS C.)

5) Improve to or maintain 86 acres of ceanothus habitat types in good condition. [2] (WL-1, RPS b.1)

6) Improve to or maintain 345 acres of mahogany habitat types in good condition. [2] (WL-1, RPS b.1)

7) Improve to or maintain 188 acres of aspen habitat types in good condition. [2] (WL-1, RPS b.1)

8) Improve to or maintain 529 acres of riparian and meadow habitat types in good condition. [2] (WL-1, W-3, RPS b 4.)

9) Improve to or maintain 15 acres of serviceberry, 82 acres of bitterbrush, 55 acres of ephedra, and 112 acres of winterfat vegetation types in good condition. [2]

10) Improve to and maintain stream habitat conditions from 43% on Paiute Creek, 58% on Battle Creek, and 50% on Bartlett Creek to an overall optimum of 60% or above. (WLA-1, RPS b.4)

a) Streambank cover 60% or above.
b) Streambank stability 60% or above.
c) Maximum summer water temperatures below 70° F.
d) Sedimentation below 10%.

11) Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% cover of sagebrush for nesting and winter use. (WL-1, RPS b.3)

12) Improve to and maintain the water quality of Paiute, Battle and Bartlett Creeks to the State criteria set for the following beneficial uses: livestock drinking water, cold water aquatic life, wading (water contact recreation), and wildlife propagation. (WL-1)

13) Improve to or maintain the Paiute seeding in good condition. (5-10 acres per AUM) (RM-2)

[1] The utilization levels will be used to evaluate and adjust management practices over a period of time.

[2] Ecological status will be used to redefine/quantify these objectives where applicable.

D. Key Species Monitored

1. Upland Habitat

Symbol	Scientific Name	Common Name
STTH2	Stipa thurberiana	Thurber's needlegrass
FEID	Festuca idahonensis	Idaho Fescue
STCO3	Stipa columbiana	Columbia needlegrass
POSE	Poa secunda	Sandberg's bluegrass
ORHY	Oryzopsis hymenoides	Indian ricegrass
ELCI2	Elymus cinereus	basin wildrye
AGSP	Agropyron spicatum	bluebunch wheatgrass
ATCO	Atriplex confertifolia	shadscale
BASA3	Balsamorhiza sagittata	arrowleaf balsamroot

Symbol	Scientific Name	Common Name
CRAC2	Crepis acuminata	tapertip hawksbeard
AMAL2	Amelanchier alnifolia	serviceberry
ARSP	Artemisia spinescens	bud sagebrush
PUTR2	Purshia tridentata	antelope bitterbrush
SYOR	Symporicorpos oreophilus	snowberry
EULA5	Eurotia lanata	winterfat
LUPIN	Lupinus	lupine
SIHY	Sitanion hystrix	bottlebrush squirreltail
EPHED	Ephera	ephedra

2. Riparian Habitat

Symbol	Scientific Name	Common Name
AGIN2	Agropyron intermedium	intermediate wheatgrass
CAREX	Carex spp.	sedge
POA++	Poa spp.	bluegrass
JUNCUS	Juncus spp.	rush
POTR5	Populus tremuloides	quaking aspen
ROWO	Rosa woodsii	woods rose
SALIX	Salix spp.	willow

IV. MANAGEMENT EVALUATION

A. Purpose

The purpose of this monitoring evaluation is to assess if current management practices are meeting the allotment specific and LUP objectives and to identify management changes needed to meet objectives.

B. Summary of Studies Data

1. Actual Use

a. Livestock

Year	AUMs Used
1983	0
1984	6,283
1985	4,896
1986	0
1987	0
1988	1,143
1989	2,342
1990	4,350

b. Wildlife (Existing Numbers)

The P-D EIS of 1982 indicated that forage use was 1,869 AUMs for mule deer and 204 AUMs for pronghorn on this allotment for the period 1971-1975. The 1986 forage use was determined to be 2,552 AUMs for mule deer and 615 AUMs by pronghorn. Survey methods to determine forage use differed between the two time periods, so data is not comparable. In general population trends for big game animals has increased on the Black Rock Range in the last 10 years.

c. Wild Horses

1) Census Data

Records indicate that the Black Rock East HMA has been censused ten times since 1974. Census counts were done by helicopter. Census data collected for the period 1974-1990 is as follows:

Year	Date	HMA
1974	Oct. 9	123
1975	Feb. 10	92
1977	April 4-5	282
1979	Feb. 6	261
1979	Sept. 17	471
1980	July 24-25	46
1986	June 12	1075
1987	Oct. 6, 8	666
1989	July 17-18	651
1990	Feb. 12-14	508

The 1987, 1989 and 1990 census indicated wild horses were found north and south of Paiute Creek as follows:

Census Date	Paiute South	Paiute North	Total
1987 (October 6, 7	448	218	666
1989 (July 17, 18)	408	243	651
1990 (February 12-14	264	244	508

2) Actual Use

Forage (AUMs) consumed by wild horses in the Black Rock East (HMA) for the years 1987-1990 indicates more forage was consumed south of Paiute Creek.

Black Rock East (HMA)
Forage Consumption

	South of Paiute Creek		North of Paiute Creek		
Year	# of Wild Horses	Actual Use (AUMs)	# of Wild Horses	Actual Use	HMA Total (AUMs)
1987	448	5,376	218	2,616	7,992
1988	448	4,919	218	2,394	7,313
1988*	207	200	18	18	225
1989	203	1,328	18	118	1,446
1989**	408	2,227	243	1,326	3,553
1990	408	604	243	360	964
1990***	264	2,778	244	2,567	5,345
		17,439 AUMs		9,399 AUMs	26,838 AUMs

* Horse numbers change 12/01/88 due to gather 12/88 to 01/89.
** Horse numbers increase to reflect census on 07/18/89.
*** Horse numbers decrease to reflect census on 02/14/90.
Refer to Appendix for further Actual Use detail.

Wild Horse Gathers

Three wild horse gathers have been completed on the Black Rock East and West HMA's since the winter of 1979-1980. The number of wild horses removed during each gather is as follows:

Year	Black Rock East	Black Rock West	Total
1979/1980	81	944	1,025
1986	193 horses removed from both (HMAs)		193
1988	445*	259	704

* 245 horses were removed from south of Paiute Creek
200 horses were removed from north of Paiute Creek

2. Climatological Data

Climatological Data (NOAA 1983-1989):

Leonard Creek Ranch Station

Precipitation	Growing Season	Annual Total
1983	6.94 M	17.24 M
1984	3.00 M	8.50 M
1985	2.48	6.82 M
1986	4.85 M	9.60 M
1987	5.42	9.30
1988	2.94	8.11
1989	3.98	7.48
1990	4.67	1/

Precipitation in Inches
Growing season March - August
M = Partial or incomplete data

1/ October, November, December data not yet available.

The Leonard Creek Station is 5 miles northeast of the Paiute Meadows Allotment at 4,300' elevation. The Paiute Meadows Allotment ranges in elevation from 4,000' to 8,631'.

A Remote Automated Weather Systems (RAWS) meteorological station (Dry Canyon) was installed in June of 1986 approximately nine miles north of Soldier Meadows Ranch on the west side of the Black Rock Range at an elevation of 4,900'. This station is approximately ten air miles from the Paiute Meadows Allotment.

Dry Canyon RAWS Data

	Annual Total (Inches)
1986 (RAWS)	1.2
1987 (RAWS)	8.7
1988 (RAWS)	5.8
1989 (RAWS)	5.6
1990 (RAWS)	3.9

3. Utilization Data

a. Use Pattern Mapping (UPM)

Use Pattern Mapping (UPM) has been conducted for four (4) years over the period 1987, 1988, 1989 and 1990. During this period (UPM) data indicates that the highest levels of utilization have consistently occurred south of Paiute Creek.

Refer to UPMs in the study file.

For the years 1988, 1989, 1990, cattle were authorized north of Paiute Creek only with some drift south of Paiute Creek.

1) North of Paiute Creek

a) 1987 (Spring/Summer Treatment)
Wild horse use only.

Heavy grazing use covered approximately 2% of the north area and was associated with the lower end of Paiute Creek.

b) 1988 (Spring/Summer Treatment)
Wild horse use only.

Heavy grazing use covered approximately 1% of the north area and was indicated near Burnt Springs and Butte Creek.

A small area of moderate use was recorded along Bartlett Creek. Battle Creek was not mapped in 1988.

c) 1988/1989 (Yearlong Treatment)
Wild horse and cattle use

Heavy grazing use covered approximately 1% of the north area and was indicated near the upper end of Paiute Creek.

A small portion of heavy use occurred along the northern end of Paiute Creek.

Battle Creek and Bartlett Creeks were not mapped.

d) 1989 (Spring/Summer Treatment)
Wild horse use only.

Severe grazing use covered less than 1% of the north area. No heavy use was recorded. Slight to light utilization of streambank riparian vegetation occurred along Paiute and Battle Creeks. Bartlett Creek was not mapped in 1989.

e) 1989/1990 (Yearlong Treatment)
Wild horse and cattle use.

Heavy grazing use covered approximately 19% of the north area. Severe grazing use was not recorded.

Slight to light utilization of streambank riparian vegetation occurred along Paiute Creek. Light use was recorded along Bartlett Creek and light to moderate use along Battle Creek.

f) 1990 (Spring/Summer Treatment)
Wild horse and cattle use.

Heavy grazing use covered approximately 49% of the north area. Severe grazing use covered less than 1% of the north area. Heavy use of streambank riparian vegetation occurred along the north and south forks of Battle Creek. Severe grazing use of streambank riparian vegetation occurred along Paiute Creek, Battle Creek and Bartlett Creek.

2) South of Paiute Creek

a) 1987(Spring/Summer Treatment)
Wild horse use only.

Heavy grazing use covered approximately 10% of the south area and was indicated primarily near developed water sources to include Opal Spring and Sheep Spring.

Severe grazing use covered approximately 11% of the south area and was indicated primarily near Indian and Pidgeon Springs.

b) 1988 (Spring/Summer Treatment)
Wild horse use only.

Heavy grazing use covered approximately 2% of the south area.

Severe use covered approximately 1% of the south area primarily near the seeding.

c) 1989 (Yearlong Treatment)
Wild horse use only.

Heavy use covered approximately 12% of the south area.

Severe use covered approximately 16% of the south area and was indicated near Indian Cave and Pidgeon Springs.

d) 1989 (Spring/Summer Treatment)
Wild horse use only.

Heavy grazing use occurred on approximately 2% of the south area and was primarily near Horse, Cherry and Pidgeon Springs.

Severe use was not recorded.

e) 1989/1990 (Yearlong Treatment)
Wild horse use only.

Heavy grazing use covered approximately 39% of the south area.

Severe grazing use covered approximately 18% of the south area.

f) 1990 (Spring/Summer Treatment)
Wild horse use only.

Heavy grazing use covered approximately 42% of the south area. Severe grazing use covered approximately 16% of the south area primarily on the Paiute Seeding. Severe grazing use was also recorded near some water sources to include Trough Spring, Cancer Spring, Indian Spring, White Rock Spring.

3) Paiute Seeding

The following information is a description of the grazing use patterns by year and use periods for the Paiute Seeding.

a) 1987 (Spring/Summer)

Heavy grazing use covered approximately 100% of the seeded area.

b) 1988 (Spring/Summer)
Heavy grazing use covered approximately 62% of the seeded area.

Severe grazing use covered approximately 38% of the seeded area.

c) 1989 UPM

Severe grazing use was covered approximately 100% of the seeded area.

b. Utilization Data

Four key areas were established during the spring of 1990.

Key Area	Location
Big Mountain (057-01)	T.39N., R.26E., Sec. 6, SE¼, South Paiute Creek
Battle Ck. #1 (057-02)	T.41N., R.26E., Sec. 25, NW¼, North Paiute Creek
Battle Ck. #2 (057-03)	T.41N., R.26E., Sec. 13, SE¼, North Paiute Creek
Emigrant (057-04)	T.38N., R.27E., Sec. 30, NE¼, South Paiute Creek

Utilization data as per the Key Forage Plant Method was collected during the initial establishment of these key areas and again during the fall along with UPM. The utilization data conducted during initial establishment in July was slight to light (1-40%) at all four key areas. The fall utilization averaged slight use at one key area, moderate use at two key areas, and heavy use at one key area.

c. The Quadrat Frequency Trend study method was initiated at the four key areas during the spring of 1990. Additional data is needed to quantify a change or trend at each key area.

Trend data was collected in 1979 at the Paiute Seeding Exclosure. No further data has been collected at this location. More data is needed to quantify a change or trend.

The Paradise-Denio EIS identifies observed trend as downward. (Refer to PD EIS Appendix G. Table 6-1 and Chapter II, 209 PD EIS)

5. Range Survey Data

a. A phase one watershed inventory was conducted in portions of the Paradise-Denio Resource Area from 1971-1974. Livestock forage condition was determined based upon data extrapolation and computations from

this inventory. This data extrapolation resulted in the following condition classifications for the Paiute Meadows Allotment:

Good	Fair	Poor
0	15,938	161,158

Appendix G, Pg-28 of the P-D EIS provides more discussion on origin of livestock forage condition.

b. In 1978 a range survey was conducted using the Ocular Reconnaissance Method to provide baseline data for analysis purposes in the Paradise-Denio EIS. The survey, along with suitability criteria indicated that 1,403 AUMs were available in 1978 for livestock and wild horse use.

6. Ecological Status Inventory

A soil survey and Ecological Status Inventory has not been completed on the allotment.

Ecological status was collected at four key areas during the spring 1990. The ecological status is as follows:

Key Area	Ecological Status
Big Mountain (057-01)	Mid Seral (39%)
Battle Ck. #1 (057-02)	Mid Seral (42%)
Battle Ck. #2 (057-03)	Mid Seral (33%)
Emigrant (057-04)	Mid Seral (49%)

7. Wildlife Habitat Inventory

a. Priority Species: Mule deer, sage grouse, pronghorn, bighorn sheep and trout.

b. Paiute, Battle and Bartlett Creeks are designated as potential recovery habitat for the threatened Lahontan Cutthroat Trout.

c. Other species: chukar, Hungarian partridge and Valley quail.

d. Special habitat features

1) A special habitat features inventory was conducted in 1977 and 1978. This inventory identified the location and acres of special habitats, listed observed plant and wildlife species, and documented ocular observations of the condition and utilization of these habitats. This information was analyzed in the Paradise-Denio EIS.

2) Special Habitat acreage calculations are approximate figures that will be field checked as time permits.

Riparian habitat	529 acres
Aspen	108 acres
Curlleaf mountain mahogany	345 acres
Ceanothus	86 acres
Serviceberry	15 acres
Bitterbrush	82 acres
Winterfat	112 acres
Ephedra	55 acres

e. Habitat Evaluation

A habitat evaluation has not been conducted on this allotment.

8. Riparian/Fisheries Habitat

a. Stream Survey

Paiute Creek was surveyed in 1976 at 51% of optimum and in 1988 at 43%. Battle Creek was also surveyed in 1976 and was rated at 59% of optimum; Battle Creek rated 58% in 1988. Bartlett Creek was 54% of optimum when surveyed in 1976 and 50% of optimum in 1988.

Summaries of the stream survey findings follow:

1) Bartlett Creek

The pool-riffle ratio index was 78% of optimum in 1976, with riffles being dominant. Quality pools were seldom observed. In 1988, pools were even scarcer, with a pool-riffle ratio index of 12%, and no quality pools.

The stream bottom had an improved proportion of desirable materials: 64% in 1976 versus 76% in 1988. There was also a slight reduction in sedimentation: 22% sand and silt in 1976 versus 18% in 1988. However, there was also a shift in the proportions of the coarser rock substrate materials, resulting in a reduction of spawning gravels from 48% to 26%.

Bank cover and stability were 50% and 61% of optimum, respectively, in 1976. This had improved to 76% and 86% in 1988. The degree of ungulate damage, however, had increased from 50% in 1976 to 86% in 1988. Part of this conflict was due to use by cattle from the Pine Forest Allotment during the 1987 grazing season. This was addressed by reconstruction of the allotment boundary fence (Bartlett Creek Division Fence, Project Number 4852).

On the portions of Bartlett Creek which were surveyed in 1976, 56% was shaded. This percentage was not determined during the 1988 stream survey.

In 1976, the water was relatively clear at the upper stations, but became increasingly turbid downstream (30 JTUs at S-1). Turbidity was not measured in 1988.

The habitat was 54% of optimum in 1976, with the main limiting factors being the lack of quality pools and the lack of bank cover. In 1988, the habitat condition index was 50%. While bank cover had improved considerably, the continued occurrence of high levels of damage to the streambanks had prevented channel evolution processes from generating pool structure.

2) Battle Creek

The stream survey of Battle Creek in 1976 found that pools constituted 39% of the stream (pool/riffle ratio index equal to 78%), but also found that few of these were quality pools. This dropped pool quality index for the stream to 41% of optimum. In 1988, only 24% of the stream was in pools, and the pool quality index had dropped to 35%.

The stream bottom materials of Battle Creek in 1976 included 59% desirable materials and 28% sediments. Spawning gravels made up 37% of the bottom materials. In 1988 the bottom materials were 89% desirable materials and 15% sediments. Spawning gravels had decreased to 25% of the bottom materials.

Bank cover and stability of Battle Creek were 52% and 64% of optimum, respectively, in 1976. Ungulate damage ranged from 10% to 50%. In 1988, bank cover was 50% and bank stability was 71%. Bank damage was rated at 91%. One factor contributing to the increased bank damage which was observed is the increase in the wild horse population on the southern portion of the allotment; the pressure on the forage resource necessitated longer periods of livestock use on this portion of the allotment.

Only 34% of the stream was shaded in 1976. The peak water temperature recorded during the two day survey in July was 64°F. Neither the percentage shaded, nor water temperature were determined in 1988. During the summer of 1990, a recording thermograph placed in Battle Creek indicated a peak temperature of 67.8°F.

The habitat in Battle Creek was 59% of optimum in 1976. In 1988, the habitat condition index was 58%. The lack of pools and pool quality were the chief limiting factors. The bank damage has prevented channel evolution from generating and maintaining increased pool and quality pool structure. The time spent along the creek is a function of the high numbers of large herbivores present on the allotment. This is due mostly to cattle and wild horses which represent nn% of the forage demand. The horse population on the Black Rock Range has increased to levels where they are impacting the vegetation resources in their preferred use areas, including riparian communities. Cattle represent both an increased forage demand and also a disproportionate demand on riparian zones during summer use periods due to their preference for the greener forage, shade, short distance to water (and avoidance of walking long distances during periods when the ambient heat environment is not in the comfort zone for them).

3) Paiute Creek

The pool-riffle ratio index of Paiute Creek was near the optimum at 92%, but the small extent of quality pools reduced the pool quality rating to 26% of optimum in 1976. By the time of the 1988 stream survey, the proportion of the stream in

pools at the five stations surveyed that year had decreased to 0%.

The stream bottom of Paiute Creek in 1976 was 41% desirable materials and 30% sediments. Spawning gravels made up 36% of the stream bottom. In 1988, desirable materials comprised 98% of the bottom materials. Sedimentation was 9%. Spawning gravels were reduced to 31%.

Much of the banks were deeply eroded, reflected as ungulate damage ratings of 50% to 90% throughout the four stations surveyed in 1976. Bank cover and stability were 39% and 58%, respectively. In 1988, Bank damage was rated at 100%; severe bank erosion and accelerated erosion and sloughing occurred over virtually all of the surveyed portions of the stream channel. Bank cover and stability were 53% and 63%.

Only 37% of the stream was shaded in 1976. The creek averaged 0.16 feet deep, with a flow of 1.03 cfs. These factors resulted in a maximum water temperature of 80°F. The percentage shading and water temperature were not determined in 1988, however the depth averaged 0.20 feet and, as stated above, bank cover still did not meet the objective.

In 1976, the habitat condition index for Paiute Creek was 50%. Warm water temperatures, a scarcity of quality pools, and poor benthic composition were the primary limiting factors. The habitat condition declined to 43% of optimum in 1988. The lack of pools and the degree of damage to the streambanks which counteracts channel development toward providing better pool structure were still

the most critical factors in the poor habitat conditions. On Paiute Creek, this is due more directly to the growth of the wild horse population of the Black Rock Range than riparian conflicts on Battle and Bartlett Creeks. The forage consumption of the wild horses has resulted in livestock management to keep cattle on other parts of the allotment. Thus, the resource conflicts found along Paiute Creek are currently attributable to wild horses.

Paiute Meadows Allotment Stream Survey Data

Paiute Creek Stream Survey Data

Date of Survey	Survey Agency	Percent of Optimum	Percent Sedimentation (% Opt.)	Bank Cover (% Opt.)	Bank Stability (% Opt.)	Water Temp. (°F)
(Objective Levels)		>60	<10	>60	>60	<70
Paiute Creek (all stations)						
8/3/76	BLM	51	30	58	58	80
7/13/88	BLM	43	9	63	63	--

Battle Creek Stream Survey Data

Date of Survey	Survey Agency	Percent of Optimum	Percent Sedimentation (% Opt.)	Bank Cover (% Opt.)	Bank Stability (% Opt.)	Water Temp. (°F)
(Objective Levels)		>60	<10	>60	>60	<70
Battle Creek (all stations						
8/4/76	BLM	59	28	52	64	64
7/18/88	BLM	58	15	50	71	--

Bartlett Creek Stream Survey Data

Date of Survey	Survey Agency	Percent of Optimum	Percent Sedimentation (% Opt.)	Bank Cover (% Opt.)	Bank Stability (% Opt.)	Water Temp. (°F)
(Objective Levels)		>60	<10	>60	>60	<70
Bartlett Creek (all stations)						
8/2/76	BLM	54	22	50	61	63
7/11/88	BLM	50	18	76	86	--

9. Wild Horse and Burro Habitat

Population Data

Forage consumption data for the Black Rock East (HMA) as indicated by census data shows that forage utilization and populations are consistently greater south of Paiute Creek compared to north of Paiute Creek. For the period 1987, 1988, 1989, 1990 forage consumed by horses south of Paiute Creek was 16,212 AUMs or 4053 AUMs avg/year and north of Paiute Creek 8,748 AUMs or 2,187 AUMs avg/year.

UPM data collected from 1987 to 1990 also indicates that the highest levels of utilization have occurred south of Paiute Creek. Use patterns indicate that the southeast portion of the HMA from Lone Spring and White Rock Spring south is the recognized winter use area. Horses are scattered over the allotment the remainder of the year.

Census data for 1987, 1989, 1990 does not indicate a steady increase or decrease in population but rather erratic change both in the Black Rock East HMA and south and north of Paiute Creek.

Data indicates that in 1980 the wild horse population on the HMP as indicated by census was 46 animals. The 1986 census indicated a population increase to 1,075 animals. The number indicates a high probability of wild horses moving within the Black Rock Range between both the West and East HMAs.

Census data does indicate horses are expanding further out into the Black Rock West and East HMAs. Horses are moving east of the Black Rock East (HMA) and south out of both HMA's. Horses are also moving north beyond Rough Canyon and Summit Lake Mountain in the East and West HMAs respectively.

In accordance with the June 1989 IBLA Ruling, future adjustments for wild horses will be made based on monitoring data. Prior to the June 1989 IBLA Ruling the appropriate management levels were established in the Paradise-Denio Land Use Plan and by District Managers Decision MFP III.

10. Water Quality

Available data - Lab water quality analysis was done in 1976 and 1979 on Bartlett Creek and Paiute Creek. Stream survey water quality analysis with a Hach Kit was done in 1976 on Battle, Bartlett, and Paiute Creeks.

Battle Creek - Temperatures are consistently too high for cold water aquatic life and fecal coliform and turbidity may also be problems, but more data is needed. TDS was both low (1976).

11. Other Information

Normal maintenance on most range improvements has not been conducted leaving them in poor condition.

V. CONCLUSION

A. Short Term Objectives

Refer to Section III C.3 for Short and Long Term Objectives.

1. Use pattern mapping completed during 1990 indicates this objective is not being met on Paiute Creek, Battle and Bartlett Creeks.

2. Use pattern mapping completed during 1990 indicates this objective is not being met.

3. Use pattern mapping collected from 1987-1990 indicates this objective is not being met. During this period the highest levels of utilization have been south of Paiute Creek, which has been made by wild horses; however, use greater than 50% has occurred north of Paiute Creek also.

4. Use pattern mapping indicates this objective is not being met for all years 1987, 1988, 1989 and 1990.

B. Long Term Objectives

1. Baseline and ESI information has not been collected to evaluate progress in attaining this objective. Current demand for mule deer is 2,552 AUMs, 615 AUMs for antelope and 0 AUMs for bighorn. Existing populations are above reasonable numbers for mule deer and pronghorn antelope.

2. Baseline data has been collected during the initial year of establishment during 1990; however, additional data is needed to evaluate the progress towards achievement of this objective. Analysis of the short-term upland habitat objectives primarily south of Paiute Creek is an indication that progress towards achievement of this objective is not being made in this area of the allotment.

3. Baseline and ESI data has not been collected to evaluate the progress towards achievement of this objective. This objective will be redefined/quantified with ecological status condition as information becomes available.

4. a. Baseline data has been collected during the initial year of establishment during 1990, however additional data is needed to evaluate the progress towards achievement of this objective, analysis of the short-term upland habitat objectives primarily south of Paiute Creek indicates utilization in the uplands is not being met. Use Pattern Mapping data indicates that the country south of Paiute Creek has received the highest levels of utilization.

   b. This objective is being met.

5. Baseline and ESI information has not been collected to evaluate the progress towards achievement of good condition in ceonothus vegetation types.

6. Baseline and ESI information has not been collected to evaluate the progress towards achievement of good condition in mahogany vegetation types.

7. Baseline and ESI information has not been collected to evaluate the progress towards achievement of good condition in aspen vegetation types.

8. Baseline and ESI information has not been collected to evaluate the achievement of this objective. Analysis of short term objectives is an indication that progress is not occurring on 52 acres of riparian and meadow habitat but may be occurring on the other 477 acres of riparian and meadow habitats.

9. Baseline and ESI information has not been collected to evaluate the achievement of good condition in serviceberry, bitterbrush, ephedra and winterfat vegetation types. Monitoring of age and form class structure in 1990 was satisfactory.

10. Comparison of stream survey data from 1976 with that from 1988 indicates that habitat conditions during that period declined on Bartlett Creek and Paiute Creek, and that no significant progress was made on Battle Creek. Analysis of use pattern maps since 1988 in relation to the short term objectives for the riverine riparian vegetation indicates that, as of this date (April 1991), some progress is being made along Battle and Bartlett Creeks, but that Paiute Creek continues to be impacted by wild horses. To resolve the conflict along Paiute Creek will require removals of wild horses to maintain their population in ecological balance with the forage resource. This balance must meet objectives of providing vegetative thermal and hiding cover for wildlife in addition to maintaining the ecological status and protection of the watershed from accelerated erosion. For progress to continue along Battle and Bartlett Creeks

will require that the livestock herding be continued. This herding is designed to move livestock rapidly through the narrow canyons up to the summer country and to move them as forage becomes depleted and mechanical damage to stream channels approaches undesirable levels. This can be assisted by constructing drift fences the ends of the canyons, both to hold cattle at the lower elevations in spring and to prevent them from drifting back into the canyons as the summer progresses.

11. Baseline information and habitat condition has not been collected to evaluate the progress towards achievement of this objective. No vegetation treatments to reduce sagebrush have occurred during the evaluation period.

12. Baseline data has not been collected to evaluate the progress towards achievement of this objective.

13. Baseline and trend information has not been collected to evaluate the achievement of this objective. However, analysis of short term objectives indicates that progress is not being made towards this objective due to heavy and severe utilization by wild horses.

VI. TECHNICAL RECOMMENDATIONS

A. Technical

1. Adjust the numbers of wild horses and the active grazing preference for livestock on the Paiute Meadows Allotment to a stocking level of 4,597 AUMs which will provide for a thriving natural ecological balance and allow for multiple use objectives to be met. See Appendix I for stocking level calculations. Analysis of data does not indicate the need for an adjustment in wildlife populations.

Alternative 1. The level of livestock and wild horse use will be adjusted to conform with proportions established in the Land Use Plan (LUP).

Implement an adjustment based on the stocking level of 4,597 AUMs. The LUP proportion is 92% livestock, 8% wild horses. This equates to 4,229 AUMs for cattle and 368 AUMs for wild horses. Reducing herd size below 50 head may jeopardize the genetic viability of the herd; therefore wild horse numbers would be adjusted to 50 animals and 600 AUMs.

Table 1. Land Use Plan Stocking Level Proportions (AUMs)

Available Forage (AUMs)	Cattle	Wild Horses
4,597	3,997	600

Alternative 2. The level of livestock and wild horse use will be based on actual use percentages.

Adjust stocking rates for livestock and wild horses on actual use percentages during 1987-1990. Implement a proportionate share adjustment based on the calculated stocking level of 4,597 AUMs. The calculated average actual use is 6,710 AUMs wild horses and 1,959 AUMs livestock as follows:

Table 2. Stocking Levels by Actual Use Proportions

User	AUMs	Proportions	Stocking Rate (AUMs)
Wild horses	6,710	77% x 4597 =	3,540
Livestock	1,959	23% x 4597 =	1,057
Total	8,669 AUMs		4,597 AUMs

Wild horse and livestock actual use was averaged for the period 1987-1990.

See Appendix II for Actual Use Calculations.

Alternative 3. The level of livestock and wild horse use will be based on actual use percentages.

Adjust stocking rates for livestock and wild horses on actual use. Implement a proportionate share adjustment based on the calculated stocking level of 4,597 AUMs. The calculated average actual use is 6,710 AUMs wild horses and 1,959 AUMs livestock based on the average for the period of 1987-1990 which are the years of monitoring data collection.

This recommendation recognizes that any adjustments to wild horses must be done from the existing population level at the time of removal and adjustments to livestock must be done from the active grazing preference level. It also recognizes that the problem is with overstocking by wild horses and livestock and that an adjustment to the current population of wild horses and to the active grazing preference for livestock must be made.

The development of a proportional share of the adjustment based on actual use places the appropriate share of the adjustment with the use that has resulted in the majority of the problem, i.e. the majority of the overutilization of forage has been with wild horses therefore the majority of the adjustment should be with wild horses.

Table 3. Actual Use Proportions

User	AUMS	%
Wild Horses	6,693	77
Livestock	1,959	23
Total	8,652	AUMs

See Appendix II for Actual Use Calculations.

Table 4. Current Forage Demand and Overallocation of Forage

User	AUMs
Wild Horses	6,292 (1990 pop. levels)
Livestock	7,827 (Active Preference)
	14,119 Total AUMs Forage Demand

14,119
-4,597 (Available Forage)
9522 AUMs to be reduced

Table 5. Adjustments by Actual Use Proportional Share

User	%	AUMs Above Carrying Capacity	Proportional Reduction
Wild Horses	77%	9522	7332 (AUMs)*
Livestock	23%	9522	2190 (AUMs)*

* The adjustment or reduction of 9522 AUMs will bring forage demand to the level of available forage. However, a viable population of wild horses must be maintained with a minimum of 50 wild horses. Therefore the adjustment to wild horse populations will be held at 600 AUMs for a yearlong population of 50 animals. The remaining adjustment will be made from livestock. The following represents the stocking

levels that will allow for multiple use objectives to be met.

Use	Desired Stocking Level
Wild Horses	600 AUMs
Livestock	3997 AUMs
	4597 AUMs Carrying Capacity

2. Change Season-of-Use

Alternative a. Grazing use within the Paiute Meadows Allotment will be changed to eliminate use during the hot season. The season-of-use will be 11/01-06/01 each year. Livestock will be removed from the public lands for the period 06/02-10/30 each year. Grazing use will occur over the allotment with stocking levels not exceeding stocking rates for the north Paiute and south Paiute use areas. This season-of use will allow complete rest during the summer period and allow for a regrowth period for riparian vegetation.

Alternative b. Change the season-of-use to summer-fall-winter and implement a Deferred Rest Grazing System. The season-of-use will be 05/01-03/15 each year. Livestock will be removed from the public lands during the spring period (03/15-05/01). Stocking levels will not exceed stocking rates for the north Paiute and south Paiute use areas.

The objective of the deferred rest grazing system would be to reduce grazing pressure during the summer period. This grazing system will reduce grazing pressure for two consecutive years north of Paiute Creek and one year south of Paiute Creek. Under the Deferred Rest Grazing System, the Paiute Meadows Allotment would be divided into three use areas. The use areas would be:

1) Winter Use Area: This area would include all the lower foothills and lower country along the entire eastern portion of the allotment.

2) South Paiute Use Area: This use area would be the southern portion of the allotment specifically from Paiute Creek south including the higher country and foothills not used for winter use.

3) North Paiute Use: This use area would be the northern portion of the allotment specifically from Paiute Creek north including the higher country and foothills not used for winter use.

The following grazing system would be implemented within the Paiute Meadows Allotment with respect to the above designated use areas:

Table - 6 Deferred Rest Grazing System

Grazing Years 1 and 2

Use Area	Period-of-Use
North Paiute	
early summer use area	05/01-08/15
winter use area	11/01-02/28
	03/01-03/15
South Paiute	
late summer use area	08/16-10/30
winter use area	11/01-02/28
	03/01-03/15

Grazing Year 3

Use Area	Period-of-Use
North Paiute	
late summer use area	08/16-10/30
winter use area	11/01-02/28
	03/01-03/15
South Paiute	
early summer use area	05/01-08/15
winter use area	11/01-02/28
	03/01-03/15

3. Range Improvement Projects

a. In order to facilitate the grazing system and improve distribution of grazing distribution of grazing animals, several waters should be developed or reconstructed.

1) Develop a pipeline on Burnt Springs
2) Repair Paiute Windmill
3) Repair Emigrant Well
4) Develop a spring at T.41N., R.27E., Sec. 20 SW¼
5) Several existing projects require reconstruction

b. Maintain the Paiute Seeding

c. Maintain/Reconstruct Range improvements as per conditions of the Cooperative Agreement, Permit and/or Assignment of Range Improvements.

4. Wild Horse Management

a. Develop a Herd Management Area Plan and consider combining the Black Rock West and East HMAs.

b. Protect wild horses from unauthorized capture, harassment, and destruction.

c. Construct a fence between the Black Rock East and West HMAs.

d. Reevaluate the Draft Paradise-Denio Grazing E.I.S., Wild horse and Burro Use Area and Map for the Black Rock Range East.

B. Monitoring Needs

1. Continue to implement the rangeland monitoring program on the Paiute Meadows Allotment.

2. Continue to identify establishment of key areas and collect baseline data on upland sites.

3. Establish monitoring studies on riparian areas.

4. Initiate Wildlife Habitat Inventory and Riparian/Fisheries Habitat Studies.

5. Develop ecological site descriptions for riparian areas and determine ecological status for wet meadows and stream riparian areas.

Determine desired seral stages for key areas where ecological condition has been determined.

Redefine/quantify long term objective (3) with ecological status condition as information becomes available.

6. Re-evaluate ecological condition on all key areas particularly where statistically significant changes in frequency of key species have occurred.

7. Continue with intensive wild horse habitat and monitoring studies. Collect data to determine population estimates, population trend, population characteristics, population dynamics, and population analysis.

8. Reevaluate the Paiute Meadows allotment in 1997.

APPENDIX 1

Stocking Level Calculations Paiute Meadows Allotment.

1. Stocking Level Calculation Procedures

Monitoring data indicates that wild horses have contributed to over utilization in the allotment. Target utilization levels were exceeded south of Paiute Creek where the use was by wild horses. Use levels north of Paiute Creek resulted from livestock and wild horses. The total amount of actual use made by livestock and wild horses was determined north and south of Paiute Creek for each year.

The stocking level for the allotment was determined using the following Actual Use/Utilization formula.

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

The stocking level was determined for the area north of Paiute Creek and south of Paiute Creek for each year data was available and then computing the average mean for those figures.

Stocking rates were calculated as follows:

North of Paiute Creek - The average calculated stocking rate is 2,556 AUMs. This was based on the four years of use pattern mapping data and the desired yearlong utilization level of 50%.

South of Paiute Creek - The average calculated stocking rate is 2,041 AUMs. This was based on the four years of use pattern mapping and the desired yearlong utilization level of 50%.

Wild horse census data and cattle licensed use were used to calculate stocking levels. Wildlife AUMs were not calculated. Utilization was determined from use pattern mapping using the Average/Weighted Average Utilization formula for those areas where forage was utilized heavy and/or severe. These figures were then used to determine the amount of reduction from the present demand necessary to achieve management objectives. The procedures for doing the calculations are outlined as follows:

1) Planimeter Use Pattern Map by utilization category for each year.

2) Figure acreage by utilization category for north of Paiute Creek and for south of Paiute Creek.

UPM completed August 8, 1987 and measures use 03/01-08/08
No cattle use
Census conducted Oct. 6-8, 1987, numbers are based on census.

B. 1989 Spring

South Paiute

448 H - 03/01/88-11/30/88 - 4,050 AUMs
203 H - 12/01/88-02/28/89 - 601 AUMs
4,651 AUMs

North Paiute

218 H - 03/01/88-11/30/88 - 1,971 AUMs
18 H - 12/01/88-02/28/89 - 93 AUMs
Cattle - 10/17/88-01/01/89 - 1,143 AUMs
3,167 AUMs

UPM completed 04/06/89 and measures use for 03/01/88-02/28/89.
Horse numbers change 12/01 due to gather in Dec. 1988/Jan. 1989.
Cattle use 1,143 AUMs

C. 1990 Spring

South Paiute

203 H - 03/01/89-07/17/89 - 928 AUMs
408 H - 07/18/89-02/14/90 - 2,844 AUMs
264 H - 02/15/90-02/28/90 - 122 AUMs
3,894 AUMs

North Paiute

18 H - 03/01/89-07/17/89 - 82 AUMs
243 H - 07/18/89-02/14/90 - 1,694 AUMs
244 H - 02/15/90-02/28/90 - 112 AUMs
Cattle - 10/26/89-02/28/90 - 2,342 AUMs
4,230 AUMs

UPM completed 04/04/90 and measures use for 03/01/89-02/28/90.
Wild horse numbers for 03/01 reflect 12/88 gather, On 07/18/89 a census was done and on 02/14/90 a census was again conducted.
Cattle use - 2,342 AUMs

D. 1990 Fall

South Paiute

264 H - 03/01/90-10/17/90 - 2,005 AUMs

North Paiute

244 H - 03/01/90-10/17/90 - 1,853 AUMs
700 C - 03/01/90-10/17/90 - 3,912 AUMs
5,765 AUMs

UPM completed 10/17/90 and measures use from 03/01/90-10/17/90.
Cattle use (AUMs) were figured for the monitoring period and do not reflect the total cattle use for 1990.
Wild horse numbers are based on the 02/14/90 census date.

Paiute Meadows

July 1, 1991

1989 Fall (Fall Data not used for calculations)

North Paiute

$$\frac{99\ Ac. \times 90\%}{90\ Ac} = 90\%$$

South Paiute

$$\frac{1,455\ Ac. \times 70\% \times 70\%}{1,455\ Ac} = 70\%$$

1990 Spring (This data was used to calculate 1989 Use 03/01-02/28/90)

North Paiute

$$\frac{(21,179\ Ac. \times 70\%) + (99\ Ac \times 90\%)}{21,278\ Ac} = 70\%$$

South Paiute

$$\frac{(23,969\ Ac. \times 70\%) (10,763\ Ac. \times 90\%)}{34,728\ Ac} = 76\%$$

‡ Note: Severe use for Fall 1989 was carried forward for calculations, since UPM did not map the severe use again in 1990 Spring. The small acreage severe use figure did not change the 70% Average utilization figure.

1990 Fall

North Paiute

$$\frac{(33,199\ Ac. \times 70\%) + (137\ Ac \times 90\%)}{33,336\ Ac} = 70\%$$

South Paiute

$$\frac{(20,159\ Ac. \times 70\%) + (10,352\ Ac. \times 90\%)}{30,511\ Ac} = 76\%$$

4. Stocking Level Calculations

	South Paiute	North Paiute
1987 (Measures Spr/Sum 1987)	$\frac{2,371\ AUMs \times 80\%}{80\%} = 1,482\ AUMs$	$\frac{1,184\ AUMs \times 90\%}{70\%} = 824\ AUMs$
1989 (Measures 1988 Use)	$\frac{4,431\ AUMs \times 80\%}{83\%} = 2,801\ AUMs$	$\frac{3,167\ AUMs \times 90\%}{70\%} = 2,262\ AUMs$
1990 (Measures 1989 Use)	$\frac{3,894\ AUMs \times 80\%}{76\%} = 2,562\ AUMs$	$\frac{4,230\ AUMs \times 90\%}{70\%} = 3,021\ AUMs$
1990 (Measures Spr/Sum 1990)	$\frac{2,003\ AUMs \times 80\%}{76\%} = 1,319\ AUMs$	$\frac{5,763\ AUMs \times 90\%}{70\%} = 4,118\ AUMs$
	8,164 AUMs	10,225 AUMs

8,164 ÷ 4 = 2,041 AUMs Avg. South Paiute
10,225 ÷ 4 = 2,556 AUMs Avg. North Paiute
4,597 AUMs Total

July 1, 1991

Paiute Meadows

A census was completed on 07/18/89 which increased numbers.

A census was again completed on 02/14/90 which decreased numbers.

Livestock Actual Use

1987	No Use
1988	1,143 AUMs
1989	2,342 AUMs
1990	4,350 AUMs
Total	7,835 AUMs

7,835 AUMs ÷ 4 yrs = 1,959 AUMs Avg. Livestock Use

NOT CHECKED

NOT CHECKED

NO USE

USE PATTERN MAP 1987

ALLOTMENT Paiute Meadows PASTURE —

DATE SAMPLED August USE PERIOD Yearlong

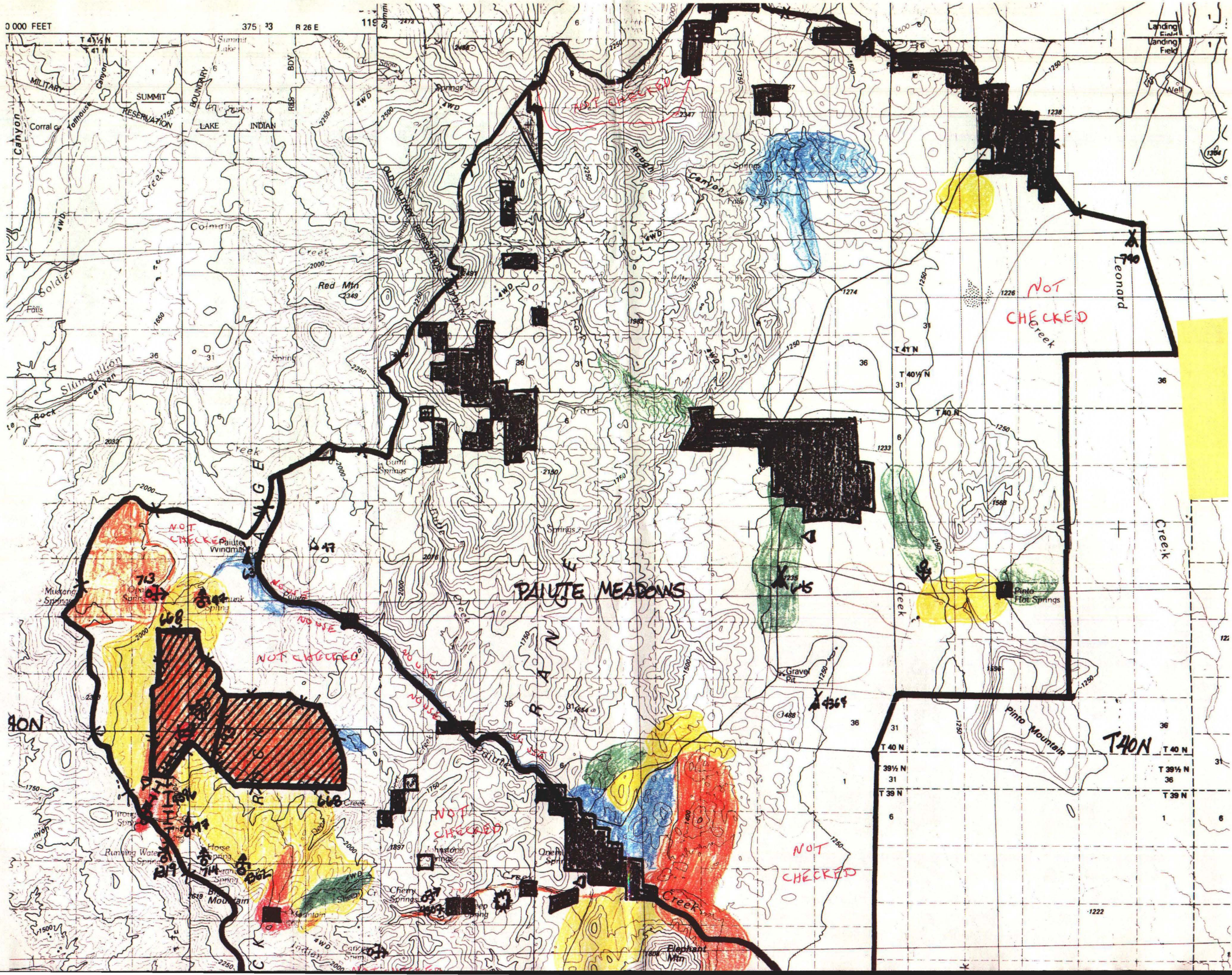
COMPILED BY B. Brown ~~No./Class LIVESTOCK~~ Wild Horses

Compiled From several maps

UTILIZATION LEVELS

- NO USE
- SLIGHT (1-20)
- LIGHT (21-40%)
- MODERATE (41-60%)
- HEAVY (61-80%)
- SEVERE (81-100%)

PAIUTE MEADOWS ALLOTMENT
HUMBOLDT COUNTY
USDOI - BLM
WINNEMUCCA DISTRICT
PREPARED BY: A. GARSKE 3-25-88


0 000 FEET
375
R 26 E
T 41½ N
T 41 N
MILITARY
Canyon
Tollhouse
Corral
SUMMIT
RESERVATION
BOUNDARY
LAKE
INDIAN
BDY
RES
Summit Lake
Creek
Colman
Creek
Red Mtn
2349
Soldier
Falls
Slumgullion
Canyon
Rock
4WD
Springs
OLD MILITARY RESERVATION BOUNDARY
NOT CHECKED
2347
Rough
Canyon
Falls
1274
1238
Landing Field
Landing Field
Well
1304
790
Leonard
NOT CHECKED
1226
Creek
T 41 N
T 40½ N
T 40 N
1233
1568
Burnt Springs
2150
1750
2076
Springs
PAIUTE MEADOWS
R A N G E
NOT CHECKED
Paiute Windmill
Mustang Springs
Opal Spring
Skunk Spring
NO USE
NO USE
NOT CHECKED
Paiute
Creek
1235
Gravel Pit
1488
Pinto Hot Springs
1596
Pinto Mountain
T40N
T 40 N
T 39½ N
T 39 N
1222
Creek
NOT CHECKED
Johnstone Springs
Onemile Spring
Cherry Springs
Sheep Spring
Horse Spring
Running Water Spring
Big Mountain
2619
Mountain Spring
Sheep Cr
Canyon Spring
Indian
Elephant Mtn
1808
1897
NOT CHECKED
Creek
1400

PAIUTE MEADOWS

BASE MAP SYMBOLS — PAIUTE MEADOWS ALLOTMENT

- PRIVATE LAND
- OTHER PRIVATE LAND
- ALLOTMENT BOUNDARY
- FENCE
- PIPELINE
- SPRING
- SPRING DEVELOPMENT WITH TROUGH
- TROUGH
- RESERVOIR
- WINDMILL/WELL
- SEEDING

1:100,000-scale metric

50 meter contour interval

PREPARED BY: ABBIE GARSKE JANUARY 1988

heavy use observed when outside boundary

Use Pattern Map — Key

Paiute Meadows Allotment Horse Use 1988

Utilization	Symbols
No Use	Utilization Transect
Slight	W.P. Witness Post
Light	P.D. Photo Documentation
Moderate	
Heavy	
Severe	

FINAL

UPM completed by A. Garske (1-30) + Leticia Gallegos (1-59) Range Cons.

9/28 - 10/4/88

WH — Wild Horses

HUMBOLDT COUNTY
USDOI - BLM
WINNEMUCCA DISTRICT

T37N
R37E

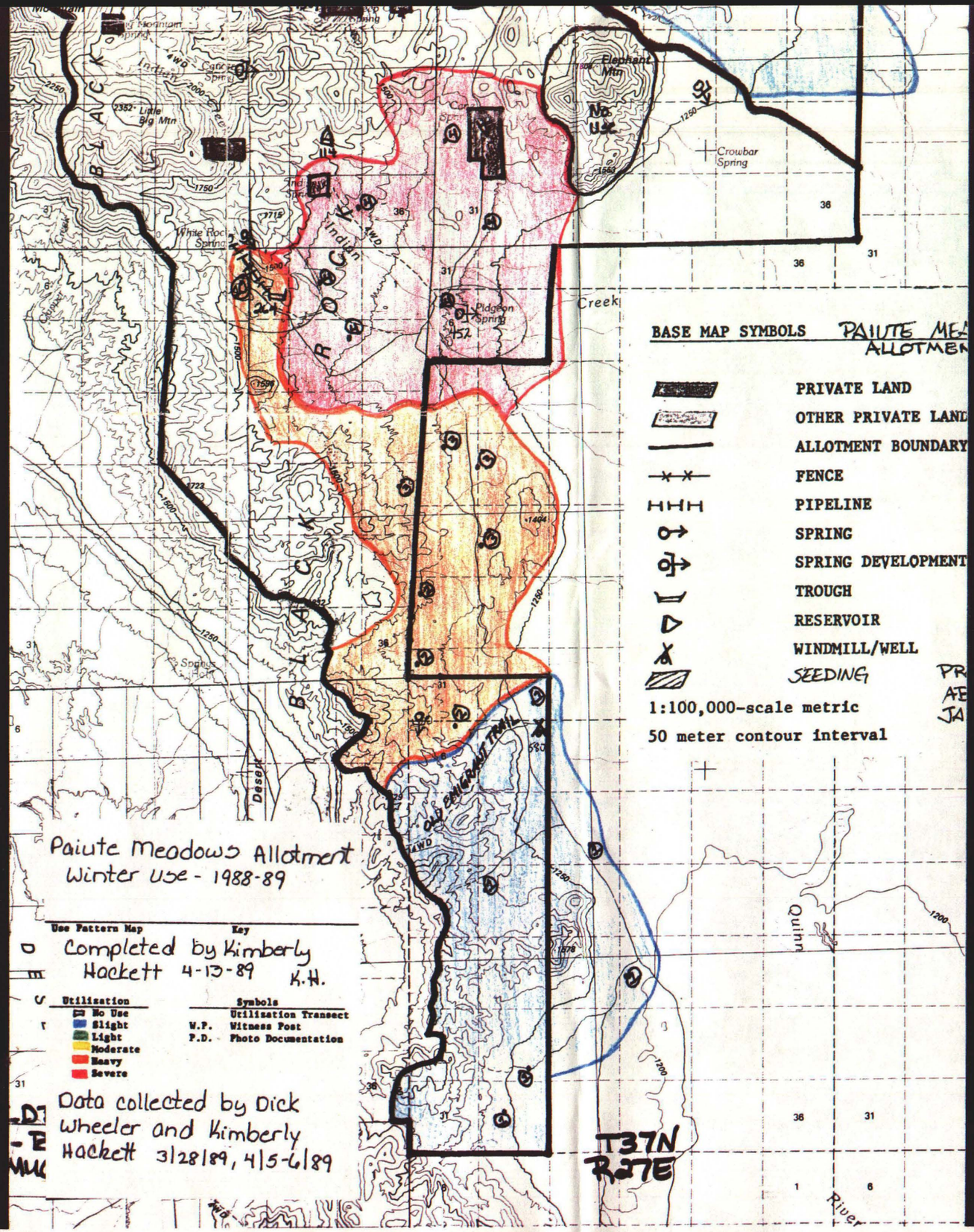
2231

PAIUTE MEADOWS

BASE MAP SYMBOLS — PAIUTE MEADOWS ALLOTMENT

- PRIVATE LAND
- OTHER PRIVATE LAND
- ALLOTMENT BOUNDARY
- FENCE
- PIPELINE
- SPRING
- SPRING DEVELOPMENT WITH TROUGH
- TROUGH
- RESERVOIR
- WINDMILL/WELL

heavy use observed when outside boundary



BASE MAP SYMBOLS PAIUTE MEA ALLOTMEN

- PRIVATE LAND
- OTHER PRIVATE LAND
- ALLOTMENT BOUNDARY
- FENCE
- PIPELINE
- SPRING
- SPRING DEVELOPMENT
- TROUGH
- RESERVOIR
- WINDMILL/WELL
- SEEDING

PR AE JA

1:100,000-scale metric

50 meter contour interval

Paiute Meadows Allotment
Winter Use - 1988-89

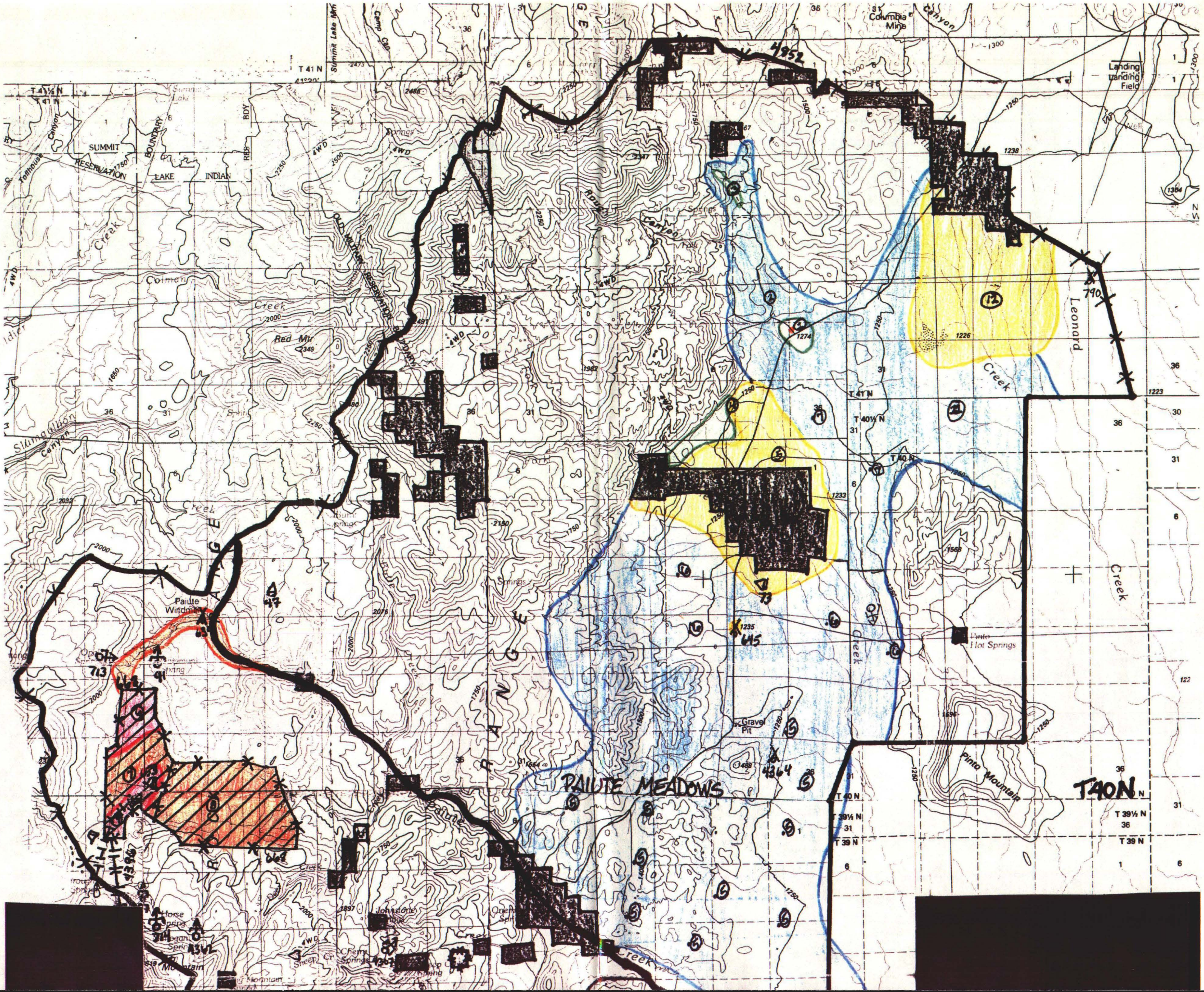
Use Pattern Map Key

Completed by Kimberly Hackett 4-13-89 K.H.

Utilization	Symbols
No Use	Utilization Transect
Slight	W.P. Witness Post
Light	P.D. Photo Documentation
Moderate	
Heavy	
Severe	

Data collected by Dick Wheeler and Kimberly Hackett 3/28/89, 4/5-6/89

T37N
R27E



PAIUTE MEADOWS
T40N
SUMMIT LAKE INDIAN RESERVATION BOUNDARY
Red Mtn
Columbia Mine
Landing Field
Leonard Creek
Pinto Hot Springs
Pinto Mountain
Paiute Windmill
Gravel Pit
Slumgullion Canyon
Colman Creek
Rough Canyon
T 41 N
T 40½ N
T 40 N
T 39½ N
T 39 N

Slight
Light
Moderate
Heavy
Severe

P.F. Witness Post
P.D. Photo Documentation

- N/C - not Checked

Ben Cheney 9/11 9/12 9/13 9/14 →
Jeff Davis and 9/20/89.
Dick Whuler - 9-11-89

T37N
R27E

Use Pattern Map Key

Paiute Meadows Allotment
Summer use 1989

Utilization	Symbols
No Use	Utilization Transect
Slight	W.P. Witness Post
Light	P.D. Photo Documentation

 8-7-91

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BOB MILLER
Governor

WILLIAM A. MOLINI
Director

August 7, 1991

Mr. Scott Billings
Paradise-Denio Resource Area
Bureau of Land Management
705 East Fourth Street
Winnemucca, Nevada 89445

RE: Draft Paiute Meadows Allotment Evaluation - "I"

Dear Scott:

Our agency appreciates the District progress in evaluating its "I" allotments. The Paiute Meadows Allotment has many important fish and wildlife resources that require management emphasis by the Bureau.

Please consider our specific comments to the evaluation:

Page 6, Allotment Objectives

The short term objectives for fish and wildlife habitat are consistent with the goals and objectives of the land use plan. These objectives are binding and management actions must be developed as to achieve these short term objectives and show progress in meeting long term objectives for this allotment. Monitoring studies must be complete in order to evaluate the effectiveness of management actions to meet these objectives.

Page 9, Key Species Monitored

Key species for fish and wildlife are listed for upland and riparian habitats. We appreciate the detail to list all key species.

Page 18, Utilization Data

Key areas for the allotment do not appear to correspond with the long term wildlife objectives of the allotment. Key areas must be delineated within pronghorn and mule deer winter ranges along

the eastern hills between the Paiute Ranch and Battle Creek Ranch, and the hills south of Paiute Ranch to the Indian Creek, Cain and Pilgrim Springs Basin. These key areas must include key species listed in this evaluation.

Page 27, Conclusions

We agree with the conclusions that all short term objectives are not being met. If anything, the monitoring data collected by the Bureau is conservative. Our observations indicate severe and heavy use in the Sheep Creek and Deer Creek drainage are directly affecting the production of deer, antelope and sage grouse. Department mule deer data suggest that the poor conditions of summer and winter ranges are causing excessive fawn mortalities during the winter months. Spring fawn ratios for this herd approach the range of nine to fifteen fawns per 100 does in recent years. This indicates a declining herd.

Our observations by air and ground suggest severe and heavy use from Paiute Creek north to Battle Creek. Areas near Burnt Spring, Butte Creek and the headwaters of the south fork of Battle Creek appear to be and have been severely used by horses and some cattle.

Data indicates the current and past wild horse use is a major factor in the condition of riparian habitat on this allotment. We agree with the District that serious overuse of riparian zones was occurring prior to 1988 when the District re-authorized livestock use. It is alarming that despite this knowledge, the District authorized 4,350 AUMs of livestock use on this allotment in 1990.

Page 30, Technical Recommendations

We appreciate the District's consideration of alternatives prior to making a livestock grazing decision for this allotment. The Department views the short term objectives of this allotment as binding and its monitoring data as the basis for determining a livestock carrying capacity for the allotment. Therefore, we encourage the District to consider an alternative that give full recognition to fish and wildlife objectives and data.

Appendix 1 determines a stocking rate under the assumption of meeting 50% utilization on upland grass species. Analysis cannot support these stocking rates and seasons of use to meet 30% utilization on streambank riparian, 50% utilization of wetland meadows or 50% utilization of key mountain browse. Since monitoring studies are not conducted to address the specific long term objectives for big game and sage grouse, data does not exist to allow for remedial actions to eliminate or reduce conflicts between livestock and wildlife.

We suggest the following measures be taken in the final allotment evaluation:

Develop another alternative using existing fish and wildlife monitoring data to set a livestock carrying capacity for the allotment.

Reduce wild horses to 59 head. Professional judgement suggest that this will constitute a genetically viable population.

Develop an interim management decision to reduce cattle until horses are removed to appropriate management levels.

Delineate key areas for utilization and trend studies that address the specific long term objectives of this allotment for sage grouse, antelope and mule deer. Schedule the monitoring activities.

Schedule the next allotment evaluation within three years.

We hope the above comments will assist you with the preparation of this allotment evaluation and the pending grazing decision. This allotment deserves our agencies' full attention and cooperation.

Sincerely,

WILLIAM A. MOLINI, DIRECTOR

Richard T. Heap, Jr.
Region I Manager
Region I

REL:rl/

CC: Habitat, Reno
Jim Jeffress
Jim French