



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Winnemucca District Office
5100 East Winnemucca Boulevard
Winnemucca, Nevada 89445
702-623-1500

April 10, 1997

In Reply Refer To:
(NV-22.18)

Dear Interested Public:

I'm enclosing a Bullhead Allotment Evaluation Update and Desired Stocking Rate Calculations for the Bullhead Allotment.

On August 25, 1994, the BLM issued a Final Multiple Use Decision for the Bullhead Allotment. On September 28, 1994, the BLM received appeals on this decision from the permittee, Nevada First Corporation.

In January 1996, Nevada First Corporation began the negotiations for the withdrawal of their appeals. Numerous meetings and discussions have taken place concerning their proposal. The BLM and NFC have agreed to use all data that is available to arrive at a management agreement for the Bullhead Allotment.

The Bullhead Allotment evaluation dated May 20, 1994, evaluated data from 1982-1992. This data was used to arrive at the Proposed and Final Multiple Use Decisions. However, during the appeal period, data from 1993-1995 has also been collected.

I'm providing these documents for your review. It is my intention to include all available data to arrive at a new Proposed Multiple Use Decision.

If you have any questions, feel free to contact Gene Seidlitz at (702) 623-1500. I would appreciate your comments by May 5, 1997.

Sincerely yours,

Colin P. Christensen
ADM, Renewable Resources

Enclosures (2)

April 10, 1997

BULLHEAD ALLOTMENT EVALUATION UPDATE

I. PURPOSE

The purpose of this document is to update the grazing use on the Bullhead Allotment from 1992-1995. This data along with the data in the Bullhead Allotment Evaluation dated May 20, 1994, is being used to arrive at a new Proposed and Final Multiple Use Decision.

1. Summary of Studies Data

a. Livestock (AUMs)

<u>Year</u>	<u>Pasture</u>	<u>AUMs</u>
1992	First Creek	1185
	Kinney	867
	Upper Kelly	913
	Snowstorm	683
	Lower Kelly	269
	Bullhead Seeding	<u>477</u>
	TOTAL	4394
1993	Dry Hills	940
	TOTAL	940
1994	Rabbit	985
	West Kinney	1020
	Lower Kelly	575
	Upper Kelly	754
	Dry Hills	<u>1062</u>
	TOTAL	4396
1995	Bullhead Seeding	227
	First Creek	1432
	East Kinney	856
	Lower Kelly	195
	Upper Kelly	711
	Dry Hills	1369
	Rabbit	<u>547</u>
	TOTAL	5632

b. Wild Horses

<u>Year</u>	<u>Pasture</u>	<u>Horse #</u>	<u>Horse AUMs</u>
1992*	Castle Ridge	78	936
	Snowstorm	17	204
	Kinney	15	180
	First Creek	14	168
	Dry Hills	35	420
	TOTAL	159	1908
1993**	Castle Ridge	34	408
	Snowstorm	6	72
	First Creek	229	2748
	Dry Hills	42	504
	TOTAL	311	3732
1994***	First Creek	221	2652
	Dry Hills	73	876
	Snowstorm	14	168
	TOTAL	308	3696
1995****	Castle Ridge	24	288
	Snowstorm	3	36
	First Creek	108	1296
	Dry Hills	30	360
	Kinney	1	12
	Rabbit	10	120
	TOTAL	176	2112
1996	Castle Ridge	28	336
	First Creek	84	1008
	Dry Hills	28	336
	TOTAL	140	1680

* Flight of 09/28/92

** Flight of 10/17/93

*** Flight of 09/26/94

**** Flight of 09/19/95

A flight did not take place in 1996. However, the breakdown by pastures is based on the percentages in 1995 for the Dry Hills, First Creek and Castle Ridge Pastures. From the data the actual breakdown is 15% for Castle Ridge, 19% for Dry Hills, and 66% for First Creek. These figures were rounded off because more late fall, early winter use is being made in Castle Ridge. Due to the fires of 1996 and associated activities, one should find distribution favoring the Castle Ridge Pasture more than in the past. The following is the split by pasture for 1996: Dry Hills 20%, First Creek 60%, and Castle Ridge 20%.

2. Climate

Precipitation
For
Paradise Valley NOAA Station
Precipitation in Inches

<u>Year</u>	<u>Growing Season</u>	<u>Yearly</u>
1992	1.27	6.48
1993	3.43	8.68
1994	3.56	10.47
1995	7.56	13.98

3. Utilization Data

a. Key Areas (Key Forage Plant Method)

<u>Year</u>	<u>Pasture</u>	<u>Key Area</u>	<u>Species</u>	<u>% Utilization</u>
1993	Dry Hills	201	SIHY	10
			ARSP5	10
		202	STTH2	20
			SIHY	12
			ORHY	10
		203	STTH2	14
			SIHY	10
			ORHY	10
		204	ORHY	10
		205	SIHY	10

Data collected on 08/10/93 and 08/30/93
Utilization was made by livestock and wild horses

<u>Year</u>	<u>Pasture</u>	<u>Key Area</u>	<u>Species</u>	<u>% Utilization</u>
1993	First Creek	301	AGSP	22
			ELCI	8

Data was collected on 08/11/93
Utilization was made by horses only

1994	Dry Hills	201	SIHY	2
		202	STTH2	14
			SIHY	14
			AGSP	10
		203	STTH2	18
			SIHY	14
			AGSP	5
		204	SIHY	2

Data was collected on 03/07/05
Utilization was made by livestock and wild horses

1994	First Creek	301	AGSP	25
			SIHY	40
			ELCI	32
		302	SIHY	10
			AGSP	10

Data was collected on 04/14/94
Utilization was made by horses only.

1994	Upper Kelly	401	FEID	5
			SIHY	5

Data was collected on 10/18/94
Utilization was made by livestock only.

1994	Kinney	601	SIHY	2
			FEID	3

Data was collected on 10/13/94
Utilization was made by livestock only.

<u>Year</u>	<u>Pasture</u>	<u>Key Area</u>	<u>Species</u>	<u>% Utilization</u>
1995	Dry Hills	201	ARSP5	1
			STTH2	44
			SIHY	12
		203	SIHY	28
			STTH2	36
			AGSP	22
		204	ORHY	14
			SIHY	14

Data was collected on 04/24/96
Utilization was made by livestock and wild horses.

1995	First Creek	301	SIHY	17
			AGSP	12
			STTH2	14
			ELCI	18
		302	STTH2	11
			AGSP	9
			SIHY	14
		303	AGSP	15
			SIHY	11
			ORHY	11

Data was collected on 04/04/95
Utilization was made by wild horses

1995	First Creek	301	AGSP	27
			STTH2	24
			SIHY	19
		302	AGSP	10
			AGSA	10
		303	AGSP	14
			SIHY	14

Data was collected on 08/02/95
Utilization was made by livestock and wild horses

<u>Year</u>	<u>Pasture</u>	<u>Key Area</u>	<u>Species</u>	<u>% Utilization</u>
1995	Upper Kelly	401	FEID SIHY	48 50

Data was collected on 09/21/95
Utilization was made by livestock only

1995	Kinney	601	SIHY FEID	18 24
------	--------	-----	--------------	----------

Data was collected on 08/29/95
Utilization was made by livestock only

b. Use Pattern Mapping

1994

Kinney Pasture

The majority of the upland habitats in this pasture had slight use. Good perennial forage production and vigor were noted. The uplands between Spring Creek and Twenty One Creek were used heavy to severe. This area burned in the past and is dominated by POSE and BRTE.

At Key Area 602, a good age class distribution on this aspen stand was noted. This aspen stand received minimal impacts from livestock. Other aspen stands were observed throughout this pasture and resource damage was not occurring. A good age class distribution was noted on the aspen stands observed.

Upland riparian habitats in T.40N., R.44E., Sec. 11 had heavy use on JUNCUS and CAREX with mechanical damage.

Upper Kelly

The upland habitats received slight use with good forage production and vigor.

The following analysis took place concerning the wetland riparian habitats:

A aspen stand in T.40N., R.44E., Sec. 12, had a good age class distribution. Livestock did not impact this stand. The uplands adjacent to this aspen stand received no to slight use with good forage production and vigor noted.

Two undeveloped springs in T.40N., R.45E., Sec. 19, had heavy use on JUNCUS and CAREX with mechanical damage having occurred.

An undeveloped spring in T.39N., R.44E., Sec. 24, also had heavy use on the herbaceous component and mechanical damage had occurred.

Kinney Creek (public portion) in T.40N., R.44E., Sec. 35, had heavy use on streambank riparian herbaceous vegetation with woody vegetation not present. This creek was flowing with severe mechanical damage having occurred on the creek and on a meadow where Kinney Creek flows into Kelly Creek.

A spring in T.40N., R.44E., Sec. 25, and the stringer meadow associated with it, had heavy use on the herbaceous vegetation. This spring flows into Kenney Creek and had severe mechanical damage associated with it.

Two undeveloped springs with meadows associated with them in T.39N. R.45E., Sec. 30, had heavy use on the herbaceous vegetation. Both springs were saturated with mechanical damage.

The spring in T.40N., R.44E., Sec. 24, which is the source for Snowstorm Creek, had heavy use on CAREX and JUNCUS with mechanical damage having occurred.

Lower Kelly

The upland habitats in this pasture received slight, light, and moderate use. The majority of the use was adjacent to Kelly Creek. The majority of Kelly Creek is private. However, the reach where Tall Corral Creek drains into Kelly Creek is public. Heavy use on streambank vegetation occurred. Willow reproduction is occurring, but heavy use is also occurring. Good bank cover was observed.

The upland habitats at the lower end of Kelly Creek received heavy use on AGSP and SIHY. The northern portion of this pasture received light to moderate use. Plant production and vigor were good.

1995

First Creek

Slight, and light use occurred on the upland habitats in this pasture. Excellent plant production, vigor and ground cover were noted throughout the majority of this pasture. Spring Creek and Twenty One Creek were dry in the reaches of this pasture.

Kinney

The uplands adjacent to Spring Creek and Twenty One Creek received heavy use on POSE and BRTE. The majority of this pasture had excellent plant production, vigor and ground cover.

A upland meadow near KA 601 received heavy use. This meadow is dominated by upland vegetation and not by wetland riparian vegetation. BRTE, and POA Spp. are the dominant species. Years of heavy utilization along with dry years could be the reason why this meadow is dry and dominated by upland vegetation.

Aspen stands throughout the allotment appeared to have an even age class distribution.

Upper Kelly

The upland habitats received moderate use and excellent plant production, vigor & ground cover were observed. Wetland riparian habitats were also monitored and a breakdown is as follows:

Two undeveloped springs in T.40N., R.45E., Sec. 19, had heavy use on JUNCUS and CAREX with mechanical damage.

An undeveloped spring in T.39N., R.44E., Sec. 24, also had heavy use on the herbaceous vegetation and mechanical damage had occurred.

A spring in T.40N., R.44E., Sec. 25, and the stringer meadow associated with it had heavy use on the herbaceous vegetation.

Two undeveloped springs with meadows associated with them in T.39N., R.45E., Sec. 30, had heavy use on the herbaceous vegetation. Both springs were saturated with mechanical damage having occurred.

The spring in T.40N., R.44E., Sec. 24, that is the source for Snowstorm Creek had heavy use on CAREX and JUNCUS with mechanical damage having occurred.

Lower Kelly

Light and moderate use occurred on the upland habitats in this pasture. Excellent plant production and vigor were observed on these habitats. The public reach of Kenny Creek, where it flows into Kelly Creek, had heavy use on the streambank riparian vegetation. The majority of Kelly Creek is private and was not monitored. A public reach near Tall Corral Creek is public and heavy use was documented.

4. Stream Survey - South Fork of the Little Humboldt River

In August 1994, NDOW conducted a stream survey of the South Fork of the Little Humboldt River. A narrative summary of the Habitat Condition Index, (HCI) follows:

HCI's for the SF Little Humboldt River ranged from a low of 36.8 percent to a high of 76.8 percent for a drainage score of 61.0 percent. In 1988, the stream HCI was 56.4 percent. Streams or stream reaches with ratings of 50.0 percent or less is considered poor habitat for trout.

In summary, the main limiting factors for the SF Little Humboldt River are low ratings for percent pool measures (pool/riffle ratio) and percent stream bottom (preferred substrate). Pool measure rated poorly at all stations sampled. Low water flows during this survey period is a contributing factor for this low rating. Percent pool quality rated good to excellent at 72.0 percent of the stations sampled (13 stations). Five stations rated poor to fair with two stations rating poor. Percent stream bottom rated good to excellent at 33.0 percent of the sample stations (six stations). The remaining 12 stations rated poor to fair, with two stations rating poor. Percent bank cover ratings at 15 stations rated good to excellent (83.0 percent). In general percent bank stability (soil and vegetation) rated good to excellent with approximately 5.0 percent of the sampled stations rating fair (one station). Overall, the present habitat condition for the SF Little Humboldt River is considered good, and they have improved over conditions portrayed during the 1988 survey.

Desired Stocking Rates

The desired stocking rates for the pastures were determined in accordance with BLM Manual Rangeland Monitoring Analysis, Interpretation, and Evaluation, Technical Reference 400-7.

The following formula was used for calculating desired stocking levels.

$$\frac{\text{ACTUAL USE}}{\text{KMA UTILIZATION}} = \frac{\text{DESIRED ACTUAL USE}}{\text{DESIRED KMA UTILIZATION}}$$

Stocking Rates By Pasture

BULLHEAD SEEDING

Key Management Areas

$$1983 \quad \frac{419 \text{ AUMs}}{17\%} \quad \times \quad 50\% = 1232 \text{ AUMs}$$

$$1984 \quad \frac{932 \text{ AUMs}}{30\%} \quad \times \quad 50\% = 1553 \text{ AUMs}$$

$$1986 \quad \frac{1866 \text{ AUMs}}{64\%} \quad \times \quad 50\% = 1458 \text{ AUMs}$$

Use Pattern Map

$$1987 \quad \frac{1866 \text{ AUMs}}{70\%} \quad \times \quad 50\% = 1332 \text{ AUMs}$$

$$1989 \quad \frac{684 \text{ AUMs}}{90\%} \quad \times \quad 50\% = 380 \text{ AUMs}$$

The 50% Desired KMA Utilization, is the allowable use level for AGCR.

Average of the three key areas = 1414 AUMs

However, in 1989, use pattern mapping showed large areas of severe use with 684 AUMs. Acreage:

2440 ac. public
1280 ac. private
3720 ac. total

If 10ac/ AUM then 372 AUMs or 380 AUMs will be used as a starting point.

RABBIT PASTURE

Key Management Areas

$$1987 \quad \frac{72 \text{ AUMs}}{2\%} \quad \times \quad 50\% = 1800 \text{ AUMs}$$

$$1988 \quad \frac{14 \text{ AUMs}}{14\%} \quad \times \quad 50\% = 50 \text{ AUMs}$$

$$1989 \quad \frac{1047 \text{ AUMs}}{12\%} \quad \times \quad 50\% = 4362 \text{ AUMs}$$

Use Pattern Mapping

$$1989 \quad \frac{1047 \text{ AUMs}}{50\%} \quad \times \quad 50\% = 1047 \text{ AUMs}$$

The 50% Desired KMA Utilization, is the allowable use level for the perennial grass species.

Use 1047 AUMs as a starting point because the TRT recommended use only south of Section 6 and small areas of heavy use are starting to appear.

LOWER KELLY BURN PASTURE

Use Pattern Mapping

$$1986 \quad \frac{978 \text{ AUMs}}{70\%} \quad \times \quad 50\% = 700 \text{ AUMs}$$

$$1987 \quad \frac{455 \text{ AUMs}}{90\%} \quad \times \quad 50\% = 253 \text{ AUMs}$$

$$1994 \quad \frac{575 \text{ AUMs}}{70\%} \quad \times \quad 50\% = 410 \text{ AUMs}$$

$$\frac{700 \text{ AUMs} + 253 \text{ AUMs} + 410 \text{ AUMs}}{3} = 454 \text{ AUMs}$$

The 50% Desired KMA Utilization, is the utilization objective for wetland/riparian habitats.

UPPER KELLY BURN PASTURE

Key Management Areas

$$1986 \quad \frac{1820 \text{ AUMs}}{65\%} \times 40\% = 1120 \text{ AUMs}$$

$$1987 \quad \frac{1138 \text{ AUMs}}{67\%} \times 40\% = 679 \text{ AUMs}$$

$$1988 \quad \frac{578 \text{ AUMs}}{68\%} \times 40\% = 340 \text{ AUMs}$$

$$1994 \quad \frac{754 \text{ AUMs}}{5\%} \times 40\% = 6032 \text{ AUMs}$$

$$1995 \quad \frac{711 \text{ AUMs}}{50\%} \times 40\% = 569 \text{ AUMs}$$

$$\frac{1120 \text{ AUMs} + 679 \text{ AUMs} + 340 \text{ AUMs} + 569 \text{ AUMs}}{4} = 677 \text{ AUMs}$$

The 40% Desired KMA Utilization, is the allowable use level for perennial grass species.

Use Pattern Mapping

$$1986 \quad \frac{1820 \text{ AUMs}}{70\%} \times 50\% = 1300 \text{ AUMs}$$

$$1987 \quad \frac{1138 \text{ AUMs}}{70\%} \times 50\% = 812 \text{ AUMs}$$

$$1994 \quad \frac{754 \text{ AUMs}}{70\%} \times 50\% = 539 \text{ AUMs}$$

$$1995 \quad \frac{711 \text{ AUMs}}{70\%} \times 50\% = 508 \text{ AUMs}$$

$$\frac{1300 \text{ AUMs} + 812 \text{ AUMs} + 539 \text{ AUMs} + 508 \text{ AUMs}}{4} = 790 \text{ AUMs}$$

The 50% Desired KMA Utilization, is the utilization objective for wetland/riparian habitats.

KINNEY PASTURE EAST

Key Management Areas

$$1987 \quad \frac{1138 \text{ AUMs}}{75\%} \quad \times \quad 40\% \quad = \quad 607 \text{ AUMs}$$

$$1988 \quad \frac{628 \text{ AUMs}}{68\%} \quad \times \quad 40\% \quad = \quad 369 \text{ AUMs}$$

$$1989 \quad \frac{1680 \text{ AUMs}}{70\%} \quad \times \quad 40\% \quad = \quad 960 \text{ AUMs}$$

$$1991 \quad \frac{1100 \text{ AUMs}}{42\%} \quad \times \quad 40\% \quad = \quad 1048 \text{ AUMs}$$

$$1994 \quad \frac{1020 \text{ AUMs}}{3\%} \quad \times \quad 40\% \quad = \quad 13600 \text{ AUMs}$$

$$1995 \quad \frac{856 \text{ AUMs}}{24\%} \quad \times \quad 40\% \quad = \quad 1427 \text{ AUMs}$$

$$\frac{607 \text{ AUMs} + 369 \text{ AUMs} + 960 \text{ AUMs} + 1048 \text{ AUMs} + 1427 \text{ AUMs}}{5} = 882 \text{ AUMs}$$

The 40% Desired KMA Utilization, is the allowable use level for perennial grass species.

KINNEY PASTURE WEST

Use Pattern Mapping

$$1987 \quad \frac{1138 \text{ AUMs}}{70\%} \quad \times \quad 50\% \quad = \quad 812 \text{ AUMs}$$

$$1994 \quad \frac{1020 \text{ AUMs}}{75\%} \quad \times \quad 50\% \quad = \quad 680 \text{ AUMs}$$

$$1995 \quad \frac{856 \text{ AUMs}}{75\%} \quad \times \quad 50\% \quad = \quad 571 \text{ AUMs}$$

$$\frac{812 \text{ AUMs} + 680 \text{ AUMs} + 571 \text{ AUMs}}{3} = 688 \text{ AUMs}$$

The 50% desired KMA utilization, is the allowable use level for perennial grass species.

DRY HILLS PASTURE

Key Management Areas

$$1984 \quad \frac{1473 \text{ C AUMs} + 63 \text{ H AUMs}}{58\%} \times 50\% = 1324 \text{ AUMs}$$

$$1987 \quad \frac{1489 \text{ AUMs} + 12 \text{ H AUMs}}{52\%} \times 40\% = 1154 \text{ AUMs}$$

$$1993 \quad \frac{940 \text{ C AUMs} + 504 \text{ H AUMs}}{20\%} \times 40\% = 2888 \text{ AUMs}$$

$$1994 \quad \frac{1357 \text{ C AUMs} + 876 \text{ H AUMs}}{18\%} \times 40\% = 4962 \text{ AUMs}$$

$$1995 \quad \frac{1396 \text{ C AUMs} + 360 \text{ H AUMs}}{44\%} \times 40\% = 1572 \text{ AUMs}$$

$$\frac{1324 \text{ AUMs} + 1154 \text{ AUMs} + 2888 \text{ AUMs} + 4962 \text{ AUMs} + 1572 \text{ AUMs}}{5} = 2380 \text{ AUMs}$$

The 50% and 40% KMA Desired Utilization levels, are the allowable use levels for perennial grass species.

FIRST CREEK PASTURE

Key Management Areas

$$1987 \quad \frac{2730 \text{ C AUMs} + 8 \text{ H AUMs}}{53\%} \times 50\% = 2583 \text{ AUMs}$$

$$1988 \quad \frac{197 \text{ C AUMs} + 10 \text{ H AUMs}}{50\%} \times 40\% = 166 \text{ AUMs}$$

$$1989 \quad \frac{1428 \text{ C AUMs} + 9 \text{ H AUMs}}{56\%} \times 50\% = 1331 \text{ AUMs}$$

$$1991 \quad \frac{1714 \text{ C AUMs} + 1512 \text{ H AUMs}}{44\%} \times 50\% = 3666 \text{ AUMs}$$

$$1993 \quad \frac{2748 \text{ H AUMs}}{22\%} \times 40\% = 6245 \text{ AUMs}$$

$$1994 \quad \frac{2652 \text{ H AUMs}}{40\%} \times 40\% = 2652 \text{ AUMs}$$

$$1995 \quad \frac{1432 \text{ C AUMs} + 1296 \text{ H AUMs}}{27\%} \times 50\% = 5051 \text{ AUMs}$$

$$\frac{2583 \text{ AUMs} + 166 \text{ AUMs} + 1331 \text{ AUMs} + 3666 \text{ AUMs} + 6245 \text{ AUMs} + 2652 + 5051}{7} = 4000$$

The 40% and 50% Desired KMA Utilization levels, are allowable use levels for perennial grass species.

Use Pattern Mapping

$$1985 \quad \frac{3008 \text{ C AUMs} + 371 \text{ H AUMs}}{70\%} \times 50\% = 2414 \text{ AUMs}$$

$$1987 \quad \frac{2730 \text{ C AUMs} + 8 \text{ H AUMs}}{70\%} \times 50\% = 1955 \text{ AUMs}$$

$$1988 \quad \frac{271 \text{ C AUMs} + 10 \text{ H AUMs}}{70\%} \times 50\% = 200 \text{ AUMs}$$

$$\frac{2414 \text{ AUMs} + 1955 \text{ AUMs} + 200 \text{ AUMs}}{3} = 1523 \text{ AUMs}$$

The 50% Desired KMA Utilization, is the utilization objective for wetland/riparian habitats.

SNOWSTORM FLAT PASTURE (NORTH)

Key Management Areas

$$1986 \quad \frac{910 \text{ C AUMs} + 271 \text{ H AUMs}}{70\%} \times 50\% = 844 \text{ AUMs}$$

$$1988 \quad \frac{479 \text{ AUMs}}{38\%} \times 50\% = 630 \text{ AUMs}$$

$$\frac{844 \text{ AUMs} + 630 \text{ AUMs}}{2} = 737 \text{ AUMs}$$

The 50% Desired KMA Utilization level, is the allowable use level for perennial grass species.

SNOWSTORM FLAT PASTURE (SOUTH)

Use Pattern Mapping

$$1986 \quad \frac{910 \text{ C AUMs} + 271 \text{ AUMs}}{70\%} \times 30\% = 506 \text{ AUMs}$$

$$1988 \quad \frac{479 \text{ AUMs}}{70\%} \times 30\% = 205 \text{ AUMs}$$

$$1992 \quad \frac{683 \text{ AUMs}}{50\%} \times 30\% = 410 \text{ AUMs}$$

$$\frac{506 \text{ AUMs} + 205 \text{ AUMs} + 410 \text{ AUMs}}{3} = 374 \text{ AUMs}$$

The 30% Desired KMA Utilization, is the utilization objective for Pole Creek.

CASTLE RIDGE

1826 AUMs based on the Range Survey.

C AUMs = Cows
H AUMs = Horses