



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Winnemucca District Office  
705 East 4th Street  
Winnemucca, Nevada 89445

IN REPLY REFER TO:

4130, 4160  
(NV-241.2)

APR 15 1994

CERTIFIED MAIL NO. P877068694  
RETURN RECEIPT REQUESTED

Ms. Cathy Barcomb  
Commission for the Preservation  
of Wild Horses  
50 Freeport Blvd. #2  
Sparks, NV 89431

Dear Ms. Barcomb:

Please find enclosed the Final Jackson Mountain Allotment Evaluation and the Proposed Multiple Use Decision for Jackson Mountain Allotment.

Please feel free to contact Lynnda Jackson of my staff at (702) 623-1500 if you have any questions related these documents.

Sincerely yours,

*Scott Billing*  
Area Manager  
Paradise-Denio Resource Area

Enclosures- Final Jackson Mountain Allotment Evaluation  
Proposed Multiple Use Decision for the Jackson Mountain Allotment

### ISSUES

- 1) use of FF+E *Because of severity of habitat we protest unless its FF+E*  
*Set AMU make FF+E in gather plan adjusting livestock or season of use will not be FF+E*
- 2) as Dec. roads AMU is  
Set on most severe year 1992  
Set carrying on livestock on best year
- 3) 5 years to phase in  
↓  
this reg is contrary to other regs.
- 4) no discussion on merits of our proposal
- 5) proportions of LUP  
10% h's - ARBITRARY  
80% L

m 4-15-94



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705 East 4th Street  
Winnemucca, Nevada 89445

IN REPLY REFER TO:

4130, 4160  
(NV-241.2)

APR 15 1994

CERTIFIED MAIL NO. P877068701  
RETURN MAIL REQUESTED

### PROPOSED MULTIPLE USE DECISION JACKSON MOUNTAIN ALLOTMENT

DeLong Ranches, Inc.  
John DeLong  
Star Route 335  
Winnemucca, NV 89445

Dear Mr. DeLong:

The record of Decision of the Paradise-Denio Environmental Impact Statement was issued on 09/18/81. The Paradise-Denio Management Framework Plan was issued on 07/09/82. These documents guide the management of public lands within the Paradise-Denio Resource Area and more specifically within the Jackson Mountain Allotment. Monitoring data has been collected on this allotment and in accordance with Bureau policy and regulations, this data has been evaluated in order to determine progress in meeting management objectives for the Jackson Mountain Allotment and to determine if management adjustments may be necessary to meet those management objectives.

On May 13, 1993, a draft Jackson Mountain Allotment Evaluation was mailed to you. That draft evaluation was dated May 12, 1993, and did not include technical recommendations for the management of Jackson Mountain Allotment.

On December 13, 1993, a second draft Jackson Mountain Allotment Evaluation was mailed to you. That draft evaluation was dated December 13, 1993, and included technical recommendations for the management of Jackson Mountain Allotment.

On January 26, 1994, I received your Grazing Application for Jackson Mountain Allotment for the 1994 grazing season.

On February 14, 1994, I received your revised Grazing Application for the Jackson Mountain Allotment for the 1994 grazing season and your letter withdrawing your previous application.

On February 17, 1994, I received your comments on the second draft Jackson Mountain Allotment Evaluation, including an alternative for management of Jackson Mountain Allotment. On that date I also received comments on the second draft Jackson Mountain Allotment Evaluation submitted on your behalf by Intermountain Range Consultants.

On February 23, 1994, I sent you notification by letter that your application was approved for grazing use through May 31, 1994, and that approval of the remaining portion of your application was withheld pending completion of the Final Jackson Mountain Evaluation and issuance of the Proposed Multiple Use Decision for Jackson Mountain Allotment.

The following are the multiple use management objectives under which management of the Jackson Mountain Allotment will be monitored and evaluated.

#### Short Term Objectives

1. The objective for utilization of key species (POA, JUNCUS, CAREX, POLYP2, POPUL, SALIX) on streambank riparian habitat on Trout Creek, Jackson Creek and Mary Sloan Creek is 30% utilization at the end of the grazing season.
2. The objective for utilization of key species (POA, JUNCUS, CAREX, POLYP2, DISTI) on wetland riparian habitat is 50% utilization at the end of the grazing season.
3. The objective for utilization of key species (SYMPH, AMELA, CEANO, PURSH, FEID, SIHY, POSE, STTH2, AGSP, ORHY, EULA5, EPHED, ATCO) on upland habitat is 50% at the end of the grazing season.

#### Long Term Objectives

1. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 378 AUMs for mule deer, 60 AUMs for pronghorn and 275 AUMs for bighorn sheep.
  - a. Improve to and maintain 102,930 acres in good or excellent mule deer habitat condition.
  - b. Improve to and maintain 186,523 acres in fair to good pronghorn habitat condition.
  - c. Improve to and maintain 48,429 acres in good to excellent bighorn sheep habitat condition.
2. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock (8,857 AUMs).
3. Improve range condition from poor to fair on 355,225 acres.
4. Maintain and improve free roaming behavior of wild horses by protecting and enhancing their home ranges.
5. Provide forage for 117 wild horses.

6. Improve or maintain 967 acres of riparian and meadow habitat types in good condition with maximum species diversity, reproduction and recruitment for maintenance of herbaceous and woody riparian species.
7. Improve or maintain 65 acres of aspen stands in good condition by allowing reproduction and recruitment within the stand and maximizing understory diversity.
8. Improve or maintain 447 acres of mahogany stands in good condition by allowing successful reproduction and recruitment in the stand.
9. Improve or maintain 1 acre of ceanothus in good condition by allowing for successful reproduction and recruitment in the stand.
10. Improve or maintain bitterbrush, snowberry and serviceberry by maximizing reproduction in the community.
11. Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% canopy cover of sagebrush for nesting and winter use.
12. Improve to or maintain the following stream habitat conditions from 67% on Mary Sloan Creek, 58% on Trout Creek and 58% on Jackson Creek to an overall optimum of 60% or above.
  - a) Streambank cover to 60% or above.
  - b) Streambank stability 60% or above.
13. Improve to and maintain the water quality of Jackson, Trout, and Mary Sloan Creeks to the state criteria set for the following beneficial uses: stockwater, cold water aquatic life, water contact recreation and wildlife propagation.

## LIVESTOCK DECISION

Based upon the evaluation of monitoring data for the Jackson Mountain Allotment, consultation with you and other affected interests, and recommendations from my staff, my proposed decision for livestock follows:

### 1. Carrying capacity:

The carrying capacity of Jackson Mountain Allotment is 7808 AUMs. See Appendix 1 for calculation of carrying capacity.

The available AUMs are apportioned between cattle and wild horses as follows (see Appendix 2 for calculation for apportioning available forage):

Cattle	6,403 AUMs
Wild horses	<u>1,405 AUMs</u>
Total	7,808 AUMs

### 2. Changes in authorized use:

#### A. Authorized use on Jackson Mountain Allotment is changed from:

##### 1. Current Preference

Total Preference	Suspended Preference	Active Preference
11,880	3,023	8,857

Active preference includes 23 AUMs fenced federal land.

##### 2. Current Grazing System

Grazing is currently yearlong as follows:

Spring/Summer Use	1525-1650 C	03/15 to 08/15
Fall Use	300-400 C	08/16 to 10/31
Winter Use	12-140 C	11/01 to 03/15

Note- Spring turnout begins 03/15 and is completed by late April. Removal dates and cattle numbers during late summer and fall vary from year to year.

##### 3. Current Terms and Conditions

Exchange of use is accounted for on each line entry as percent public land. Your exchange of use agreement expires 02/29/97.

Line number 8 is for 23 AUMs fenced federal range which may be grazed concurrently with private land as long as grazing use is not detrimental to federal range.

Any cattle owned or controlled by you found on the federal range without BLM issued ear tags will be deemed in excess of your authorized numbers.

This grazing authorization is contingent upon submission of copies of bills and proof of payment for railroad leases as the leases are renewed on 03/01.

Salt and/or mineral blocks shall not be placed within one quarter ( $\frac{1}{4}$ ) mile of springs, meadows, streams, riparian habitats or aspen stands.

You are required to perform normal maintenance on the range improvements which you have maintenance responsibility as per your signed cooperative agreements.

Your certified actual use report, by pasture, is due 15 days after the end of your authorized grazing period.

B. Authorized use on Jackson Mountain Allotment is changed to:

1. Preference

In addition to forage available based upon the carrying capacity of Jackson Mountain Allotment, active preference includes an additional 23 AUMs from fenced federal land. Fenced federal range is small tracts of public land fenced in with large tracts of private land. Forage from fenced federal range is included as part of active preference to ensure that the public is compensated for forage consumed off those small tracts of public land.

Active preference will be reduced from 8,857 AUMs to 6,426 AUMs (6,403 AUMs + 23 AUMs fenced federal = 6,426 AUMs) over a period of five years as follows:

	Total <u>Preference</u>	Suspended <u>Preference</u>	Active <u>Preference</u>
Year 1	11,880	4,740	7,117 + 23 = 7140
Year 3	11,880	5,090	6,767 + 23 = 6790
Year 5	11,880	5,454	6,403 + 23 = 6426

Prior to Year 3 and Year 5 management will be assessed in light of monitoring data available at that time.

2. Grazing System

Grazing will occur during the following season of use:

Spring        04/01 to 05/31  
Summer/Fall 06/01 to 10/15

Beginning in Year 2 grazing will be scheduled by use area as displayed below. It is recognized that due to lack of fencing, drift will occur between use area. The exception is the Jackson-Mary Sloan Use Area which is to be grazed from 05/25 to 07/15. Drift into this area is prevented in the spring by a drift fence on the lower portion of Jackson Creek. This fence very effectively prevents movement into the area from the west. The other access to this area is at the south end of the use area. No movement is expected into this area from the south unless cattle are actively pushed into the area because cattle will not occupy the area south until late summer/fall and at that time their movement will be towards Trout Creek Ranch. If drift is found to occur, it will be prevented by riding by the permittee.

Scheduling grazing by use area, and subsequently the permittee's report of actual use by use area, will allow more accurate assessment of management practices. Actual use reports will be made based on the best estimate by use area. It is recognized that lack of pasture fences will limit the permittee's knowledge of actual use by use area. As stated above, no drift is expected into or out of the Jackson-Mary Sloan Use Area. Therefore accurate actual use is attainable for that use area.

As actual use data by use area becomes available, it may be determined through analysis of monitoring data and in consultation, coordination and cooperation with the permittee and other interested parties, that allotment objectives can be met by adjusting stocking by use area and within active preference. If, for example, short term objectives are not met in the Jackson-Mary Sloan Use Area and forage is available in another use area, some use may be shifted out of the Jackson-Mary Sloan Use Area and onto another area.

Active preference will be reduced from 8,857 AUMs to 6,426 AUMs (6,403 AUMs + 23 AUMs fenced federal = 6,426 AUMs) over a period of five years. During that five year period grazing will be scheduled as follows:

YEAR 1

On February 23, 1994, I sent you notification by letter that your grazing application on the Jackson Mountain Allotment for the 1994 grazing year was approved through May 31, 1994, as follows:

Livestock No. & Kind	Period		%PL Use	Type Use	AUMs
	Begin	End			
100 C	03/01/94	03/15/94	98	Active	48
363 C	03/16/94	03/31/94	98	Active	187
650 C	04/01/94	04/30/94	98	Active	628
1650 C	05/01/94	05/31/94	98	Active	1648
				Total	2511

In that same letter you were notified that approval of the remaining portion of your application was withheld pending completion of the Final Jackson Mountain Evaluation and issuance of the Proposed Multiple Use Decision for Jackson Mountain Allotment. It is my proposed decision that the remaining and following portion of you application is denied:

Livestock No. & Kind	Period		%PL Use	Type Use	AUMs
	Begin	End			
1650 C	06/01/94	08/15/94	98	Active	4040
826 C	08/16/94	09/30/94	98	Active	1224
326 C	10/01/94	10/31/94	98	Active	326
276 C	11/01/94	12/31/94	98	Active	542
100 C	01/01/95	02/28/95	98	Active	190
24 C	11/01/94	11/30/94	98	Active	24

It is my proposed decision that the following grazing use on Jackson Mountain Allotment for the 1994 grazing year is approved:

1650 C	06/01/94	08/15/94	98	Active	4040
288 C	08/16/94	10/15/94	98	Active	566
* 2 C	03/01/94	02/15/95	100	Active	23
				Total	4629

\* This line is for 23 AUMs fenced federal range that can be grazed concurrently with private land as long as grazing use is not detrimental to federal range.

Total authorized use for the 1994 grazing season follows:

Approved by letter dated 02/23/94	2511 AUMs
Approved by this decision	4629 AUMs
Total authorized use for 1994	7140 AUMs



YEAR 2

Grazing use will be scheduled as follows in Year 2:

<u>Use Area</u>	<u>No. Cattle</u>	<u>Period of Use</u>	<u>% Fed Land</u>	<u>AUMs</u>
Southwest	400 C	04/01 to 04/30	98	387
	750 C	05/01 to 05/31	98	725
Jungo Hills	200 C	04/01 to 04/30	98	193
	700 C	05/01 to 05/31	98	699
Northwest	200 C	04/01 to 05/24	98	193
Jackson-Mary Sloan	200 C	05/25 to 07/15	98	490
Rattlesnake Canyon	750 C	06/01 to 08/15	98	1836
	200 C	08/16 to 10/15	98	393
Cedar Creek	700 C	06/01 to 07/15	98	1015
	900 C	07/16 to 08/15	98	899
	146 C	08/16 to 10/15	98	287
Fenced Federal Land	2 C	03/01 to 02/15	100	23
Total				7140

YEAR 3 & Year 4

Prior to Year 3 management will be assessed in light of monitoring data available at that time.

If it is determined through analysis of monitoring data prior to Year 3 or Year 5 that the carrying capacity of the Jackson Mountain Allotment differs from the carrying capacity identified in this decision, the available forage will be apportioned in the same proportions used in this decision (that is, 18% of the available forage to wild horses and 82% of the available forage to livestock).

Grazing use will be scheduled as follows in Year 3 and Year 4:

<u>Use Area</u>	<u>No. Cattle</u>	<u>Period of Use</u>	<u>% Fed Land</u>	<u>AUMs</u>
Southwest	350 C	04/01 to 04/30	98	338
	725 C	05/01 to 05/31	98	701
Jungo Hills	200 C	04/01 to 04/30	98	193
	675 C	05/01 to 05/31	98	674
Northwest	200 C	04/01 to 05/24	98	193
Jackson-Mary Sloan	200 C	05/25 to 07/15	98	490
Rattlesnake Canyon	725 C	06/01 to 08/15	98	1775
	150 C	08/16 to 10/15	98	295
Cedar Creek	675 C	06/01 to 07/15	98	979
	875 C	07/16 to 08/15	98	874
	130 C	08/16 to 10/15	98	255
Fenced Federal Land	2 C	03/01 to 02/15	100	<u>23</u>
Total				6790

YEAR 5

Prior to Year 5 management will be assessed in light of monitoring data available at that time.

If it is determined through analysis of monitoring data prior to Year 3 or Year 5 that the carrying capacity of the Jackson Mountain Allotment differs from the carrying capacity identified in this decision, the available forage will be apportioned in the same proportions used in this decision (that is, 18% of the available forage to wild horses and 82% of the available forage to livestock).

Grazing will be scheduled as follows in Year 5 and thereafter:

<u>Use Area</u>	<u>No. Cattle</u>	<u>Period of Use</u>	<u>% Fed Land</u>	<u>AUMs</u>
Southwest	301 C	04/01 to 04/30	98	291
	700 C	05/01 to 05/31	98	677
Jungo Hills	200 C	04/01 to 04/30	98	193
	650 C	05/01 to 05/31	98	649
Northwest	200 C	04/01 to 05/24	98	193
Jackson-Mary Sloan	200 C	05/25 to 07/15	98	490
Rattlesnake Canyon	700 C	06/01 to 08/15	98	1714
	106 C	08/16 to 10/15	98	208
Cedar Creek	650 C	06/01 to 07/15	98	942
	850 C	07/16 to 08/15	98	849
	100 C	08/16 to 10/15	98	197
Fenced Federal Land	2 C	03/01 to 02/15	100	<u>23</u>
Total				6426

3. Terms and Conditions

Upon completion of the drift fence on middle Jackson Creek livestock will be excluded from the middle Jackson Creek area after 06/15 except when being actively trailed.

Upon completion of fencing of private land in the upper Big Cedar Creek area livestock will be excluded from the area west of that private land and east of King Lear Peak after 07/15.

Exchange of use is accounted for on each line entry as percent public land. Your exchange of use agreement expires [enter date].

Your active preference includes 23 AUMs fenced federal range which may be grazed concurrently with private land as long as grazing use is not detrimental to federal range.

Any cattle owned or controlled by you found on the federal range without BLM issued ear tags will be deemed in excess of you authorized numbers.

This grazing authorization is contingent upon submission of copies of bills and proof of payment for railroad leases as the leases are renewed on 03/01.

Salt and/or mineral blocks shall not be placed within one quarter ( $\frac{1}{4}$ ) mile of springs, meadows, streams, riparian habitats or aspen stands.

C. Structural Projects

The following projects are scheduled to be evaluated through the project planning process. Construction of projects is dependent upon funding and project priorities:

1. Approximately two miles of drift fences are recommended to control livestock use on middle Jackson Creek. The proposed location of the fences follow:

Section 34, T40N, R31E  
Section 26, T40N, R31E

Upon completion of this fence, no use of the middle Jackson Creek area will be scheduled after 06/15 except when cattle are being actively trailed through the area.

2. Enclosures around selected springs and associated meadows are recommended to eliminate use of those areas by livestock and wild horses. The sites to be fenced would be selected in consultation, coordination and cooperation with the Nevada Division of Wildlife, the permittee and other interested parties.
3. Development of springs at the following locations is recommended for consideration:

Section 36, T40N, R31E (two springs)  
Section 34, T40N, R31E  
Section 2, T39N, R31E  
Section 11, T36N, R31E

Construction of a pipeline off Donna Schee Spring (Section 30, T37N, R32N, located on private land) to provide water to Section 15, T37N, R32E; and of a pipeline off Dead Man Spring (Section 3, T37N, R31E, may be located on private land) to provide water to Section 12, T37N, R31E, is recommended for consideration.

## RATIONALE

Analysis of monitoring data indicates that both wild horses and livestock have contributed to failure to meet allotment objectives. Through analysis of monitoring data the carrying capacity of Jackson Mountain Allotment has been determined to be 7808 AUMs. See Appendix 1 for calculation of carrying capacity). The land use plan established the starting point for monitoring within Jackson Mountain for livestock and wild horses. The available forage (7808 AUMs) was apportioned between livestock and wild horses in proportion to those land use plan numbers. See Appendix 2 for calculations to apportion available vegetation. The apportionment of forage between livestock and wild horses follows:

Cattle	6,403 AUMs
Wild horses	<u>1,405 AUMs</u>
Total	7,808 AUMs

The reduction in use by cattle and wild horses is expected to allow utilization objectives to be met on upland habitat. In addition, the utilization objectives for wetland riparian habitat is expected to be met on a larger area than is occurring under present management. However, even with reduced use objective levels are expected to be exceeded on some wetland riparian areas. To insure improvement and maintenance of those areas in good condition exclosures are to be constructed.

Grazing of the Jackson-Mary Sloan Use Area, which includes upper Trout Creek, is scheduled for 05/25 to 07/15. This period of use is expected to result in improved livestock distribution and therefore reduced use of riparian areas. In addition, reduced livestock numbers and the shorter period of use will reduce the amount of AUMs harvested from this area. Improved livestock distribution and reduced use are expected to allow utilization objectives to be met on riparian areas. In addition, the period of use is expected to reduce any impacts livestock have had on browse species. Elimination of livestock use after 07/15 from the area east of King Lear Peak and west of private land is also expected to allow short term objectives to be met.

Construction of water developments would improve livestock distribution and reduce grazing pressure on both upland and riparian areas.

Short term utilization objectives are designed to ensure progress toward meeting long term objectives. Achievement of the short term objectives will:

Provide adequate stubble height by the beginning of the spring runoff period to disperse flood water, filter sediment, maximize bank water storage and dry season flows, and provide for sage grouse cover and maintenance of plant vigor, and promote successful recruitment of suckers and saplings in the community in streambank riparian habitat.

Ensure adequate stubble height during the grazing season for sage grouse cover, and after the grazing season maximize plant vigor and minimize headcutting and erosion on wetland riparian habitat.

Promote successful reproduction and recruitment, promote plant vigor and provide watershed protection on upland habitat.

#### AUTHORITY

The authority for this decision is contained in Title 43 of the Code of Federal Regulations, which states in pertinent parts:

4100.0-8 "The authorized officer shall manage livestock grazing on public lands under the principle of multiple use and sustained yield, and in accordance with applicable land use plans. Land use plans shall establish allowable resource uses (either singly or in combination), related levels of production or use to be maintained, areas of use and resource condition goals and objectives to be obtained. The plans also set forth program constraints and general management practices needed to achieve management objectives. Livestock grazing activities and management actions approved by the authorized officer shall be in conformance with the land use plan as defined at 43 CFR 1601.0-5(b)."

4110.3 "The authorized officer shall periodically review the grazing preference specified in a grazing permit or grazing lease and may make changes in the grazing preference status. These changes shall be supported by monitoring, as evidenced by rangeland studies conducted over time, unless the change is either specified in an applicable land use plan or necessary to manage, maintain or improve rangeland productivity."

4130.6 "Livestock grazing permits and leases shall contain terms and conditions necessary to achieve the management objectives for the public lands and other lands under Bureau of Land Management administration."

4130.6-1(a) "The authorized officer shall specify the kind and number of livestock, the period(s) of use, the allotment(s) to be used, and the amount of use, in animal unit months, for every grazing permit or lease. The authorized livestock grazing use shall not exceed the livestock carrying capacity as determined through monitoring and adjusted as necessary under 4110.3, 4110.3-1 and 4110.3-2."

4130.6-2 "The authorized officer may specify in grazing permits and leases other terms and conditions which will assist in achieving management objectives, provide for proper range management or assist in the orderly administration of the public rangelands."

4130.6-3 "Following careful and considered consultation, cooperation and coordination with the lessees, permittees, and other affected interests, the authorized officer may modify terms and conditions of the permit or lease if monitoring data show that present grazing use is not meeting the land use plan or management objectives."

PROTEST

If you wish to protest this proposed decision in accordance with 43 CFR 4160.2 you are allowed fifteen (15) days from receipt of this notice within which to file such protest with the Paradise-Denio Area Manager, Bureau of Land Management, Winnemucca District, 705 East Fourth St., Winnemucca, NV 89445. Subsequent to the fifteen day protest period a final decision will be issued which will provide an opportunity for appeal in accordance with 43 CFR 4160.4 and 43 CFR 4.470.

## WILD HORSE DECISION

Based upon the evaluation of monitoring data for the Jackson Mountain Allotment, consultation with you and other affected interests and recommendations from my staff, my proposed decision for wild horses follows:

The appropriate management level for wild horses within the Jackson Mountain Allotment portion of the Jackson Mountains Herd Management Area is 117 horses.

If it is determined through analysis of monitoring data prior to Year 3 or Year 5 of the five year phase in period for reductions in active preference that the carrying capacity of Jackson Mountain differs from the carrying capacity identified in this document, the available forage will be apportioned in the same proportions used in this decision (that is, 18% of the available forage to wild horses and 82% of the available forage to livestock).

### RATIONALE

Analysis of monitoring data indicates that both wild horses and livestock have contributed to failure to meet allotment objectives. Through analysis of monitoring data the carrying capacity of Jackson Mountain Allotment has been determined to be 7808 AUMs. See Appendix 1 for calculation of carrying capacity). The land use plan established the starting point for monitoring within Jackson Mountain for livestock and wild horses. The available forage (7808 AUMs) was apportioned between livestock and wild horses in proportion to those land use plan numbers as follows (see Appendix 2 for calculations to apportion available vegetation):

Cattle	6,403 AUMs
Wild horses	<u>1,405 AUMs</u>
Total	7,808 AUMs

1,405 AUMs provides forage for 117 horses yearlong calculated as follow:

$$\frac{1,405 \text{ AUMs}}{12 \text{ months}} = 117 \text{ horses}$$

The reduction in use by cattle and wild horses is expected to allow utilization objectives to be met on upland habitat. In addition, the utilization objectives for wetland riparian habitat is expected to be met on a larger area than is occurring under present management. However, even with reduced use objective levels are expected to be exceeded on some wetland riparian areas. To insure improvement and maintenance of those areas in good condition, exclosures are to be constructed.



Short term utilization objectives are designed to ensure progress toward meeting long term objectives. Achievement of the short term objectives will:

Provide adequate stubble height by the beginning of the spring runoff period to disperse flood water, filter sediment, maximize bank water storage and dry season flows, and provide for sage grouse cover and maintenance of plant vigor, and promote successful recruitment of suckers and saplings in the community in streambank riparian habitat.

Ensure adequate stubble height during the grazing season for sage grouse cover, and after the grazing season maximize plant vigor and minimize headcutting and erosion on wetland riparian habitat.

Promote successful reproduction and recruitment, promote plant vigor and provide watershed protection on upland habitat.

#### AUTHORITY

The authority for this decision is contained in Sec. 3(a) and (b) of the Wild-Free-Roaming Horse and Burro Act (P.L. 92-195) as amended and in Title 43 of the Code of Federal Regulations, which states in pertinent parts:

§ 4700.0-6(a) "Wild horses and burros shall be managed a self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat."

§ 4710.4 "Management of wild horses and burros shall be undertaken with the objective of limiting the animals distribution to herd areas. Management shall be at the minimum level necessary to attain the objective identified in approved land use plans and herd management plans."

§ 4720.1 "Upon examination of current information and a determination by the authorized officer that an excess of wild horses or burros exist, the authorized officer shall remove excess animals immediately..."

#### PROTEST

If you wish to protest this proposed decision, you are allowed fifteen (15) days from receipt of this notice within which to file such protest with the Paradise-Denio Resource Area Manager, Bureau of Land Management, Winnemucca District, 705 East Fourth St., Winnemucca 89445. Subsequent to the fifteen day protest period a final decision will be issued which will provide an opportunity for appeal in accordance with 43 CFR 4.470.

## WILDLIFE MANAGEMENT DECISION

Based upon the evaluation of monitoring data for the Jackson Mountain Allotment, consultation with you and other affected interests and recommendations from my staff, my proposed decision for wildlife follows:

1. Continue with the management of wildlife as outlined in the Land Use Plan.
2. Manage those creeks identified in the final U.S. Fish and Wildlife Service Lahontan Cutthroat Trout Recovery Plan for the introduction of Lahontan cutthroat trout.

### RATIONALE

Analysis of monitoring data indicates that mule deer use has contributed to failure to meet short term objectives on portions of the Jackson Mountain Allotment. However, data also shows that a decline deer numbers has been occurring and therefore no artificial reduction in mule deer numbers is recommended at this time. There is no indication that pronghorn antelope or bighorn sheep are contributing to failure to meet allotment objectives. Therefore, a change in the existing wildlife populations or the existing wildlife management of the Jackson Mountains Allotment is not warranted. Reasonable numbers for wildlife will remain as follows:

<u>Mule Deer</u>	<u>Pronghorn Antelope</u>	<u>Bighorn Sheep</u>
378 AUMs	60 AUMs	275 AUMs

Mary Sloan Creek, Jackson Creek and Trout Creek have been identified by the Winnemucca District of the Bureau of Land Management as potential Lahontan cutthroat trout habitat. The draft U.S. Fish and Wildlife Service Lahontan Cutthroat Trout Recovery Plan lists Mary Sloan Creek and Jackson Creek as potential LCT recovery stream.

### AUTHORITY

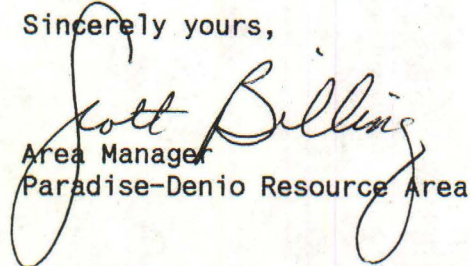
The authority for this decision is contained in Title 43 of the Code of Federal Regulations, which states in pertinent parts:

§ 1725.3-3(b) "Management of public lands for fish and wildlife development and utilization involves the protection, regulated use, and development of habitat on public lands and waters to obtain a sustained yield of fish and wildlife and provision and maintenance of public access to fish and wildlife resources."

PROTEST

If you wish to protest this proposed decision, you are allowed fifteen (15) days from receipt of this notice within which to file such protest with the Paradise-Denio Resource Area Manager, Bureau of Land Management, Winnemucca District, 705 East Fourth St., Winnemucca 89445. Subsequent to the fifteen day protest period a final decision will be issued which will provide an opportunity for appeal in accordance with 43 CFR 4.470.

Sincerely yours,

  
Area Manager  
Paradise-Denio Resource Area

Certified copies to:

Natural Resources Defense Council P877068755  
Sierra Club-Toiyabe Chapter P877068756  
Mr. Craig C. Downer P877068757  
The Wilderness Society P877068758  
Nevada Outdoor Recreation Association P877068759  
Desert Bighorn Council P877068760  
Nevada Dept. of Conservation and Natural Resources  
Division of Wildlife - Fallon P877068761  
Mr. John Marvel P877068762  
Nevada Cattlemen's Association P877068763  
Rutgers Law School P877068764  
Mr. Dave Torell P877068765  
Nevada Farm Bureau Federation P877068766  
Winnemucca Unit, NCA P877068767  
USFWS P877068768  
Wild Horse Organ. Assist. P877068769  
Sagebrush Chapter, Trout Unlimited P877068770  
SCS Dist. Conservationist P877068771  
Ms. Claudia J. Richards P877068772  
Animal Protection Institute of America P877068773  
Commission for the Preservation  
of Wild Horses P877068694  
International Society for the Protection  
of Mustangs and Burros P877068695  
Humboldt County Commissioners P877068696  
Nevada Dept. of Conservation and Natural Resources  
Division of Wildlife - Winnemucca P877068697  
Intermountain Range Consultants P877068698  
Mr. Stephen A. Moen P877068699  
National Wildlife Federation P877068700

## Appendix 1- Calculation of Carrying Capacity

Carrying capacity for wild horses plus cattle on the Jackson Mountain Allotment was calculated based upon actual use data and upon utilization data gathered during use pattern mapping in 1988 and 1992. Limited observations of utilization were made in 1991 which did not include use pattern mapping. Because data was limited in 1991, it was not used to calculate carrying capacity.

1988:

Use pattern mapping in 1988 shows that upland utilization objectives were met at a stocking rate of 8624 AUMs. This stocking rate is the amount of forage consumed (actual use) by cattle and wild horses at the time use pattern mapping was conducted. Provided management is implemented to insure riparian utilization objectives are met, 1988 data indicates short term objectives would be met at a stocking rate of 8624 AUMs. Management actions to insure riparian objectives are met include elimination of grazing from the Jackson-Mary Sloan Use Area after 07/15 and reduce numbers of cattle in this area; elimination of grazing in the upper Big Cedar Creek area after 07/15; and fencing to protect selected riparian areas.

1992:

Actual use by cattle and wild horses at the time use pattern mapping was conducted was 7646 AUMs. Use pattern mapping conducted in 1992 shows areas of heavy use of upland species in the southwest and south-central portion of the allotment. Actual use by cattle and wild horses on that portion of the allotment was 2290 AUMs. Actual use by cattle and horses on the remainder of the allotment was 5356 AUMs. Calculation of the stocking level at which utilization objectives are expected to be met (desired stocking level) on the southwest and south-central portion follows:

$$\frac{\text{Actual Use}}{\text{Actual Utilization}} = \frac{\text{Desired Stocking Level}}{\text{Desired Utilization}}$$

Therefore:

$$\frac{2290 \text{ AUMs}}{70\%} = \frac{\text{Desired Stocking Level}}{50\%}$$

$$\text{Desired Stocking Level} = 1636 \text{ AUMs}$$

Provided management as described above is implemented to insure riparian utilization objectives are met, 1992 data indicates short term objectives would be met at the following stocking rate:

1636 AUMs southwest and south-central portion  
+ 5356 AUMs remainder of allotment  
6992 AUMs total allotment

The carrying capacity of the allotment is calculated as an average of those two years data as follows:

8624 AUMs + 6992 AUMs = 7808 AUMs  
2 years

Appendix 2- Calculations to Apportion Available Forage

The starting point for monitoring within Jackson Mountain Allotment was established by the land use plan as 8,857 AUMs for livestock and 1,920 AUMs (160 head yearlong) for wild horses. The starting point proportions follow:

$$\text{Livestock-} \quad \frac{8,857 \text{ AUMs}}{8,857 \text{ AUMs} + 1,920 \text{ AUMs}} \times 100 = 82\%$$

$$\text{Wild Horses-} \quad \frac{1,920 \text{ AUMs}}{8,857 \text{ AUMs} + 1,920 \text{ AUMs}} \times 100 = 18\%$$

The carrying capacity for Jackson Mountain Allotment has been determined to be 7808 AUMs (see Appendix 1). Apportionment of the 7808 AUMs forage available to wild horses and livestock based upon the above proportions results in the following:

$$\text{Livestock-} \quad 7808 \text{ AUMs} \times 0.82 = 6403 \text{ AUMs}$$

$$\text{Wild Horses-} \quad 7808 \text{ AUMs} \times 0.18 = 1405 \text{ AUMs}$$

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I. Introduction

- A. Jackson Mountain Allotment (00058)
- B. Permittee - DeLong Ranches, Inc.
- C. Evaluation Period - 10/14/83 to present
- D. Selective Management Category M

II. Initial Stocking Level

A. Livestock Use

1. Grazing Preference (AUMs)

- a. Total Preference - 11,880 AUMs
- b. Suspended Preference - 3,023 AUMs
- c. Active Preference - 8,857 AUMs

2. Season of Use - 3/1 to 2/28

3. Kind and Class of Livestock - Cattle (cow/calf)

4. Percent Federal Range - 98%

5. Grazing System

- a. The permittee's grazing practices vary slightly each year depending upon livestock operations, weather conditions and water availability. The permittee's general grazing practice is to use the allotment predominantly during the spring and summer with some fall use and a limited amount of winter use. There are no interior pasture fences on the allotment. Natural barriers such as the steep mountain terrain of the Jackson Mountains, distance between waters and trailing livestock to various use areas help control livestock use on the allotment. The following information outlines the permittee's general grazing practices by livestock use areas. Adequate information is not available to determine accurate actual use (AUMs) by use area:

(1) Winter Use Areas

Winter use occurs at the lower elevations on the south end of the allotment from Jungo Point Windmill to Hot Springs.

30-50 C 11/01 to 03/15

(2) Spring/Summer Use Areas

Approximately 1,525 head of cattle are trailed in different herd sizes on various days during the early spring months (03/15 to 04/30) from private land to several use areas throughout the allotment. The following information is a general description of livestock numbers by use areas, period of use and livestock management practices:

- (a) Cattle trailed from private land are scattered between Winter Camp, Salt Water Springs and Little Buck Brush Springs. The livestock move up slope along the west facing slopes of the south Jackson Mountains. In the first part of June, cattle that have not moved up slope are moved by riders. Cattle stay in this general location until July at which time cattle drift back towards private land. Between the middle of July and first of August gates are opened on private land.

300-335 C - 03/16 to 07/31

- (b) Cattle trailed from private land are scattered from the Buck Brush Springs area to as far north as the allotment boundary fence. As the season progresses, cattle drift up the mountain to higher elevations (Mary Sloan Basin, Upper Trout Creek, Iron King Mine and upper portion of Jackson Creek). In the first part of June cattle that have not moved up slope are moved by riders. Cattle drift back to private land beginning in July.

225-275 C 04/01 to 08/15

- (c) Cattle are trailed from private land to the Jungo Hills Area where they scatter throughout the area.

125-150 C 04/01-04/05 to 08/15

- (d) Throughout the evaluation period cattle were trailed from the Seven Troughs Allotment, and from the area south and west of Hot Springs to Sulfur, to the Lewis Mine troughs, Railroad, Trail, Hidden, Sleep Camp, Smokey and Fox Springs. On 11/01 cattle were trailed back to Seven Troughs (240 cows) and Jackson Mtn. winter areas (30 to 50 cattle).

270-290 C 04/15 to 11/01

- (e) Throughout the evaluation period cattle were trailed from Blue Mountain and Humboldt Valley Allotments into the Donna Schee Pass area the latter part of April. Approximately half of these cattle move from the lower fans up to the higher elevations on their own between mid-May and mid-June. In June the remaining cattle were moved up the mountain to the Shawnee, Bull, Cedar, Clover and lower Trout Creek areas. Approximately August 1 gates on private land (Trout Creek Ranch) are opened and cattle drift in.

400-500 C - 04/24 to 08/15

(3) Summer/Fall

From the end of July through the beginning of August, cattle are gathered and put into private land at the same time they are drifting in as stated above. The number of cattle remaining varies on a yearly basis, but generally does not exceed 400 head.

300-400 C 08/15 to 09/30

## 4) 1993 Grazing Season

As the result of transfer of grazing privileges, beginning in the 1993 grazing season the permittee no longer has grazing privileges in the Humboldt Valley or Seven Troughs Allotments, and has acquired grazing privileges in the Mormon Dan Allotment. Livestock use of Jackson Mountain Allotment is scheduled to be similar to the use which occurred during the evaluation period. The permittee has been authorized to adjust cattle numbers and take additional non-use during the 1993 grazing season. The permittee identified excess wild horses as the reason for non-use.

## B. Wild Horse Use

The Jackson Mountains Herd Management Area (HMA) encompasses a portion of the Jackson Mountain Allotment (see Appendix 5 for map of Jackson Mountains HMA). The Paradise-Denio Land Use Plan identifies 160 wild horses and 0 burros as a starting point for monitoring for the Jackson Mountain Allotment portion of the HMA. Portions of the Bottle Creek, Deer Creek, Wilder-Quinn, and Happy Creek Allotments are also included in the Jackson Mountains HMA. An appropriate management level (AML) will be established based on resource monitoring as required by the June 1989, Interior Board of Land Appeals (IBLA) decision. This AML may be more or less than 160 horses.

## C. Wildlife Use

Mule deer and pronghorn antelope summer and winter range as well as bighorn sheep yearlong habitats have been identified in the Jackson Mountain Allotment.

1. Reasonable numbers developed in conjunction with Nevada Department of Wildlife (NDOW) personnel for the Jackson Mountain Allotment are:

Mule deer	378 AUMs
Pronghorn antelope	60 AUMs
Bighorn sheep	275 AUMs

2. The following Key or Critical Management areas have been identified within the allotment.

a. Mule Deer:

deer summer-	13,889 acres (DS-8; DS-9)
deer winter-	12,794 acres (DW-13)
deer yearlong-	76,245 acres (DY-19; DY-20)

b. Pronghorn Antelope:

pronghorn summer-	13,658 acres (PS-14)
pronghorn winter-	15,562 acres (PW-15)
pronghorn yearlong-	157,303 acres (PY-13)

c. Bighorn Sheep:

bighorn yearlong-	34,324 acres (BY-5)
	14,105 acres (BY-6)

d. Sage Grouse:

General sage grouse distribution areas have been identified in the northern most portion of the Jackson Mountain Allotment.

e. Other/Game Species:

Several other upland bird and mammal species occur on this allotment.

f. Other/Non-Game Species:

Various species of nongame birds and mammals occur in the Jackson Mountain Allotment.

D. Riparian/Fisheries

There are three major streams located within the Jackson Mountain Allotment; Jackson Creek, Mary Sloan Creek, and Trout Creek. These creeks were identified by the Winnemucca District of the BLM as "proposed" Lahontan cutthroat trout habitats. Mary Sloan Creek has been identified in the US Fish and Wildlife Service publication "Technical/Agency Draft Recovery Plan for Lahontan Cutthroat Trout, Oncorhynchus clarki henshawi (Salmonidae)," as a potential recovery site.

During stream surveys conducted by the Nevada Department of Wildlife (NDOW) brook trout were found in Jackson Creek and rainbow trout were found in Mary Sloan Creek. No fish were found in Trout Creek.

### III. Allotment Profile

#### A. Narrative Description

The Jackson Mountain Allotment is located in the southwestern portion of Humboldt County. The allotment is approximately 30 air miles west, northwest of Winnemucca. It includes the majority of the Jackson Mountain Range, portions of the Black Rock Desert to the west and portions of Desert Valley to the east. Elevations range from 4,000 feet to 8,900 feet. The lower elevations are dominated by greasewood and shadscale. As elevations increase, sagebrush is dominant. Riparian and meadow, juniper, aspen and mountain browse vegetation types are also included within the allotment. Soils are basalt and granitic in origin.

#### B. Acreage

1. Allotment Total - 366,090 acres
2. Public land - 355,255 acres
3. Private land - 10,835 acres

#### C. Allotment Specific Objectives

##### 1. Land Use Plan Objectives

###### a. Objective RM-1

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 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 healthy fish community.

c. Objective WL-1

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

d. Objective WH/B-1

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

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.

2. Rangeland Program Summary Objectives

In the Rangeland Program Summary the information displayed under Jackson Mountain Allotment includes both Jackson Mountain Allotment and Bottle Creek Allotment. This evaluation covers the Jackson Mountain Allotment only. Therefore, the objectives displayed below exclude Bottle Creek Allotment.

a. Increase available forage for livestock to maintain an active preference of 8,857 AUMs.

b. Improve range condition from poor to fair on 355,225 acres.

b. Improve water quality for fisheries.

c. Develop a livestock grazing plan that will alleviate the following problems:

- (1) Improper season-of-use
- (2) Inadequate livestock distribution
- (3) Livestock drift
- (4) Excessive stocking rate

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

Deer	378 AUMs
Antelope	60 AUMs
Bighorn Sheep	275 AUMs

e. Protect known sage grouse strutting grounds and associated breeding complexes, and future grounds as identified.

f. Improve and maintain the condition of aquatic habitat having the potential to support a sport fishery on Jackson, Trout and North Fork of Jackson Creek.

g. Graze 160 wild horses (1,920 AUMs) in the Jackson Mountains Herd Use Area.

3. Habitat Management Plan Objectives

a. Jackson Mountain Habitat Plan (Bighorn Sheep Reintroduction) approved 09/21/79

- 1. Establish a viable herd of california bighorn sheep.

b. Jackson Mountain Habitat Management Plan approved 01/06/81

- 1. Manage the habitat toward optimum quality, quantity, and diversity of food, water, cover, and space for all terrestrial wildlife species.
- 2. Mitigate any present or potential adverse impacts placed upon wildlife habitat within the habitat area.
- 3. Encourage range and other resource developments that will benefit wildlife and wildlife habitat.



4. Provide additional cover for the major big game species
5. Create habitat diversity in selected areas having large monotypic shrub communities in order to reduce the monotonous shrub component and increase the forb and grass composition.
6. Ensure that wildlife needs are coordinated during the design and implementation of all resource activity plans.
7. Vegetative composition objectives were also developed for the Jackson Mountains. However, these recommendations were made without the benefit of an Ecological Site Inventory and the attainability of these objectives is not known.

4. Allotment Objectives

The allotment specific objectives tie the Land Use Plan and Rangeland Program Summary and Habitat Management Plan objectives together into quantified objectives for this allotment.

a. Short Term Objectives

- (1) Manage for moderate (41-60%) utilization of key species on streambank riparian habitats on Jackson, Trout and Mary Sloan Creeks with a preferred use level of 50%.
- (2) Manage for moderate (41-60%) utilization of key plant species in wetland riparian habitats with a preferred use level of 50%.
- (3) Manage for moderate (41-60%) utilization of key plant species in upland habitat with a preferred use level of 50%.

b. Long Term Objective

- (1) Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 378 AUMs for mule deer, 60 AUMs for pronghorn and 275 AUMs for bighorn sheep.
  - (a) Improve to and maintain 102,930 acres in good or excellent mule deer habitat condition.
  - (b) Improve to and maintain 186,523 acres in fair to good pronghorn habitat condition.
  - (c) Improve to and maintain 48,429 acres in good to excellent bighorn sheep habitat condition.
- (2) Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 8,857 AUMs.
- (3) Improve range condition from poor to fair on 355,225 acres.
- (4) Maintain and improve free roaming behavior of wild horses by protecting and enhancing their home ranges.
- (5) Improve to and maintain 1 acre of ceanothus habitat types in good condition.
- (6) Improve to and maintain 447 acres of mahogany habitat types in good condition.
- (7) Improve to and maintain 65 acres of aspen habitat types in good condition.
- (8) Improve to and maintain 967 acres of riparian and meadow habitat types in good condition.

- (9) Improve to or maintain the following stream habitat conditions from 55% on Mary Sloan Creek, 57% on Trout Creek and 53% on Jackson Creek to an overall optimum of 60% or above.
- (a) Streambank cover 60% or above.
  - (b) Streambank stability 60% or above.
  - (c) Maximum summer water temperatures below 70°F.
  - (d) Sedimentation below 10%.
- (10) Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% canopy cover of sagebrush for nesting and winter use.
- (11) Improve to and maintain the water quality of Jackson, Trout, and Mary Sloan Creeks to the state criteria set for the following beneficial uses: stockwater, cold water aquatic life, water contact recreation and wildlife propagation.

The applicable state criteria are displayed in Appendix 1. The criteria can also be found in Chapter 445 of the Nevada Administrative Codes (Nevada Division of Environmental Protection).

#### D. Key Species Monitored

##### 1. Upland Habitat

<u>Symbol</u>	<u>Scientific Name</u>	<u>Common Name</u>
SIHY	<u>Sitanion hystrix</u>	bottlebrush squirreltail
POSE	<u>Poa secunda</u>	Sandberg's bluegrass
ELCI2	<u>Elymus cinereus</u>	Great Basin wildrye
STTH2	<u>Stipa thurberiana</u>	Thurber's needlegrass
AGSP	<u>Agropyron spicatum</u>	bluebunch wheatgrass
PPGG	<u>Agrositanion saundesii</u>	Saunders' wheatgrass
ORHY	<u>Oryzopsis hymenoides</u>	Indian ricegrass
EULA5	<u>Eurotia lanata</u>	winter fat
EPHED	<u>Ephedra sp.</u>	ephedra
ATCO	<u>Atriplex confertifolia</u>	shadscale
PUTR2	<u>Purshia tridentata</u>	bitterbrush
CELE	<u>Cercocarpus ledifolius</u>	curlleaf mountain mahogany
CEANO	<u>Ceanothus sp.</u>	ceanothus
AMAL2	<u>Amelanchia alnifolia</u>	serviceberry

## 2. Riparian Habitat

<u>Symbol</u>	<u>Scientific Name</u>	<u>Common Name</u>
PONE3	<u>Poa nevedensis</u>	Nevada bluegrass
POPR	<u>Poa pratensis</u>	Kentucky bluegrass
JUNCU	<u>Juncus</u> spp.	rush
CAREX	<u>Carex</u> spp.	sedge
POMO5	<u>Polygono monspeliensis</u>	rabbit's foot grass
DISTI	<u>Distichlis</u> sp.	saltgrass
ROWO	<u>Rosa woodsii</u>	Wood's rose
POPR5	<u>Populus tremuloides</u>	aspen
SALIX	<u>Salix</u> spp.	willow
RIBES	<u>Ribes</u> spp.	currant

## F. Wilderness Study Areas (WSAs)

Portions of the following WSAs occur within the Jackson Mountain Allotment:

- NV-020-620 - Black Rock Desert WSA
- NV-020-606 - North Jackson Mountains WSA
- NV-020-603 - South Jackson Mountains WSA

The trail up McGill Canyon to King Lear Peak is a popular hiking route within the South Jackson WSA. McGill Canyon has been designated as a Wildlife Viewing Area.

## IV. Management Evaluation

## A. Purpose

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

## B. Summary of Studies Data

## 1. Actual Use

## a. Livestock

## Grazing

<u>Year</u>	<u>Actual Use</u>
1984	8,857 (1)(2)
1985	8,684 (1)
1986	7,465
1987	7,357
1988	7,050
1989	8,093
1990	7,099
1991	7,009
1992	5,700

(1) Licensed use, actual use not available.

(2) In 1984 Jackson Mountain (8,857 AUMs) and Bottle Creek (3,409 AUMs) Allotments were licensed together under the name Jackson Mountain Allotment. This evaluation covers Jackson Mountain Allotment only. Therefore, AUMs licensed for use on Bottle Creek Allotment are not displayed.

Note- The permittee identified excess wild horses as the reason for non-use in the 1993 grazing season.

## b. Wildlife (existing numbers)

The Jackson mountain allotment lies within Nevada Department of Wildlife (NDOW) hunt unit 035. According to data collected by NDOW over the last twenty years, and evaluated in this allotment over the last five years, mule deer populations in unit 035 have decreased. Pronghorn estimates for unit 035 have increased over the last five years.

The Jackson Mountain allotment is one of five allotments which include some portion of the Jackson Mountain range. Deer and antelope populations in the Jackson Mountain range primarily migrate elevationally between winter/yearlong and summer ranges (Jeffress, 1993). Considerable lateral movement occurs throughout the seasonal range as a function of weather/vegetation conditions and competition, therefore, actual deer and pronghorn use each year will vary significantly. The final population

estimate for hunt unit 035, as derived from modelling, is also influenced yearly due to differing sample sites, as a result of weather conditions at the time of the survey which impacts animal observations.

With this in mind, an estimate of allotment specific numbers of deer and pronghorn on the Jackson Mountain allotment is highly variable from year to year and may not be a clear indicator of habitat condition and trend relative to mule deer or pronghorn.

To estimate existing numbers on an allotment, first the percent of hunt area 3 encompassed by unit 035 was determined. Winter and yearlong habitat area was calculated in each allotment and compared to the total habitat in hunt unit 035. From this calculation, a decimal percent of the total use area acreage in unit 035 is arrived at for the allotment. Using this decimal factor, and the population estimate for hunt unit 035, and assuming normal distribution of each species in the yearlong and winter range, and that species remain in the same location throughout the season, the following estimate of existing numbers for the past five years was derived.

	<u>Mule Deer</u>		<u>Pronghorn</u>	
	<u>Number</u>	<u>AUMs</u>	<u>Number</u>	<u>AUMs</u>
1988	445	1335	Not Available	
1989	362	1086	59	141
1990	348	1044	73	176
1991	363	1089	93	223
1992	275	825	87	209

The Nevada Department of Wildlife reported that the mule deer fawn to doe ratio in the western part of Humboldt County in March 1993, was 8.5:100, and that in order to maintain a deer population, it is desirable to end the winter with an average of 30-35 fawns per 100 does. Heavy snowfall following drought conditions has had a tremendous impact on wildlife. Antelope and bighorn sheep survived the winter relatively well, with "antelope numbers seeing the first decrease in five years and sheep numbers actually rising a bit." (Humboldt Sun, 1993)

California bighorn sheep were released in this allotment south of McGill Canyon on the west face of King Lear Peak in January 1983, and just north of Mary

Sloan Creek on the west face of Parrot Peak in the winter of 1986-1987. The sheep have since begun to use much of the suitable habitat in the northern portion of the allotment. The following population estimates, which include all age classes, were published by the Nevada Department of Wildlife in the annual "Big Game Status and Hunting Recommendations":

<u>Year</u>	<u>King Lear Peak Number</u>	<u>Parrot Peak Number</u>
1989	60-67	23-27
1990	70-80	30-35
1991	80-100	30-40
1992	90-100	40-50

The 1992 "Big Game Status and Hunting Recommendations" states:

The Jackson Mountain bighorn herd continues to expand in both density and distribution.

In January of 1989, the permittee observed 34 bighorn sheep on the west slopes of the Jackson Mountain range, and on January 17, 1992, observed 62 sheep in the same general vicinity.

## c. Wild Horses

1) Aerial Count Data

The Jackson Mountains Wild Horse Herd Management Area (HMA) is found within the Jackson Mountain, Bottle Creek, Deer Creek, Wilder-Quinn and Happy Creek Allotments. Records indicate that the Jackson Mountains HMA has had census or distribution flights conducted 13 times since 1977: These flights were conducted with a helicopter for census flights or a fixed wing aircraft for distribution flights. Total numbers observed for the Jackson Mountains Allotment are as follows.

<u>Year</u>	<u>Date</u>	<u># Horses(Ad./Yng)</u>	<u>Aircraft</u>
1977	March 31	124 (120/4)*	H (Bell B-1)
1980	July 25**	166 (135/31)*	H (Bell B-1)
1986	June 13	125 (103/22)	H (Bell B-1)
1988	Sept. 28	273 (216/57)	H (Bell B-1)
1989	July 19	243 (188/55)	H (Bell Soloy)
1990	Feb. 28	78 (78/0)	FW (Cessna 210)
1991	Feb. 1	81 (81/0)	FW (Cessna 210)
1991	July 30	82 (71/11)	FW (Maule 5)
1992	March 4	105 (102/3)	FW (Maule 5)
1992	May 20	94 (77/17)	FW (Maule 5)
1992	July 24	21 (18/3)	FW (Maule 5)
1992	Sept. 27	23 (19/4)	FW (Maule 6)
1993	Jan. 18	275 (237/38)	H (Bell Soloy)

H = Helicopter, FW = Fixed wing

\* Total number for the whole HMA; distribution by allotment not available.

\*\* Census began 7/25/80, continued 7/30/80 and ended 8/19/80.

A helicopter census is an attempt to count as accurately as possible all horses in a given area. A distribution flight is made with a fixed wing aircraft and is an attempt to locate horses seasonally, while counting as many as possible. Use of helicopters results in a more accurate count due to the slower speed and greater maneuverability of this type of aircraft.



Distribution flights at all seasons show the majority of horses are concentrated in the foothill country south of Red Butte Canyon, Brush Basin and Shawnee Creek.

2) Gather Data

One gather, which took place during December 1988 and January 1989, has been conducted on the Jackson Mountains HMA. Out of 225 animals removed from the entire HMA, 108 were removed from the Jackson Mountains Allotment. The remaining horses were removed from the Happy Creek and Wilder-Quinn Allotments.

3) Actual Use

<u>Grazing Year</u>	<u>No. Adults</u>	<u>AUMs</u>
1988 (pre-gather)	225 (1)	2250
1988 (post-gather)	138 (2)	276
1989	188 (3)	2256
1990	217 (4)	2604
1991	233 (4)	2796
1992	251 (4)	<u>3012</u>
Total		13104
Average 1988-92		2621

- (1) Based on census of 9/28/88 (10 months)
- (2) The percentage of young-of-the-year (1988) removed during the gather was 27.4%. Applying this percentage to the Jackson Mountains portion gives 78 adults, 30 young removed; 138 adults, 27 young remaining for 2 months of the grazing year.
- (3) Based on census of 7/19/89, following gather in winter 1988-89
- (4) Projected number, see Appendix 4 for calculation

Accurate data is not available to determine actual use prior to 1988.

## 2. Climatological Data (1983-1992)

The National Oceanic and Atmospheric Administration (NOAA) climatological station, Leonard Creek Ranch, is located approximately 10 miles north of Jackson Mountain Allotment. Precipitation data collected at that station follow:

<u>Year</u>	<u>Precipitation (inches)</u>	
	<u>Growing Season</u> <u>March-August</u>	<u>Annual</u>
1983	6.64 M	17.74 M
1984	3.00	8.50
1985	2.48	6.82 M
1986	4.85	9.60
1987	5.42	9.30
1988	2.94	8.11
1989	3.98	7.48
1990	4.67	7.19
1991	5.06	9.04
1992	2.38	5.29 M

M - Insufficient or partial data

1983 - Partial data for May

1985 - No data for October

1992 - No data for November or October (not published as of 04/93)

Unseasonably low precipitation occurred in April (0.26 inches) and May (0.00) of 1992.

## 3. Utilization Data

Utilization studies were conducted with the following use ratings of the current year's growth:

<u>Use Rating</u>	<u>Percent utilization</u>
No Use	0%
Slight	1-20%
Light	21-40%
Moderate	41-60%
Heavy	61-80%
Severe	81-100%

## a. 1988

Actual use by cattle and wild horses at the time when utilization data was collected follows. Actual use for the entire grazing period (March 1 through the end of February) can be found in Section IV-B (page 15) of this document.

Cattle	03/01/88 to *10/26/88	6849 AUMs
Wild.Horses	03/01/88 to *10/26/88	<u>1775 AUMs</u>
	Total	8624 AUMs

\* 10/26/88 is the mid-point of the time period when utilization data was collected.

Use pattern mapping was conducted on October 19, 20, 25, 26, 27, 31, and November 1, 2, 3, 1988.

## (1) Winter Use Areas (11/01 to 3/15)

## (a) Jungo Point Windmill to Hot Springs:

Slight grazing use covered a high percentage of this area.

A long, narrow strip of light use was mapped from Woodcamp Spring, south to the Lewis Mine troughs. Small, scattered, light use areas were also mapped north of Fox Spring, south of Smokey Spring, north and south of Railroad Spring, and in the southwest corner of the allotment just north of Sulphur.

Small scattered areas of moderate use were found around water sources, including Sulphur Windmill, Lewis Mine troughs, Trail Spring, Railroad Spring, South Spring, Rattlesnake Spring, and between Fox and Smokey Springs.

## (2) Spring/Summer Use Areas

## (a) Salt Water Spring, Winter Camp and Little Buckbrush Spring area and the adjacent west facing slopes of the Jackson Mountains:

Slight grazing use covered a high percentage of this area between water sources.

Light use was mapped along the lower end of the Red Butte Canyon drainage.

Moderate use was found around Salt Water Spring, along Red Butte Mine Road and Red Butte Canyon, east of Winter Camp, at the upper portion of Brush Basin, and between Fish Pond and Rock Springs.

A few, small, scattered areas of heavy use were found near water sources in Black Rock and Red Butte Canyons, and at several springs to the south.

- (b) Buckbrush Spring, Mary Sloan Basin, upper Trout Creek, Iron King Mine and the upper portion of Jackson Creek:

Slight use was mapped east and west of the road from the Buckbrush Springs area, continuing several miles north to the first drainage past the gravel pit. Light use was also mapped at the higher elevations and steep slopes around Iron King and Redbird Mines.

Light use was found southwest of the Buckbrush Spring area, west of the road towards Jackson Creek Slough; south of Jackson Creek Ranch, east and west of the road down to the first drainage north of the gravel pit; and along the lower end of Jackson Creek. Several fingers of light use were found in the canyon areas and at the higher elevations west of Iron King Mine.

A narrow strip of moderate use was observed southwest of Buckbrush Springs, west of the road.

Several small areas of moderate use were observed along Jackson Creek, the North Fork of Jackson Creek, Mary Sloan Creek, the upper end of Trout Creek just south of

Redbird Mine, and at the higher elevations north of Iron King Mine. A large area of moderate use was also found just north and west of the private land along Trout Creek.

Light use was observed in the Donna Schee and Nobel Springs area. A large area of light use was found at the lower elevations in the vicinity of Bull Creek Ditch and Louse Creek. A small area of light use was found between the private land along Trout Creek and the Desert Valley Allotment boundary fence.

Several small areas of heavy use were observed along Mary Sloan Creek, Jackson Creek, the North Fork of Jackson Creek, and upper end of Trout Creek south of Red Bird Mine.

Small, narrow strips of severe use were mapped along portions of Mary Sloan Creek, Jackson Creek, and the North Fork of Jackson Creek.

(c) Jungo Hills Area

A large strip of light use was mapped east and west of the road south of Five Mile Well, parallel to the boundary between Jackson Mountain Allotment, and Desert Valley and Mormon Dan Allotments.

(d) Noble and Donna Schee Spring area; and Shawnee, Bull, Cedar, Clover and lower Trout Creek areas:

A large area of slight use was found north of Fox Spring, extending northward several miles to the vicinity of the private land near Bull Creek. Large intermittent areas of slight use were mapped along the lower slopes north of Bull Creek, extending northward to Big Boy Mine Road. Slight use was also found along the lower slopes from Clover Creek to Trout Creek.

Light use was found in the Donna Schee and Noble Springs area. A large area of light use was also found at the lower elevations in the vicinity of Bull Creek Ditch and Louse Creek. A small area of light use was found between the private land along Trout Creek and the Desert Valley Allotment boundary fence.

Several small moderate use areas were mapped near water sources, including Donna Schee Spring, Noble Spring, Shawnee Creek, Bull Creek, Big and Little Cedar Creeks, Clover Creek and upper Louse Creek.

Small, scattered, heavy use areas were mapped along Shawnee Creek, Big and Little Cedar Creeks east of King Lear Peak, Louse Creek and Clover Creek. Most of these small, heavy use areas were along the upper ends of these creeks and on associated upland areas.

b. 1991

Actual use by cattle and wild horses at the time utilization was observed follows. Actual use for the entire grazing period (March 1 through the end of February) can be found in Section IV-B (page 15) of this document.

Cattle	03/01/91 to *10/10/91	6775 AUMs
Wild Horses	03/01/91 to *10/10/91	<u>1716 AUMs</u>
	Total	8491 AUMs

\* 10/10/91 is the mid-point of the time period when utilization was observed.

Use pattern mapping was not conducted in 1991, however the following observations of utilization were made on October 4 and 17, 1991:

Utilization of upland perennial grasses (Thurber's needlegrass, Idaho fescue, bluebunch wheatgrass, squirreltail) was slight to light in the vicinity of the upper reaches of Jackson Creek and Mary Sloan Basin. Use of herbaceous streambank vegetation (bluegrass, sedges, rushes) was heavy. Utilization of bitterbrush was heavy (bitterbrush had a hedged

appearance).

Utilization of squirreltail was moderate on the uplands adjacent to upper Trout Creek.

Utilization of Indian ricegrass was moderate in the area south of Bill DeLong Well.

c. 1992

Actual use by cattle and wild horses at the time when utilization data was collected follows. Actual use for the entire grazing period (March 1 through the end of February) can be found in Section IV-B (page 15) of this document.

Cattle	03/01/92 to *10/25/92	5674 AUMs
Wild Horses	03/01/92 to *10/25/92	<u>1972 AUMs</u>
	Total	7646 AUMs

\* 10/25/92 is the mid-point of the time period when utilization data was collected.

Use pattern mapping was conducted on October 19, 20, 21, 27, 28 and November 4, 19, 1992. Observations of utilization were also made on October 1, 14, 15, 20, during stream survey.

Use Pattern Mapping

The lower elevations on the eastern portion of the allotment are composed of greasewood dominated sodic flats and shadscale dominated lake terraces. Very few perennial grasses are present with the exception of Indian ricegrass dominated sand dunes which comprise approximately 15% of the area. Desert saltgrass occurs in wet areas. Utilization of Indian ricegrass was light in the area south of Winter Camp, moderate from the area around Hot Springs to the area south to Bill DeLong Well, and heavy in the area south. Use of desert saltgrass was moderate at Hot Springs and heavy at the well north of Sulphur. The well area showed signs of heavy use by cattle. The dunes showed evidence of horse use.

The dominant upland perennial grasses from Brush Basin south to Antelope are squirreltail, Sandberg's bluegrass, and in lower density, Thurber's needlegrass and Indian ricegrass. Upland utilization ranged from

slight to moderate from Brush Basin to Rattlesnake Canyon and was light from Rattlesnake Canyon to Woodcamp Spring. From south of Rattlesnake Canyon to north of Smokey Spring, utilization was heavy. From Smokey Spring to Antelope utilization was moderate with areas of heavy use. Utilization was heavy at Woodcamp Spring, Smokey Spring, and Fish Pond Spring. Both horses and cattle utilize these areas. Cattle use was most apparent in the vicinity of watering facilities where use on vegetation was heavy and vegetative cover has apparently reduced by trampling and grazing. Watering facilities include well traveled, powdery trails to and from water. Away from watering facilities, horse sign was evident with little cattle sign.

In the area north of Jungo, use on winterfat was slight to light. Utilization of squirreltail was slight to moderate. In the vicinity of the upper reaches of Jackson Creek and the North Fork of Jackson Creek utilization of herbaceous riparian vegetation (bluegrass, sedges, rushes) ranged from slight to severe, and was predominantly heavy. Limited horse sign was found in the vicinity. Some use of the herbaceous vegetation probably occurred due to deer and horse use, however, the great majority is probably by cattle. Although there were small localized areas of heavy use of upland perennial grass species (bluebunch wheatgrass, Idaho fescue, Thurber's needlegrass, squirreltail), utilization was predominantly light to slight. Utilization of serviceberry was light. Utilization of curleaf mountain mahogany was heavy. Years of heavy use was evidenced by the absence of a variety of age classes. Plants were either approximately 6 inches tall and very hedged, or over 7 feet tall, with most vegetation removed up to approximately 5.5 feet. Utilization of bitterbrush was heavy. Years of heavy use was evidenced by the very hedged appearance of the plants. Readily accessible ceanothus immediately adjacent to the allotment received heavy utilization. No ceanothus within the allotment boundaries was observed. Although some use of these browse species probably resulted from cattle grazing, the great majority probably resulted from deer use. This is evidenced by the low use of perennial grass species in the vicinity of the browse species. Aspen use was variable, ranging from slight to heavy. Utilization of aspen appears to have resulted from both cattle and



deer use. Evidence of beaver use of aspen within the past several months was also present. No beaver were found.

Utilization Observed During Stream Survey

Observations of utilization recorded on Jackson Creek, including the north fork of Jackson Creek, during stream survey indicated use of riparian vegetation ranged from slight to severe with predominantly heavy use. Species recorded included sedges, rushes, Kentucky bluegrass, willow and Wood's rose.

4. Trend

Current trend data is not available for the Jackson Mountain Allotment. The Paradise-Denio EIS indicated an apparent downward trend.

5. Range Survey Data

- a. A Phase I Watershed Inventory was conducted between 1971 and 1974. Livestock forage condition was determined based upon data extrapolation and computations from this inventory. This data extrapolation resulted in the following condition classification for the Jackson Mountain Allotment:

<u>Good Condition</u>	<u>Fair Condition</u>	<u>Poor Condition</u>
0 acres	0 acres	355,255 acres

Appendix G, pg 28, of the Paradise-Denio EIS provides more discussion on 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. This survey, along with suitability criteria, indicated that 5,332 AUMs were available in 1978 for livestock and wild horses on Jackson Mountain Allotment (Jackson Mountain Allotment and Bottle Creek Allotment were managed together under the name Jackson Mountain Allotment at the time of the survey. The survey showed 5,332 AUMs were available on Jackson Mountain and Bottle Creek Allotments).

6. Ecological Status

Soil survey (order 3) has been completed on Jackson Mountain Allotment. Ecological Status Inventory has not been completed on this allotment.

7. Wildlife Habitat Inventory

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

b. Other Species: Chukar, hungarian partridge, and California quail.

c. A special habitat features inventory was conducted in September and October, 1977. This inventory identified locations 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.

1. Riparian and meadow habitat - 967 acres located predominantly in the northern portion of the Jackson Mountain Range.

2. Aspen - 65 acres located in the northern part of the Jackson Range.

3. Curleaf mountain mahogany - 447 acres located scattered throughout the mountain range at the higher elevations usually in association with juniper.

4. Ceanothus - 1 acre scattered throughout the northern portion of the allotment at higher elevations.

5. Bitterbrush - Identified as a component in 1,435 acres of various ecological sites.

d. Habitat Evaluation

In the absence of baseline big game habitat condition and trend data, a habitat evaluation has not been completed.

## 8. Riparian/Fisheries Habitat

Jackson Creek

Jackson Creek originates from the west slope of the Jackson Mountains at an elevation of 7,600 feet, in Humboldt County, Nevada. The stream is approximately 8.2 miles in length and flows into the Jackson Creek Slough which then flows to the Quinn River. Water is usually diverted at the Jackson Creek Ranch from the main channel for irrigation purposes. A north fork tributary intersects the main stem stream at an elevation of 5,260 feet. This tributary has a total length of 3.5 miles and usually does not provide surface flowing water to Jackson Creek during late summer or drought periods. Water flow for both Jackson Creek and the north fork tributary stream is mainly from springs and late spring season snow melt. The headwaters for these streams begin in very steep, mountainous terrain and are densely covered with shrubs (NDOW, 1989).

Jackson Creek flows through 6.2 miles of BLM land and 2.0 miles of private land. The main stream has an average stream gradient of 4.1 percent and ranges from 2.0 to 15.0 percent. The north fork tributary ranges from 2.5 to 15.0 percent and has a mean gradient of 6.2 percent. The mean valley bottom width for the main stem stream is 209 feet. The north fork tributary has an average valley width of 61 feet. In 1992, the main stem stream had an average water width of 5.2 feet and an average water depth of one to two inches, while the north fork had an average water width of 2.4 feet and a mean water depth of 2 inches.

Jackson Creek was first surveyed by the BLM in 1976 and again in 1978, 1980, 1982, 1984, 1986, 1989, and 1992. NDOW also surveyed this system in 1989. Data on habitat parameters were collected during all surveys, while fish population data was collected in 1989 by NDOW. Brook trout was the only fish species found during the 1989 NDOW survey.

## Stream Habitat Conditions

A comparison of changes in percent habitat optimum and the riparian condition class between 1976 and 1992 show that habitat conditions, once poor in 1982 through 1984, improved to a "good" rating in 1989, and has since slightly declined to fair (58%) in 1992 (Table 1). The major limiting factor was poor pool quality (11%) in 1992.

Table 1. Changes in stream and riparian habitat condition ratings for Jackson Creek between 1976 and 1992.

<u>YEAR OF SURVEY</u>	<u>% OPTIMUM</u>
<u>Stream Habitat Condition</u>	
1976	66
1978	63
1980	60
1982	40
1984	48
1986	52
1989	61
1992	58
<u>Riparian Condition Class</u>	
1976	67
1978	66
1980	76
1982	44
1984	43
1986	56
1989	86
1992	64

Riparian condition class is an average of bank cover and bank stability. The stream habitat condition and riparian condition class ratings are classified as follows:

<u>% Optimum</u>	<u>Classification</u>
70-100%	Excellent
60-69%	Good
50-59%	Fair
0-49%	Poor

#### 1992 Stream Survey

As a consequence of the sixth consecutive year of drought and existing grazing practices, stream habitat conditions are in somewhat poorer conditions than if normal precipitation levels had occurred. Nearly all observed pools have filled in with either sand or silt, and fine gravels. Insufficient runoff has prevented scouring of pools. These conditions directly affect pool quality ratings which decrease the overall percent of habitat optimum.

While the overall riparian condition class for Jackson Creek was acceptable (64%), there were several sections of the stream which have improved little over the past 13 to 15 years. The narrow valley bottom combined with the road in close proximity to the stream tends to "funnel" livestock up and down the creek. Very few AUMs are present in these areas, although damage to the stream banks and increased width to depth ratios (wide and shallow riffles) appear to be increasing. The area where the north fork enters the mainstem does afford more grazing, however, moderate to heavy use of riparian vegetation (grasses and forbs) was observed during the October 1992 stream survey.

#### Trout Creek

Trout Creek originates from the east slope of the Jackson Mountains, in Humboldt County, Nevada at an elevation of 8,240 feet. It is a second order stream that is approximately 11.5 miles in length and terminates into Big Cedar Creek Ditch near an elevation of 4,260 feet. There is a pipeline diversion located on private land that diverts water to the valley floor. Water flow for Trout Creek and its main tributary is primarily from springs and snow melt. Surveyed portions of Trout Creek flow through 7.0 miles of private land and 2.8 miles of BLM land. The average stream gradient is 4.9 percent and ranges from 3.0 to 10.0 percent. The mean valley bottom width and riparian zone width is 193 feet and 60 feet respectively. The 1990 stream survey data collected by NDOW indicated that average water width was 3.8 feet and the mean water depth was 1.4 inches.

Trout Creek was first surveyed by the BLM in 1976 and again in 1987. As noted above, the Nevada Department of Wildlife conducted a stream survey in 1990. Data on habitat parameters was collected during all surveys, while fish population data was collected in 1990. No fish were found at any of the habitat stations or in the drainage in 1990.

#### Stream Habitat Conditions

A comparison of changes in percent habitat optimum and the riparian condition class between 1976, 1987, and 1990 show that habitat conditions have improved from a poor rating of 48 percent in 1976 to fair (58%) in 1990. No additional stream survey data is available for Trout Creek. While the overall stream habitat condition has improved to 58 percent, the riparian condition class (RCC), a major component of

percent habitat optimum, declined from 79 percent in 1989 to 68 percent in 1990 (Table 2).

Table 2. Changes in stream and riparian habitat condition ratings for Trout Creek between 1976, 1987, and 1990.

<u>YEAR OF SURVEY</u>	<u>% OPTIMUM</u>
<u>STREAM HABITAT CONDITION</u>	
1976	48
1987	57
1990	58
<u>RIPARIAN CONDITION CLASS</u>	
1976	77
1987	79
1990	68

Riparian condition class is an average of bank cover and bank stability. The stream habitat condition and riparian condition class ratings are classified as follows:

<u>% Optimum</u>	<u>Classification</u>
70-100%	Excellent
60-69%	Good
50-59%	Fair
0-49%	Poor

#### 1990 Survey

Although the 1990 stream survey indicates that overall stream habitat conditions have improved since 1976, they are still below objective levels of 60 percent. A decline in RCC combined with an almost non-existent number of quality pools has contributed significantly to existing conditions (NDOW, 1990).

The principal limiting factors for Trout Creek were pool-riffle ratio and poor pool structure (quality pools). Riffles appeared to be of greater number than pools throughout the BLM reach. Bank cover and stability ratings were considered good. According to the NDOW survey, "Overall damage from livestock use was considered light." Some cattle were observed in the drainage with the heaviest concentration found in the headwaters (public land).

Mary Sloan Creek

Mary Sloan Creek originates from the west slope of the Jackson Mountains, in Humboldt County, Nevada, near an elevation of 7,280 feet. During the 1991 NDOW stream survey, the creek was found to be either dry or with very shallow flows throughout most of drainage. The very upper drainage was found to be totally dry. The stream is approximately 5.0 miles in length. Water flow for the stream is primarily from springs and snow melt. Mary Sloan Creek runs in a northwesterly direction and has its terminus in the Black Rock Desert at an elevation of 4,100 feet.

Mary Sloan Creek flows through 3.8 miles of public land and approximately 1.1 miles of private land. The upper portion of the creek has an average stream gradient of 8.5 percent and ranges from 8.0 to 9.0 percent. The mean valley bottom width and riparian zone width is 10 feet and 18 feet respectively. According to the 1991 NDOW stream survey, the average water width was 2.5 feet and the mean water depth was 3.1 inches.

Mary Sloan Creek was first surveyed by the BLM in 1976 and by NDOW in 1991. Data on habitat parameters was collected for both surveys, with fish population data collected in 1991. Rainbow trout and hybrid trout were the only salmonids found. Both populations were found to be in low numbers.

Stream Habitat Conditions

A comparison of changes in percent habitat optimum and the RCC between 1976 and 1991 show that habitat conditions have remained at good condition (67%) for percent habitat optimum and excellent for RCC (Table 3).

Table 3. Changes in stream and riparian habitat condition ratings for Mary Sloan Creek between 1976 and 1991.

<u>YEAR OF SURVEY</u>	<u>% OPTIMUM</u>
<u>Stream Habitat Condition</u>	
1976	65
1991	67
<u>Riparian Condition Class</u>	
1976	83
1991	90

Riparian condition class is an average of bank cover and bank stability. The stream habitat condition and riparian condition class ratings are classified as follows:

<u>% Optimum</u>	<u>Classification</u>
70-100%	Excellent
60-69%	Good
50-59%	Fair
0-49%	Poor

#### 1991 Survey

According to the 1991 NDOW stream survey, the principal limiting factor for Mary Sloan Creek was pool-riffle ratio, which appeared to be related to low stream flow. Pool-riffle ratios were poor throughout the drainage, while pool structure (quality) rated good to excellent. Stream bottom substrate, bank cover and bank stability also rated good to excellent. Overall, stream habitat conditions for Mary Sloan Creek were considered good.

It appears that the high gradient nature of Mary Sloan Creek combined with areas of dense vegetative cover have prevented livestock and wild horses from accessing most of this drainage. These circumstances are generally favorable for good stream conditions.

#### 9. Water Quality

For the three perennial streams within the allotment, Jackson Creek, Trout Creek and Mary Sloan Creek, water quality data is limited for the evaluation period. Jackson Creek was sampled in 1983, 1984, 1985 and \*1989. Trout Creek was sampled in \*1990. Mary Sloan Creek was sampled in \*1991.

Results of these samplings and baseline data collected prior to the evaluation period can be found in Appendixes 2 and 3.

\* NDOW Stream Survey



V. Conclusions

A. Short Term Objectives

1. OBJECTIVE

Manage for moderate (41-60%) utilization of key species on streambank riparian habitats on Jackson, Trout and Mary Sloan Creeks with a preferred use level of 50%.

CONCLUSION

Use pattern mapping conducted in 1988 indicated several small areas of heavy use along Mary Sloan Creek, Jackson Creek (including the north fork of Jackson Creek) and the upper end of Trout Creek. Small, narrow strips of severe use were mapped along portions of Mary Sloan Creek, Jackson Creek (including the north fork) in 1988. Observations of utilization in 1991 showed heavy use of herbaceous streambank vegetation on Jackson Creek. 1992 use pattern mapping and observations during stream survey indicated predominantly heavy utilization of herbaceous vegetation on some reaches of Jackson Creek, including the north fork.

This objective is not being met along portions of these creeks.

Wild horse use is limited in this portion of the allotment. Cattle tend to congregate in the creek bottoms due to topography and the presence of green feed, water and shade. Although some utilization is a result of use by wildlife species, the great majority of the use appears to be the result of cattle grazing.

2. OBJECTIVE

Manage for moderate (41-60%) utilization of key plant species in wetland riparian habitats with a preferred use level of 50%.

CONCLUSION

Use pattern mapping in 1988 indicates heavy use occurred at several springs and on wetland riparian vegetation associated with several creeks. 1992 use pattern mapping also showed heavy use at several springs.

This objective is not being met on portions of the allotment.

From the Brush Basin area, south, heavy utilization is due to use by both wild horses and cattle. Cattle appear to "camp" more at the water sources. North of this area wild horse numbers are limited and the heavy use is due primarily to cattle use.

3. OBJECTIVE

Manage for moderate (41-60%) utilization of key plant species in upland habitat with a preferred use level of 50%.

CONCLUSION

Use pattern mapping in 1988 indicated that except for limited areas, this objective was being met.

Use pattern mapping in 1992 indicated this objective is not being met on some areas in the southern end of the allotment. Evidence of horse use was present throughout those areas, however, cattle also contributed to the use.

Leonard Creek Ranch reported low levels of precipitation in April (0.26 inches) and May (0.00 inches) 1992. Low precipitation during periods of growth is expected to result in lower than normal vegetative production. Although precipitation patterns vary locally, low production may have resulted in herbivores consuming a higher percentage of annual growth than would have been consumed if production were normal.

Utilization of bitterbrush was heavy in 1991 and 1992. Utilization of mountain mahogany was heavy in 1992 (no record of use in 1991). Plant form indicates heavy use has occurred over a period of years. Low utilization of the perennial grasses in the vicinity of the browse species suggests that although some use of the browse probably resulted from cattle grazing, the great majority probably resulted from mule deer use.

B. Long Term Objectives

1. OBJECTIVE

Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 378 AUMs for mule deer, 60 AUMs for pronghorn and 275 AUMs for bighorn sheep.

- a. Improve to and maintain 102,930 acres in good or excellent mule deer habitat condition.
- b. Improve to and maintain 186,523 acres in fair to good pronghorn habitat condition.
- c. Improve to and maintain 48,429 acres in good to excellent bighorn sheep habitat condition.

CONCLUSION

Habitat condition data is not available to evaluate the achievement of these objectives. However, heavy utilization of browse species by mule deer within the Jackson Mountain Allotment is expected to result in a decline in vegetative conditions if that use continues suggesting that progress toward meeting this objective is not occurring on portions of the allotment.

Existing number estimates indicate the allotment supported 275 mule deer (825 AUMs) and 87 pronghorn antelope (209 AUMs) in 1992. These numbers are well above the initial forage demand of 378 AUMs for mule deer and 60 AUMs for pronghorn. However, estimated existing numbers show an decline in mule deer numbers since 1988. A decline in the mule deer population is also indicated by low fawn-doe ratios recorded for western Humboldt County in March 1993. This may be the result of the combination of 1) low vegetative production due to drought conditions which resulted in low fat reserves going into winter, and 2) severe snow conditions which reduced the availability of forage.

The Jackson Mountain California bighorn sheep herd has "continued to expand in both density and distribution," in both the King Lear Peak area and Parrot Peak area. Those sheep in the Parrot Peak area also range outside the Jackson Mountain Allotment.

2. OBJECTIVE

Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 8,857 AUMs.

CONCLUSION

Heavy utilization of forage species by wild horses and cattle in the south end of the allotment is expected to result in a decline in vegetative conditions if that use continues suggesting progress toward meeting this objective is not occurring on portions of the south end of the allotment.

3. OBJECTIVE

Improve range condition from poor to fair on 355,225 acres.

CONCLUSION

Ecological Site Inventory has not been conducted on Jackson Mountain Allotment. This objective will be redefined/quantified utilizing desired plant communities as information becomes available.

4. OBJECTIVE

Maintain and improve free roaming behavior of wild horses by protecting and enhancing their home ranges.

CONCLUSION

Fencing in this allotment is restricted to allotment boundary fences and fences associated with privately owned land. There are no fences (corrals and exclosures excepted) within the Jackson Mountain Allotment portion of the herd management area preferred by wild horses (south end).

5. OBJECTIVE

Improve to and maintain 1 acre of ceanothus habitat types in good condition.

CONCLUSION

Baseline data has not been collected to evaluate obtainment of this objective.

6. OBJECTIVE

Improve to and maintain 447 acres of mahogany habitat types in good condition.

CONCLUSION

Condition studies have not been established. However, plants observed during use pattern mapping were either mature high-lined plants over 7 feet tall, or very hedged plants approximately 6 inches tall. The lack of intermediate height classes and the rounded growth form of the low growing plants indicate that the objective is not being met.

7. OBJECTIVE

Improve to and maintain 65 acres of aspen habitat types in good condition.

CONCLUSION

Baseline data has not been collected to evaluate obtainment of this objective.

8. OBJECTIVE

Improve to and maintain 967 acres of riparian and meadow habitat types in good condition.

CONCLUSION

Condition data has not been collected to evaluate obtainment of this objective.

Riparian class condition ratings, which evaluate cover and streambank stability, showed Trout Creek and Jackson Creek rated as "good." Mary Sloan Creek was rated "excellent."

Areas of heavy use on some riparian areas and meadows suggests that progress is not being made towards meeting this objective on portions of the allotment.

9. OBJECTIVE

Improve to or maintain the following stream habitat conditions from 55% on Mary Sloan Creek, 57% on Trout Creek and 53% on Jackson Creek to an overall optimum of 60% or above.

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

CONCLUSION

During stream surveys conducted by the Nevada Department of Wildlife (NDOW) brook trout were found in Jackson Creek and rainbow trout were found in Mary Sloan Creek. No fish were found in Trout Creek.

JACKSON CREEK

Results from stream survey data collected since 1976 for Jackson Creek show that although improvements in stream condition have been made since 1982, 1992 conditions were below acceptable levels of 60 percent for overall stream habitat condition. While several components of the overall habitat optimum met or exceeded desired levels, pool quality did not. Low stream flows resulting from the sixth consecutive year of drought have had a direct effect on pool quality ratings (by lowering them). Low to intermittent flows are also indirectly caused by other activities within the watershed. Jackson Creek had several sections that are below desirable habitat levels which will require several years to recover. These sections currently are not recovering under the existing grazing system. Undesirable bank cover and stability was documented in these areas. In addition, residual herbaceous plant height was no more than one to two inches at the time of the October stream survey for several of the surveyed stations along Jackson creek. A minimum of four to six inches of stubble is recommended to meet the requirements of plant vigor maintenance, bank protection, and sediment entrapment (Clary and Webster, 1989). While Jackson Creek may not be a priority stream for the recovery of LCT, it will still be a priority to recover this system to benefit riparian/stream values as well as livestock, wildlife, and human purposes.

TROUT CREEK

The most recent stream survey data for Trout Creek suggests that a change in the existing grazing system should be considered so that objectives for stream/riparian habitat would be met. While there has been some improvement towards meeting the overall 60 percent of optimum level for stream habitat, the existing data suggests that Trout Creek still has a long way to go to achieve complete recovery which would benefit not only the stream system but the livestock operation as well.

MARY SLOAN CREEK

The most recent stream survey data collected for Mary Sloan Creek indicated that stream habitat objectives were met. With Mary Sloan Creek being considered as a potential LCT recovery stream, this stream should be closely monitored to ensure that habitat conditions remain above acceptable levels.

10. OBJECTIVE

Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% canopy cover of sagebrush for nesting and winter use.

CONCLUSION

Baseline data has not been collected to evaluate obtainment of this objective.

11. OBJECTIVE

Improve to and maintain the water quality of Jackson, Trout, and Mary Sloan Creeks to the state criteria set for the following beneficial uses: stockwater, cold water aquatic life, water contact recreation and wildlife propagation.

The applicable state criteria are displayed in Appendix 1. The criteria can also be found in Chapter 445 of the Nevada Administrative Codes (Nevada Division of Environmental Protection).

### CONCLUSION

Alkalinity measurements, as determined by the NDOW Stream Survey, exceeded the state criteria for wildlife propagation at all but one station (see Appendix 2). The elevated alkalinity may be due to the lithology of the area. The typical geology of the Jackson Mountain Allotment area is andesitic in nature. This situation normally leads to natural conditions which are alkaline.

Turbidity measurements on Jackson Creek taken on 5/17/83 and 5/7/85 exceeded the state criteria for propagation of cold water aquatic life.

Data is insufficient to determine whether water quality on Jackson, Trout and Mary Sloan Creeks meets the remaining state criteria. Therefore, there is insufficient data to evaluate whether or not these objectives are being met.

## VI. Technical Recommendations

### A. Recommended Objectives

#### 1. Short Term Objectives

The short term objectives are designed to ensure progress toward meeting the long term objectives. The following utilization objectives are to be read at the end of the growing season. That does not preclude determining utilization at other times including during the grazing season. The following short term objectives are recommended:

- a. The objective for utilization of key woody species (POPUL, SALIX) on streambank riparian habitat on Trout Creek, Jackson Creek and Mary Sloan Creek is 30%.

Rationale: Achieving the above objective would promote successful recruitment of suckers and saplings in the community.

- b. The objective for utilization of key herbaceous species (POA, JUNCUS, CAREX, POLYP2) on streambank riparian habitat on the public land portions of Trout Creek, Jackson Creek and Mary Sloan Creek is a stubble height of 4"-6".



An alternative to the above objective follows:

The objective for utilization of key herbaceous species (POA, JUNCUS, CAREX, POLYP2) on streambank riparian habitat on the public lands portions of Trout Creek, Jackson Creek and Mary Sloan Creek is 30%.

Rationale: Achieving the above objectives would provide adequate stubble height by the beginning of the spring runoff period to disperse flood waters, filter sediment, maximize bank water storage and dry season flows, and would provide for sage grouse cover and maintenance of plant vigor. The use of the stubble height objective has the additional advantage of being a direct measurement not requiring calibration of the observer. It is particularly useful when examining areas where regrowth has occurred. It would also help the permittee accurately monitor progress toward meeting the objective.

The above objectives are to be read at the end of the growing season. If utilization were read in the summer a higher utilization level (40-50%) could be recommended provided adequate regrowth followed to leave a stubble height of 4"-6" at the end of the growing season.

- c. The objective for utilization of key species (POA, JUNCUS, CAREX, POLYP2, DISTI) on wetland riparian habitat is 50%.

An alternative to the above objective follows:

The objective for utilization of key species on wetland riparian habitat is a stubble height of 3"-4".

Rationale: Achievement of the above objective would ensure adequate stubble height during the grazing season for sage grouse cover, and after the grazing season to maximize plant vigor and minimize headcutting and erosion.

- d. The objective for utilization of key species (SYMPH, AMELA, CEANO, PURSH, SIHY, POSE, STTH2, AGSP, ORHY, EULA5, EPHED, ATCO) on upland habitat is 50%.

Rationale: Achieving the above objective would promote successful reproduction and recruitment,

promote plant vigor and provide watershed protection.

2. Long Term Objectives

The long term objectives listed beginning on page 12 are recommended with the following modifications:

- a. Improve or maintain 967 acres of riparian and meadow habitat types in good condition with maximum species diversity, reproduction and recruitment for maintenance of herbaceous and woody riparian species.
- b. Improve or maintain 65 acres of aspen stands in good condition by allowing reproduction and recruitment within the stand and maximizing wnderstory diversity.
- c. Improve or maintain 447 acres of mahogany stands in good condition by allowing successful reproduction and recruitment in the stand.
- d. Improve or maintain 1 acre of ceanothus in good condition by allowing for successful reproduction and recruitment in the stand.
- e. Improve or maintain bitterbrush, snowberry and serviceberry by maximizing reproduction in the community.

Rationale for changing the five objectives listed above: The above objectives expand upon the existing objectives by describing factors used to define good condition of the habitat types included.

- f. Improve to or maintain the following stream habitat conditions from 67% on Mary Sloan Creek, 58% on Trout Creek and 58% on Jackson Creek to an overall optimum of 60% or above.
  - a) Streambank cover to 60% or above.
  - b) Streambank stability 60% or above.

Rationale: The percent stream habitat condition for each creek was changed to reflect the most current data collected in 1990, 1991 or 1992.

Bureau stream survey methodology does not quantifiably measure sedimentation. Water temperature is included under state water quality standards. Therefore, it is recommended that 1)

maximum summer water temperatures below 70°F and 2) sedimentation below 10% no longer be included under this objective.

B. Herd Management Area Boundary and Appropriation of Water for Wild Horses

It is recommended that the Jackson Mountains Herd Management Area (HMA) boundary be adjusted to reflect historic use areas as indicated by distribution and census data. Two horse populations occupy two geographically separate areas within or near the Jackson Mountain HMA. The population at the north end of the Jackson Mountains inhabits an area outside the Jackson Mountain Allotment. The southern population inhabits the area approximately from Navaho Peak, south and east to the allotment boundary and west to Bottle Creek Road. See Appendix 5 for map.

Review of herd management boundaries, including the Jackson Mountains HMA is expected during the Resource Management Planning process which is scheduled to begin in 1996.

It is recommended that adequate water be appropriated from the State of Nevada to support the appropriate management level of wild horses after that level is determined.

## C. Management Actions

## 1. Introduction

The following information was consolidated from other portions of this evaluation to facilitate development of the management alternatives. Other information obtained through the consultation with interested parties is also included.

ADJUSTMENT OF CATTLE AND WILD HORSE USE THROUGH THE EVALUATION PERIOD:

The actual use by livestock and wild horses throughout the evaluation period is displayed below. Data is displayed by grazing year (03/01 to 02/28):

Year	<u>Livestock Use</u>		<u>Wild Horse Use</u>		Total AUMs
	AUMs	%	AUMs	%	
1984	8,857 (1)	--	(2)	--	--
1985	8,684 (1)	--	(2)	--	--
1986	7,465	--	(2)	--	--
1987	7,357	--	(2)	--	--
1988	7,050	.74	2,436	.26	9,486
1989	8,093	.78	2,256	.22	10,349
1990	7,099	.73	2,604	.27	9,703
1991	7,009	.71	2,796	.29	9,805
1992	5,700	.65	3,012	.35	8,712

(1) Licensed use, actual use not available.

(2) Accurate data not available to determine wild horse actual use prior to 1988.

In the winter of 1988-89, 108 wild horses were removed from the Jackson Mountain Allotment. The actual use data displayed above shows that the permittee voluntarily reduced grazing use yearly until that horse removal. In 1989 he resumed grazing at a higher level (764 AUMs below active preference) and then voluntarily reduced grazing use yearly in subsequent years. The permittee has stated that he reduced use to compensate for forage used by increasing numbers of wild horses and in response to drought conditions.

It is the permittee's view that the increase in horse numbers has resulted in part from a migration of horses from the Black Rock Mountain Range area that occurred as a result of efforts to remove wild horses from that area in January 1988. This opinion is based on his observation that prior to that time the colors of horses in Jackson Mountain

Allotment were approximately 6% sorrel, 5-6% brown and the remainder were dark bay (calvary type). Following the Black Rock Mountain Range area removal he noticed additional colors including sorrel with flaxen mane and tail, black, "off color" browns with beige along the flanks, greys, bays with lighter tails (not blood bay, calvary type), and more white on some horses (bald face, blazes and white socks).

LAND USE PLAN PROPORTION AND CARRYING CAPACITY:

The starting point for monitoring within Jackson Mountain Allotment was established by the land use plan as 8,857 AUMs for livestock and 1,920 AUMs (160 head yearlong) for wild horses. The starting point proportions follow:

Livestock-	$\frac{8,857 \text{ AUMs}}{8,857 \text{ AUMs} + 1,920 \text{ AUMs}} \times 100 = 82\%$
Wild Horses-	$\frac{1,920 \text{ AUMs}}{8,857 \text{ AUMs} + 1,920 \text{ AUMs}} \times 100 = 18\%$

The starting point for monitoring of 8,857 AUMs is the permittee's active preference. 8,857 AUMs is the carrying capacity of Jackson Mountain Allotment as determined by the range survey completed in 1965. Although some overlap of forage use exists between cattle and wildlife species, forage preferences of cattle and horses are very similar. The allocation of forage for cattle and wild horses based on the 1965 range survey follows:

Cattle	8,857 AUMs
Wild Horses	<u>0 AUMs</u>
Total	8,857 AUMs

If 8,857 AUMs were allocated based on the starting point proportions the results would be:

Cattle	8,857 AUMs X 0.82 = 7,263 AUMs
Wild Horses	8,857 AUMs X 0.18 = <u>1,594 AUMs</u>
Total	8,857 AUMs

1,594 AUMs would provide forage for 132 horses calculated as follows:

$$\frac{1,594 \text{ AUMs}}{12 \text{ months}} = 132.8 \text{ horses}$$

The carrying capacity for Jackson Mountain Allotment will be determined through evaluation of monitoring data with consideration of the management selected for the allotment, not from the 1965 range survey, and may differ from the carrying capacity derived from that survey. However, the above information is useful towards acquiring a perspective of what may be a "fair" allocation of forage within the allotment.

#### AREAS USED BY HORSES:

The Jackson Mountains Herd Management Area (HMA) extends throughout the Jackson Mountains and includes portions of Bottle Creek, Deer Creek, Happy Creek and Wilder Quinn Allotments, as well as Jackson Mountain Allotment. The HMA boundaries do not accurately reflect the areas used by horses. Census data shows two separate populations occur within the HMA. One population occurs in the north end of the HMA in Deer Creek and Happy Creek Allotments. The other occurs in the south end of Jackson Mountain Allotment from Navaho Peak, south. The area used by the southern population also extends outside the HMA to the west and south.

2. Alternative 1- Continue Present Management Except Adjust AUMs Harvested by Livestock and Wild Horses

Under this alternative no change in management of livestock or wild horses would be implemented except numbers of both would be reduced to a level expected to meet short term objectives for the allotment.

Because no management action other than adjustment of stocking level would be implemented to insure that the short term objectives would be met, calculation of carrying capacity under this alternative is based upon areas of heavy use.

The following formula was used to calculate the desired stocking level for the years in which use pattern mapping was conducted. The results were averaged to determine the carrying capacity under this alternative.

$$\frac{\text{Actual Use (AUMs)}}{\text{Actual \% Utilization}} = \frac{\text{Desired Stocking Level (AUMs)}}{\text{Desired \% Utilization}}$$

Calculation of Desired Stocking Level based on 1988 data:

$$\frac{8624^* \text{ AUMs}}{70\%} = \frac{\text{Desired Stocking Level (AUMs)}}{50\%}$$

Desired Stocking Level = 6160 AUMs

\* 8624 AUMs is the actual use at the time utilization studies were conducted. See page 21, 54.

Calculation on Desired Stocking Level based on 1992 data:

$$\frac{7646^{**} \text{ AUMs}}{70\%} = \frac{\text{Desired Stocking Level (AUMs)}}{50\%}$$

Desired Stocking Level = 5461 AUMs

\*\* 7646 AUMs is the actual use at the time utilization studies were conducted. See page 25.

$$\begin{aligned} \text{Average Desired Stocking Level} &= \frac{6160 \text{ AUMs} + 5461 \text{ AUMs}}{2 \text{ years}} \\ &= 5811 \text{ AUMs} \end{aligned}$$

The 5811 AUMs available would be apportioned between livestock and wild horses. Utilizing the proportions calculated from the land use plan the forage would be apportioned as follows:

Wild Horses:

$$5811 \text{ AUMs} \times 0.18 = 1056 \text{ AUMs}$$

$$\frac{1056 \text{ AUMs}}{12 \text{ months}} = 88 \text{ horses}$$

Cattle:

$$5811 \text{ AUMs} \times 0.82 = 4765 \text{ AUMs}$$

Under this alternative the AML would be 88 horses. It is not known what affect this low AML would have on the genetic integrity of the population. Genetic baseline data will be collected through blood testing during gathers and will be monitored through future gathers.

The reduction in stocking level under this alternative would be expected to allow upland utilization levels to be met. However, continuation of grazing during the hot summer months generally

results in cattle congregating in riparian areas which may result in continued failure to meet riparian utilization objectives even with reduced numbers and further reductions may be needed.

In addition, the carrying capacity calculations were calculated to attain a 50% utilization level. It is recommended in this document that a utilization level of 30% (or a 4"-6" stubble height) of streambank riparian vegetation be implemented for Jackson, Mary Sloan and upper Trout Creeks. Because separate actual use data for this relatively small but important area is not available, separate carrying capacity calculations for this specific area can not be made. In order for this alternative to result in achievement of the streambank utilization objective of 30%, livestock use in those creek areas would be adjusted yearly based upon monitoring data from the previous year, until the stocking rate were determined that would allow the 30% utilization objective to be met. This would require that accurate actual use data be collected for this specific area. Again, hot season use tends to result in concentrated use on riparian areas and a lower carrying capacity is expected under hot season grazing than under early season use.

In summary, the advantages of this grazing system are that it will allow short term objectives to be met and therefore progress is expected towards meeting long term objectives. It would require no expenditures for new range improvements and no change in the permittee's livestock operation except in numbers of cattle. The disadvantage is that it would result in significant reductions in both horses and cattle use. In addition, with continued hot season use riparian areas may continue to be grazed above objective utilization levels and further reductions may be needed.

3. Alternative 2- Adjust Season of Use on Streambank  
Riparian Areas Utilizing Fencing, Fence  
Meadows, and Adjust Stocking Rates

Under this alternative the following management action would be implemented: .

- 1) Fence would be constructed to control use on Jackson Creek, Mary Sloan Creek and Basin, upper Trout Creek, the north fork of Jackson Creek and the area east of King Lear Peak. Cattle would be rotated through these areas to provide rest during a portion of the growth period.
- 2) Cattle would be removed from the above areas by July 15.



- 3) Selected meadows would be enclosed to exclude livestock and/or wild horse use.
- 4) Livestock and wild horse numbers would be adjusted.

#### SEASON OF USE

The season of use on Jackson Mountain Allotment would be spring-summer (04/01-08/15) except in the southern portion occupied by wild horses, which would continue to receive yearlong use.

The Jackson/Mary Sloan/upper Trout Creek area would be used May 15 to July 15. Cattle would also be removed from the area east of King Lear Peak (upper Big Cedar Creek area) by July 15.

#### RANGE IMPROVEMENTS

Range improvements under this alternative include fencing to control livestock use of riparian areas, exclosures to exclude livestock and wild horses from wetland riparian areas and water developments to improve livestock distribution and decrease grazing pressure on riparian areas. Construction of range improvements is dependent upon Bureau funding and priorities, and upon contributions by the permittee and other interested parties.

#### 1) Fencing

The permittee proposes to fence portions of the privately owned land in 1) the vicinity of the confluence of the north fork of Jackson Creek and Jackson Creek, 2) east of King Lear Peak and 3) mid-Trout Creek. These fences, used in conjunction with drift fences on public land, would be used to control livestock use of public riparian areas.

Approximately two miles of drift fences constructed in the following locations would be used to control livestock use of the Jackson Creek, Mary Sloan and upper Trout Creek areas:

Section 34, T40N, R31E  
Section 26, T40N, R31E

The drift fences would be constructed within the Jackson Mountains Herd Management Area, but outside

the areas of historic and present wild horse use as indicated by distribution and census data. Therefore, construction of the drift fences would not impede the movement or free roaming behavior of wild horses.

2) Spring/Meadow Enclosures

Enclosures would be constructed around selected springs and associated meadows to eliminate wild horse and livestock use. The enclosures would be constructed to protect and enhance water quality and wildlife values. Wild horses would not be eliminated from current watering sources unless other sources were available. Enclosure sites would be selected in coordination with the Nevada Department of Wildlife, the permittee and other interested parties who express an interest in site selection. Sites to be considered include, but may not be limited to, those springs and meadows listed on Appendix 6.

3) Water Developments

The following springs are recommended for consideration for development:

Section 36, T40N, R31E (two springs)  
Section 34, T40N, R31E  
Section 2, T39N, R31E  
Section 11, T36N, R31E

In addition, a pipeline off Donna Schee Spring (Sec. 30, T37N, R32E, located on private land) should be considered to provide water to Sec. 15, T37N, R32E.

STOCKING RATE

Different methods were used to determine the stocking level for wild horses and livestock. The appropriate management level for wild horses was derived from 1992 data which reflects drought conditions. The number derived from this method is expected to allow utilization objectives, and consequently long term objectives to be met even under drought conditions without removing additional horses.

The carrying capacity of the allotment, and consequently the stocking level for livestock, was derived from 1988 data which reflects a more typical precipitation year.

The different methods were used because the permittee has demonstrated the ability and willingness to reduce the stocking level in response to vegetative conditions (see page 46). It is therefore reasonable to base the cattle stocking level on a typical year. Setting horse levels based on an unfavorable precipitation year is expected to maintain the natural ecological balance even under drought conditions without further adjustment of horse numbers. Because horse numbers are based on drought conditions, if any further reduction in stocking level is needed within the portion of the allotment used by horses, that reduction should be made in cattle use unless the need to specifically reduce horse numbers exists.

#### APPROPRIATE MANAGEMENT LEVEL FOR WILD HORSES:

Use pattern mapping conducted in 1992 shows areas of heavy use on upland species south of Rattlesnake Canyon, which includes the southwest and south-central portion of the allotment. For clarity this area will be referred to as the "Rattlesnake-south" area in this document. In 1988 heavy use was recorded in some watering areas, but not in extensive upland areas.

Actual use by livestock and wild horses in the "Rattlesnake-south" area at the time utilization data was collected follows:

Year	Actual Use (AUMs)		Total
	Cattle	Wild Horses	
1988	2372	1018	3390
1992	1198	1092	2290

1988 and 1992 census data shows over 50% of the wild horses in the allotment in the "Rattlesnake-south" area. Cattle and wild horses share the forage base within that area and within the remainder of the allotment where horse use occurs. Under this alternative the AML for horses is based upon all forage available for horses and cattle in the "Rattlesnake-south" area as determined from the 1992 data. For calculation purposes cattle are not provided with forage within the "Rattlesnake-south" and horses are not provided with forage outside the "Rattlesnake-south" area. This is for calculation purposes only and does not mean that cattle or horses will be excluded from either area. Free access by horses will continue to occur. Reduction in cattle use may occur if monitoring indicates the need.

The appropriate management level based upon 1992 data on the "Rattlesnake-south" area was calculated as follows:

Where: Actual use by wild horses and cattle = 2290 AUMs  
 Actual % utilization = 70%  
 Desired % utilization = 50%

Then:  $\frac{2290 \text{ AUMs}}{70\%} = \frac{\text{AML}}{50\%}$

AML in AUMs = 1636 AUMs

$\frac{1636 \text{ AUMs}}{12 \text{ months}} = 136.3 = 136 \text{ horses}$

The AML of 136 horses is expected to provide a thriving natural ecological balance provided livestock management, including stocking levels, is appropriate.

Note that page 47 shows that if the carrying capacity of 8857 AUMs determined from the 1965 range survey were apportioned based on the proportion derived from the land use plan, 1594 AUMs would be apportioned to wild horses. Those AUMs would support 132 horses. While the 1965 range survey has not been used to determine carrying capacity in this evaluation, this information may be useful in judging fair allocation of forage within the allotment, and it does lend support to providing forage for 136 horses.

#### LIVESTOCK STOCKING LEVEL:

1988 use pattern mapping indicates upland utilization objectives were met at a stocking rate of 8624 AUMs (see page 21). Under this alternative change of season of use (and adjustment of stocking level, if needed) would be used to insure riparian streambank objectives are met and exclosures would be used to insure wetland riparian utilization objectives are met.

Under this alternative it is recommended that the carrying capacity of the allotment be based upon the 1988 use pattern mapping. A carrying capacity of 8624 AUMs provides the following forage for cattle and wild horses:

8624 AUMs forage available  
~~-1636 AUMs~~ apportioned to wild horses  
 6988 AUMs available for livestock

A 30% utilization level (or a 4"-6" stubble height) has been recommended in this document for streambank riparian vegetation on Jackson, Mary Sloan and upper Trout Creeks. Because separate actual use data is not currently available for the area of these creeks a separate carrying capacity calculation has not been made for this area. Use in this area is estimated to have been 225-275 cattle, with cattle drifting into the area beginning in late April and most removed by mid-August. Under this alternative, 200 cattle would be moved into the mid-Jackson Creek area (between the upper and lower drift fences) in late May. Cattle would remain in the area for up to 10 days and then be moved above the upper drift fence. The mid-Jackson Creek area would receive rest during the majority of the growing season. Use above the drift fence would begin south of the private land adjacent to the drift fence one year and north of the private land the next. Alternating beginning areas of use would allow periods of rest during the growing season. Utilization and actual use data would initially be collected yearly for this area. If utilization objectives were not met due to livestock use the stocking rate would be adjusted on a yearly basis until the objectives are met.

The advantages of this grazing system are that it would allow short term objectives to be met and therefore progress would be expected towards meeting long term objectives. Maintenance of the appropriate management level of 130 horses combined with meadow exclosures would allow the population to remain in a natural ecological balance with the other resources through periods of drought. Avoidance of hot season use of riparian areas in the Jackson, Mary Sloan and upper Trout Creek area and the area east of King Lear Peak would allow utilization objectives to be met at a higher stocking rate than under hot season use. In addition, less use of browse species would be expected during the earlier grazing period.

The disadvantage to this management alternative is the cost of constructing and maintaining range improvements.

4. Alternative 3- Remove Cattle When Short Term Objectives are Met

Under this alternative management would be the same as Alternative 2 except that no change in active preference would be made initially. Instead cattle would be removed when short term objectives were met.

Success in implementing this management action during plant growth and regrowth presents some difficulties, particularly on riparian areas where wet conditions can result in growth of rushes and sedges into October. For example, if a 50% utilization level is reached in summer and cattle are removed, continued growth on riparian areas can result in a standing crop of similar amount to the standing crop at a 30% utilization level if adequate soil moisture is present.

Removal of livestock when a 4"-6" stubble height is reached also presents a problem when grazing begins before the plants have reached a height of 4"-6".

In light of the above, determination of utilization 30-45 days (or earlier) prior to the end of the growth period should not be used to determine the need to remove livestock. The exception is when heavy or severe use has occurred. Heavy to severe use would be expected to result in loss of plant vigor and continued grazing is not recommended when these utilization levels are reached, even during the growing period where continued growth is expected.

Therefore it is recommended under this alternative that utilization be determined periodically beginning in early June at the lower elevation and in late June in the upper elevations. Utilization should be determined monthly, or more frequently if it is judged that utilization objective levels are expected to be met in a shorter period of time. If moist soil conditions indicate continued growth is expected cattle may remain if in the judgement of Bureau personnel the objective levels will be met with continued use. For example, a 30% utilization level on streambank riparian vegetation may not indicate cattle be removed if wet soil conditions are expected to result in continued growth and concentrated use on streambanks is not expected.

Cattle would be removed from the allotment or moved to another part of the allotment if that move were not expected to result in failure to meet allotment objectives.

The advantage to this alternative over Alternative 2 is that the permittee would be able to harvest the maximum amount of AUMs and the stocking rate at which objectives can be met would be more quickly and accurately determined. The disadvantage is that implementation of this alternative would initially require a large commitment of work time on the part of the Bureau.

5. Alternative 4- Alternative Provided by the Commission for the Preservation of Wild Horses, Wild Horse Organized Assistance and the Nevada Department of Wildlife

At the meeting with representatives of the Commission for the Preservation of Wild Horses, Wild Horse Organized Assistance and the Nevada Department of Wildlife on January 31, 1994, those representatives offered the following alternative as a method to determine carrying capacity of Jackson Mountain Allotment and to determine how the available forage would be apportioned between cattle and wild horses:

JACKSON MOUNTAIN ALLOTMENT

CARRYING CAPACITY

Year	AUMS Livestock	AUMS Horses	AUMS Total	Measure 70	Desired 50	AUMs Desired
1988	7050	2436	9486	70	50	6776
1989	8093	2256	10349	70	50	7392
1990	7099	2604	9703	70	50	6931
1991	7099	2796	9805	70	50	7004
1992	*5700	3012	8712	70	50	6223
Average	7008	2621	9611			6865
Percent	.73	.27	1.00			

Necessary Reduction to Meet Carrying Capacity

Five Year Average Total Use	9611 AUMs
Five Year Average Desired Use	6865 AUMs
Reduction	2746 AUMs

Reduction by User

Livestock	2746 AUMs x .73 = 2005 AUMs
Wild Horse	2746 AUMs x .27 = 741 AUMs

## Livestock Active Preference

7008 AUMs - 2005 AUMs = 5003 AUMs

## Wild Horse Appropriate Management Level

2621 AUMs - 741 AUMs = 1880 AUMs

1880 AUMs = 157 Horses  
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\* Actual Use of 1992 was corrected by the permittee by letter following the January meeting with the authors of this alternative. 5700 AUMs is the corrected actual use.

Note: 1992 Wild Horse Population was 251 horses. Actual use for horse are from census on the allotment. If 50 percent of the herd area is on the Jackson Mountain Allotment, then the AML for the herd is 314 horses.

How available forage would be apportioned between cattle and wild horses is addressed by this methodology. The premise is that if overgrazing has occurred, in the absence of information to the contrary, cattle and wild horses are responsible for the overgrazing in proportion to the actual use made by each species. Therefore, reductions in grazing use are to be made in proportion actual use. Cattle are not reduced based upon use made by wild horses and wild horses are not reduced based upon use made by cattle. In addition, reductions are made from the level of the average actual use, not from active preference or from initial levels established for monitoring purposes.



6. Alternative 5- Alternative Provided by the Permittee

In his letter received by the Bureau on February 17, 1994, John DeLong offered the following alternative for management of Jackson Mountain Allotment:

Livestock and Wild Horse Use:

Livestock will be licensed at the active preference of DeLong Ranches, Inc. 8857 AUMs). The season of use will be yearlong, as in the past. The fall and winter grazing use made in the allotment is both necessary to use range that does not get grazed at any other time, and to prevent inadvertent trespass allegations by the BLM for livestock that drift over the unfenced boundaries of adjacent allotments where we graze most of the cattle in the winter time.

Horses will be reduced to 50 head or less, and maintained in their area of use in 1971 (I have enclosed a map of the area, and Intermountain Range Consultants has also enclosed a copy of this map in their comments, at my request).

Jackson/Mary Sloan/Trout Creeks:

We are in the process of fencing our private lands at upper Jackson Creek Ranch (part of which has been noted by your staff as having heavy use in past years), and at Sweeney Field (Trout Creek). With these fenced, we will be able to move cattle off these drainages starting about July 15. We estimate that we can have the cattle 95% off these drainages about July 15, and 100% removed by August 1, except for possible stragglers. We cannot clean the drainages if cattle from adjacent ranches are still on the mountain, however.

We have been using a drift fence in the lower reaches of Jackson Creek to keep cattle from going too high too soon in the spring, and will continue to do this. We have proposed another drift fence to tie into our private fences at upper Jackson Creek, and have volunteered to build those fences at our cost. We would then use this upper drift fence to keep the cattle from coming back into the main canyon during the summer. From the time the lower drift fence is opened in the spring (mid-May), we would then clean the canyon by about the first week of June and close the upper drift fence. The upper drift fence needs to be used for livestock management in that period to let calves mother up and get the animals together, but we do not want to necessarily leave the cattle in the canyon between the two fences for that entire time period. This is something that the cattle will determine by how fast they get mothered up up-canyon.

We have explained our basic operation and the draft evaluation does a pretty good job of explaining it, although the yearly variation because of weather, water, and the way the cattle may move probably can't be captured on paper. This basic operation on the remainder of the allotment needs to be continued.

Fencing on springs meadows and development of water sources:

The first spring listed in Appendix 6 [of the draft evaluation] is not on the allotment, and the next four are on Jackson and Trout Creeks, from which we will be removing cattle about July 15. They do not need to be fenced. The other springs listed could be fenced, with water piped outside the fenced area. Page 53 [of the draft evaluation] lists 4 springs for development, and we agree with those. In addition, a spring between the forks of the road going up Bit Cedar Creek in Section 3, T38, R31 could be developed, with the spring source fenced and water piped outside the fence. Also, a spring north of the northwest corner of the private lands fence between Bit Cedar and Louse Creeks could be developed the same way.

D. Monitoring

Collect the following types of monitoring data to continue the evaluation of management practices.

1. Utilization
2. Actual Use
3. Climate
4. Wildlife habitat evaluation
5. Trend
6. Ecological Status
7. Stream habitat inventory
8. Water Quality
9. Wild horse census and distribution

Collection of census and distribution data will be scheduled to better reflect seasonal distribution. That is, data will be gathered in July for summer distribution, December or January for winter distribution, etc.

It is recommended that monitoring to determine the extent of movement of wild horses between the Black Rock Range and the Jackson Mountains be implemented.

## VI. Consultation

## A. Chronologically Listing of Consultation

- 05/13/93 Draft Jackson Mountain Allotment Evaluation sent to interested parties. This document did not include technical recommendations. A letter was included citing the permittee's intention to put together a committee of interested parties to develop recommendations for management of allotment.
- 06/01/93 Permittee's meeting with interested parties.
- 06/14/93 Comments on proposal to put together a committee of interested parties to develop recommendations received from Animal Protection Institute.
- 06/16/93 Comments on draft evaluation dated 05/12/93 received from the Nevada Department of Wildlife.
- 06/17/93 Comments on draft evaluation dated 05/12/93 received from the Commission for the Preservation of Wild Horses.
- 06/21/93 Comments on draft evaluation dated 05/12/93 received from Wild Horse Organized Assistance.
- 06/24/93 Comments on draft evaluation dated 05/12/93 received from the US Fish and Wildlife Service.
- 07/12/93 Meeting following up the 06/16/93 meeting held.
- 07/30/93 Meeting with permittee, the Commission for the Preservation of Wild Horse and Wild Horse Organized Assistance.
- 08/13/93 Meeting with the Nevada Department of Wildlife.
- 12/13/93 Second Draft Jackson Mountain Allotment Evaluation sent to interested parties. This document included technical recommendations.
- 01/10/93 Comment on the draft evaluation dated 12/13/93 received from Stephan A. Moen.
- 01/14/93 Comment on the draft evaluation dated 12/13/93 received from the Commission for the Preservation of Wild Horses and Wild Horse Organized Assistance.

- 01/20/94      Comments on the draft evaluation dated 12/13/93 received from the Nevada Division of Wildlife (formerly the Nevada Department of Wildlife).
- 01/31/94      Meeting with the Commission for the Preservation of Wild Horses, Wild Horse Organized Assistance and the Nevada Division of Wildlife.
- 02/17/94      Comments on the draft evaluation dated 12/13/94 received from John DeLong of DeLong Ranches, Inc.
- 02/17/94      Comments on the draft evaluation dated 12/13/94 received from Intermountain Range Consultants on behalf of DeLong Ranches, Inc.

B.      Summary of Comments on the Draft Jackson Mountain Allotment Evaluation dated 05/12/93

ANIMAL PROTECTION INSTITUTE, RECEIVED 06/14/93

Comment- (In reference to committee of interested parties for development of management recommendations) Essentially we call you to account for your decision under your mandate from Congress. I cannot give away any portion of the law to enter into agreements and other compromises.

I disagree that it is in the best interests of public land management to have "consensus" groups, which may or may not be the product of strong arm persuasion, doubletalk and railroad agendas.

Response- Your concerns related to "consensus" groups have been expressed by others, albeit in milder terms. Because of those concerns facilitators were used at the meetings held to develop management recommendations in order to insure that all parties were heard and treated with respect. Unfortunately, those meetings were poorly attended.

Face to face group problem solving can encourage understanding between individuals and allow interactive work towards solutions. However, in no way does group process relieve the Bureau of its responsibilities under law or policy.

NEVADA DEPARTMENT OF WILDLIFE, RECEIVED 06/16/93

Comment- Short term objectives have been modified to meet the draft livestock agreement in 1988.

Response- The Jackson Mountain and Bottle Creek Allotment Evaluation Summary of 1988 and the draft Livestock Use Agreement

for Jackson Mountain Allotment both included initial efforts to establish utilization objectives. Neither were implemented by decision or approved agreement. The management over the evaluation period was evaluated in reference to the objectives listed beginning on page 12 of this evaluation. While similar, those objectives are not identical to the objectives listed in either of the 1988 evaluation or the draft livestock use agreement nor is there a requirement that they be identical. The objectives listed have been a useful tool in evaluating past management. Future management will be designed to meet objectives established by decision or approved livestock management agreement. Please see page 42 for recommended objectives.

Comment- It should be noted that willow is a key species with an "allowable use level" of 30% utilization.

Response- This comment refers to the 30% allowable use level for willow displayed on Table 4 of the draft Paradise-Denio EIS. The EIS is an analysis document. The recommendation in MFP I and MFP II (W-3.2) to establish proper use levels for utilization was rejected in the MFP III for the reason that these levels may vary when other resources are adequately considered. No allowable use levels have been incorporated into the land use plan, MFP III.

Comment- Data should establish population estimate and recruitment rate to support an appropriate management level for the technical recommendations. These data should provide some insight as to how fast the herd will recruit and reestablish numbers after a gather.

Response- Population estimate and recruitment rate are included in this evaluation (see page 19 and Appendix 4). This data will be used to determine management action needed to maintain or obtain the appropriate management level when it is determined.

Comment- Range land monitoring data are absent for 1989 and 1990. We request the use pattern mapping data for these years be expressed in the final document.

Response- Use pattern mapping was not conducted in 1989 and 1990.

Comment- Mule deer utilize bitterbrush. Mule deer and cattle compete for bitterbrush during summer and early fall. According to the literature, "Improvement of Great Basin Winter Range with Livestock Grazing", Neal 1981, cattle prefer bitterbrush to perennial grasses during and after seedripe. According to Bureau monitoring procedures, form class data and mule deer pellet counts are required to determine actual use of mountain browse by mule deer. Please provide supporting data and analysis to estimate mule deer use of bitterbrush in the final document.

Response- Form class data and mule deer pellet counts have not been collected. While these methods can suggest the principle browser, neither of these methods provide actual use information. Actual use is the amount of forage harvested. Actual use estimates have been made for this allotment (see page 16). These estimates are more reliable as an indicator of general trend in population size than as an accurate report of the actual forage harvested. Please see page 15, Wildlife (existing numbers) for more information.

Recommendations- Reinstate the allotment Short Term Objectives to meet the land use plan allowable use levels for key vegetation.

Response- There are no land use plan allowable use levels for key vegetation. The recommendation in MFP I and MFP II (W-3.2) to establish proper use levels for utilization was rejected in the MFP III for the reason that these levels may vary when other resources are adequately considered. No allowable use levels have been incorporated into the land use plan, MFP III. Please see page 42 for recommended short term objectives for this allotment.

Recommendation- Establish carrying capacities according to proper Bureau of Land Management procedures to meet all allotment specific objectives.

Response- It is the function of the evaluation process to determine management that will allow all allotment specific objectives to be met. Carrying capacity can vary depending on the management implemented.

Recommendation- Adjust livestock season of use to protect critical mountain browse species important to big game species.

Response- Under two of the alternative management actions July 15 has been recommended as the livestock removal date in the area east of King Lear Peak and in the Mary Sloan and Jackson Creek basin areas. This removal date would be expected to benefit key browse species as well as riparian species.

Recommendation- Establish a carrying capacity for mule deer based upon land use plan objectives and monitoring data.

Response- Establishment of carrying capacity for mule deer can be considered when accurate actual use by mule deer data is obtained. Current estimates of actual use by mule deer are more reliable as an indicator of general trend in population size than as an accurate report of the actual forage harvested. Please see page 15, Wildlife (existing numbers) for more information.

COMMISSION FOR THE PRESERVATION OF WILD HORSES, RECEIVED 06/17/93

Comment- The objectives set for this allotment in 1988 were adjusted without an approved activity plan.

Response- The Jackson Mountain and Bottle Creek Allotment Evaluation Summary of 1988 and the draft Livestock Use Agreement for Jackson Mountain Allotment both included initial efforts to establish utilization objectives. Neither were implemented by decision or approved agreement. The management over the evaluation period was evaluated in reference to the objectives listed beginning on page 12 of the evaluation. While similar, those objectives are not identical to the objectives listed in either of those document nor is there a requirement that they be. Those objectives have been a useful tool in evaluating past management. Future management will be designed to meet objectives established by decision or approved livestock management agreement. Please see page 42 for recommended objectives.

Comment- On page 5, the document briefly explains wild horse management restraints for the allotment. It states a conclusion that the appropriate management level "may be more or less than 160 horses". This section makes no reference to adjustment of other ungulates. It appears to be bias prior to analysis of any data.

Response- The statement "This AML may be more or less than 160 horses," does not relate to adjustment in existing horse numbers. Existing horse numbers are approximately 275 head. This statement is meant to clarify to the reader that the AML may differ from the starting point for monitoring established by the Land Use Plan, that is the AML may differ from 160 horses.

Comment- (suggestion for analysis)- On page 15, the document discusses surveys and data for this herd. We find that survey technique and timing are random data over the past 13 years of monitoring. Recruitment rates range from zero to 29 percent based upon summer surveys. These survey data were not analyzed in relationship to the five gathers conducted since 1988. It would be important that population estimates and recruitment rates be fully explained to support an appropriate management level in a multiple use decision.

Response- Collection of census and distribution data will be scheduled to better reflect seasonal distribution. That is, to the degree permitted by budgetary constraints, data will be gathered in July for summer distribution, December or January for winter distribution, etc. Population estimates and recruitment

rates on this and other allotments will be used to determine management action needed to maintain the appropriate management level when it is determined.

WILD HORSE ORGANIZED ASSISTANCE, RECEIVED 06/21/93.

Comment- I am not aware of any activity plans, HMAP, AMP or HMP's for these areas, if they exist, please advise.

Response- The Jackson Mountain Habitat Plan (Bighorn Sheep Reintroduction) was approved 09/21/79 and the Jackson Mountain Habitat Management Plan was approved 01/06/81. There is no AMP for Jackson Mountain Allotment or HMAP for Jackson Mountains Herd Management area.

Comment- An AML must be established, along with the livestock carrying capacity to meet the LUP objectives. These decisions must be based on monitoring...who ate what, when and where.

On page 30 though 35, we agree that wild horses do not contribute to over grazing of the stream banks, however in this area they can impact the meadows. Since the objective for these have not been met since the monitoring was established in 1982, we would require that you determine through monitoring the grazing animals responsible.

Response- You are correct that these decisions must be based upon monitoring. In this allotment cattle have used the same areas as wild horses throughout the growing season. In areas known to have been used by both cattle and horses determination of precisely which portion of the use was made by cattle and which portion was made by horses can not be made without extensive observations during grazing. Estimates can be made based upon actual use data.

Comment- The data is inconsistent, part of the monitoring data is censusing adult/foal ratios over a period of years in order to document increases; however inconsistency makes the use of random census and estimates comparable to apples and oranges. None of the gathers since 1988 were analyzed with those figures. Please explain in full how those gathers and random censusing led to your conclusions.

Response- Collection of census and distribution data will be scheduled to better reflect seasonal distribution. That is, to the degree permitted by budgetary constraints, data will be gathered in July for summer distribution, December or January for winter distribution, etc. Population estimates and recruitment rates on this and other allotments will be used to determine management action needed to maintain the appropriate management



level when it is determined.

Recommendation- Establish seasons of use for livestock and adjust those animals, establish seasons of use for wild horses and adjust those. You are required by law to PROTECT, manage and control wild horses and burros on public lands; somehow the PROTECT gets lost in the adjustments. You MUST protect their seasonal habitat. It will no longer be accepted that emergencies suddenly cost animals their lives.

Response- Please see Technical Recommendations for management alternatives.

US FISH AND WILDLIFE SERVICE, RECEIVED 06/24/93

Recommendation- We recommend that grazing strategies, such as frequent herding and/or construction of pasture fences, be considered to control animal distribution and to determine accurate actual use per seasonal area.

Response- Recommendations for fencing to control livestock use of Jackson, Mary Sloan and upper Trout Creeks have been included in this document.

Recommendation- The Service (USFWS) recommends utilization levels be adopted for allowable use of riparian habitats along proposed LCT streams which provides for sufficient regrowth to at least a 6 inch stubble height by the end of the growing season.

Response- Mary Sloan Creek and Jackson Creek, as identified in Appendix D of the draft LCT Recovery Plan, are listed as "potential" recovery streams. The long term objective for stream habitat condition is currently being met on Mary Sloan Creek. The 4"-6" stubble height (or alternately, 30% use) recommended in the technical recommendations section of this document is expected to meet the requirements of plant vigor maintenance, bank protection and sediment entrapment on these creeks.

Comment- We note that stream habitat condition data were inconsistent between the riparian/fisheries management evaluation section and the long-term objectives conclusions section.

Response- This comment refers to the habitat condition indexes which are part of the long term objective for stream habitat condition. The technical recommendations section includes the recommended revised stream habitat condition objective with the most current habitat condition indexes.

Recommendation- We recommend that the monitoring section state that: 1) Mid-season utilization surveys will be conducted, and 2) when maximum allowable utilization limits have been reached, livestock will be removed.

Response- One of the management alternatives requires removal of livestock when short term objectives are met. The others do not.

SUPPLEMENT

In response to several questions concerning the evaluation of long term objectives for the improvement and maintenance of special habitats, the following question is submitted:

Question- How will good reproduction and recruitment be determined for big game browse and woody riparian species?

Response- Reproduction and recruitment for upland browse species is evaluated using the Cole Browse Method as identified in the Bureau's "Big Game Studies" manual 6630.

Age class density sampling using permanently established one-tenth and one-hundredth acre circular plots was suggested by University of Nevada, Reno, faculty as a fast and reliable method of evaluating reproduction and recruitment in aspen and willow stands. This method will be used together with photo trend monitoring to evaluate reproduction and recruitment of aspen and willow communities.

- C. Summary of Comments on the Draft Jackson Mountains Allotment Evaluation dated 12/13/93

COMMISSION FOR THE PRESERVATION OF WILD HORSES AND WILD HORSE ORGANIZED ASSISTANCE, RECEIVED 01/14/94

Comment- Page 43b If the monitoring is read only at the end of the growing season the objective will not be met. Cattle will remain on the riparian area until they are physically moved. Once the utilization level is attained the cattle should be moved and not return. Studies have shown that physical damage to stream banks can occur before utilization level is met.

Response- Under the recommendation it was intended that utilization be determined after the growing season when cattle have been removed. Under the Selected Management Action utilization objectives apply to the end of the grazing season.

Comment- Page 43c Key species on wetland riparian habitat would be better managed at a 40 to 50% utilization level not at stubble

height.

Response- While stubble height as a utilization objectives has the advantage of requiring less calibration to determine than is needed to determine percent utilization, more data needs to be collected before utilizing this method on wetland riparian habitat on Jackson Mountain Allotment. The short term wetland riparian objective will not include stubble height at this time.

Comment- Page 45b It is unclear what you are proposing for the HMA's under B. HMA's can only be changed by amended MFP's, LUP's etc.

Response- This section provides documentation that can be used during the land use planning process. You are correct that HMA's are appropriately adjusted though that process.

Comment- Page 45c Your statement that "management related to wild horses is only included which can be implemented in concurrence with any of the three alternatives," leaves the reader to believe that horses can't be managed without livestock on the allotment. This is a misleading statement.

Response- This paragraph will be deleted from the final evaluation. It was included when the previous section (VI.B.) was included in the Management Actions section of the draft and should have been removed.

Comment- Page 46 & 47 You do not address the situation of horses that are reported to be migration from the Black Rock Range to the Jacksons. This should be studied to see if it is true.

Response- You are correct. If funding permits observations should be made to determine the extent of movement that is occurring between these horse populations.

Comment- Page 48 Alternative 1- You are using the utilization levels 70% that were found on riparian areas which is predominantly cattle overuse. You then adjust horse numbers using these figures. You then state on page 50 that cattle indeed congregate on the riparian areas during hot seasons and this "may result in continued failure to meet riparian objectives." and that further reductions may be needed. You are making horses pay the bill for the overgrazing caused by total mismanagement of the

livestock. When horses cause the problem, reduce horses, when cattle cause the problem reduce cattle!

If there is not a change in permittees cattle operation this alternative is not acceptable.

Response- "Total mismanagement of livestock" is not occurring on Jackson Mountain Allotment. While wild horse are not responsible for failure to meet short term allotment objectives on portions of the northern part of the allotment, wild horses have contributed to failure to meet short term objectives on portions of the southern part of the allotment.

Comment- Page 53 It is arbitrary and capricious to use one method for determining stocking rate for horses and another for cattle...

Response- The methodology used to determine stocking rates was discussed at the meeting of 07/30/93 which included Bureau personnel, representatives from the Commission for the Preservation of Wild Horses, Wild Horse Organized Assistance and the permittee. It is clear from your comment that the methodology was not accurately communicated and understood at that meeting. The method used to determine stocking rates under Alternative 2 will not be implemented.

Comment- To achieve consistency in the final we request that you use all years...1988-89-90-91 and 1992, for both livestock and wild horses. We request that you portray all data and computations for those years for both species and not just selectively use one year for livestock and four drought years later for horses.

Response- Both utilization and actual use data are need to compute the desired stocking level. While actual use data is available for 1988 through 1992, adequate utilization data is available for 1988 and 1992 but not for 1989, 1990 or 1991. Computations for 1988 and 1992 for both species are displayed in Appendix 8 of this document. Please note that the permittee has provided additional use pattern maps which, while useful, will not be used to calculate carrying capacity.

Comment: Page 55 & 56 You are reducing the use by cattle on the riparian areas by 25 cattle. I looks like the major benefit of this alternative is that the BLM will not have to confront the permittee with the fact that cattle numbers have to be reduced.

Response- Under this alternative reductions in cattle use would occur over the allotment. In addition, use on Jackson, Mary Sloan

and upper Trout Creeks would be reduced both in time and number of cattle. Cattle would be removed from this area July 15 rather than mid-August.

Comment- Page 56 Alternative 3 You are again proposing to reduce wild horses and allow cattle grazing to continue as it has, for the past 50 years, until allotment objectives are met. It has become intimidated by this permittee and is not willing to initiate the changes that are necessary to meet the vegetative needs of the allotment. Your statement allowing the permittee to harvest the maximum amount of AUM's is the key to where Bureau priorities lie.

Response- While perhaps unintentional, your comment suggests the view that to maximize the harvest of AUMs is unacceptable even if objectives are allotment objectives are met. Livestock grazing is recognized by law and the Land Use Plan as one of the legitimate multiple uses of public land and of Jackson Mountain Allotment.

Please also refer to the response to your comment addressing page 53 above.

NEVADA DIVISION OF WILDLIFE, RECEIVED 01/20/94

Comment- Utilization data for key species should be collected during and after the grazing season, rather than after the growing season. During recent debates with the District, range professionals could not determine if "green up" was the end of the previous growing season or start of the next growing season. In respect to riparian "regrowth" range professionals caution that a plant that must regain leaf growth does so at the expense of storing energy in the root system (See "Managing Change, Livestock Grazing on Western Riparian Areas", EPA, July 1993.)

Response- Under this recommendation it was intended that utilization be determined after the growing season when cattle have been removed. Under the Selected Management Action utilization objectives apply to the end of the grazing season.

Comment- We can support the modification of proper utilization levels to stubble heights. However, the 4-6 inch stubble height must reflect 30 percent use of annual growth of stream band key species, listed on page 14, of the allotment evaluation. While it is conceivable that 6 inch stubble could represent 30%, or light

use, of Poa nevedensis, how could 3 inch stubble height represent 50% utilization of the same species found on wetland meadows? We question that three inch stubble height will provide adequate cover for nongame and sage grouse on wetland meadows.

Response- While stubble height as a utilization objectives has the advantage of requiring less calibration to determine than is needed to determine percent utilization, more data needs to be collected before utilizing this method on wetland riparian habitat on Jackson Mountain Allotment. The short term wetland riparian objective will not include stubble height at this time.

Comment: It may be more relative to use the 1978 [range survey] as an example of how available forage could be allocated to users.

Response- The 1978 range survey indicated that 5,332 AUMs were available for Jackson Mountain Allotment and Bottle Creek Allotment combined. At the time of the survey Jackson Mountain Allotment and Bottle Creek Allotment were managed together under the name of Jackson Mountain Allotment and the results of the range survey were not summarized by each of the two allotments. The point is recognized, however, that the 1978 range survey showed significantly less forage to be available that did the 1965 range survey and this is due, at least in part, to the application of suitability criteria.

Comment- Carrying capacities need to be established with the best data available to meet short term objectives each year. Since actual use data for livestock and wild horses exist for several years, we would like carrying capacity computations for each year.

Response- Both utilization and actual use data are needed to compute desired stocking level. While actual use data is available for 1988 through 1992, adequate utilization data is available for 1988 and 1992 but not for 1989, 1990 or 1991. Computations for 1988 and 1992 for both species are displayed in Appendix 8 of this document. Please note that the permittee has provided additional use pattern maps which, while useful, will not be used to calculate carrying capacity.

STEPHEN A. MOEN, RECEIVED 01/10/94

Comment- A rest rotation grazing system should be put into effect. The riparian areas should be fenced and water sources be developed away from the stream. More riding should be done by the permittees in order to assure even use of the range and that water be hauled into areas of light use to take the pressure off of the areas that have been heavily used in the past.

The range condition objective will be redefined as Ecological Site Inventory data becomes available.

BOB SCHWEIGERT, RECEIVED 02/17/94

Comment- A page 12

The draft incorrectly reports the Land Use Plan objective concerning wildlife numbers within the allotment when it states that the AUMs listed are to be considered an "initial forage demand".

Response-

You are correct in your interpretation in the sense that the objective indicates that the reasonable numbers of forage demand, established in the Land Use Plan (LUP), are subject to periodic review and revision. Over the course of time, new, more accurate data is almost certainly going to arise which indicates that changes in the LUP are needed to improve the base information contained in the LUP which is used for decision making. Reasonable wildlife demand is one of the factors which may be reviewed. It is important to recognize, however, that modification of the data in the LUP cannot be accomplished in the allotment evaluation process, nor is this type of action being recommended for the Jackson Mountains Allotment. The revision of reasonable numbers in the LUP can only be accomplished by way of a Land Use Plan Amendment which involves several levels of both in house and public review. In short, since the modification of LUP reasonable wildlife numbers is not being recommended at this time, the concerns expressed here are not warranted. If, in the future, a recommendation is made to modify the reasonable numbers established in the LUP, the required public review of this proposed action will allow you to fully express your concerns at that time.

Comment- B page 14

This page contains a "cookbook" list of species. These species do not occupy all habitats of the allotment, and a site-specific or key-area-specific listing should be provided. Certain of these species would be appropriate to monitor under some range sites, but not under others.

Response-

There is no reference made in the document that all of these species will be managed for and monitored on all sites. It is

obvious that riparian species will not occur in the upland communities, and likewise, that not all the listed upland species will occur together on uplands, or that all listed riparian species will occur in all riparian communities. The decision of which species will be monitored on a particular site is made based on the potential of the particular site to support a particular species or group of species, or the actual presence of the species or group of species on the site.

Comment- C page 14

The inference in this document that all of the species listed constitute key species at all locations is incorrect.

Response-

Refer to Comment "B"

Comment- D page 14

Rosa woodsii and Ribes spp. are inappropriately and incorrectly listed as riparian species. They furthermore comprise an EXTREMELY small percentage of the available forage and as such are inappropriate as "Key Species".

Response-

These species are regular components, either together or individually in most riparian habitats which have a woody component. These species are also highly palatable to livestock and wildlife. As such, the monitoring of utilization, frequency and trend, on these species, aids in the assessment of allotment-wide variations in utilization and enables a better assessment of how management is effecting riparian habitat. The fact that these species not only pose a small percentage of the available forage but also aid in the assessment and trend of riparian habitats, when monitored together with other riparian species occurring on a site.

Comment- E page 15

Because of the mild spring weather throughout most of the "five years" cited at this page in which deer populations have supposedly declined, and considering the admission that such factors effect the accuracy of aerial counts at page 16, little credence can be placed in the conclusion that deer populations have declined in the past five years in the allotment.

Assuming the validity of that conclusion, however, we note that they are still WELL OVER the numbers called for in the LUP.



Response-

Typical spring weather is generally recognized as a period of unstable weather resulting in frequent precipitation events and cloudy skies. The mild spring weather you cite as contributing to the sampling of lower numbers of deer is therefore unfounded. Mild spring weather with a greater period of clear skies would actually result in a more complete representation of deer numbers (i.e. a greater sample size). More areas would be sampled, more effectively and efficiently. The fact that even under these preferable conditions, fewer deer were cited during this period only emphasizes the conclusion that deer numbers have declined over the last five years.

Several qualifying statements were included with the estimate of existing numbers of wildlife, least of which, that the estimate was derived from another estimate. The margin of error that must accompany an estimate of an estimate must be great. The direct comparison of these numbers with those in the LUP is not the intended use. Rather, this section was intended to emphasize the importance of the allotment relative to the amount of habitat contained within its boundaries. The allotment contains 39.3% of the yearlong, 48.2% of the winter, and 33.9% of the summer deer habitat in Hunt Unit 035.

Comment- F page 16

The table at the bottom of this page, as compared to the LUP "reasonable numbers", reflects that the mule deer using the Jackson Mountains Allotment are 230% of the LUP reasonable numbers, and pronghorn are at an incredible 3428% of the LUP reasonable numbers.

Response-

Refer to response to comment "E".

Comment- G page 17

We note that the number of bighorn sheep presently occupying this allotment is between 113% and 130% of the levels called for in the LUP.

Response-

The population estimate provided in the evaluation, for the Parrot Peak and King Lear populations of sheep was not specific to the allotment. While the King Lear population occurs entirely in the

Jackson Mountain Allotment, the Parrot Peak herd uses parts of the Deer Creek and Happy Creek allotments along with the Jackson Mountain Allotment. What amount of the yearly AUM usage, by sheep, occurs outside the Jackson Mountain Allotment is not available at this time. Further, the "Jackson Mountains Bighorn Sheep Habitat Management Plan" (HMP), which was approved September 21, 1979 indicated: "Habitat requirements in terms of food, shelter, water, open space, and lambing grounds are available for approximately 200 sheep (480 AUMs) as identified by the Nevada Department of Wildlife in their reasonable numbers recommendations.:" The existing numbers for bighorn sheep identified in the draft evaluation are still well below the reasonable numbers established in the HMP which predates the LUP by approximately 3 years. The difference in numbers between the LUP and HMP will be reconciled during the development of the Winnemucca District Resource Management Plan beginning in 1995.

Comment- H page 28

Item 7.c.1. lists 976 acres of riparian and meadow habitat in this allotment. This is in gross error. The total public land mileage of Jackson, Mary Sloan, and Trout creeks, including lengths which are out on the fans of the desert and do not support riparian vegetation, is less than 15 miles.

Response-

The Special Habitat Features Inventory, includes all riparian habitats on public lands in the calculation of "riparian and meadow habitat". This acreage total included tributaries, springs, seeps, upland seasonally wet meadows, and the multitude of small ephemeral and intermittent streams, where riparian vegetation was present, along with the three streams you indicated. In actuality, the riparian habitat acreage was probably under-estimated.

Comment-

Experience of private lands grazing and haying of such vegetation types further illustrates that the restriction of utilization of the herbaceous species in riparian areas has nothing to do with its long-term productivity. Private meadows are heavily mowed and grazed every year, and continue to provide undiminished production.

Response-

The hay meadows you are referring to have little in common with the upland and stream riparian habitats on the allotment and are

Response- These are very useful management tools. Unfortunately, except for in the northeast corner of the allotment, extensive fence construction would be required to implement a rest rotation grazing system on this allotment. While this option may become more viable in the future if more funding is available, no fences will be constructed which inhibit the wild and free roaming nature of wild horse within there herd management area. Water development and fencing of wetland riparian habitat is recommended in this document.

Comment- This land has been badly abused in the past and a period of non-use would help it the most. At the best, recovery will be very slow in an area that gets less than 10 inches of annual rainfall and there remains only vestiges of the native forage. The streams need total protection in order to improve the banks, water quality and pool-riffle ratio.

Response- Portions of this allotment may have been "abused" in the historical past. You are correct that recovery is very slow when precipitation is low. Improvement can occur more rapidly on riparian areas and stream survey data indicates improvement in habitat condition is occurring on Trout Creek and Jackson Creeks. While total protection does not appear to be necessary, changes in management are recommended in this document.

Comment: We seriously question that the ranges, by your classification, in poor condition should even be grazed the plants have recovered to where in your judgment the range is classified as good to excellent.

Response- The determination that range was in poor condition was based upon vegetation composition and erosion condition data obtained from Phase 1 of the Watershed Conservation and Development System conducted between 1971 and 1974. Livestock vegetative condition was determined through classification of the plant species according to their palatability to cattle, sheep and wild horses and burro. This means that areas lacking palatable vegetation were classified as poor regardless of the potential of the site to produce palatable species.

Ecological Site Inventory (ESI) has not been conducted on Jackson Mountain Allotment. This inventory method evaluates the present plant community in relation to the potential plant community that could exist on that site under ungrazed conditions. Under this system a greasewood flat, for example, classified as poor under the former method may be classified in excellent ecological condition under ESI. Likewise, a site with potential to produce high quantities of palatable vegetation may be classified in lower condition under ESI than under the former method.

not directly comparable in terms of production potential, erosion resistance, and sustainability of yield. Hay meadows are not generally under the same strains as the upland habitats which have similar vegetation. Slopes in hay meadows are much less dramatic and are therefore, much less inclined to the types of erosion (mass-wasting, headcutting) which are often found on upland meadows and streams.

Water in a hay meadow is supplied by a much less "transient" source. Irrigation, whether delivered by sprinklers or ditches, is regulated and maintained independent of the seasonal cycle of moisture which strongly controls the production on upland meadows and stream-side vegetation. Similarly, the hay meadow is not subject to the same erosive forces which are present on upland riparian sites which must be able to withstand large sustained volumes of water over a short period. Water application on the hay meadow can be shut off or reduced when saturation point of the soil is reached or when a dike breaks causing erosion. Finally, the hay meadow is practically assured of receiving steady water (when the runoff water is exhausted, the pumps are turned on), whereas the upland meadow or stream must rely on the water it has absorbed and stored in its soil during the brief runoff period.

Comment- I page 42

Available data on the utilization effects on such [woody riparian] species, however, does not support a utilization restriction of 30%. Such species may maintain and improve under browsing of 50%.

Response-

This statement is partially true in that the 50% utilization of aspen and willow does not have a significant detrimental effect on stand growth and maintenance. However, recognizing that livestock are not the only species utilizing aspen and willow, the 30% objective for livestock use allows for slight to light use by wildlife without crossing the threshold level of use in which aspen and willow are damaged.

Comment- J page 43

The species listed [herbaceous-riparian] are a very minor component of the riparian system on these creeks, let alone of the allotment in general. Furthermore, they do not control the functioning of the riparian systems on these creeks.

Response-

Refer to response to comment "D". The fact that herbaceous

riparian species make up a small percentage of the vegetation in the allotment in no way reduces its importance as a critical component of a streambank riparian community. Functioning streambank riparian systems are a complex association of vegetative (woody and herbaceous) and non vegetative features. Each of these features significantly contributes to the maintenance of the stream environment. Herbaceous riparian species are the primary line of defense against the erosive force of spring runoff waters. The presence of above ground material, sought by the objective, slows the velocity of water at the ground surface, and captures the sediment necessary to further develop and maintain the streambank. This objective also insures that a healthy root structure, which is critical, is maintained to provide strength to the streambank to resist collapse of the bank from undercutting and compaction by ungulates. The significance of monitoring of these species is further emphasized by several studies which have positively correlated utilization of herbaceous riparian species with browsing pressure, by livestock, on woody riparian species. One study, for instance, found that: "when use of herbaceous [riparian] species reaches about 45%, livestock begin using current annual growth of willows. Use of shrubs increases into second-year twigs when herbaceous utilization reaches 65%, and into third-year wood at 85-90%."

Comments & Responses- K page 43

comment 1. Sage grouse do not depend upon the isolated small tracts to which this objective would apply.

response 1. This statement is not correct. Abundant evidence is present in the literature, including two very good reports specific to Nevada, which emphasize the importance of these small stringer meadows and upland meadows. Statistical analysis of habitat selection and sage grouse use on meadows of varying size, by the authors of these reports, found a significant correlation with amount of sage grouse use and meadow size. In short, the smaller meadows were found to have the highest levels of sage grouse use (birds per acre). A list of published literature citing this correlation can be obtained from this office on request.

comment 2. Furthermore, no identification of sage grouse habitats, distribution, or requirements has been made on this allotment.

response 2. Page seven of the draft evaluation presents the extent of our current verified knowledge regarding sage grouse in the Jackson Mountain Allotment. Several people have reported sighting sage grouse strutting grounds on the allotment but to

date, there has not been a concerted effort to intensively survey the allotment area for sage grouse strutting use. Several sightings of sage grouse outside the presently identified "general distribution area" have also been made in the allotment as far south as Navajo Peak. NDOW is planning to do a strutting ground survey this spring in the Jackson Mountain Range. This survey should enable a better description of sage grouse use in the allotment for the next evaluation.

comment 3. It is a fact of sage grouse biology that they brood in areas of sagebrush cover. They are not camped out on meadows, although they do use them for sources of feed.

response 3. This statement is only partially true. Refer to response to comment 1. above. Brood rearing occurs on upland, as well as riparian habitats. Several published investigations, which studied sage grouse diet and movement, have indicated a strong dependence, by sage grouse chicks up to 12 weeks of age, on succulent herbaceous plant materials. These succulent plant materials are found on both sagebrush dominated uplands, and riparian areas. The studies found that the sage grouse broods, and adults, use riparian areas with increasing frequency as the succulent forbs on the upland habitats dry out. The concentrated supply of food on meadows is also desirable to broods because it allows for the acquisition of sufficient amounts of forage in a shorter time producing a two-fold benefit of reducing energy expenditures in locating food, and reducing the time of vulnerability to predation.

comment 4. Both of these feed sources [insects and tender green shoots], and the birds' ability to capture feed source, are enhanced by having the small meadows grazed so that the small chicks can maneuver and so that rank vegetation does not encumber the development of green shoots of vegetation.

response 4. Again this statement is only partially true. The studies which you are referring to did show that sage grouse use on meadows is enhanced with light to moderate grazing which maintains desirable forage in an earlier developmental stage, maintains higher protein levels in desirable forb species, and reduces the "rank" vegetation left from the previous years growth. You may have overlooked, however the importance of this conclusion on **light to moderate** use. The benefits to sage grouse from grazing meadows are only realized with this light to moderate use. Heavy and severe use on meadows are a significant detriment to the maintenance of quality sage grouse forage on meadows through the reduction of available-quality forage on the short term, and exposure of the meadow to wind and water erosion, reduction in growth potential through soil compaction, over the long term.

Studies data have found that sage grouse use on meadows is optimized when livestock are allowed to graze meadows to a level of between 2½-6½ inches. It should also be noted that the objective is intended to allow the meadow to have a cushion of left over vegetation by the end of the season to protect against erosion.

Comment- L page 43

There also exists no evidence of "headcutting" purported in this rationale. Some springs, throughout the allotment, have had animal hoof imprinting, and sometimes to a noticeable degree, but no erosive headcutting has been documented within this evaluation.

Response-

The objective and rationale you refer to was not written to infer that headcutting is occurring on the allotment. Our level of knowledge regarding the presence or absence of headcutting on the allotment is limited. The rationales which are given for the objectives, were inserted in the document to demonstrate to the reader what conflicts/concerns are being addressed by the objective, and also to provide the reader with some indication as to what we will be looking for in evaluating this objective.

Applying this thought process to this objective is intended to inform the reader that the objective to maintain a 3-4 inch stubble height will provide for: sage grouse use, to maximize plant vigor annually by maintaining the plants in an earlier phenological stage, longer, without causing damage, and finally to minimize the threat of headcutting and erosion by ensuring that a protective layer of vegetation is present at the beginning of the spring runoff period.

Comment- M page 44

The phrase "maximum species diversity, reproduction,..." should be removed from the recommendation for establishment of long term objective 2.a. The phrase in itself is nebulous, since there exists numerous definitions of "species diversity". Secondly, late seral ("good") rangeland and riparian habitat condition is often contrary to the notion of maximum species diversity. The most diversity of species occurs throughout all range types that we are aware of at lower levels of seral stage.

Response-

The reference to species diversity is intended to be interpreted in its most literal sense which is "number and kind of species".

You are correct in your summary of late seral condition, however, this objective was not intended to make any reference that "good" condition sage grouse or mule deer habitat is the same as the "late seral" term used in the SCS classification. Again, the objective was written to be interpreted in its most literal sense which is : Improve or maintain 967 acres of riparian meadow habitats in good condition with [the] maximum species diversity [possible under whatever seral vegetation best provides quality habitat parameters for the species being managed for]...

Comment- N page 44

The objective [long term #2.a.] as written, would destroy that classification system [SCS range site classification system], would change the BLM's stated objectives and directive, and would be contradictory to the management of the rangelands and riparian areas toward late seral stages.

Response-

This objective would not impact the SCS classification system, because it does not propose any changes to the methodology, or system, of classification or naming. The early, mid, late seral classification system used by the SCS range sites is not directly related to the poor, fair, good, excellent reference made in the objective. Your statement above that "good" condition is [sometimes] different from "late seral" is correct in this instance and demonstrates this point. BLM objectives and directives have not been compromised by this objective. There has been no direction, to our knowledge, that BLM must manage all rangeland habitats for late seral condition. Your statements relating that good condition does not always correspond to late seral, only reinforce the sensibility of not practicing a policy of managing all areas for late seral vegetation conditions.

Comment- O Page 44

At 2.b., "maximizing understory diversity" should be removed from the proposed objective. It is contrary to the wording of the LUP and suffers from the same problem as noted above (accuracy of the acreage was questioned).

Response-

The objective is in conformance with the LUP. The District Managers Decision for the LUP objective pertaining to aspen (WL 1.3) states that: "Specific management objectives will be designed for the critical species and these objectives will be used in the activity plans developed on an area." Long Term Objective 2.a.



was "designed for the critical species" and "will be used in the activity plan developed for the area." The rationale indicating a desire for maximizing understory species diversity was based on a scientific foundation established in the literature which indicated that a reduction in understory species diversity or change in existing composition is an excellent indicator of declining aspen stand condition. Use of understory vegetation as an indicator of aspen condition, it is hoped, will allow managers to become aware of declining aspen stand condition before the decline has permanently effected the regenerative ability of the stand. Understory species are also an indicator of utilization on aspen, See response to Comment L.

Comment- P Page 49

This section [desirable stocking rate calculation] neglects entirely to account for forage available in areas of light and slight utilization, which dominate the allotment utilization pattern mapping, and proposes to remove livestock from the allotment on the basis of a minuscule portion of the allotment (4%), in an area of low productivity and low forage potential.

Response-

It is not the policy of the BLM to practice the use of "sacrifice areas" in our management of the public lands. All areas, including small areas, are worthy of attention and management. To exclude these areas or allow them to become obscured by averaging them together with the larger areas, where acceptable conditions prevail, would compromise the mission of the BLM as stewards of the public lands. It must be recognized that each part, no matter how small, is closely linked to the maintenance of the whole as a functioning unit (ecosystem concept). Once this concept is realized, this argument becomes moot.

Comment- "We note for the record that the numbers cited under "Actual Use" at this page are based partially or wholly (sic) on conjecture, and are taken from Appendix 4. Appendix 4 applies a 20.4% foal crop, based on a different herd in a different herd management area in a different allotment. Data from this herd within this allotment shows an average foal crop of 25.3%, and to the extent that projections and conjecture are to be made, it is certainly more appropriate to use this figure than the 20.4% figure. We note also that the fall 1989 foal crop was 29%, and the adult increase from 1988 to 1989 was a 36% increase."

Response- The 20.4% figure was not obtained from "a different herd in a different herd management area in a different allotment."

Rather it was obtained by calculating (# foals ÷ # total animals) for the Jackson Mountains allotment, for the years 1986, 1988 and 1989 and averaging. This figure, when used in the calculations and projections, gives a more accurate result compared to the numbers actually seen on the ground (270 projected, 275 observed) than does the commenter's figure (304 projected [calculations based on # foals ÷ # adults], 275 observed).

Comment- "The last paragraph [of appendix 4] should be deleted, because it is biologically unfounded. A large increase would not have shown up in 1989...."

Response- The largest increase was not from 1988-89 but from 1989-90.

Comment- The draft document incorrectly states that Jackson Creek, Mary Sloan Creek, and Trout Creek have been identified as "proposed" Lahontan cutthroat trout habitats by BLM. To the extent they have been identified as anything pertaining to that species by the BLM, they have been identified as "potential" habitats. DeLong Ranches has made comment to U.S. Fish and Wildlife Service draft recovery plan regarding Mary Sloan Creek and Jackson Creek. Trout Creek was not a proposed water in that plan.

Response-

A September 1, 1989 memorandum which was later updated indicates that Jackson Creek, Mary Sloan, and Trout Creek were proposed Lahontan cutthroat trout habitats. The Fish and Wildlife Service LCT "Draft" Recovery plan does not include Trout Creek

Comment-

The water flow of Mary.Sloan Creek is very low, it is extremely small and limited water, and we do not believe it provides appropriate habitat for LCT on account of this low flow. It furthermore contains competing and/or displacing species of salmonids harmful to the potential stocking of LCT.

Response-

Mary Sloan Creek has been identified by the Fish and Wildlife Service "Draft" Recovery plan as a potential LCT recovery stream. Existing information provided by the Nevada Department of Wildlife (1991 NDOW Mary Sloan survey) does indicate that this system supports trout and could support LCT following eradication of "other" salmonids. For thousands of years, fish that were once endemic to this area survived similar low flow periods without additional problems due to land management activities. Management

of severely degraded headwater areas of Mary Sloan Creek which are privately owned will be critical in providing both good water quality and quantity for the lower reaches of Mary Sloan Creek.

Comment-

Jackson Creek has a higher flow, but is subject to flash-flooding because of the high percentage of rock in the upper watershed. It also holds an active mine claim at the Iron King Mine in the headwaters. Tailings from this mine have been responsible for extirpation of native and/or planted trout in the 1960's. That claim being active, such mining may resume at any time. The BLM and NDOW both recognized this water as "barren" until Jim French of NDOW planted what were supposed to be "Alvord" cutthroat trout on the private lands portion of this stream at the upper Jackson Creek Ranch, belonging to DeLong Ranches, Inc. Two years later, NDOW censused not Alvord Cutthroat, but brook trout in the stream. Jackson Creek furthermore contains high levels of arsenic. All of these factors force us to question the validity of this stream for LCT introduction.

Response-

Prior to LCT introduction into any recovery stream, studies will be performed to ensure that streams such as Jackson Creek could support LCT. The BLM would encourage the sharing of information pertaining to water quality (i.e. "high arsenic levels in Jackson Creek) conditions of Jackson Creek.

The NDOW introduction of trout into Jackson Creek on private lands was done so following permission of DeLong Ranches, Inc.

Comment-

The public lands portion of Trout Creek are extremely limited in scope, and the water flow of this stream is not great. The majority of this stream lies on private lands, and the flow itself is diverted into an irrigation pipe on the fans of the mountain.

For the above reasons, we do not believe these watercourses have the potential to support a sport fishery on a sustained basis, and should therefore not be considered under the Land Use Plan as potential fisheries.

Response-

With proper livestock management and recovery of woody plants and streambank vegetation, Trout Creek does have the potential to support a sport fishery as it once did in the past.

Comment-

Item (9) at this page also incorrectly reports the habitat conditions of the streambank cover and streambank stability on the creeks. According to page 30 of this draft, the cover and stability averaged 64% in 1992 on Jackson Creek, not the 53% cited here. According to page 32 of this draft, the cover and stability averaged 68% in 1990 on Trout Creek, not the 57% reported here. According to page 34 of this draft, the cover and stability averaged 90% in 1991, not the 55% cited here.

Response-

On page 34 of the draft Jackson Mountain Allotment Evaluation report, the riparian condition class for Mary Sloan Creek was reported at 90%. The other riparian condition class numbers were reported correctly as well. Page 30 shows 64% for Jackson Creek and 68% is shown on page 32 for Trout Creek.

Comment-

The riparian species monitored should also be identified as to specific site. The inference in this document that all of the species listed constitute key species at all locations is incorrect. The majority of the stream-sides of all three creeks are dominated by, and the riparian functioning controlled by, willows and large rock. The herbaceous species listed are inappropriate as "key management species" because they neither control the functioning of the riparian areas nor constitute a significant proportion of the riparian forage, let alone the total forage of the allotment.

Response-

Willow and rock are important criteria for the functionality of a stream. However, there are other parameters such as streambank vegetation, canopy cover, gravel substrate, etc. which are equally, or in many cases, more important, than just willows and large rock. Poa, carex, juncus, etc. are extremely important (depending on stream morphology) for streambank development, maintenance, and survival of aquatic organisms.

The Bureau would be interested in receiving the criteria involved and methodology employed to come to the conclusion that "the majority of stream-sides of all three creeks are dominated by, and the riparian functioning controlled by, willows and large rock". If such a percent has been developed, this information would be very useful towards the management of woody species in the

watersheds.

Comment-

The discussion of utilization observed during stream survey fails to identify in what year of stream survey that the use described was noted. It further fails to identify the means of assessing the utilization and the qualifications of the observer in making such a determination and put proper weight and validity to the general descriptive statement at this page.

Response-

Utilization of Key Forage Plant species was observed during the BLM 1992 stream survey of Jackson Creek utilizing the Key Forage Plant Methodology identified in the Nevada Rangelands Monitoring Handbook. Photo documentation is also available.

Comment-

We will also remind the Bureau that stream conditions which are beyond the scope of livestock management practices are reflected within the "stream habitat condition" spoken of on these pages, and such things as pool:riffle ratio, pool quality, and pool structure are parameters which directly contribute to such "stream habitat condition" over which the forces of nature play more part than does the livestock management of the allotment. Drought, parent material, flash-flooding, geophysical setting, etc. all dominate these parameters.

Response-

There are a multitude of reports which document the direct relationship between livestock management and stream habitat condition. See "Managing Fisheries and Wildlife on Rangelands Grazed by Livestock" by William S. Platts for the Nevada Department of Wildlife (December, 1990) for documentation of this.

Comment-

Finally, no correlation exists between a "60 percent objective" and the Land Use Plan objective.

Response-

There is a correlation in that 60% is desired in maintaining or improving fishery habitat.

Comment-

The opening line of this page illustrates the above, and the problem of attempting to blame livestock use for poor quality fisheries habitat (or fair, or good). The fact that quality pools are "non-existent", even though the RCC is above the 60% "expected" of it, points to the fact that even when the RCC was at 77 to 79%, the non-existent pools would prohibit the stream from being viable fisheries habitat. In point of fact, the cover and stability are above the purported "objective" of 60%, but the pool quality has always been, and likely will always be, so poor that even if the "stream habitat" is pulled up by increasing the RCC, the fact will remain that the stream will not be viable habitat due to a lack of pool structure and quality.

Response-

As bank cover and stability ratings improve for Jackson Creek and other systems, so will pool quality over time. As streambanks become more stable, undercutting will occur which provides critical cover for fish both in hot and cold periods. Stream temperatures will fluctuate less both in the summer and winter as a result of improved bank cover and stability and pool quality.

The Bureau welcomes any information that is available that would prove that "pool quality will likely always be so poor" as indicated in the comment.

Comment-

The data for Mary Sloan Creek also supports the above fact. The RCC also increased between 1976 and 1991, despite...

Response-

See previous comments for Mary Sloan Creek and the ability for this system to support fish.

Comment-

We repeat our earlier comments relative to number 9 at this page. The fact is that the overall RCC is above the objective level. To the extent that other factors reduce the "stream habitat conditions" below the purported "objective" level, the problem is certainly not due to livestock management on this allotment. Pool quality, pool structure, pool:riffle ratio, and low flows due to drought are certainly not functions of livestock management.

Response-

See previous comments..

Comments-

Also at this page, reference is made that "several" sections of Jackson Creek are below "desirable habitat levels". In meetings with Area staff, two sections were identified for us, both of which we believe are on private lands, and both of which will be fenced into the private lands in 1994. No other areas have been identified. We request the identification of these areas, and the particular parameters which are below "desirable levels", and the length of the sections involved.

Response-

The "sections" that were inventories during the 1992 BLM stream survey of Jackson Creek that were below "desirable habitat levels" were conducted on public lands. The area surveyed was identified on the maps included with the stream survey. The particular parameters which are below "desirable levels" were identified in the stream survey and following Key Forage Plant Monitoring.

Comment-

The reference to Clary and Webster is inappropriate since Clary and Webster have never to our knowledge visited the Jackson Mountains allotment, since their work involves montaine systems not found within the Jackson Mountains Allotment, and since the functioning of the systems on the Jackson Mountains Allotment is dependent upon woody systems and large rock, not upon the herbaceous component. We are opposed to managing these streams based upon a very few inches of herbaceous vegetation. This vegetation does not control the functioning of any of the stream on this allotment.

Response-

Vegetation does indeed control the functioning of streams on the Jackson Mountain Allotment. Without minimum stubble heights, streambanks will never be able to re-establish themselves in the areas identified in this report. Clary and Websters report, although not conducted on the Jackson Mountains, can be used for systems similar to those of the Jackson Mountains.

The Bureau would welcome data that has been collected on streams within the Jackson Mountain Allotment that indicates that the functioning of these stream systems is dependent upon woody systems and large rock, not upon the herbaceous component.

Comment- The "HMA" actually encompasses separate herd use areas, and the numbers in the Land Use Plan include herds in Jackson Mountains and in Happy Creek. These two herds have always been separate and distinct herds, and repeated aerial flight by the BLM to census these herds reflect this. These herds have their own distinct characteristics. The blurring of these facts in this draft evaluation needs to be clarified in the final.

Response- Page 45 of the draft evaluation clearly states that two horse population occupy two geographically separate areas within or near the Jacksons Mountain Herd Management Area, and recommends that the herd management area boundary be adjusted to reflect historic use areas as indicated by distribution and census data. A map of those areas is included as Appendix 5. In addition, page 18 states that "Distribution flights at all seasons show the majority of horses are concentrated in the foothill country south of Red Butte Canyon, Brush Basin and Shawnee Creek."

Comment- Additionally, we are informed by several sources that the area of horse use in 1971 in the Jackson Mountain Allotment was a roughly circular area encompassed by a line running approximately 1 mile north of Rattlesnake Canyon to the Stroud Mine; southeasterly to about 3 miles east of Smokey Spring; westerly approximately 1 mile north Railroad Spring and approximately 1 mile north of the railroad tracks to about the point that the tracks turn south; northerly approximately 2 miles west of South Spring, back to ridge north of Rattlesnake Canyon.

Response- The herd management area boundary was established through the land use planning process with public input. As stated on page 45 of the draft evaluation, review of herd management boundaries, including the Jackson Mountain HMA is expected during the Resource Management Planning process which is scheduled to begin in 1995.

Comment- These sources inform us that the number of horses in 1971 was approximately 50 or less, and to their knowledge were in balance with the other uses of the area in which the horses made use (livestock numbers, wildlife, water, and forage).

Response- It is worth noting that by law and regulation management of wild horses is undertaken with the objective of limiting their distribution to the geographic area identified as having been used by a herd as its habitat in 1971. However, there



is no requirement that horses be maintained at numbers that existed in 1971, but rather that wild horses be managed in balance with other uses and the productive capacity of their habitat. Further, Interior Board of Lands Appeals decision 88-678 states in part:

An "appropriate management level" established purely for administrative reasons because it was the level of wild horse use at a particular point in time cannot be sustained under 16 U.S.C. § 1333(b)(2) (1982). The statute does not authorize the removal of wild horses to achieve an appropriate management level which was established for administrative reasons rather than in terms of the optimum number of animals which results in a thriving natural ecological balance and avoids deterioration of the range.

That decision further states:

16 U.S.C. § 1333(b)(2) (1982) contains the sole and exclusive authority for BLM to remove wild horses from the public range. The statutory term "appropriate management level" has a very specific meaning in regard to removing wild horses or burros from the public range. It is synonymous with restoring the range to a thriving natural ecological balance and protecting the range from deterioration. The number of "excess" animals the Secretary is authorized to remove is that which exceeds the appropriate management level, which is the optimum number of wild horses and burros that results in a thriving natural ecological balance and avoids a deterioration to the range.

Comment- The list of Land Use Plan Objectives is not comprehensive, and other Range Management Objectives apply to this allotment. One of these is the treatment of sagebrush and the seeding of the range with adapted species to increase forage production of suitable areas of the allotment. Such areas exist within the allotment, and would benefit from brush reduction and seeding.

Response- No treatment of sagebrush or seeding is planned for the Jackson Mountain Allotment at this time. However, the objective referenced in the above comment may be applied to the Jackson Mountain Allotment if future evaluations or management determinations establish the need.

Comment- Another Land Use Plan Objective is to develop allotment specific objectives through the development of an Allotment Management Plan, using Coordinated Resource Management Planning and the CRMP Local #1 Committee to accomplish this objective. We

are informed of your opinion that you do not have to abide by these objectives, and we believe you are incorrect in that opinion.

Response- The above statement is incorrect. Management actions are required to be in conformance with the Land Use Plan. The CRMP process does not require participation of the CRMP Local #1 Committee. Efforts in Humboldt County to revive the formal CRMP process have been unsuccessful. However, the informal CRMP process continues to be used in the Paradise-Denio Resource Area, including in evaluation of management of the Jackson Mountain Allotment. The decision of the administrative law judge dated March 17, 1993, on Fred Buckingham v. BLM and NJ Ranches v. BLM stated that the BLM satisfied the requirement of employing the CRMP process citing that:

The above described process [which was described in the decision] certainly afforded all those who expressed in writing a desire to considered an affected interest a sufficient opportunity to actively participate in the evaluation of the allotments. That is all that is required to constitute an adequate informal CRMP process.

Likewise, affected interest have had, and continue to have, sufficient opportunity to actively participate in the evaluation of the Jackson Mountain Allotment.

Comment- The "allotment-specific objectives" listed beginning at this page [page 12] are not objectives which have been agreed upon not implemented by decision beyond the decisions of the Land Use Plan.

Because several of these objectives have been developed "in-house" and without proper consultation, let alone by an agreement or decision, they are invalid as a yardstick by which to evaluate the allotment.

The only valid "allotment-specific" objectives currently in place for the Jackson Mountains Allotment are those found within the MFP III.

Response- The management over the evaluation period was evaluated in reference to the objectives listed beginning on page 12 of the draft evaluation. Similar, objectives were presented in the Jackson Mountain and Bottle Creek Allotment Evaluation Summary of 1988 and the draft Livestock Use Agreement for Jackson Mountain Allotment. The objectives listed on page 12 of the draft have been a useful tool in evaluating past management. Future management will be designed to meet objectives established by decision or approved livestock management agreement. See page 42 of the draft evaluation for recommended objectives.

Comment- The wording at page 12 of the draft implies that the Land Use Plan numbers are a "floating number" subject to change by Area Manager's whim. This is incorrect.

Response- The forage demand by mule deer, pronghorn and bighorn sheep is subject to adjustment, and may be adjusted through consultation with the Nevada Department of Wildlife and other interested parties, and through the land use planning process. Any interpretation that forage demand is a "'floating number' subject to change by Area Manager's whim" is clearly incorrect, and the draft evaluation contains no implication that this is the case.

Comment- Because this objective [related to range condition] applies in great part to greasewood and shadscale areas of the allotment which were considered poor livestock forage condition areas, it does not accurately reflect the ecological condition of the allotment or portions thereof.

Response- You are correct that the range condition objective does not reflect ecological condition. As stated on page 38 of the draft evaluation, this objective will be redefined/quantified utilizing desired plant communities as information becomes available.

Comment- Item (11) at this page cites "applicable state criteria" for water quality as being listed in Appendix 1. Appendix 1, however does not contain the State's determination that any of the listed criteria apply specifically to Jackson Creek, Mary Sloan Creek, or Trout Creek. Please supply that determination by the State of Nevada.

Response- The table of "applicable state criteria" presented in Appendix 1 is an abridged version of a table that can be found under NAC 445.117. The values contained within that table are specific to designated beneficial uses, they are not specific to individual streams.

The Winnemucca District's MFP III, decision W1.1 states, "Prevent Bureau and Bureau-authorized activities from degrading water quality beyond established standards as specified in the Nevada Water Pollution Control Regulation of 1978...". MFP III, decision W2.1 states "Acquire or provide sufficient water on public lands through permit, adjudication, or purchase processes as provided by Federal and State Water Law and/or other appropriate direction to support the uses of the public lands for wild horses, wildlife, aquatic habitat, livestock, and recreation.

Therefore, to be in compliance with both the Water Pollution Control Regulations, and the Bureau's Management Framework Plan, the criteria of Appendix 1 must be applied to the waters of Jackson Creek, Mary Sloan Creek, and Trout Creek.

Comment- The precipitation data at this page [page 20] is misleading and incorrect as it applies to the precipitation year important to vegetative species of the Intermountain west. The precipitation year begins in October, and runs through September.

Because of the large fluctuation in what can be considered a "normal" precipitation year, because of the fluctuation in growth depending on precipitation regimen, and because of the variation inherent in "Key Forage Plant" methodology of determining utilization, there exists virtually no correlation between precipitation and utilization.

Response- The National Oceanic and Atmospheric Administration summarizes precipitation based upon the calendar year and that data is reflected in allotment evaluations. More detailed data is examined during the evaluation process and, when applicable, is discussed within the evaluation. See page 36 of the draft for example.

There is a correlation between precipitation and utilization to the extent that precipitation results in differences in production from year to year. A stocking rate that yields heavy utilization in a low production year may yield light utilization in a high production year.

Comment- The AUMs for horses listed at the top of this page should read 2663 AUMs, rather than 1775 AUMs listed, in conformance with the LUP calculation of horse AUMs.

Response- Forage for wild horses in that Land Use Plan and elsewhere is determined at a rate of one AUM per horse per month, not at 1.5 AUMs per horse per month.

Comment- The draft is incorrect in stating that wild horse use is limited in the drainage of Jackson Creek, Mary Sloane Creek, and Trout Creek. The truth is, such use is non-existent. Wild horses do not occupy this portion of this allotment, and never have.

We question whether the "limited horse sign" found in the upper reaches of Jackson Creek was from anything more than domestic horses used for pleasure and gathering livestock. This is NOT an area in which we have ever seen wild horses or where wild horses have been noted by others.

Response- We concur in part. Census data does not show that wild horses occupy the northern portion of the allotment. Limited horse sign has been observed in the vicinity of the upper reaches of Jackson Creek near the boundary between Jackson Creek and Happy Creek Allotments, not within the drainage, and that sign may have been the result of either domestic horses used for hunting or other purposes, or wild horses as wild horses inhabit the adjacent Happy Creek Allotment. Because use by horses is limited, failure to meet short term utilization objectives is not the result of horse use.

Comment- This page [page 27] states that no trend data is available for the Jackson Mountain Allotment. This is incorrect, as the Bureau has been given trend summaries for all plots which Intermountain Range Consultants has in place. As the Bureau well knows, this data is collected in conformance with BLM methodology. We expect this data to be displayed within the final evaluation and to be given full consideration in subsequent decision-making on the allotment. An additional copy is attached to this letter.

Response- Monitoring data for Jackson Mountain Allotment was requested from Intermountain Range Consultants in the spring of 1993. At that time Bureau personnel were informed by IRM that the Bureau would only be given data in a form determined by IRM because it was IRM's view that data provided in the past on other allotments had been misused. On July 12, 1993, IRM provided a summary of trend and utilization information collected at unspecified locations. This information is displayed in Appendix 7. On February 17, 1994, IRM provided this office with use pattern maps for 1986, 1991 and 1993. While the Bureau is unable to confirm that data was collected in conformance with Bureau methodology, and has not been provided with information necessary to fully interpret IRC's data, the information is none the less useful, if given appropriate weight, and will be considered when determining management for this allotment.

Comment- These data [use pattern mapping data] scarcely reflect that there exists an overutilization of available forage within that allotment, particularly by livestock.

Response- If grazing use became uniform throughout the Jackson Mountain Allotment, monitoring data indicates that the area would support numbers in excess of existing use by wild horses and livestock. However, use is not uniform and areas of heavy use have been documented by both the Bureau and IRC. Areas of slight or light utilization do not negate the impact of heavy use on other areas.

Comment- We know that DeLong Ranches, Inc. has requested that the Bureau remove excess wild horses, to remove wild horses outside their 1971 area of use, and to remove wild horses from private lands within the 1971 [area of use].

Response- All recommendations related to the AML for wild horses developed by the Bureau in coordination with interested parties, or received from interested parties, recommend an AML below the present number of horses. Removal of wild horses is anticipated this fall if an appropriate management level is established.

We request that DeLong Ranches' requests to remove wild horses from private land be provided to the Bureau within 48 hours of observation of wild horse on private land and that the request provide the following information:

- Date and time horses were observed on private land.
- Location of private land where horses were observed.
- Description of horses and number.

Comment- The Bureau is required to manage wild horse in balance with other resource uses, in those areas that the wild horses existed in 1971. If the Bureau intends to diminish the livestock grazing preference in order to expand the wild horse use of this allotment, we believe the Bureau is in violation of the law, and we believe further that a taking of private property may be occurring. Under the provision of Executive Order 12630, the Bureau is required to perform a Takings Implication assessment if such a taking MAY occur. No such TIA is presented at page 47 or beyond in this draft.

Response- It is the Bureau's position that grazing privileges are not private property, and therefore the loss of grazing privileges is not a taking of private property. The Taylor Grazing Act states:

So far as consistent with the purposes and provisions of this Act, grazing privileges recognized and acknowledged shall be adequately safeguarded, but the creation of a grazing district or the issuance of a permit pursuant to the provisions of this Act shall not create any right, title, interest, or estate in or to the lands.

Comment- We will also remind the Bureau that the arbitrary selection of number or percentages of horses established by the LUP has been set aside by court order.

Response- The use of percentages of horses established by the LUP has not been set aside by court order. Interior Board of Lands Appeals decision 94-56 states in part:

A decision to make proportionate reductions in livestock and wild horse use that was based on monitoring, research, and analysis of usage of the public lands and was shown to have been made in consideration of the condition of the affected range in terms of available forage was properly affirmed.

This decision upheld the use of percentages established by LUP to apportion available forage between livestock and wild horses.

Comment- The formula listed at page 48 is one which is commonly used, but the Bureau neglects in this draft to point out that the utilization is to be weighted based upon the different utilization zones and productivity (if known) of the pasture or allotment. The listed formula is therefore incomplete and/or erroneous in that as listed it is the formula to be used for calculation based upon either uniform use throughout a pasture or allotment or upon Key Management Areas, none of which exist by definition on this allotment. Nebulous, shifting non-repeating areas of heavy use (or any other degree of use) certainly do NOT constitute Key Management Areas.

Response-

Weighted averages are useful for determining average utilization, which is not the same as determining stocking rate. However, weighted averages can also be use to determine a stocking level that could be achieved on a management unit assuming utilization patterns could be completely uniform. Utilization patterns are not completely uniform, nor expected to become uniform, on Jackson Mountain Allotment.

A key management area is defined as an area of land that influence or limits the management opportunities of the land surrounding it. Key management area may be synonymous with key area.

Key areas have not been selected for Jackson Mountain Allotment. That fact does not prevent adjustments in stocking rates based upon areas of heavy use. Because the Bureau is unwilling to sacrifice these areas, they do in fact influence or limit the management opportunities of the land surrounding these areas.

Comment- The proposal at this page [page 50] to adjust livestock use yearly based upon previous year's data is completely unfounded.

Response- The intention of this proposal is to allow the short term objective of 30% to be met within a relatively short period of time. Under this alternative livestock use would be adjusted yearly based upon the previous years monitoring data, and it should be added that the adjustment would also be based upon data from other years as it becomes available. Grazing use could occur on a different area of the allotment, if forage were available and objectives would be met.

Comment- At no time did DeLong Ranches agree, nor were they consulted with by the Bureau, on removal of livestock from the eastern slopes of King Lear Peak.

Response- DeLong Ranches, Inc. has responded to concerns about heavy use in the upper Big Cedar Creek area, citing that after completion of fencing of private land on Big Cedar Creek, cattle use of upper Big Cedar Creek could be controlled including preventing use of that area after July 15. That fencing is planned within the next few years. Fencing on public land in the area is not expected to be necessary at this time.

Comment- Wild horses, managed at the levels found on the allotment in 1971, represent both a viable herd and a number which did not interfere with the other resource uses of the allotment. To the extent that number (50 head or fewer) does not impart harm



to private lands and water rights held by DeLong Ranches, Inc., it is the number that should be allowed on this allotment.

Response- The decision on IBLA 89-285, 89-286 states in part:

The Board will set aside a BLM decision to remove wild horses from a herd management area where removal is not properly predicated on an appropriate determination that removal is necessary to restore the range to a thriving natural ecological balance and prevent a deterioration of the range, in accordance with sec. 3(b) of the Wild Free-Roaming Horses and Burros Act, as amended, 16 U.S.C. § 1333(b) (1982).

The Bureau does not agree with IRC's opinion that overgrazing is not occurring on the Jackson Mountain Allotment. Rather it is the Bureaus opinion that overgrazing is occurring and adjustment in livestock and wild horse use is needed to prevent overgrazing and to prevent deterioration of the range.

#### VIII. Selected Management Action

##### A. Carrying Capacity:

The carrying capacity of Jackson Mountain Allotment is 7808 AUMs. See Appendix 8 for calculation of carrying capacity.

The available AUMs are apportioned between cattle and wild horses as follows (see Appendix 9 for calculation for apportioning available forage):

Cattle	6,403 AUMs
Wild horses	<u>1,405 AUMs</u>
Total	7,808 AUMs

##### B. Livestock

###### 1. Preference

In addition to forage available based upon the carrying capacity of Jackson Mountain Allotment, active preference includes an additional 23 AUMs from fenced federal land. Fenced federal range is small tracts of public land fenced in with large tracts of private land. Forage from fenced federal range is included as part of active preference to ensure that the public is compensated for forage consumed off those small tracts of public land.

Active preference will be reduced from 8,857 AUMs to 6,426 AUMs (6,403 AUMs + 23 AUMs fenced federal = 6,426 AUMs) over a period of five years as follows:

	Total <u>Preference</u>	Suspended <u>Preference</u>	Active <u>Preference</u>
Year 1	11,880	4,740	7,117 + 23 = 7140
Year 3	11,880	5,090	6,767 + 23 = 6790
Year 5	11,880	5,454	6,403 + 23 = 6426

Prior to Year 3 and Year 5 management will be assessed in light of monitoring data available at that time.

## 2. Grazing System

Grazing will occur during the following season of use:

Spring	04/01 to 05/31
Summer/Fall	06/01 to 10/15

Beginning in Year 2 grazing will be scheduled by use area as displayed below. It is recognized that due to lack of fencing, drift will occur between use areas. The exception is the Jackson-Mary Sloan Use Area which is to be grazed from 05/25 to 07/15. Drift into this area is prevented in the spring by a drift fence on the lower portion of Jackson Creek. This fence very effectively prevents movement into the area from the west. The other access to this area is at the south end of the use area. No movement is expected into this area from the south unless cattle are actively pushed into the area because cattle will not occupy the area south until late summer/fall and at that time their movement will be towards Trout Creek Ranch. If drift is found to occur, it will be prevented by riding by the permittee.

Scheduling grazing by use area, and subsequently the permittee's report of actual use by use area, will allow more accurate assessment of management practices. Actual use reports will be made based on the best estimate by use area. It is recognized that lack of pasture fences will limit the permittee's knowledge of actual use by use area. As stated above, no drift is expected into or out of the Jackson-Mary Sloan Use Area. Therefore accurate actual use is attainable for that use area.

As actual use data by use area becomes available, it may be determined through analysis of monitoring data and in consultation, coordination and cooperation with the permittee and other interested parties, that allotment

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objectives can be met by adjusting stocking by use area and within active preference. If, for example, short term objectives are not met in the Jackson-Mary Sloan Use Area and forage is available in another use area, some use may be shifted out of the Jackson-Mary Sloan Use Area and onto another area.

Active preference will be reduced from 8,857 AUMs to 6,426 AUMs (6,403 AUMs + 23 AUMs fenced federal = 6,426 AUMs) over a period of five years. During that five year period grazing will be scheduled as follows:

## YEAR 1

On February 23, 1994, the permittee was notified by letter that his grazing application on the Jackson Mountain Allotment for the 1994 grazing year was approved through May 31, 1994, as follows:

Livestock No. & Kind	Period		%PL	Type	AUMs
	Begin	End	Use	Use	
100 C	03/01/94	to 03/15/94	98	Active	48
363 C	03/16/94	to 03/31/94	98	Active	187
650 C	04/01/94	to 04/30/94	98	Active	628
1650 C	05/01/94	to 05/31/94	98	Active	1648
				Total	2511

In that same letter he was notified that approval of the remaining portion of your application was withheld pending completion of the Final Jackson Mountain Evaluation and issuance of the Proposed Multiple Use Decision for Jackson Mountain Allotment. It will be the area manager's proposed decision that the remaining and following portion of his application is denied:

Livestock No. & Kind	Period		%PL	Type	AUMs
	Begin	End	Use	Use	
1650 C	06/01/94	to 08/15/94	98	Active	4040
826 C	08/16/94	to 09/30/94	98	Active	1224
326 C	10/01/94	to 10/31/94	98	Active	326
276 C	11/01/94	to 12/31/94	98	Active	542
100 C	01/01/95	to 02/28/95	98	Active	190
24 C	11/01/94	to 11/30/94	98	Active	24

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It will be the area manager's proposed decision that the following grazing use on Jackson Mountain Allotment for the 1994 grazing year is approved:

1650 C	06/01/94 to 08/15/94	98	Active	4040
288 C	08/16/94 to 10/15/94	98	Active	566
* 2 C	03/01/94 to 02/15/95	100	Active	<u>23</u>
			Total	4629

\* This line is for 23 AUMs fenced federal range that can be grazed concurrently with private land as long as grazing use is not detrimental to federal range.

Total authorized use for the 1994 grazing season follows:

Approved by letter dated 02/23/94	2511 AUMs
To be approved by decision	<u>4629 AUMs</u>
Total authorized use for 1994	7140 AUMs

YEAR 2

Grazing use will be scheduled as follows in Year 2:

<u>Use Area</u>	<u>No. Cattle</u>	<u>Period of Use</u>	<u>% Fed Land</u>	<u>AUMs</u>
Southwest	400 C	04/01 to 04/30	98	387
	750 C	05/01 to 05/31	98	725
Jungo Hills	200 C	04/01 to 04/30	98	193
	700 C	05/01 to 05/31	98	699
Northwest	200 C	04/01 to 05/24	98	193
Jackson-Mary Sloan	200 C	05/25 to 07/15	98	490
Rattlesnake Canyon	750 C	06/01 to 08/15	98	1836
	200 C	08/16 to 10/15	98	393
Cedar Creek	700 C	06/01 to 07/15	98	1015
	900 C	07/16 to 08/15	98	899
	146 C	08/16 to 10/15	98	287
Fenced Federal Land	2 C	03/01 to 02/15	100	<u>23</u>
			Total	7140

## YEAR 3 &amp; Year 4

Prior to Year 3 management will be assessed in light of monitoring data available at that time.

If it is determined through analysis of monitoring data prior to Year 3 or Year 5 that the carrying capacity of the Jackson Mountain Allotment differs from the carrying capacity identified, the available forage will be apportioned in the land use plan proportions (that is, 18% of the available forage to wild horses and 82% of available forage to livestock).

Grazing use will be scheduled as follows in Year 3 and Year 4:

<u>Use Area</u>	<u>No.</u>		<u>% Fed Land</u>	<u>AUMs</u>
	<u>Cattle</u>	<u>Period of Use</u>		
Southwest	350 C	04/01 to 04/30	98	338
	725 C	05/01 to 05/31	98	701
Jungo Hills	200 C	04/01 to 04/30	98	193
	675 C	05/01 to 05/31	98	674
Northwest	200 C	04/01 to 05/24	98	193
Jackson-Mary Sloan	200 C	05/25 to 07/15	98	490
Rattlesnake Canyon	725 C	06/01 to 08/15	98	1775
	150 C	08/16 to 10/15	98	295
Cedar Creek	675 C	06/01 to 07/15	98	979
	875 C	07/16 to 08/15	98	874
	130 C	08/16 to 10/15	98	255
Fenced Federal Land	2 C	03/01 to 02/15	100	<u>23</u>
			Total	6790

## YEAR 5

Prior to Year 5 management will be assessed in light of monitoring data available at that time.

If it is determined through analysis of monitoring data prior to Year 3 or Year 5 that the carrying capacity of the Jackson Mountain Allotment differs from the carrying capacity identified, the available forage will be apportioned in the land use plan proportions (that is, 18%

of the available forage to wild horses and 82% of available forage to livestock).

Grazing will be scheduled as follows in Year 5 and thereafter:

<u>Use Area</u>	No. <u>Cattle</u>	<u>Period of Use</u>	<u>% Fed</u> <u>Land</u>	<u>AUMs</u>
Southwest	301 C	04/01 to 04/30	98	291
	700 C	05/01 to 05/31	98	677
Jungo Hills	200 C	04/01 to 04/30	98	193
	650 C	05/01 to 05/31	98	649
Northwest	200 C	04/01 to 05/24	98	193
Jackson-Mary Sloan	200 C	05/25 to 07/15	98	490
Rattlesnake Canyon	700 C	06/01 to 08/15	98	1714
	106 C	08/16 to 10/15	98	208
Cedar Creek	650 C	06/01 to 07/15	98	942
	850 C	07/16 to 08/15	98	849
	100 C	08/16 to 10/15	98	197
Fenced Federal Land	2 C	03/01 to 02/15	100	<u>23</u>
			Total	6426

### 3. Terms and Conditions

Upon completion of the drift fence on middle Jackson Creek livestock will be excluded from the middle Jackson Creek area after 06/15 except when being actively trailed.

Upon completion of fencing of private land in the upper Big Cedar Creek area livestock will be excluded from the area west of that private land and east of King Lear Peak after 07/15.

Exchange of use is accounted for on each line entry as percent public land. Your exchange of use agreement expires [enter date].

Your active preference includes 23 AUMs fenced federal range which may be grazed concurrently with private land as long as grazing use is not detrimental to federal range.

Any cattle owned or controlled by you found on the federal range without BLM issued ear tags will be deemed in excess of you authorized numbers.

This grazing authorization is contingent upon submission of copies of bills and proof of payment for railroad leases as the leases are renewed on 03/01.

Salt and/or mineral blocks shall not be placed within one quarter ( $\frac{1}{4}$ ) mile of springs, meadows, streams, riparian habitats or aspen stands.

4. Structural Projects

The following projects are scheduled to be evaluated through the project planning process. Construction of projects is dependent upon funding and project priorities:

- a. Approximately two miles of drift fences are recommended to control livestock use on middle Jackson Creek. The proposed location of the fences follow:

Section 34, T40N, R31E  
Section 26, T40N, R31E

Upon completion of this fence, no use of the middle Jackson Creek area will be scheduled after 06/15 except when cattle are being actively trailed through the area.

- b. Enclosures around selected springs and associated meadows are recommended to eliminate use of those areas by livestock and wild horses. The sites to be fenced would be selected in consultation, coordination and cooperation with the Nevada Division of Wildlife, the permittee and other interested parties.

- c. Development of springs at the following locations is recommended for consideration:

Section 36, T40N, R31E (two springs)  
Section 34, T40N, R31E  
Section 2, T39N, R31E  
Section 11, T36N, R31E

Construction of a pipeline off Donna Schee Spring (Section 30, T37N, R32N, located on private land) to provide water to Section 15, T37N, R32E; and of a pipeline off Dead Man Spring (Section 3, T37N, R31E,

may be on private land) to provide water to Section 12, T37N, R31E, is recommended for consideration.

#### 5. Rationale

Analysis of monitoring data indicates that both wild horses and livestock have contributed to failure to meet allotment objectives. Through analysis of monitoring data the carrying capacity of Jackson Mountain Allotment has been determined to be 7808 AUMs. See Appendix 8 for calculation of carrying capacity). The land use plan established the starting point for monitoring within Jackson Mountain for livestock and wild horses. The available forage (7808 AUMs) was apportioned between livestock and wild horses in proportion to those land use plan numbers. See Appendix 9 for calculations to apportion available vegetation. The apportionment of forage between livestock and wild horses follows:

Cattle	6,403 AUMs
Wild horses	<u>1,405 AUMs</u>
Total	7,808 AUMs

The reduction in use by cattle and wild horses is expected to allow utilization objectives to be met on upland habitat. In addition, the utilization objectives for wetland riparian habitat is expected to be met on a larger area than is occurring under present management. However, even with reduced use objective levels are expected to be exceeded on some wetland riparian areas. To insure improvement and maintenance of those areas in good condition exclosures are to be constructed.

Grazing of the Jackson-Mary Sloan Use Area, which includes upper Trout Creek, is scheduled for 05/25 to 07/15. This period of use is expected to result in improved livestock distribution and therefore reduced use of riparian areas. In addition, reduced livestock numbers and the shorter period of use will reduce the amount of AUMs harvested from this area. Improved livestock distribution and reduced use are expected to allow utilization objectives to be met on riparian areas. In addition, the period of use is expected to reduce any impacts livestock have had on browse species. Elimination of livestock use after 07/15 from the area east of King Lear Peak and west of private land is also expected to allow short term objectives to be met.



Construction of water developments would improve livestock distribution and reduce grazing pressure on both upland and riparian areas.

Short term utilization objectives are designed to ensure progress toward meeting long term objectives. Achievement of the short term objectives will:

Provide adequate stubble height by the beginning of the spring runoff period to disperse flood water, filter sediment, maximize bank water storage and dry season flows, and provide for sage grouse cover and maintenance of plant vigor, and promote successful recruitment of suckers and saplings in the community in streambank riparian habitat.

Ensure adequate stubble height during the grazing season for sage grouse cover, and after the grazing season maximize plant vigor and minimize headcutting and erosion on wetland riparian habitat.

Promote successful reproduction and recruitment, promote plant vigor and provide watershed protection on upland habitat.

C. Wild Horses

1. Management

The appropriate management level for wild horses within the Jackson Mountain Allotment portion of the Jackson Mountains Herd Management Area is 117 horses.

If it is determined through analysis of monitoring data prior to Year 3 or Year 5 of the five year phase in period for reductions in active preference that the carrying capacity of Jackson Mountain differs from the carrying capacity identified, the available forage will be apportioned in the land use plan proportions (that is, 18% of the available forage to wild horses and 82% of the available forage to livestock).

2. Rationale

Analysis of monitoring data indicates that both wild horses and livestock have contributed to failure to meet allotment objectives. Through analysis of monitoring data the carrying capacity of Jackson Mountain Allotment has been determined to be 7808 AUMs. See Appendix 8 for calculation of carrying capacity). The land use plan established the

starting point for monitoring within Jackson Mountain for livestock and wild horses. The available forage (7808 AUMs) was apportioned between livestock and wild horses in proportion to those land use plan numbers as follows (see Appendix 9 for calculations to apportion available vegetation):

Cattle	6,403 AUMs
Wild horses	<u>1,405 AUMs</u>
Total	7,808 AUMs

1,405 AUMs provides forage for 117 horses yearlong calculated as follow:

$$\frac{1,405 \text{ AUMs}}{12 \text{ months}} = 117 \text{ horses}$$

The reduction in use by cattle and wild horses is expected to allow utilization objectives to be met on upland habitat. In addition, the utilization objectives for wetland riparian habitat is expected to be met on a larger area than is occurring under present management. However, even with reduced use objective levels are expected to be exceeded on some wetland riparian areas. To insure improvement and maintenance of those areas in good condition, exclosures are to be constructed.

Short term utilization objectives are designed to ensure progress toward meeting long term objectives. Achievement of the short term objectives will:

Provide adequate stubble height by the beginning of the spring runoff period to disperse flood water, filter sediment, maximize bank water storage and dry season flows, and provide for sage grouse cover and maintenance of plant vigor, and promote successful recruitment of suckers and saplings in the community in streambank riparian habitat.

Ensure adequate stubble height during the grazing season for sage grouse cover, and after the grazing season maximize plant vigor and minimize headcutting and erosion on wetland riparian habitat.

Promote successful reproduction and recruitment, promote plant vigor and provide watershed protection on upland habitat.

## D. Wildlife Management

## 1. Management

- a. Continue with the management of wildlife as outlined in the Land Use Plan.
- b. Manage those creek identified in the final U.S. Fish and Wildlife Service Lahontan Cutthroat Trout Recovery Plan for the introduction of Lahontan cutthroat trout.

## 2. Rationale

Analysis of monitoring data indicates that mule deer use has contributed to failure to meet short term objectives on portions of the Jackson Mountain Allotment. However, data also shows that a decline deer numbers has been occurring and therefore no artificial reduction in mule deer numbers is recommended at this time. There is no indication that pronghorn antelope or bighorn sheep are contributing to failure to meet allotment objectives. Therefore, a change in the existing wildlife populations or the existing wildlife management of the Jackson Mountains Allotment is not warranted. Reasonable numbers for wildlife will remain as follows:

<u>Mule Deer</u>	<u>Pronghorn Antelope</u>	<u>Bighorn Sheep</u>
378 AUMs	60 AUMs	275 AUMs

Mary Sloan Creek, Jackson Creek and Trout Creek have been identified by the Winnemucca District of the Bureau of Land Management as potential Lahontan cutthroat trout habitat. The draft U.S. Fish and Wildlife Service Lahontan Cutthroat Trout Recovery Plan lists Mary Sloan Creek and Jackson Creek as potential LCT recovery stream.

F. Monitoring

The following types of monitoring data are needed to make a determination of attainment of allotment objectives.

1. Utilization
2. Actual Use
3. Climate
4. Wildlife Habitat Inventory
5. Trend
6. Ecological Status Inventory
7. Stream Survey
8. Water Quality
9. Census and Migration of Wild Horses

G. Objectives

The following are the multiple use management objectives under which management of the Jackson Mountain Allotment will be monitored and evaluated.

Short Term Objectives

1. The objective for utilization of key species (POA, JUNCUS, CAREX, POLYP2, POPUL, SALIX) on streambank riparian habitat on Trout Creek, Jackson Creek and Mary Sloan Creek is 30% utilization following fall green-up. *at the end of the grazing season.*
2. The objective for utilization of key species (POA, JUNCUS, CAREX, POLYP2, DISTI) on wetland riparian habitat is 50% utilization at the end of the grazing season.
3. The objective for utilization of key species (SYMPH, AMELA, CEANO, PURSH, FEID, SIHY, POSE, STTH2, AGSP, ORHY, EULA5, EPHED, ATCO) on upland habitat is 50% at the end of the grazing season.

Long Term Objectives

1. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for big game, with an initial forage demand of 378 AUMs for mule deer, 60 AUMs for pronghorn and 275 AUMs for bighorn sheep.
  - a. Improve to and maintain 102,930 acres in good or excellent mule deer habitat condition.
  - b. Improve to and maintain 26,523 acres in fair to good

- c. Improve to and maintain 48,429 acres in good to excellent bighorn sheep habitat condition.
2. Manage, maintain and improve public rangeland conditions to provide forage on a sustained yield basis for livestock, with an initial stocking level of 8,857 AUMs.
3. Improve range condition from poor to fair on 355,225 acres.
4. Maintain and improve free roaming behavior of wild horses by protecting and enhancing their home ranges.
5. Provide forage for 117 wild horses.
6. Improve or maintain 967 acres of riparian and meadow habitat types in good condition with maximum species diversity, reproduction and recruitment for maintenance of herbaceous and woody riparian species.
7. Improve or maintain 65 acres of aspen stands in good condition by allowing reproduction and recruitment within the stand and maximizing understory diversity.
8. Improve or maintain 447 acres of mahogany stands in good condition by allowing successful reproduction and recruitment in the stand.
9. Improve or maintain 1 acre of ceanothus in good condition by allowing for successful reproduction and recruitment in the stand.
10. Improve or maintain bitterbrush, snowberry and serviceberry by maximizing reproduction in the community.
11. Protect sage grouse strutting grounds and brooding areas. Maintain a minimum of 30% canopy cover of sagebrush for nesting and winter use.
12. Improve to or maintain the following stream habitat conditions from 67% on Mary Sloan Creek, 58% on Trout Creek and 58% on Jackson Creek to an overall optimum of 60% or above.
  - a) Streambank cover to 60% or above.
  - b) Streambank stability 60% or above.

13. Improve to and maintain the water quality of Jackson, Trout, and Mary Sloan Creeks to the state criteria set for the following beneficial uses: stockwater, cold water aquatic life, water contact recreation and wildlife propagation.

H. Future Monitoring

The Paradise-Denio Resource Area will continue to monitor all existing studies and establish additional studies as identified in Section VIII-F of this allotment evaluation. This monitoring data will continue to be collected in the future to provide the necessary information for subsequent evaluation. These re-evaluations are necessary to determine if the allotment specific objectives are being met under the selected management strategies.

I. NEPA Compliance

The selected management action for grazing in the Jackson Mountain Allotment conforms with the environmental analysis of grazing impacts described in the Final Paradise-Denio Environmental Impact Statement dated September 18, 1981.

The EIS and NEPA Compliance Record are on file in the Winnemucca District Office, located at 705 East Fourth St., Winnemucca, Nevada 89445.

Literature Cited

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- Nevada Department of Wildlife. 1989. Jackson Creek stream survey. NDOW, Humboldt County, Nevada.
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- Nevada Department of Wildlife. 1991. Mary Sloan Creek stream survey. NDOW, Humboldt County, Nevada.

## Appendix 1

## NEVADA STATE STANDARDS FOR WATER QUALITY

Constituents	Stock Water	Aquatic Life Propagation (cold)	Water Contact Recreation	Wildlife Propagation
Temperature °C	X	Site Specific	15-34 °C	X
pH	5.0-9.0	6.5-9.0	6.5-8.3	7.0-9.2
Dissolved Oxygen	Aerobic	>5.0 mg/l	Aerobic	Aerobic
Chlorides	<1500 mg/l	X	X	<1500 mg/l
Total Phosphate	X	Site Specific	Site Specific	X
Nitrates (as N)	<100 mg/l	Y	X	<100 mg/l
Nitrites (as N)	<10 mg/l	<0.06 mg/l	X	<10 mg/l
Total Nitrogen (as N)	X	Site Specific	X	X
Un-ionized Ammonia (as NH <sub>3</sub> )	X	<0.02 mg/l	X	X
Total Dissolved Solids (TDS)	<3000 mg/l	X	X	X
Turbidity	X	<10 NTU	X	X
Fecal Coliform (Geometric Mean)	<1000/100ml	X	<200-400/100ml	<1000/100ml
Alkalinity (CaCO <sub>3</sub> )	X	<25% change from natural conditions	X	30-130mg/l
Suspended Solids	X	<25-80mg/l	X	X

X--indicates that a specific standard has not yet been established.

Y--indicates that no standard need be established.

Site Specific--indicates that the activity or the aquatic species will dictate the standard.

NTU--an abbreviation for Nephelometric Turbidity Units, an accepted means of measuring turbidity.

Aerobic--indicates that detectable amounts of oxygen must exist within the water.

Geometric mean-- defined as the mean of "n" positive numbers obtained by taking the "nth" root of the product of the numbers.

The standard presented for Fecal Coliform, as it applies to Water Contact Recreation, is based on a minimum of 5 samples taken over a 30 day period. The level of Fecal Coliform colonies present must not exceed a log mean of 200 per 100 milliliters. Additionally, no more than 10% of the individual samples may exceed 400 colonies per 100 milliliters.

Source: Chapter 445 of the Nevada Administrative Codes (Nevada Department of Environmental Protection)



Appendix 2 - Water Chemistry for Jackson, Trout and Mary Sloan Creeks

JACKSON CREEK 1989

<u>Station</u>	<u>pH</u>	<u>Alkalinity (mg/l)</u>	<u>Conductivity * (UMHOS)</u>	<u>Sulphate (mg/l)</u>
100	8.0	222.3	620	72.0
243	8.5	222.3	550	55.0
378	8.5	222.3	500	<50.0
645	8.0	171.0	350	<50.0
792	7.0	85.5	N/A	<50.0

TROUT CREEK 1990

<u>Station</u>	<u>pH</u>	<u>Alkalinity (mg/l)</u>	<u>Conductivity * (UMHOS)</u>	<u>Sulphate (mg/l)</u>
788	8.0	205.2	350	<50.0
996	8.0	171.0	275	<50.0
001**	7.5	153.9	225	<50.0

MARY SLOAN CREEK 1991

<u>Station</u>	<u>pH</u>	<u>Alkalinity (mg/l)</u>	<u>Conductivity * (UMHOS)</u>	<u>Sulphate (mg/l)</u>
190	8.0	273.6	500	<50.0
250	8.0	188.1	400	<50.0

\* Conductivity is the measure of water's ability to conduct an electrical current. Although it is not a direct measure of total dissolved solids, it is a good indicator of the concentration of ions held in solution. Actual total dissolved solids values can be determined from electrical conductivity if a conversion factor has been determined. This conversion factor normally ranges from 0.5 to 0.75 (dimensionless).

\*\* Tributary 930

Appendix 3 - Water Quality Data for Jackson Creek

CONSTITUENTS	11/76	5/14/79	7/18/79	9/12/79	5/19/82	7/14/82	9/09/82	5/17/83	6/12/84	8/21/84	5/07/85	7/23/85	10/24/89
	pH	8.2	8.45	8.4	8.3	8.0	7.5	7.9	7.9	---	---	---	---
TURBIDITY (JTU's)	0.7	0.0	0.9	1.8	3.7	14.0	13.6	11*	13*	2.0*	16*	3.7*	---
TOTAL DISSOLVED SOLIDS (mg/l)	225	228	200	170	204	201	169	---	---	---	---	---	---
NITRATE (mg/l)	1.1	1.05	1.8	1.1	1.6	1.2	1.1	ND	1.25	---	.70	.30	---
ORTHO-PHOSPHATE (mg/l)	.001	.04	ND	.05	ND	ND	ND	---	---	---	---	---	---
TOTAL PHOSPHATE (mg/l)	---	---	---	---	---	---	---	.30	.14	.12	.10	ND	---
CHLORIDES (mg/l)	11	165	238	158	9.6	7.1	10	18	47	---	34	65	---
ARSENIC (mg/l)	<.001	ND	.031	.002	ND	.12	.04	.003	---	---	---	---	---
CALCIUM (mg/l)	48	26	21	28.7	53	34	32	---	---	---	---	---	---
COPPER (mg/l)	1.05	ND	ND	ND	ND	ND	ND	---	---	---	---	---	---
IRON (mg/l)	.02	.70	.49	ND	ND	.41	.17	---	---	---	---	---	---
MANGANESE (mg/l)	<.02	.06	.06	ND	ND	ND	ND	---	---	---	---	---	---
POTASSIUM (mg/l)	1	2.4	1.2	1.4	.89	1	1	---	---	---	---	---	---
SODIUM (mg/l)	18	16	15	15	15	14	13	---	---	---	---	---	---
ZINC (mg/l)	<.01	.10	ND	ND	.006	.005	.012	---	---	---	---	---	---
TOTAL COLIFORM (#/100ml)	262	9	0	10	20	600	---	1800	6838	1578	---	TNTC	---
FECAL COLIFORM (#/100ml)	0	0	0	0	<10	<10	---	---	90	38	---	---	---
SULFATE (mg/l)	12	19	11	15	10	14	12	---	---	---	---	---	50
BICARBONATE (mg/l)	17	114	81	119	150	125	119	---	---	---	---	---	---
CARBONATE (mg/l)	0	16	30	0	0	0	0	---	---	---	---	---	---
TEMPERATURE (°C)	7	12	12	9	6	12	12	---	---	14.4	10	17.7	6.1
MERCURY (mg/l)	---	ND	.0003	ND	ND	ND	ND	---	---	---	---	---	---
MAGNESIUM (mg/l)	---	---	---	---	7.9	5.6	6.4	---	---	---	---	---	---

ND-indicates that no detectable levels were present.

TNTC-Too Numerous To Count

--- indicates that the test was not performed due to lab or sampling error.

Appendix 4 - Determination of Wild Horse Population Increase Following  
the Gather in Winter 1988-89.

Calculations assume (1) an average weighted survival rate of 89.3% for the herd, based on results from the 1992 Black Rock East HMA gather, and (2) a foal crop of 20.4%, which is the average of the percent foals in the censuses of 1986, 1988 and 1989. The figure from the 1993 census (13.8%, 38/275) was not used in the average because of difficulty in distinguishing young-of-the-year (1992) from adults in many cases; therefore the figure is likely to be low.

Fall 1989

188 adults

55 colts

243 x .893 = 217 survived to spring 1990.

Spring 1990

217 adults x .204 = 44 colts born.

Fall 1990

217 adults

44 colts

261 x .893 = 233 survived to spring 1991.

Spring 1991

233 adults x .204 = 48 colts born.

Fall 1991

233 adults

48 colts

281 x .893 = 251 survived to spring 1992.

Spring 1992

251 x .204 = 51 colts born.

Fall 1992

251 adults

51 colts

302 x .893 = 270 survive to spring 1993.

The census in January 1993 counted 275 horses in the Jackson Mountains allotment.

Rate of increase:

Spring 89 to spring 90: 188-217 = 15.4%





Spring 90 to spring 91: 217-233 = 7.3%

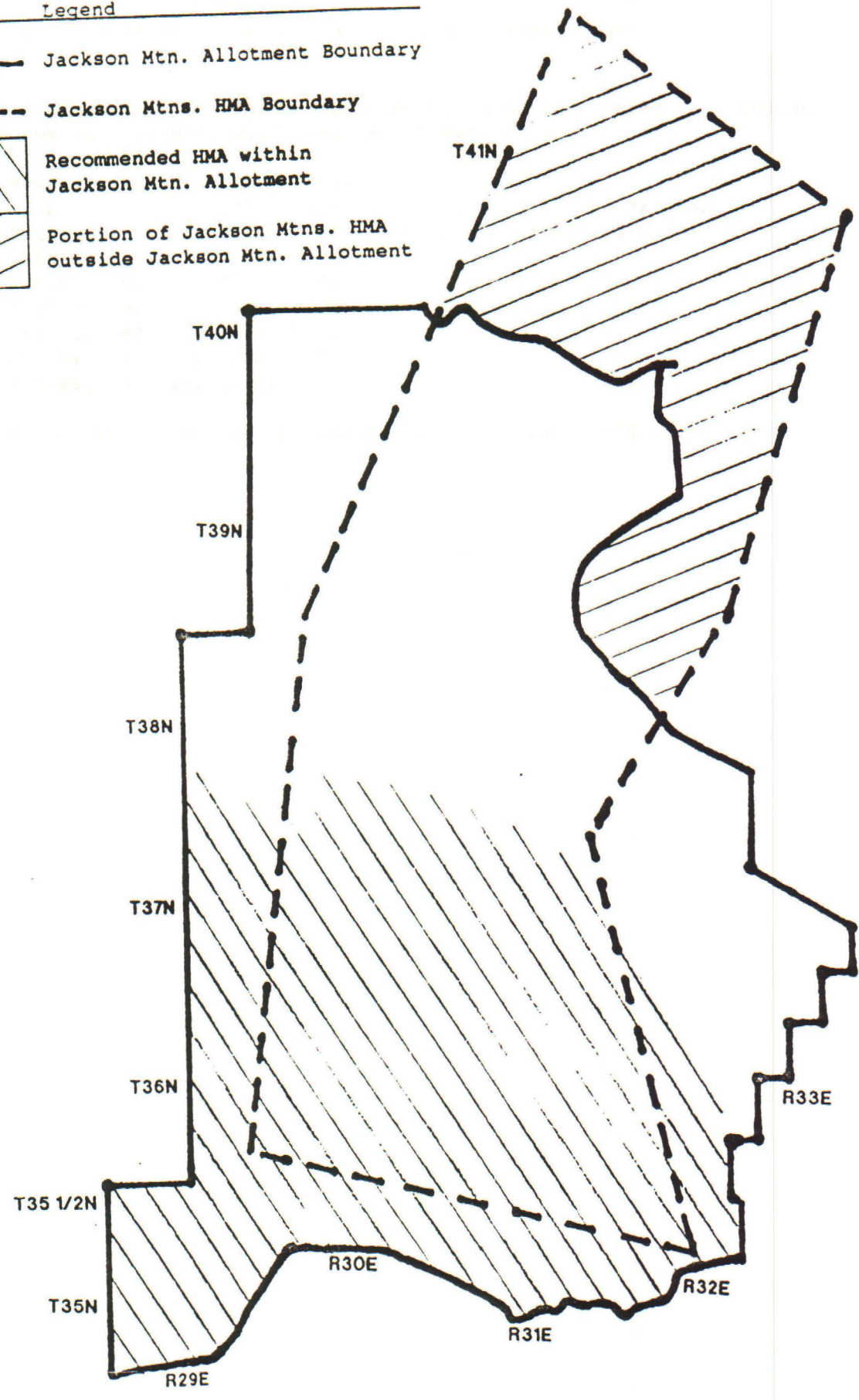
Spring 91 to spring 92: 233-251 = 7.7%

Spring 92 to spring 93: 251-270 = 7.6%

Spring 89 to spring 93: 188-270 = 9.5%

Apparently there was a high birth rate following the gather, then it settled down. Drought conditions may have contributed to the lower rates.

- Legend**
-  Jackson Mtn. Allotment Boundary
  -  Jackson Mtns. HMA Boundary
  -  Recommended HMA within Jackson Mtn. Allotment
  -  Portion of Jackson Mtns. HMA outside Jackson Mtn. Allotment



Appendix 6 - Potential Spring and Meadow Exclosure Sites

Under Alternative 2 the following sites would be considered for constuction of exclosures to eliminate wild horse and livestock use:

NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Sec. 36, T40N, R31E	} Identified in the Jackson Mtns. HMP approved 01/06/79
SE $\frac{1}{4}$ SW $\frac{1}{4}$ , Sec. 7, T39N, R32E	
SE $\frac{1}{4}$ NE $\frac{1}{4}$ , Sec. 6, T39N, R32E	
SE $\frac{1}{4}$ NW $\frac{1}{4}$ , Sec. 8, T39N, R32E	
NW $\frac{1}{4}$ SW $\frac{1}{4}$ , Sec. 13, T37N, R30E	
NE $\frac{1}{4}$ NE $\frac{1}{4}$ , Sec. 9, T38N, R30E	
NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Sec. 2, T37N, R30E	
SW $\frac{1}{4}$ NE $\frac{1}{4}$ , Sec. 5, T38N, R31E	
NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Sec. 28, T39N, R31E	

Sites to be considered are not restricted to these listed above.

Appendix 7 - Data Provided by Intermountain Range Consultants

JACKSON MOUNTAIN  
UTILIZATION AND TREND DATA FOR 1986-93 \*\*

JUNGO #1	1986	1987	1988	1989	1990	1991	1993
UTILIZATION:							
EULA	0%	13%	0%	2%	2%	1%	1-20%
TREND:							
EULA	18.5	20.5	20.5	21.0	21.0	22.5	23.5
TROUT/LOUSE	1986	1987	1988	1989	1990	1991	1993
UTILIZATION:							
SIHY	69%	66%	49%	NA	62%	NA	10%
TREND:							
SIHY	40.0	46.5	48.0	NA	42.0	53.5	19.0
TROUT/JACKSON	1986	1987	1988	1989	1990	1991	1993
UTILIZATION:							
AGSP	10%	17%	20%	39%	27%	NA	4%
STTH	51%	30%	45%	50%	33%	13%	16%
ELCI	50%	16%	44%	30%	16%	NA	10%
TREND:							
AGSP	2.0	4.5	1.5	1.5	4.0	1.5	2.5
STTH	16.0	15.0	17.0	17.0	20.0	25.0	26.0
ELCI	2.5	2.5	3.0	3.0	3.0	3.0	11.0
JUNGO #2	1986	1987	1988	1989	1990	1991	1993
UTILIZATION:							
EULA	NA	NA	0%	0%	0%	5%	1-20%
UTTS SPRINGS	1986	1987	1988	1989	1990	1991	1993
UTILIZATION:							
ORHY	0%	0%	0%	0%	4%	42%	10%

JACKSON MOUNTAIN  
UTILIZATION AND TREND DATA  
1986-1993 \*\* CONTINUED

The Following Sites are Monitored on an occasional basis, to verify Utilization Patterns and Document Measured Utilization.

UPPER LOUSE CREEK	1986	1987	1988	1989	1990	1991	1992	1993
UTILIZATION: SIHY	0%	NA	14%	NA	NA	NA	NA	NA
MIDDLE LOUSE CREEK	1986	1987	1988	1989	1990	1991	1992	1993
UTILIZATION: SIHY	34%	NA	42%	NA	NA	NA	NA	NA
ELCI	40%	NA	NA	NA	NA	NA	NA	NA
STTH	43%	NA	NA	NA	NA	NA	NA	NA
MINE ROAD	1986	1987	1988	1989	1990	1991	1992	1993
UTILIZATION: ELCI	NA	NA	28%	NA	12%	NA	8%	8%
STTH	NA	NA	29%	NA	18%	NA	22%	22%
AGSP	NA	NA	0%	NA	7%	NA	5%	5%

\*\* Monitoring was not conducted on the Jackson Mountain allotment in 1992.

## Appendix 8- Calculation of Carrying Capacity

Carrying capacity for wild horses plus cattle on the Jackson Mountain Allotment was calculated based upon actual use data and upon utilization data gathered during use pattern mapping in 1988 and 1992. Limited observations of utilization were made in 1991 which did not include use pattern mapping. Because data was limited in 1991, it was not used to calculate carrying capacity.

1988:

Use pattern mapping in 1988 shows that upland utilization objectives were met at a stocking rate of 8624 AUMs. This stocking rate is the amount of forage consumed (actual use) by cattle and wild horses at the time use pattern mapping was conducted. Provided management is implemented to insure riparian utilization objectives are met, 1988 data indicates short term objectives would be met at a stocking rate of 8624 AUMs. Management actions to insure riparian objectives are met include elimination of grazing from the Jackson-Mary Sloan Use Area after 07/15 and reduce numbers of cattle in this area; elimination of grazing in the upper Big Cedar Creek area after 07/15; and fencing to protect selected riparian areas.

1992:

Actual use by cattle and wild horses at the time use pattern mapping was conducted was 7646 AUMs. Use pattern mapping conducted in 1992 shows areas of heavy use of upland species in the southwest and south-central portion of the allotment. Actual use by cattle and wild horses on that portion of the allotment was 2290 AUMs. Actual use by cattle and horses on the remainder of the allotment was 5356 AUMs. Calculation of the stocking level at which utilization objectives are expected to be met (desired stocking level) on the southwest and south-central portion follows:

$$\frac{\text{Actual Use}}{\text{Actual Utilization}} = \frac{\text{Desired Stocking Level}}{\text{Desired Utilization}}$$

Therefore:

$$\frac{2290 \text{ AUMs}}{70\%} = \frac{\text{Desired Stocking Level}}{50\%}$$

$$\text{Desired Stocking Level} = 1636 \text{ AUMs}$$



Provided management as described above is implemented to insure riparian utilization objectives are met, 1992 data indicates short term objectives would be met at the following stocking rate:

1636 AUMs southwest and south-central portion  
+ 5356 AUMs remainder of allotment  
6992 AUMs total allotment

The carrying capacity of the allotment is calculated as an average of those two years data as follows:

8624 AUMs + 6992 AUMs = 7808 AUMs  
2 years

Appendix 9- Calculations to Apportion Available Forage

The starting point for monitoring within Jackson Mountain Allotment was established by the land use plan as 8,857 AUMs for livestock and 1,920 AUMs (160 head yearlong) for wild horses. The starting point proportions follow:

$$\text{Livestock-} \quad \frac{8,857 \text{ AUMs}}{8,857 \text{ AUMs} + 1,920 \text{ AUMs}} \times 100 = 82\%$$

$$\text{Wild Horses-} \quad \frac{1,920 \text{ AUMs}}{8,857 \text{ AUMs} + 1,920 \text{ AUMs}} \times 100 = 18\%$$

The carrying capacity for Jackson Mountain Allotment has been determined to be 7808 AUMs (see Appendix 1). Apportionment of the 7808 AUMs forage available to wild horses and livestock based upon the above proportions results in the following:

$$\text{Livestock-} \quad 7808 \text{ AUMs} \times 0.82 = 6403 \text{ AUMs}$$

$$\text{Wild Horses-} \quad 7808 \text{ AUMs} \times 0.18 = 1405 \text{ AUMs}$$