SECTION 1

1. Report on Actions Leading to Appeal and Answers to Allegations in Appeals NV-055-94-01, 02, & 03 of the Meadow Valley Mountain Herd Management Area Emergency Removal Plan and Environmental Assessment Finding of No Significant Impact and Record of Decision No. NV-055-93-31.

2. Appeal of Area Managers Final Decision and District Managers Final Decision Submitted by Wild Horse Organized Assistance

3. Appeal of Area Managers Final Decision and District Managers Final Decision Submitted by the Commission for the Preservation of Wild Horses

4. Appeal of Area Managers Final Decision and District Managers Final Decision Submitted by the Humane Society of the United States

5. Notice of Final Decision Full Force and Effect for the Meadow Valley Mountain Wild Horse Emergency Removal and Memorandum from Nevada State Director Authorizing the Emergency Removal

6. Meadow Valley Mountain Herd Management Wild Horse Emergency Removal Plan and Environmental Assessment No. NV-055-93-31

V-050-94-01, 02, 03

Form 1850-2
(December 1979)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

GRAZING APPEAL TRANSMITTAL

TO:

State Director: Nevada (NV-910)

The appeal identified herein has been filed and is forwarded to you, together with copies of the pertinent District Office records, for action and transmittal to an Administrative Law Judge in accordance with 43 CFR 4.470.

1. Name(s) of appellant(s)

A. Wild Horse Organized Assistance
P.O. Box 555
Reno, NV 89504

B. Commission for the Preservation of Wild Horse
50 Freeport Boulevard #2
Sparks, NV 89431

C. Humane Society Of United States
2100 L St., NW
Washington, DC 20037

2. Appeal was filed *(date)*
A&B Mailed 10/26/93 Received 11/02/93
Mailed 11/23/93 Received 11/29/93
C. Mailed 11/15/93 Received 11/18/93

3. Decision appealed from was served on appellant(s) *(date)*
A. 10/14/93 B. 10/28/93
C. 10/15/93

4a. [XX] I do *not* recommend that a motion to dismiss the appeal be filed

b. [ ] I recommend that motion to dismiss the appeal be filed. I am submitting my recommendations in a separate memorandum to you

5. Recommendations as to approximate time for hearing *(specify week or month)*

a. Preferred time* April 1994

b. Alternative acceptable time July 1994

** If preferred time is more than 90 days hence, give reasons under "Remarks" item 8.*

6. Estimated time *(in days)* hearing will require: 2

7. Approximate number of other range users who may request to intervene: Unknown

8. Remarks *(See item 5 above; also include any other information helpful to the Administrative Law Judge in making his arrangements for the hearing; continue on reverse side, if necessary)*

Las Vegas District

1/20/94
(Date)

(Signature of Authorized Officer)

Copy to: Office of Hearings and Appeals, Salt Lake City, Utah
Director, (220) Washington, D.C.

Forward with this transmittal: (1) related grazing application(s); and (2) Authorized Officer's final decision on application(s) with evidence of service upon the applicant(s).

GPO 853-888

NV-050-94-01,02,03

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
LAS VEGAS DISTRICT OFFICE
4765 Vegas Drive
P.O. Box 26569
Las Vegas, Nevada 89126

In Reply Refer To

4160/4770
(NV-053)

Memorandum

JAN 20 1994

To: State Director, Nevada (NV-910)

From: District Manager, (NV-050)

Subject: Report on Actions Leading to Appeal and Answers to Allegations in Appeals NV-050-94-01, 02, & 03 of the Meadow Valley Mountain Herd Management Area Emergency Removal Plan and Environmental Assessment Finding of No Significant Impact and Record of Decision No. NV-055-93-31

Since the appellants combined the Meadow Valley Mountain Herd Management Area Emergency Removal Plan, and Environmental Assessment Finding of No Significant Impact and Record of Decision No. NV-055-93-31 in their appeals and the allegations in the appeals are the same, I am transmitting appeals NV-050-94-01, 02, and 03 together. Most of the allegations relate to wild horse and burro actions not to the grazing decisions. I have restated the allegations and identified those that are only related to grazing appeals NV-050-94-04, 05, and 06. These appeals are included in a separate appeal transmittal for the Interior Board of Land Appeals.

The appeal transmittal file has a copy of the Meadow Valley Mountain Herd Management Area Emergency Removal Plan, and Environmental Assessment Finding of No Significant Impact and Record of Decision No. NV-055-93-31 and the three appeals. The appeals were received by the Caliente Resource Area office on November 2 and 29, 1993 for the Wild Horse Organized Assistance (appeal #01) and Commission for the Preservation of Wild Horses (appeal #02), and on November 18, 1993 for the Humane Society of the United States (appeal #03).

The issues of the Meadow Valley Mountain Herd Management Area (HMA) Emergency Removal Plan, Record of Decision and Environmental Assessment leading to the appeal are as follows.

1. Greater numbers of wild horses were reduced in the HMA than livestock and carrying capacities were not established.

2. Violations of BLM Policy, Regulations, NEPA, and FLPMA.

3. Wild horse herd viability and long term survival.

4. The environmental assessment did not adequately address all the impacts related to the wild horse herd and its habitat.

Pertinent information to the issues in chronological order are:

The Caliente Resource Area office with assistance from the Las Vegas District staff initiated interdisciplinary evaluations of the Meadow Valley Mountain Herd Management Area (HMA) and associated grazing allotments on May 12, 1993. The primary objectives were to establish the appropriate management level (AML) for wild horses within in the HMA and evaluate the existing livestock management on the allotments.

Prior to the fire, we completed several weeks of intensive monitoring, inventory and data analysis for the HMA and associated grazing allotments. We identified concerns on reliable water sources for wild horses and livestock, severe use and degraded condition of the riparian areas due to horses and livestock, livestock season of use and capacity, and on setting a wild horse AML that would maintain a genetically viable herd. These concerns will be addressed in the multiple use evaluation at a later date.

On July 28, 1993 a wildland fire (Meadow Fire #Y416) started on the northwest boundary of the Henrie Complex Allotment. The fire burned for five days and consumed 21,686 acres within the Henrie Complex, Boulder Springs and Lower Riggs grazing allotments. On August 7, 1993 a second fire (Kane Fire #Y454) started adjacent to the southern edge of the Meadow Fire. The fire burned for three days and consumed 5,500 acres within Henrie Complex and Boulder Springs. The two fires consumed a total of 27,186 acres within the three allotments.

The Meadow Valley Mountain Herd Management Area (HMA) falls within the Henrie Complex Allotment. The Meadow Valley Mountain HMA is approximately 98,775 acres in size. Roughly 21,026 acres were consumed within the Meadow and Kane Fires or approximately 21% of the wild horse habitat within the HMA. The estimated population was from 80 to 150 wild horses within the HMA and an unknown number on unclaimed horses outside the HMA in the Breedlove and Rox-Tule allotments (the Breedlove allotment currently has a horse grazing permit) that use the HMA seasonally. The primary use area is centered around the Hackberry and Vigo Canyons. This area is located outside and south of the burn with no physical barriers to horse movement into the burn.

Before the burn, the primary vegetative community was blackbrush over most of the 21,026 acres consumed by the wildfire.

Livestock and wild horse use was incidental and localized around the ephemeral waters named Avertt Reservoir and 2-Fer Spring during the winter and spring. These waters are located within or close to the burn.

After a burn, herbaceous grass and forb species will grow where there was just blackbrush. This will serve as an attractant to the wild horses and cattle during the growing season. Grazing use after a fire inhibits the establishment of desirable native perennial grass and shrub species and facilitates the spread of introduced annual grasses red brome and cheatgrass.

The District Fire Rehabilitation Plan and Environmental Assessment No. NV-054-9-24 dated February 4, 1992 identifies the management options of closure to livestock grazing and wild horse and burro use for a period of at least two growing seasons after a fire.

Wild horse access to the burn could have been restricted through either a physical barrier, i.e. fencing the boundary of the burn, or physically removing horses from the area. The majority of the burned area within the HMA is contained in the Meadow Valley Wilderness Study Area (WSA), which restricts the fencing option. This option would require many miles of fence at a high cost. Also, permanent fencing within an HMA to restrict herd movement may not be consistent with Public Law 92-195 requiring that management of wild horses and burros be at the minimum feasible level.

The option selected for rehabilitating the burn was removal of grazing animals from the HMA before spring.

We decided that an emergency gather was needed. Since the government wild horse contractor was scheduled to complete the Nellis capture in September, we elected to make effective use of the wild horse capture contractor while he was still in the area. This would save time, expenses, and assure that the animals would be removed prior to spring of 1994.

A fire rehabilitation team was put together for the Meadow and Pass fires on August 11, 1993 to develop a fire rehabilitation plan for the Meadow and Pass Fires.

The Fire Rehabilitation Environmental Assessment and Finding of No Significant Impact (FONSI) No. NV-055-93-29 and Decision Record was signed by the Caliente Area Manager on September 29, 1993.

The Meadow Valley Mountain Emergency Wild Horse Removal Environmental Assessment No. NV-055-93-31 and the Emergency Removal Plan were completed on September 23, 1993. The Nevada State Director approved the emergency removal on September 23, 1993. The FONSI for EA No. NV-055-93-31 was signed by the Caliente Area Manager on September 23 and the Las Vegas District Manager on September 28, 1993.

Due to the emergency nature of the removal, the removal documents were implemented through Full Force and Effect Decision on 09/27/93. The decision was signed in the late afternoon on the 27th and the FONSI in the early am on the 28th.

The emergency gather started using the government wild horse contractor immediately following the Nellis capture on September 29, 1993.

Horse numbers were reduced to 17 by capturing all horses that make use of the Meadow Valley Mountain HMA. By retaining 17 animals (based on professional judgement we had planned to retain 15 but 2 stallions evaded capture and increased the number to 17), grazing pressure on the burn would be minimized and animals with knowledge of local waters and other habitat parameters would still be present.

If vegetative objectives in the burn areas are met, horses would be re-introduced to bring the herd to 50 animals sometime from November 1, 1995 to January 1, 1996. If not, we would maintain the 17 animals and their progeny to assess the viability of the HMA. Population genetic studies by Ian Robert Franklin and William James Berg indicates that a effective minimum population level to lessen the loss of genetic variability in a wild population is about 50 animals. This effort would help establish an AML. While this went unstated to this detail, it was part the documents plans to mitigate the impact on horses.

We completed the removal on October 11, 1993.

On October 5, 1993, the Las Vegas District Manager sent a memo to the Caliente Area Manager directing him to issue the allotment grazing decisions consistent with the Environmental Assessment and district staff recommendations.

On October 7, 1993, the Las Vegas District Manager issued Notices of Closure to the livestock permittees for the burn areas at the request of the Caliente Area Manager.

On October 12, 1993, the Caliente Area Manager sent certified mail copies of the emergency removal plan, record of decision and environmental assessment to the affected interests.

The Caliente Area Manager issued full force and effect grazing decisions on October 15, 1993 to the Henrie Complex allotments' permittees with copies sent certified mail to affected interests. These decisions closed the burn area to grazing but allowed livestock use in the adjacent areas that horses were removed from. The permittees were directed to herd their livestock to keep them off the burn.

Because this was inconsistent with the District Managers direction, discussions began on rescinding and re-issuing the grazing decisions. It was determined unlikely that herding livestock for the first two years on the west side of the allotment would be effective in allowing the burn area the needed rest to naturally re-vegetate. Allowing livestock to remain with no physical barrier preventing access to the burn was inconsistent with the management actions taken for the Meadow Valley Mountain HMA. Closure of the west side of the allotment as a minimum was recommended to help natural re-vegetation.

The Caliente Area Manager received appeals from Wild Horse Organized Assistance and Commission for the Preservation of Wild Horses on November 2 and 29, 1993 and the Humane Society of the United States on November 18th. These appeals are essentially identical in text.

After discussions with the Nevada State Office and pursuant to previous management determinations, the Las Vegas District Manager (DM) met with the Caliente Area Manager (AM) and his staff on November 3rd. The DM followed up with a memorandum dated November 9, 1993 directing the AM to rescind and re-issue the Henrie Complex Allotment decisions closing the west side of the allotment falling within the burn and Meadow Valley Mountain HMA to livestock grazing for a minimum of two years. The east side of the allotment is outside the HMA and separated by a fence from the burn and HMA.

The AM rescinded the October 15th grazing decisions and issued new decisions on November 24, 1993.

Answers to the allegations in the appeals are in the same order as presented in the appeal for the Meadow Valley Mountain HMA Emergency Removal Plan Environmental Assessment Finding of No Significant Impact and Record of Decision No. NV-055-93-31. Responses for the allegations # 1, 2 a, b, and c, 3 a and b, 4, 5 a and b, and 6 related to wild horses and burros are the only ones addressed.

1. "The documents and decisions are arbitrary and biased against wild horses"

   Wild horse access to the burn could have been restricted through either a physical barrier, i.e. fencing the boundary of the burn, or physically removing horses from the area. The majority of the burned area within the HMA is contained in the Meadow Valley Wilderness Study Area (WSA), which restricts the fencing option.

The removal documents reduced horse numbers to 17 by capturing all horses that make use of the Meadow Valley Mountain HMA. By retaining some animals, grazing pressure on the burn would be minimized and animals with knowledge of local waters and other habitat parameters would still be present. The number of 15 was decided using professional judgement and the additional 2 animals alluded efforts to remove them. The actual number of animals captured was 312. This included 31 claimed as private or estray animals. If vegetative objectives in the burn areas are met, horses would be re-introduced to bring the herd initially to a minimum of 50 animals sometime from November 1, 1995 to January 1, 1996. If not, we would maintain the animals turned out and their progeny to assess the HMA.

The grazing decision issued on October 15, 1993 closed the burn area to livestock in accordance with the EA No. NV-055-93-29 (this EA's FONSI and Decision Record is not being appealed) and required the permittees to control access through the use of herding. A temporary suspended preference of 98 AUMs for permittee Robert Lewis and 319 AUMs for Kevin Olson for a total of 417 AUMs was determined based upon the percentage of the total allotment acreages burned as compared to the total preference. Since 10% of the allotment acreages burned, 10% of the preference was placed in suspended use.

Prior to receiving an appeal, it was determined unlikely that herding livestock for the first two years on the west side of the allotment would be effective in allowing the burn area the needed rest to naturally re-vegetate. Allowing livestock to remain with no physical barrier preventing access to the burn was inconsistent with the management actions taken for the Meadow Valley Mountain HMA. Closure of the west side of the allotment as a minimum was recommended to help natural re-vegetation.

After discussions with the Nevada State Office and pursuant to previous management determinations, the Las Vegas District Manager (DM) directed the AM on November 3, 1993 to rescind and re-issue the Henrie Complex Allotment decisions closing the west side of the allotment falling within the burn and Meadow Valley Mountain HMA to livestock grazing for a minimum of two years.

On 11/24/93, the Caliente Resource Area Manager rescinded the October 15, 1993 decisions and issued new ones. The new Terms and Conditions placed the permittees' permits required: 1) the specific Terms and Conditions would remain in effect for a minimum of two (2) years and continuing until monitoring indicates resource objectives for the burn area have been attained, 2) 2210 AUMs of active preference (the total AUMs carrying capacity attached to the west side of the Henrie Complex) shall be held in temporary suspended preference for the duration of the closure period, 3) livestock use will only

be authorized to the east of the Union Pacific Railroad in the Henrie Complex allotment, and 4) the railroad right-of-way fence shall be repaired and maintained prior to 01/01/94 before authorized use can be made or the entire Henrie Complex allotment will be closed to livestock grazing.

In summary, the October 15th grazing decision closed the burn area and cattle were required to be herded to keep them off. If they entered the burn, the entire allotment would be closed to grazing. The new decision dated November 24, 1993, closed the entire west side of the allotment falling within the burn and in the subject HMA. The first grazing decision's herding stipulation made it less consistent with the horse removal decision and it was deemed unlikely to meet the resource objectives. The new grazing decision is consistent with the wild horse and burro removal decision and will maximize the chance of meeting resource objectives by keeping livestock off the burn.

BLM recognized the discrepancy and issued a new decision removing the livestock entirely from the HMA with no physical access to the burn area just as was done to the wild horses. The appellants argument was addressed by the revised decisions.

2. "Violations of BLM Policy, Regulations, NEPA, and FLPMA"

   a. "This decision on wild horses was issued approximately 2 weeks after the gather was done! The document is dated October 12, 1993, and you gathered the horses two weeks prior to that on September 29, 1993!"

The appellant has confused the dates for the decisions and environmental documents with a transmittal letter.

The emergency removal plan and EA No. NV-055-93-31 were approved and signed and dated by the Las Vegas District Manager in the am on September 28, 1993. The removal was implemented with a full force and effect decision dated in the pm on September 27, 1993. The removal was placed in full force and effect to prevent habitat degradation and facilitate rehabilitation of the burn. To do this, it was important to remove animals from the HMA before spring. The emergency removal did not begin until September 29 and was finished on October 11, 1993. We did not know we were going to conduct the removal with certainty until the Nevada State Director approved the action in writing on September 23, 1993.

Due to administrative and clerical circumstances beyond the Area Managers control, the mailing of these documents to the appellant did not occur until 10/12/93. It was the intention of the Caliente BLM office to mail these decisions at the time they were signed. Because of the emergency nature, the decision to remove was placed in full force and effect.

b. ".. you can not justify the removal of the horses from the rest of the HMA without supporting data as well as for horses outside of a HMA without the requirement of issuing a draft and final gather plan!"

The removal the wild horses from within and outside of the Meadow Valley Mountain HMA occurred due to an emergency situation created by the Meadow and Pass Fires. The process and procedures followed were correct and consistent with emergency procedures and policies. The District Fire Rehabilitation Plan and Environmental Assessment No. NV-054-9-24 dated February 4, 1992 identifies the management options of closure to livestock grazing and wild horse and burro use for a period of at least two growing seasons after a fire.

The Meadow and Pass Fire areas were considered for emergency removal due to the lack of physical barriers, i.e. fences, impassable mountain ranges or canyons, etc., to keep the horse herd from concentrating on the flush of green vegetation common in a burn area. There is a perennial water source (Upper Hackberry Spring) within approximately four (4) miles of the burn area as well as two ephemeral water sources (Avertt Reservoir and Hidden Spring) within or adjacent to the burn area.

Concentrated use in burn areas is detrimental to the re-establishment of native perennial vegetation and adverse to the horses habitat and the areas ecology. Emergency measures were required to give the area a 2 year minimum rest from ungulate use to help vegetative rehabilitation.

c. "No EA's were prepared analyzing the impacts of this gather, impacts to the herds and the viability of the herds were not analyzed, policy and procedures were not followed. Your documents were NEPA insufficient."

The Site-Specific Environmental Assessment For Fire Rehabilitation of Two Wildland Fires in Caliente Resource Area (No. NV-055-93-29) under the Las Vegas District Normal Fire Rehabilitation Plan and EA (No. NV-054-9-24) (neither of these EA's were ever or are currently under appeal) and the Environmental Assessment Finding of No Significant Impact and Record of Decision No. NV-055-93-31 (the EA being appealed) focused on the livestock and wild horse grazing impacts to the habitat or ecosystem.

While a detailed discussion of the impacts to the horse herd is not in either EA, EA No. NV-055-93-29 states in part, "An emergency wild horse gather plan was approved to reduce horse numbers to between 15 and 20 animals in the Meadow Valley Mountain Herd Management Area (HMA).....When vegetation has been successfully reestablished in the burned areas of the HMA, wild horses numbers could be adjusted, based on established Appropriate Management Levels (AMLs)."

EA No. NV-055-93-31 states in part, "Approximately 15-20 horses would be released back to the HMA to maintain the gene pool and knowledge of water and forage sources."

Reference response to allegation number 1 for further discussion and in the chronological section on pertinent information to the issues.

GRAZING DECISIONS ONLY:

d. "You violated CFR 4110.3-3(c) in that actions must be taken after consultation with affected permittees or lessees, and other affected interests, either to close allotments to grazing by all or a particular kind of livestock or to modify authorized grazing use."

3. "Wild horse distribution and habitat"

a. "Reduction of the Meadow Valley Mountain wild horse herd did not consider the biological needs of the herd....."

BLM policy for wild horse management within a emergency situation is to remove all horses necessary to protect the horse herd and their habitat.

During development of the fire rehabilitation plan and the emergency removal documents, it was discussed at length whether the wild horses in the area needed to be removed from the HMA. In order to protect the native vegetation that re-establishes in the burn area, the wild horse habitat, and the ecology of the area, the burn area was closed to grazing animals.

The objective of the emergency removal was to manage the habitat for rehabilitation and future use by wild horses. Reference the discussion in 2 c. above for the considerations taken in the fire rehabilitation and emergency removal EAs.

b. "You have arbitrarily set a herd size at 15....."

The emergency removal did not attempt or portend to set a herd size or AML. The discussion in the response to allegation 1 and 2 c. clarify this.

4. "Restructuring of the wild horse herd....were not assessed in the environmental assessment for this gather"

The emergency removal had no objective or goal of restructuring the long term age classes within the Meadow Valley Mountain HMA and therefore did not analyze it in the plan or environmental documents.

The allegation contends that the emergency removal was permanently restructuring the wild horse herd to older age classes through the use of the Strategic Plan for Management of Wild Horses and Burros. BLM policy for wild horse management within a emergency situation is to remove all horses necessary to protect the horse herd and their habitat with priority for removal placed on those horses under the age of ten (10) years.

Though the animals that where retained within the HMA following the gather do exceed the nine (9) year age limit for adoptable animals, the objective was to keep some horses within the HMA that originated there. The adjusted resident animals would be used to facilitate the adaptability of any relocated animals to the HMA in the future (reference response the allegation 1 and 2 c.)

Based on the completion of the on going evaluations and subsequent establishment of AMLs and livestock carrying capacity and season of use, wild horses would be re-located into the HMA. These animals would be collected from other gathers.

5. "No consideration for the social and economic impacts"

a. "The Strategic Plan for the Management of Wild Horses and Burros was finalized without public input stating that input could be provided in documents or actions implementing the plan."

The emergency removal plan is just that. It does not portend to implement the Strategic Plan as would a standard non-emergency removal.

<u>This statement does not relate to the actual content or intent of the documents and decisions under appeal and is immaterial.</u>

b. "...no alternative social or economic avenues were explored."

As an emergency removal, the primary impetus was to take immediate action to protect the burn area. Other alternatives such as fencing were considered in the EA's.

This statement does not clearly and concisely identify why the decisions are in error and is immaterial.

6. "Carrying capacities were not established, the Decision was arbitrary"

It was not the intent of the emergency removal to establish carrying capacities for the HMA. It was not addressed in the plan or EA's because an emergency removal is not the vehicle for setting carrying capacities or AML's. These are established through Multiple Use Decisions following the completion of the allotment and HMA multiple use evaluation.

The appealed livestock grazing decision dated October 15, 1993 and the newer decision dated November 24, 1993 did not set carrying capacities. The decisions were in response to a resource emergency related to a wildland fire and were not intended or designed to set carrying capacities. As with AMLs, these are set through multiple use decisions.

The entire burn area was closed to livestock use in both decisions as was use by all but 17 wild horses. This is the same management action.

Since 10% of the allotment acreages burned, the October 15 decision placed 10% of the allotment grazing preference in suspended preference for a minimum of two years or until resource burn objectives were met. The November 24 decision placed all the preference attached to the west side of the allotment where the burn and HMA are located in suspended preference for the same time period. The east side of the allotment and the associated preference are not suspended because there is a fence separating the east and west parts of the Henrie Complex allotment keeping the livestock off the burn.

Reference responses to allegations 1 and 2c for further discussion.

7. "The gather plan executes a process to eliminate the Meadow Valley Mountain wild horse herd".

The emergency removal plan or EA has no intent, implied or actual, to eliminate the wild horse herd. Reference allegation response 1 and 2 c. for a detailed discussion of intent. This statement is purely conjecture and has no basis in fact.

The emergency gather plan is to provide resource protection to an area that had been significantly impacted by wildfire. The CRA has no intention of eliminating the wild horse herd existing within the Meadow Valley Mountain HMA based on existing data. Steps were taken to retain a limited number of animals in the HMA while the burned area was recovering.

This statement does not relate to the actual content or intent of the documents and decisions under appeal and is immaterial.

GRAZING DECISIONS ONLY:

8. "Grazing decision issued above carrying capacity of the range"

Additional supportive information for each appeal will be transmitted to you at a later date in the appeal case file.

cc: Caliente Resource Area

NV-050-94-01

WHOA
WILD HORSE ORGANIZED ASSISTANCE
P.O. BOX 555
RENO, NEVADA 89504

. . . a note from

Dawn Y. Lappin

RECEIVED FAX
DEC 28, 1993
CALIENTE RESOURCE AREA
BLM

December 28, 1993

Curtis G. Tucker, Area Manager
BLM-Caliente Resource Area
Box 237
Caliente, Nevada 89008

RE: Grazing Decisions for Henrie Complex, Boulder Spring, and Lower Riggs Allotments

Dear Mr. Tucker,

Thank you for the opportunity to review and comment on the new grazing decisions for the Henrie Complex, Boulder Spring, and Lower Riggs Allotments.

On page two of your Full Force and Effect Decision for livestock to Mr. Robert Lewis, you mention your desire to "implement impartial management consistent for both livestock and wild horses within that portion of the Henrie Complex Allotment and Meadow Valley Mountain HMA where the two fires occurred." Obviously your desire to implement impartial management has come too late for the wild horses that have already been eliminated.

We point out that this alternative of constructing fencing to keep livestock out of the burn area was also available as an alternative to keep horses out of the burn area. How convenient for you and the permittees that this option was neglected for consideration until after the gross removal of the entire Meadow Valley Mountain HMA wild horse population excepting for a token 15 animals. We do not understand why this option wasn't considered for the horses. It would appear by your previous decisions and the thorough removal of the horses that the goals, objectives, and main concerns were for maintaining the livestock preference at all costs without any consideration for the viability, management, and preservation of that wild horse population which is the responsibility of the Bureau of Land Management.

Please advise us after January 1, 1994, if the fence was repaired and maintained and if livestock are actually permitted in the area.

Sincerely,

Dawn Y Lappin

DAWN Y. LAPPIN
Director

WILD HORSE ORGANIZED ASSISTANCE
P.O. BOX 555
RENO, NEVADA 89504

NV-050-94-01

. . . a note from

Dawn Y. Lappin

November 23, 1993

Curtis G. Tucker, Area Manager
BLM-Caliente Resource Area
P.O. Box 237
Caliente, Nevada 89008

RE: 1) FORMAL APPEAL OF THE MEADOW VALLEY MOUNTAIN HERD MANAGEMENT EMERGENCY REMOVAL PLAN, RECORD OF DECISION, & EA
2) FORMAL APPEAL OF THE GRAZING DECISION ON THE HENRIE COMPLEX ALLOTMENT

Dear Mr. Tucker,

We are in receipt of your Meadow Valley Mountain Herd Management Wild Horse Emergency Removal Plan, Record of Decision and Environmental Assessment which was provided "for our information." Subsequent to this horse plan we received copies of your Full Force and Effect Grazing Decisions affecting the wild horse herd management area in question. We formally appeal the horse documents and the livestock grazing decision for the Henrie Complex Allotment and Meadow Valley herd area for the following reasons:

The documents and decisions are arbitrary and biased against wild horses.

In the decision on wild horses you are quoting that wild horses must be removed because 21% of their herd area was burned out and in addition at least 50% of the remaining acreage in the HMA is in severe condition. For this reason you have reduced the wild horses from **269** to **15.** However, in your livestock decisions you are only reducing livestock with the criteria that 21% of the allotment is burned, not even considering the 50% severe condition on the remainder of the allotment. You are claiming to have the data to support the horse decision but that does not apply to livestock on the same area. The severity of the conditions of the allotment was serious enough to protect from wild horses but not from livestock that share the same boundaries.

Violations of BLM Policy, Regulations, NEPA, and FLPMA

This decision on wild horses was issued approximately 2 weeks **after** the gather was done! The document is dated October 12, 1993, and you gathered the horses two weeks prior to that on September 29, 1993! You may issue a gather plan full force and effect for

emergency reasons prior to gathering, even with only one days notice, you knew for 2 months that you would be gathering these horses because of the burn. However, you cannot justify the removal of horses for the rest of the HMA without supporting data as well as for horses **outside** of a HMA without the requirement of issuing a draft and final gather plan! No EA's were prepared analyzing the impacts of this gather, impacts to the herds and the viability of the herds were not analyzed, policy and procedures were not followed. Your documents were NEPA insufficient.

You violated CFR 4110-3-3(c) in that actions must be taken after consultation with affected permittees or lessees, and other affected interests, either to close allotments to grazing by all or a particular kind of livestock or to modify authorized grazing use. Your decisions show that you met with the permittees on September 7th and 8th, 1993. Your letter to the affected interests does not request a meeting or any input and was issued after the fact eliminating any input that we are allowed by law. As a result the livestock operators take little or no reduction in use while wild horses take a 95% reduction.

Wild Horse Distribution and Habitat

Reduction of the Meadow Valley wild horse herd did not consider the biological needs of the herd. The EA didn't analyze the jeopardy you have arbitrarily placed on the herd, viability, gene pool, seasonal use, distribution, social needs, and longevity. By reducing the herd from 269 to approximately 15 older horses you have sentenced the Meadow Valley herd into a very probable extinction.

You have made these decisions without considering the seasonal use or distribution of the herd. For example, if winter range in the limiting factor of grazing animals with the herd area, then distribution and population data should have been analyzed to determine the "initial herd". You have arbitrarily set a herd size at 15 without considering percentages of summer or winter ranges necessary for any herd size.

Restructuring of the Wild Horse Herd

The 1993 wild horse gather and future gathers are governed by the Strategic Plan for Management of Wild Horses and Burros on Public Lands. Plan Assumption E. states: "Only adoptable animals will be removed from public lands." This assumption is being implemented in Nevada in gathers to release all horses in excess of their carrying capacities and restructuring the herds to older age classes. These two issues were not assessed in the environmental assessment for this gather.

No consideration for the Social or Economic Impacts

The Strategic Plan for the Management of Wild Horses and Burros was finalized without public input stating that input could

be provided in documents or actions implementing the plan. In this removal plan and associated EA there was not consideration for the social structure, biological diversity, age and sex classification, or the long term impacts to the herds by implementation of this action. In addition no alternative social or economic avenues were explored.

Carrying Capacities were not established, the Decision was Arbitrary

The removal plan did not establish a carrying capacity to justify the initial herd or establish livestock use. Carrying capacity computations must consider all land use plan objectives. Riparian habitat was not considered in the environmental assessment and must be considered.

As an example, the following computation which is equitable to both users should have been applied to determine carrying capacity and appropriate management level:

$$\frac{\text{wild horse and livestock aums}}{\text{percent utilization}} = \frac{\text{carrying capacity}}{\text{55\% desired utilization}}$$

Allocation of the carrying capacity or desired stocking rate could be proportional to the composition of existing animals. Further adjustments in wild horses cold be proportional to percentage of loss in habitat necessary to support the remaining herd. Livestock adjustments would be made to meet a natural ecological balance.

Livestock stocking rates were not established under the same criteria as the removal decision for wild horses. It would appear that the above carrying capacity computation (TR 4400-7 BLM Manual), could be applied based upon existing monitoring data to set a livestock carrying capacity and appropriate management level for wild horses in a multiple use decision.

The gather plan executes a process to eliminate the Meadow Valley wild horse herd.

The removal plan adjusts the existing population from 269 to an arbitrary number of 15 for an interim period. Implentation of the Strategic Plan for the Management of Wild Horses and Burros dictated that only older age class animals in excess of ten years of age. These combined actions reduced the Meadow Valley herd below its biological threshold and has jeopardized the herd in the short and long term.

Grazing decision issued above carrying capacity of the range.

You state supporting data in your horse decision that in addition to the 21% burn you have the remaining wild horse habitat in 50% severe condition. That criteria has not been applied to your livestock grazing decision for the protection of the habitat.

The terms and conditions that you have established with these adjusted grazing decisions are violations of:

1) CFR 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);"

2) 4110.3-2(b) "When monitoring shows use is causing an unacceptable level or pattern or utilization or exceeds the livestock carrying capacity as determined through monitoring, the authorized officer shall reduce active use if necessary to maintain or improve rangeland productivity, unless the authorized officer determines a change in management practices would achieve the management objectives;"

We are filing this appeal with the Solicitor and IBLA. We request that you file this appeal with IBLA as well. If you have any questions, please feel free to call.

Sincerely,

Dawn Y Lappin

DAWN Y. LAPPIN
Director

WHOA
WILD HORSE ORGANIZED ASSISTANCE
P.O. BOX 555
RENO, NEVADA 89504

NV-050-94-01

. . . a note from

Dawn Y. Lappin

RECEIVED
07:30 A.M.

NOV 02 1993

CALIENTE RESOURCE AREA
BUREAU OF
LAND MANAGEMENT

October 26, 1993

Curtis G. Tucker, Area Manager
BLM-Caliente Resource Area
P.O. Box 237
Caliente, Nevada 89008

RE: 1) FORMAL APPEAL OF THE MEADOW VALLEY MOUNTAIN HERD MANAGEMENT EMERGENCY REMOVAL PLAN, RECORD OF DECISION, & EA
2) FORMAL APPEAL OF THE GRAZING DECISION ON THE HENRIE COMPLEX ALLOTMENT

Dear Mr. Tucker,

We are in receipt of your Meadow Valley Mountain Herd Management Wild Horse Emergency Removal Plan, Record of Decision and Environmental Assessment which was provided "for our information." Subsequent to this horse plan we received copies of your Full Force and Effect Grazing Decisions affecting the wild horse herd management area in question. We formally appeal the horse documents and the livestock grazing decision for the Henrie Complex for the following reasons:

The documents and decisions are arbitrary and biased against wild horses.

In the decision on wild horses you are quoting that wild horses must be removed because 21% of their herd area was burned out and in addition at least 50% of the remaining acreage in the HMA is in severe condition. For this reason you have reduced the wild horses from **269** to **15.** However, in your livestock decisions you are only reducing livestock with the criteria that 21% of the allotment is burned, not even considering the 50% severe condition on the remainder of the allotment. You are claiming to have the data to support the horse decision but that does not apply to livestock on the same area. The severity of the conditions of the allotment was serious enough to protect from wild horses but not from livestock that share the same boundaries.

Violations of BLM Policy, Regulations, NEPA, and FLPMA

This decision on wild horses was issued approximately 2 weeks **after** the gather was done! The document is dated October 12, 1993, and you gathered the horses two weeks prior to that on September 29, 1993! You may issue a gather plan full force and effect for

emergency reasons prior to gathering, even with only one days notice, you knew for 2 months that you would be gathering these horses because of the burn. However, you cannot justify the removal of horses for the rest of the HMA without supporting data as well as for horses **outside** of a HMA without the requirement of issuing a draft and final gather plan! No EA's were prepared analyzing the impacts of this gather, impacts to the herds and the viability of the herds were not analyzed, policy and procedures were not followed.

Grazing decision issued above carrying capacity of the range.
You state supporting data in your horse decision that in addition to the 21% burn you have the remaining allotment in 50% severe condition. That criteria has not been applied to your livestock grazing decision for the protection of the habitat.

The terms and conditions that you have established with these adjusted grazing decisions are violations of:

1) CFR 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);"

2) 4110.3-2(b) "When monitoring shows use is causing an unacceptable level or pattern or utilization or exceeds the livestock carrying capacity as determined through monitoring, the authorized officer shall reduce active use if necessary to maintain or improve rangeland productivity, unless the authorized officer determines a change in management practices would achieve the management objectives;"

Within the next 30 days we will be supplying these and possibly other arguments to the Solicitor and IBLA. We request that you file this appeal with IBLA as well. If you have any questions, please feel free to call.

Sincerely,

Dawn Y Lappin

DAWN Y. LAPPIN
Director

BOB MILLER
Governor

STATE OF NEVADA

CARLETON A. HARRIS
Executive Director

NV-050-94-02

COMMISSION FOR THE PRESERVATION OF WILD HORSES
50 Freeport Boulevard, No. 2
Sparks, Nevada 89431
(702) 359-8768

December 28, 1993

Curtis G. Tucker, Area Manager
BLM-Caliente Resource Area
Box 237
Caliente, Nevada 89008

RE: Grazing Decisions for Henrie Complex, Boulder Spring, and Lower Riggs Allotments

Dear Mr. Tucker,

Thank you for the opportunity to review and comment on the new grazing decisions for the Henrie Complex, Boulder Spring, and Lower Riggs Allotments.

On page two of your Full Force and Effect Decision for livestock to Mr. Robert Lewis, you mention your desire to "implement impartial management consistent for both livestock and wild horses within that portion of the Henrie Complex Allotment and Meadow Valley Mountain HMA where the two fires occurred." Obviously your desire to implement impartial management has come too late for the wild horses that have already been eliminated.

We point out that this alternative of constructing fencing to keep livestock out of the burn area was also available as an alternative to keep horses out of the burn area. How convenient that this option was neglected for consideration until after the gross removal of the entire Meadow Valley Mountain HMA wild horse population excepting for a token 15 animals. We do not understand why this option wasn't considered prior to the removal of the horses. It would appear by your previous decisions and the thorough removal of the horses that the goals, objectives, and main concerns were for maintaining the livestock preference at all costs without any consideration for the viability, management, and preservation of that wild horse population which is the responsibility of the Bureau of Land Management.

Please advise us after January 1, 1994, if the fence was repaired and maintained and if livestock are actually permitted in the area.

Sincerely,

Catherine Barcomb

CATHERINE BARCOMB
Executive Director

NV-050-94-02

BOB MILLER
Governor

STATE OF NEVADA

CATHERINE BARCOMB
Executive Director

COMMISSIONERS

Paula S. Askew, *Chairperson*
Carson City, Nevada

Steven Fulstone, *Vice Chairman*
Smith Valley, Nevada

Michael Jackson
Las Vegas, Nevada

Dan Keiserman
Las Vegas, Nevada

Dawn Lappin
Reno, Nevada

COMMISSION FOR THE PRESERVATION OF WILD HORSES

50 Freeport Boulevard, No. 2
Sparks, Nevada 89431
(702) 359-8768

RECEIVED
NOV 29 1993
CALIENTE RESOURCE AREA
BLM-CALIENTE

November 23, 1993

Curtis G. Tucker, Area Manager
BLM-Caliente Resource Area
P.O. Box 237
Caliente, Nevada 89008

RE: 1) FORMAL APPEAL OF THE MEADOW VALLEY MOUNTAIN HERD MANAGEMENT EMERGENCY REMOVAL PLAN, RECORD OF DECISION, & EA
2) FORMAL APPEAL OF THE GRAZING DECISION ON THE HENRIE COMPLEX ALLOTMENT

Dear Mr. Tucker,

We are in receipt of your Meadow Valley Mountain Herd Management Wild Horse Emergency Removal Plan, Record of Decision and Environmental Assessment which was provided "for our information." Subsequent to this horse plan we received copies of your Full Force and Effect Grazing Decisions affecting the wild horse herd management area in question. We formally appeal the horse documents and the livestock grazing decision for the Henrie Complex Allotment and Meadow Valley herd area for the following reasons:

The documents and decisions are arbitrary and biased against wild horses.

In the decision on wild horses you are quoting that wild horses must be removed because 21% of their herd area was burned out and in addition at least 50% of the remaining acreage in the HMA is in severe condition. For this reason you have reduced the wild horses from **269** to **15.** However, in your livestock decisions you are only reducing livestock with the criteria that 21% of the allotment is burned, not even considering the 50% severe condition on the remainder of the allotment. You are claiming to have the data to support the horse decision but that does not apply to livestock on the same area. The severity of the conditions of the allotment was serious enough to protect from wild horses but not from livestock that share the same boundaries.

Violations of BLM Policy, Regulations, NEPA, and FLPMA

This decision on wild horses was issued approximately 2 weeks **after** the gather was done! The document is dated October 12, 1993, and you gathered the horses two weeks prior to that on September 29, 1993! You may issue a gather plan full force and effect for

emergency reasons prior to gathering, even with only one days notice, you knew for 2 months that you would be gathering these horses because of the burn. However, you cannot justify the removal of horses for the rest of the HMA without supporting data as well as for horses **outside** of a HMA without the requirement of issuing a draft and final gather plan! No EA's were prepared analyzing the impacts of this gather, impacts to the herds and the viability of the herds were not analyzed, policy and procedures were not followed. Your documents were NEPA insufficient.

You violated CFR 4110-3-3(c) in that actions must be taken after consultation with affected permittees or lessees, and other affected interests, either to close allotments to grazing by all or a particular kind of livestock or to modify authorized grazing use. Your decisions show that you met with the permittees on September 7th and 8th, 1993. Your letter to the affected interests does not request a meeting or any input and was issued after the fact eliminating any input that we are allowed by law. As a result the livestock operators take little or no reduction in use while wild horses take a 95% reduction.

Wild Horse Distribution and Habitat

Reduction of the Meadow Valley wild horse herd did not consider the biological needs of the herd. The EA didn't analyze the jeopardy you have arbitrarily placed on the herd, viability, gene pool, seasonal use, distribution, social needs, and longevity. By reducing the herd from 269 to approximately 15 older horses you have sentenced the Meadow Valley herd into a very probable extinction.

You have made these decisions without considering the seasonal use or distribution of the herd. For example, if winter range in the limiting factor of grazing animals with the herd area, then distribution and population data should have been analyzed to determine the "initial herd". You have arbitrarily set a herd size at 15 without considering percentages of summer or winter ranges necessary for any herd size.

Restructuring of the Wild Horse Herd

The 1993 wild horse gather and future gathers are governed by the Strategic Plan for Management of Wild Horses and Burros on Public Lands. Plan Assumption E. states: "Only adoptable animals will be removed from public lands." This assumption is being implemented in Nevada in gathers to release all horses in excess of their carrying capacities and restructuring the herds to older age classes. These two issues were not assessed in the environmental assessment for this gather.

No consideration for the Social or Economic Impacts

The Strategic Plan for the Management of Wild Horses and Burros was finalized without public input stating that input could

be provided in documents or actions implementing the plan. In this removal plan and associated EA there was not consideration for the social structure, biological diversity, age and sex classification, or the long term impacts to the herds by implementation of this action. In addition no alternative social or economic avenues were explored.

Carrying Capacities were not established, the Decision was Arbitrary

The removal plan did not establish a carrying capacity to justify the initial herd or establish livestock use. Carrying capacity computations must consider all land use plan objectives. Riparian habitat was not considered in the environmental assessment and must be considered.

As an example, the following computation which is equitable to both users should have been applied to determine carrying capacity and appropriate management level:

$$\frac{\text{wild horse and livestock aums}}{\text{percent utilization}} = \frac{\text{carrying capacity}}{\text{55\% desired utilization}}$$

Allocation of the carrying capacity or desired stocking rate could be proportional to the composition of existing animals. Further adjustments in wild horses cold be proportional to percentage of loss in habitat necessary to support the remaining herd. Livestock adjustments would be made to meet a natural ecological balance.

Livestock stocking rates were not established under the same criteria as the removal decision for wild horses. It would appear that the above carrying capacity computation (TR 4400-7 BLM Manual), could be applied based upon existing monitoring data to set a livestock carrying capacity and appropriate management level for wild horses in a multiple use decision.

The gather plan executes a process to eliminate the Meadow Valley wild horse herd.

The removal plan adjusts the existing population from 269 to an arbitrary number of 15 for an interim period. Implentation of the Strategic Plan for the Management of Wild Horses and Burros dictated that only older age class animals in excess of ten years of age. These combined actions reduced the Meadow Valley herd below its biological threshold and has jeopardized the herd in the short and long term.

Grazing decision issued above carrying capacity of the range.

You state supporting data in your horse decision that in addition to the 21% burn you have the remaining wild horse habitat in 50% severe condition. That criteria has not been applied to your livestock grazing decision for the protection of the habitat.

The terms and conditions that you have established with these adjusted grazing decisions are violations of:

1) CFR 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);"

2) 4110.3-2(b) "When monitoring shows use is causing an unacceptable level or pattern or utilization or exceeds the livestock carrying capacity as determined through monitoring, the authorized officer shall reduce active use if necessary to maintain or improve rangeland productivity, unless the authorized officer determines a change in management practices would achieve the management objectives;"

We are filing this appeal with the Solicitor and IBLA. We request that you file this appeal with IBLA as well. If you have any questions, please feel free to call.

Sincerely,

Catherine Barcomb

CATHERINE BARCOMB
Executive Director

NV-050-94-02

BOB MILLER
Governor

STATE OF NEVADA

CATHERINE BARCOMB
Executive Director

COMMISSIONERS

Paula S. Askew, *Chairperson*
Carson City, Nevada

Steven Fulstone, *Vice Chairman*
Smith Valley, Nevada

Michael Jackson
Las Vegas, Nevada

Dan Keiserman
Las Vegas, Nevada

Dawn Lappin
Reno, Nevada

COMMISSION FOR THE PRESERVATION OF WILD HORSES
50 Freeport Boulevard, No. 2
Sparks, Nevada 89431
(702) 359-8768

October 26, 1993

Curtis G. Tucker, Area Manager
BLM-Caliente Resource Area
P.O. Box 237
Caliente, Nevada 89008

RE: 1) FORMAL APPEAL OF THE MEADOW VALLEY MOUNTAIN HERD MANAGEMENT EMERGENCY REMOVAL PLAN, RECORD OF DECISION, & EA
2) FORMAL APPEAL OF THE GRAZING DECISION ON THE HENRIE COMPLEX ALLOTMENT

Dear Mr. Tucker,

We are in receipt of your Meadow Valley Mountain Herd Management Wild Horse Emergency Removal Plan, Record of Decision and Environmental Assessment which was provided "for our information." Subsequent to this horse plan we received copies of your Full Force and Effect Grazing Decisions affecting the wild horse herd management area in question. We formally appeal the horse documents and the livestock grazing decision for the Henrie Complex for the following reasons:

The documents and decisions are arbitrary and biased against wild horses.

In the decision on wild horses you are quoting that wild horses must be removed because 21% of their herd area was burned out and in addition at least 50% of the remaining acreage in the HMA is in severe condition. For this reason you have reduced the wild horses from **269** to **15.** However, in your livestock decisions you are only reducing livestock with the criteria that 21% of the allotment is burned, not even considering the 50% severe condition on the remainder of the allotment. You are claiming to have the data to support the horse decision but that does not apply to livestock on the same area. The severity of the conditions of the allotment was serious enough to protect from wild horses but not from livestock that share the same boundaries.

Violations of BLM Policy, Regulations, NEPA, and FLPMA

This decision on wild horses was issued approximately 2 weeks **after** the gather was done! The document is dated October 12, 1993, and you gathered the horses two weeks prior to that on September 29, 1993! You may issue a gather plan full force and effect for

emergency reasons prior to gathering, even with only one days notice, you knew for 2 months that you would be gathering these horses because of the burn. However, you cannot justify the removal of horses for the rest of the HMA without supporting data as well as for horses **outside** of a HMA without the requirement of issuing a draft and final gather plan! No EA's were prepared analyzing the impacts of this gather, impacts to the herds and the viability of the herds were not analyzed, policy and procedures were not followed.

Grazing decision issued above carrying capacity of the range.
You state supporting data in your horse decision that in addition to the 21% burn you have the remaining allotment in 50% severe condition. That criteria has not been applied to your livestock grazing decision for the protection of the habitat.

The terms and conditions that you have established with these adjusted grazing decisions are violations of:

1) CFR 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);"

2) 4110.3-2(b) "When monitoring shows use is causing an unacceptable level or pattern or utilization or exceeds the livestock carrying capacity as determined through monitoring, the authorized officer shall reduce active use if necessary to maintain or improve rangeland productivity, unless the authorized officer determines a change in management practices would achieve the management objectives;"

Within the next 30 days we will be supplying these and possibly other arguments to the Solicitor and IBLA. We request that you file this appeal with IBLA as well. If you have any questions, please feel free to call.

Sincerely,

Catherine Barcomb

CATHERINE BARCOMB
Executive Director

NV-050-94-03

HSUS

November 15, 1993

Curtis G. Tucker, Area Manager
BLM-Caliente Resource Area
P.O. Box 237
Caliente, Nevada 89008

RE: 1) FORMAL APPEAL OF THE MEADOW VALLEY MOUNTAIN HERD MANAGEMENT WILD HORSE EMERGENCY REMOVAL PLAN, RECORD OF DECISION, & ENVIRONMENTAL ASSESSMENT
2) FORMAL APPEAL OF THE GRAZING DECISION ON THE HENRIE COMPLEX ALLOTMENT

Dear Mr. Tucker:

We are in receipt of your Meadow Valley Mountain Herd Management Wild Horse Emergency Removal Plan, Record of Decision and Environmental Assessment which was provided "for our information." Subsequent to receiving this horse plan we received copies of your Full Force and Effect Grazing Decisions affecting the wild horse herd management area in question.

The Humane Society of the United States (HSUS) has a longstanding interest in the welfare of wild horses and their management on public lands, and a long history of providing comments on Bureau of Land Management management documents.

For reasons described below, we hereby formally appeal the horse documents and the livestock grazing decision for the Henrie complex for the following reasons:

The documents and decisions are arbitrary and biased against wild horses.
In the decision on wild horses the Bureau argues that wild horses must be removed because 21% of their herd area was burned, and in addition at least 50% of the remaining acreage in the HMA is in the "severe" use

The Humane Society of the United States
2100 L Street, NW, Washington, DC 20037
(202) 452-1100 FAX (202) 778-6132

category. For this reason the Bureau has reduced the wild horses from 269 to 15. However, it is our understanding that the Bureau is reducing livestock allocations only in response to the 21% habitat reduction caused by the fires, and have not considered the 50% severe use categorization of the remainder of the allotment. No data are provided in the decision documents or the EA that justify the differential application of these standards to horses and livestock that share the same boundaries.

Violations of BLM Policy, Regulations, NEPA, and FLPMA
It is our understanding that the Meadow Valley gather was carried out beginning on September 29, 1993. The gather plan decision was dated September 28, 1993; however, this plan and accompanying documentation were not mailed until October 12, 1993, approximately 2 weeks following the implementation of the gather. We understand that a gather plan may be issued under full force and effect regulations for emergency reasons prior to gathering, even with only one day's notice. Because of the timing of the burn, it was known for two months that a gather would be likely. However, you cannot justify the emergency removal of horses for the rest of the HMA or of horses outside the HMA without supporting data and without issuing a draft and final gather plan. No EA's were prepared analyzing the impacts of this gather; impacts to the herds and the viability of the herds were not analyzed; policy and procedures were not followed.

Grazing decision issued above carrying capacity of the range.
In the gather decision, the Bureau states the existence of supporting data that in addition to the 21% burn, 50% of the remaining allotment is in the "severely grazed" category. That criterion has not been applied to your livestock grazing decision for the protection of the habitat.

The terms and conditions that you have established with these adjusted grazing decisions are violations of:

1) CFR 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 1601-5(b);"

2) 4110.3-2(b) "When monitoring shows use in causing an unacceptable level or pattern or utilization or exceeds the livestock carrying capacity as determined through monitoring, the authorized officer shall reduce active use if necessary to maintain or improve rangeland productivity, unless the authorized officer determines a change in management practices would achieve the management objectives;"

Within the next 30 days we will be supplying these and other arguments to the Solicitor and IBLA. We request that you file this appeal with IBLA as well. If you have any questions, please feel free to call.

Sincerely,

Allen T. Rutberg, Ph.D.
Senior Scientist
Wildlife and Habitat Protection

cc: Board of Land Appeals, Department of Interior
Burt Stanley, Regional Solicitor, Sacramento, California

NV-050-94-01,02,03

SEP 2 7 1993

NOTICE OF FINAL DECISION
FULL FORCE AND EFFECT

MEADOW VALLEY MOUNTAIN WILD HORSE EMERGENCY REMOVAL

A significant portion of the Herd Management Area (HMA) has been consumed by wildfire. Grazing by wild horses or livestock after a wildfire will cause habitat degradation, and has reduced the available forage for approximately 160 wild horses within the Meadow Valley Mountain Herd Management Area (HMA). These animals are located within the established HMA boundaries, as well as outside the HMA boundaries within the Breedlove and Rox-Tule grazing allotments. Both allotments were identified as horse-free areas in the Caliente Resource Area Management Plan.

Twenty-one percent of the HMA was consumed by wildland fires between July and August, 1993; 50 percent of the remaining HMA was documented to be in the "severe" use category. From field observations of remaining available forage and review of monitoring data available (water availability and use pattern mapping), it has been determined the wild horses and their habitat would be significantly impacted if horses are allowed to remain in this area. Therefore, approximately 145 wild horses must be removed from the Meadow Valley HMA, through the use of a helicopter and/or water trapping.

Due to the emergency nature of these conditions, it is necessary to implement this removal immediately, through a Full Force and Effect decision. The rationale for placing this decision in Full Force and Effect are as follows:

1. Forage availability for wild horses is critically limited due to the loss of 21 percent of the HMA to recent wildland fires. Approximately 50 percent of the remaining habitat has been documented to be in the "severe" use category. This limited forage availability could result in unnecessary harm and the possible deaths of animals, thus affecting the survival rates of wild horses in the HMA.

2. If wild horses populations are allowed to remain at current levels within the burned portions of the HMA, significant resource damage could occur. Natural revegetation to a desirable plant community in the burn would not be possible with wild horse or livestock grazing on the sprouting grass and shrub species. Use levels in the unburned areas would increase substantially, due to the limited amounts of available forage.

NV-050-94-01,02,03

UNITED STATES DEPARTMENT of the INTERIOR
BUREAU OF LAND MANAGEMENT

Las Vegas District Office
4765 Vegas Drive
P.O. Box 26569
Las Vegas, Nevada 89126

TAKE PRIDE IN AMERICA

In Reply Refer To:
4710
(NV-055)

SEP 23 1993

TO: State Director, Nevada

FROM: District Manager, Las Vegas

SUBJECT: Meadow Valley Mountains Wild Horse Emergency Removal

On July 28, 1993, a wild fire (Meadow Fire #Y416) started on the south side of the Meadow Valley Mountains and eventually consumed 21,686 acres within the Henrie Complex, Boulder Springs and Lower Riggs grazing allotments. A second fire (Pass Fire #Y454) began adjacent to the southern edge of the Meadow Fire on August 7, 1993 (see Map 1). This fire burned an additional 5,500 acres within the Henrie Complex and Boulder Springs allotments. The total acreage of the combined fires was 27,186 acres. Approximately 21,000 acres of the Meadow Valley Mountain Herd Management Area (HMA) were consumed by the Meadow and Pass fires or 21 percent of the wild horse habitat within the 98,775 acres HMA.

The Caliente Resource Area has prepared a fire rehabilitation plan for these fires. A number of options were considered for the burned acreage, using guidelines contained within the approved Las Vegas District Normal Fire Rehabilitation Plan. The recommended management action would allow natural re-vegetation to occur, facilitated by closure of the burned areas to grazing for a period of at least two growing seasons. Use of the burned areas by livestock and wild horses would be restricted (closed) during re-vegetation.

To achieve this closure, wild horse access to the burned area must be restricted either through a physical barrier, i.e. fencing the boundary of the burn, or by physically removing the horses from the area for the closure period. The majority of the HMA burned acreage occurs in the Meadow Valley Wilderness Study Area (WSA). The construction of approximately 10 miles of fencing within the WSA would have the potential to impair wilderness values and concentrate wild horse grazing pressure on sensitive riparian areas along Meadow Valley Wash. This action would not achieve management objectives in a timely and cost-effective manner.

NV-050-94-01,02,03

MEADOW VALLEY MOUNTAIN

HERD MANAGEMENT

WILD HORSE EMERGENCY REMOVAL PLAN

Bureau of Land Management

Caliente Resource Area

Las Vegas District

Prepared By: Terry Lee Smith for
Alan Shepherd
Wild Horse and Burro Specialist

9-23-93
Date

NV-050-94-01,02,03

UNITED STATES DEPARTMENT of the INTERIOR
BUREAU OF LAND MANAGEMENT
Las Vegas District Office

4765 Vegas Drive
P.O. Box 26569
Las Vegas, Nevada 89126

TAKE PRIDE IN AMERICA

In Reply Refer To:
4710
(NV-055)

SEP 23 1993

TO: State Director, Nevada

FROM: District Manager, Las Vegas

SUBJECT: Meadow Valley Mountains Wild Horse Emergency Removal

On July 28, 1993, a wild fire (Meadow Fire #Y416) started on the south side of the Meadow Valley Mountains and eventually consumed 21,686 acres within the Henrie Complex, Boulder Springs and Lower Riggs grazing allotments. A second fire (Pass Fire #Y454) began adjacent to the southern edge of the Meadow Fire on August 7, 1993 (see Map 1). This fire burned an additional 5,500 acres within the Henrie Complex and Boulder Springs allotments. The total acreage of the combined fires was 27,186 acres. Approximately 21,000 acres of the Meadow Valley Mountain Herd Management Area (HMA) were consumed by the Meadow and Pass fires or 21 percent of the wild horse habitat within the 98,775 acres HMA.

The Caliente Resource Area has prepared a fire rehabilitation plan for these fires. A number of options were considered for the burned acreage, using guidelines contained within the approved Las Vegas District Normal Fire Rehabilitation Plan. The recommended management action would allow natural re-vegetation to occur, facilitated by closure of the burned areas to grazing for a period of at least two growing seasons. Use of the burned areas by livestock and wild horses would be restricted (closed) during re-vegetation.

To achieve this closure, wild horse access to the burned area must be restricted either through a physical barrier, i.e. fencing the boundary of the burn, or by physically removing the horses from the area for the closure period. The majority of the HMA burned acreage occurs in the Meadow Valley Wilderness Study Area (WSA). The construction of approximately 10 miles of fencing within the WSA would have the potential to impair wilderness values and concentrate wild horse grazing pressure on sensitive riparian areas along Meadow Valley Wash. This action would not achieve management objectives in a timely and cost-effective manner.

The most feasible management option for natural rehabilitation of the burn would be to remove a majority of the animals from the HMA. This objective can be effectively reached by conducting an emergency gather with the use of the government wild horse contractor.

The burn area may receive concentrated use from approximately 160 wild horses during the spring green up and suffer potential habitat degradation. The wild horses using the area are located within established HMA boundaries, as well as outside the HMA in the Breedlove and Rox-Tule grazing allotments. Both of these allotments were identified as horse-free areas in the Caliente Resource Area Management Framework Plan.

Twenty-one percent of the HMA was consumed by wild fires; 50 percent of the remaining HMA has been documented (based on use pattern mapping) to be in the "severe" use category. From field observations of remaining available forage, water source locations, and a review of use pattern mapping for the HMA, it has been determined that the wild horses and their habitat would be significantly impacted if horses are allowed to remain in this area. Therefore, approximately 145 wild horses should be removed from the HMA through the use of a helicopter trapping.

Due to the emergency nature of the situation, it is necessary to implement this decision immediately through a Full Force and Effect decision for the protection of the wild horses and their habitat in the Meadow Valley Mountain HMA.

If you concur with this emergency removal, please sign and return this to me so I can take the appropriate action.

Gary Ryan

Gary Ryan "Acting"
Las Vegas District Manager

Billy R. Templeton

Concurrence by:
Billy R. Templeton
State Director, Nevada

NV-050-94-01,02,03

MEADOW VALLEY MOUNTAIN

HERD MANAGEMENT

WILD HORSE EMERGENCY REMOVAL PLAN

Bureau of Land Management

Caliente Resource Area

Las Vegas District

Prepared By: Terry Lee Smith for

Alan Shepherd
Wild Horse and Burro Specialist

9-23-93
Date

MEADOW VALLEY MOUNTAIN EMERGENCY WILD HORSE REMOVAL PLAN

I. Purpose and Authority

On July 28, 1993, a wildland fire (Meadow Fire #Y416) started on the northwest boundary of the Henrie Complex. The fire burned for 5 days and consumed 21,686 acres within the Henrie Complex, Boulder Springs and Lower Riggs grazing allotments. A second fire (Pass Fire #Y454) began on August 7, 1993, adjacent to the southern edge of the Meadow Fire. This fire consumed 5,500 acres within the Henrie Complex and Boulder Springs allotments; total acreage of the combined fires was 27,186 acres. Approximately 21, 000 acres of the Meadow Valley Mountains Herd Management Area (HMA) were consumed by the Meadow and Pass fires or 21 percent of the wild horse habitat within the 98,775 acre HMA.

The Caliente Resource Area has prepared a fire rehabilitation plan for these fires. A number of options were considered for the burned areas, using guidelines contained within the approved Las Vegas District Normal Fire Rehabilitation Plan (NFRP). The recommended management action would allow natural revegetation to occur, facilitated by closure of the burned areas to grazing for a period of at least two growing seasons. Use of the burned areas by livestock and wild horses would be restricted (closed) during revegetation.

To achieve this closure, wild horse access to the burned areas must be restricted either through a physical barrier, i.e. fencing the boundary of the burn, or by physically removing the horses from the area for the closure period. The majority of the HMA burned acreage occurs within the Meadow Valley Mountains Wilderness Study Area (WSA). The construction of approximately 10 miles of fencing within the WSA would have the potential to impair the wilderness values and concentrate wild horse grazing pressure on sensitive riparian areas along Meadow Valley Wash. This option would not achieve management objectives in a timely and cost-effective manner.

The most feasible management option for rehabilitating the burned areas would be to remove a majority of the animals from the HMA. This objective can be effectively accomplished by conducting an emergency gather, with the use of the government wild horse contractor.

As a consequence of the fires, the condition of the natural habitat has been adversely affected, ungrazed recovery for a minimum of two growing seasons is essential for the protection of the wild horse and its habitat, and available forage is limited for approximately 160 wild horses. These animals are located within the established HMA boundaries, as well as outside the HMA in the Breedlove and Rox-Tule grazing allotments. Both of the allotments were identified as horse-free areas in the Caliente Resource Area Management Framework Plan.

Twenty-one percent of the HMA was consumed by wild fires; 50 percent of the remaining habitat is receiving "severe" use levels. Unnecessary habitat degradation and wild horses stress would occur, thus affecting the potential survival of individual wild horses. Due to the emergency nature of the situation, the majority of the animals must be removed. Authority for this action is contained the Wild Horse and Burro Act of 1971 (Public Law 92-195), regulations contained in Title 43 CFR 4720.1 and 4770.3 (c) and the approved Las Vegas District NFRP.

II. Area of Concern

The area of concern is the Meadow Valley Mountains HMA, which contains the Henrie Complex allotment. Wild horses, burros and mules located outside of established HMA boundaries within the Breedlove and Rox-Tule Allotments are also of concern. The location of the area is shown on Map #1.

III. Numbers of Wild Horses

Based on census data obtained in September 1992, approximately 160 wild horses are located within the emergency area. This number includes wild horses within the HMA's established boundaries, as well as those wild horses, burros and mules found within the Breedlove and Rox-Tule allotments. .

IV. Methods for Removal and Safety

The method employed during this capture operation will be herding horses with a helicopter to a trap built with portable panels. The Bureau of Land Management may contract with a private party for part or all of this operation. If a private party is used for this operation, Bureau employees will be supervising the contractor at all times during the gathering operation. The following stipulations and procedures will be followed during the contract to ensure the welfare, safety, and humane treatment of wild horses. If capture operations are performed by Bureau personnel, the same stipulations required of a private contractor will apply.

A. Gather procedures within the emergency area:

The Contracting Officer's Representative (COR) or Project Inspectors (PI) will determine specific gather areas and numbers of animals within these areas, as animal concentration, terrain, physical barriers, and weather conditions dictate. Upon determination of the specific gather areas, the COR/PI and gather contractor will select the general location of trap sites in which to herd the animals. Animal concentration, terrain, physical barriers and weather conditions will be considered when selecting trap sites.

B. **STIPULATIONS AND STANDARD OPERATING PROCEDURES COMPRISING THE PROPOSED ACTION:**

Use of Motorized Equipment:

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals.

2. Vehicles shall be in good repair, of adequate rated capacity and operated so as to insure that captured animals are transported without undue risk of injury.

3. Only stock trailers shall be allowed for transporting animals from traps to temporary holding facilities, only Bobtail trucks, stock trailers or single deck trucks shall be used to transport animals from temporary holding facilities to final destination. Sides of stock racks of transporting vehicles shall be a minimum height of 6 feet 6 inches from vehicle floor. Single deck trucks with trailers 40 feet or longer shall have two partition gates to separate animals. Trailers less than 40 feet shall have at least one partition gate to separate the animals. Each partition shall be a minimum of 6 feet high and shall have a minimum 5 foot wide swinging gate. The use of double deck trailers is unacceptable and shall not be allowed.

4. All vehicles used to transport animals to final destination shall be equipped with at least one door at the rear end of the vehicle which is capable of sliding either horizontally or vertically.

5. Floors of vehicles and loading chute shall be covered and maintained with a non-skid surface such as sand, mineral soil or wood shavings to prevent the animals from slipping. This will be confirmed by the COR/PI prior to loading (every load).

6. Animals to be loaded and transported in any vehicle shall be as directed by the COR/PI and may include limitations on numbers according to age, size, sex, temperament and animal condition. A minimum of 1.4 linear foot per adult animal and .75 linear foot per foal shall be allowed per standard 8 foot wide stock trailer/truck.

The BLM employee supervising the loading of the wild horses to be transported from the trap to the temporary holding corral will require separation of small foals and weak horses from the rest, if they could be injured during the trip. Distance and condition of the road and animals will be considered in making this determination. Horses shipped from the temporary holding corral to the BLM holding facility will normally be separated by studs, mares and foals (including small yearlings). However, if the numbers of these classes of animals are too few in one compartment and too many in another, animals may be shifted between compartments to properly distribute the animals in the trailer. This may include placing a younger, lighter stud with the mares or a weak mare with the foals. Further separation may be required should condition of the animals warrant.

The BLM employee supervising the loading will exercise authority to off-load animals should there be too many horses on the trailer or truck.

7. The COR/PI shall consider the condition of the animals, weather conditions, type of vehicles, distance to be transported and other factors when planning for the movement of captured animals. The COR/PI shall provide for any brand inspection or other inspection services required for the captured animals.

   It is currently planned to ship all horses to the Palomino Valley facility. Communication lines have been established with the Palomino Valley personnel involved in off-loading the horses, to receive feedback on the condition of shipped horses. Should problems arise, shipping methods or separation of the horses will be changed in an attempt to alleviate the problems.

8. If the COR/PI determines that dust conditions are such that the animals could be endangered during transportation, the contractor will be instructed to adjust speed. The maximum distance over which animals may have to be transported on dirt road is approximately 40 miles.

   Periodic checks by BLM employees will be made as the horses are transported along dirt roads. If speed restrictions are placed in effect, then BLM employees will, at times, follow or time trips to ensure compliance.

Trapping and Care:

1. The helicopter shall be used in such a manner that bands of horses will remain together. Foals shall not be left behind.

   The Las Vegas District may use an observation helicopter to supervise the use of the project helicopter. In the absence of an observation helicopter, a saddle horse may be used to place a BLM observer on a point overlooking the area of the helicopter herding operations.

2. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI, who will consider terrain, physical barriers, weather, condition of the animals and other factors.

   BLM will not allow horses to be herded more than 10 miles nor faster than 20 miles per hour. The COR/PI may decrease the rate of travel or distance moved should the route to the trap site be steep or rocky enough to pose a danger or cause avoidable stress. Animal condition will also be considered in making distance and speed restrictions.

   Special attention will be given to avoiding physical hazards such as fences. Map 1 shows locations of fences and any other potential hazards.

3. It is estimated that five trap locations will be required to accomplish the work. All trap locations and holding facilities must be approved by the COR/PI prior to construction. The contractor may also be required to change or move trap locations as determined by the COR/PI. All traps and holding facilities not located on public land must have prior written approval of the landowner.

   If tentative trap sites (Map 1) are not located near enough to the concentrations of horses, then the trap site will not be approved. The COR/PI will move the general location of the trap closer to the horses. Trap sites will not be approved where barbed-wire fences are used as wings, wing extensions or to turn the horses, during herding unless covered with jute material or black plastic.

4. Class III intensive field inventory for cultural and paleontological values would be completed at each proposed trapping location and holding facility. All cultural and paleontological sites would be recorded and evaluated. Section 106 consultation with the Nevada state Historic Preservation Officer would initiated, in accordance with the Programmatic Agreement among the BLM, State Historic Preservation Officer and the Advisory Council on Historic Preservation. In the event that National Register-eligible or listed sites are identified within the Area of Potential Effect from the proposed action, any impacts to those properties would be avoided through project redesign or relocation.

5. All proposed trapping locations and holding facilities will be inventoried for the occurrence of desert tortoise, burrows and/or sign. Upon completion of the inventory, a may effect or no effect determination will be made. If a may effect situation is determined, Section 7 consultation with the U.S. Fish and Wildlife Service will be initiated. Trap sites and holding facilities may be relocated to obtain a no effect determination if desert tortoises or their sign is observed.

The following are desert tortoise specific stipulations to be enforce during the emergency gather:

a. The contractor and all employees will be instructed of the likelihood of the occurrence of desert tortoise and of their threatened status. Each shall be advised of the potential impacts to desert tortoises and potential penalties (up to $50,000 in fines and one year in prison) for taking a Federally protected species.

b. The discharge of firearms will be prohibited at all trap and holding facilities except in the case of euthanasia of a captured animal (wild horse, mule or burro) by an authorized BLM employee.

c. All vehicles use in desert tortoise habitat will be restricted to existing roads and vehicles speed shall not exceed 25 mph.

d. Garbage and similar items will be placed in appropriate contains and not allowed to accumulate in order to discourage the attraction of ravens to the area.

e. If a desert tortoise should be observed within the vicinity of the trap sites and/or holding facilities, all activities will cease until the tortoise moves out of harms way under its own power.

6. All traps, wings and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:

a. Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high, the bottom rail of which shall not be more than 12 inches from the ground level. All traps and holding facilities shall be oval or round in design.

b. The loading chute shall also be a minimum of 6 feet high.

c. All runways shall be a minimum of 20 feet long and a minimum of 6 feet high.

d. Wings shall not be constructed out of barbed wire or other materials injurious to animals and must be approved by the COR/PI.

e. All crowding pens including the gates leading to the runways shall be covered with material which prevents the animals from seeing out (plywood, burlap, etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level. Eight linear feet of this material shall be capable of being removed or let down to provide a viewing window.

7. No fence modification will be made without authorization from the COR/PI. The contractor shall be responsible for restoration of any fence modification which he has made.

If the route the contractor wishes to herd horses passes through a fence, the contractor will be required to roll up the fencing material and pull up the posts to provide at least one-eighth mile gap. The standing fence on each side of the gap will be well-flagged for a distance of 300 yards from the gap on each side.

8. When dust conditions occur within or adjacent to the trap or holding facility, the contractor shall be required to wet down the ground with water.

9. Alternate pens, within the holding facility shall be furnished by the contractor to separate mares with small foals, sick and injured animals, and estray animals from the other horses. Animals shall be sorted as to age, number, size, temperament, sex, and condition when in the holding facility so as to minimize injury due to fighting and trampling.As a minimum, studs will be separated from the mares and foals when the animals are held overnight.

10. Animals shall be transported to final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the COR/PI for unusual circumstances. Animals shall not be held in traps or temporary holding facilities on days when there is no work being conducted except as specified by the COR/PI. The contractor shall schedule shipments or animals to arrive at final destination between 6:00 a.m. and 4:00 p.m.

11. The contractor shall provide animals held for 5 hours or more in the traps or holding facilities with a continuous supply of fresh clean water at a minimum of 10 gallons per animal per day. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day.

12. It is the responsibility of the contractor to provide security to prevent loss, injury or death of captured animals until delivery to final destination.

13. The contractor shall restrain sick or injured animals if treatment by the government is necessary. The COR/PI will determine if injured animals must be destroyed and provide for destruction of such animals. The contractor may be required to dispose of the carcasses as directed by the COR/PI.

14. When refueling, the helicopter shall remain a distance of at least 1,000 feet or more from animals, vehicles (other than fuel truck), and personnel not involved in refueling.

V. Disposition of Removed Animals:

Wild horses under the age of 9 years, mules, and burros will be sent to Palomino Valley Wild Horse and Burro Placement Center to be prepared for adoption. Fifteen to twenty horses will be released within the HMA to maintain the existing gene pool and knowledge of water and forage sources. All other horses over the age of 9 years will be relocated within an HMA without an established appropriate management level (AML) but with resource data supporting increased animals or within a HMA under AML levels. No horses that were trapped during this gather operation from out-side the HMA boundaries will be released into the HMA, in order to eliminate any chance of the horses re-establishing home ranges outside of the HMA.

Impounded privately owned animals will be handled in accordance with the Bureau of Land Management, Nevada State Office Instruction Memoranda NV-84-116 and NV-85-416.

VI. Responsibility:

The District Manager is responsible for maintaining and protecting the health and welfare of the wild horses. To ensure the contractor's compliance with the contract stipulations, the COR and PI's, all from the Las Vegas District, will be on site. Also, the Caliente Area Manager and the Las Vegas District Manager are very involved with guidance and input into this removal plan and with contract monitoring. The health and welfare of the animals is the overriding concern of the District Manager, Area Manager, COR and PI's.

The COR and/or PI will constantly, through observation, evaluate the contractor's ability to perform the required work in accordance with the contract stipulations. Compliance with the contract stipulations will be through issuance of written instructions to the contractor, stop work orders and default procedures should the contractor not perform work according to the stipulations.

Prior to issuance of the "Notice to Proceed" to the contractor, the COR and PI's will inspect the equipment to be used during the Contract, to insure the equipment meets or exceeds the standards contained in the Contract Stipulations. Prior (less than 20 days) to the start of the contract and constantly during the course of the contract the COR and/or PI's will evaluate the conditions which may cause undue stress to the animals.

The factors considered will include but limited to animal condition, prevailing temperatures, drought conditions, soil conditions, topography, animal distribution, distance animals travel to water, quantity of available water, quantity and quality of available forage and condition of roads that animals are to be transported over. These factors will be evaluated to determine if additional constraints other than those already discussed above, need to be initiated in order to safely capture and transport the animals (i.e. veterinarian present, or delay of capture operations).

The proposed action is in conformance with the Caliente Resource Area Management Framework Plan and the approved Las Vegas District Normal Fire Rehabilitation Plan.

Recommend Approval:

Terry Lee Smith "Acting" 9/22/93

Curtis G. Tucker
Area Manager
Caliente Resource Area

Date

Approved:

for Gary Ryan
Acting District Manager
Las Vegas District

9/28/93

Date

MEADOW VALLEY MOUNTAIN HERD MANAGEMENT AREA

Map #1 Legend

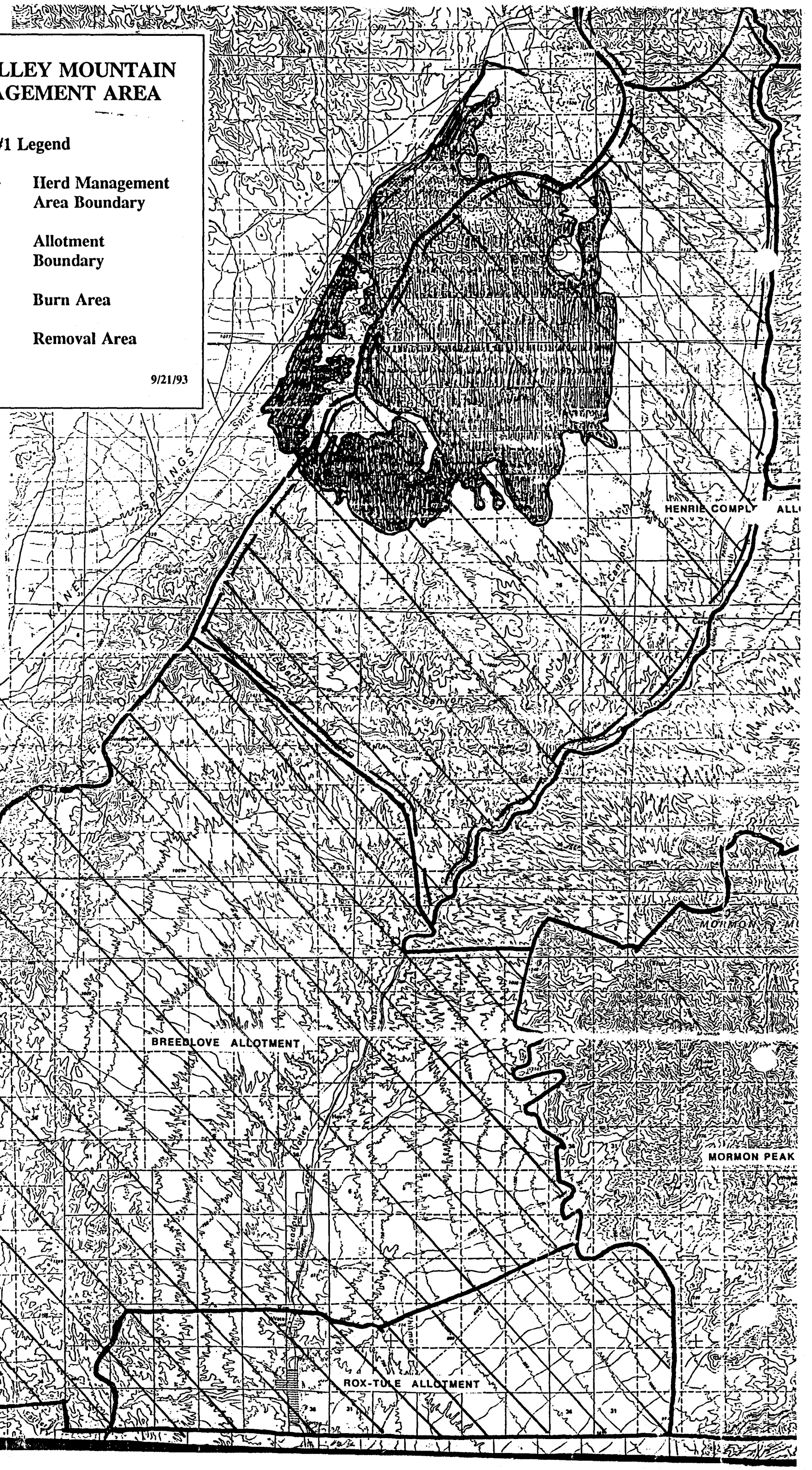
Herd Management Area Boundary

Allotment Boundary

Burn Area

Removal Area

9/21/93



FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD
Meadow Valley Mountains Emergency Wild Horse Removal
EA # NV-055-93-31

Finding of No Significant Impact

Based on the analysis of potential environmental impacts contained in Environmental Assessment NV-055-93-31, I have determined that the action will not have a significant effect on the human environment, and therefore, an environmental impact statement will not be prepared.

Decision

It is my decision to authorize the Meadow Valley Mountains Emergency Wild Horse Removal, as described in the proposed action of EA NV-055-93-31.

Monitoring

Monitoring of the Meadow Valley Mountains Emergency Wild Horse Removal will be conducted on site throughout all phases of the operations by the Contracting Officer's Representative (COR) or Project Inspectors (PI); the COR or PI will be staff members from the Las Vegas District, BLM.

Rationale

The proposed action will prevent possible habitat degradation during green up after the burn , animal stress from the loss of available herbaceous forage , and allow for establishment of plant vigor and root reserves for existing and new herbaceous plants . Over 20 percent of the wild horse habitat was consumed by wildland fires between July 28 and August 7, 1993; 50 percent of the remaining acreage of the HMA has been determined to be in the severe use category. Due to these events forage availability for approximately 160 wild horses was determined to be critically limited. Serious impacts on the wild horse and their habitat were projected to occur if the emergency removal was not initiated.

This action would facilitate the natural revegetation of the fire areas by reducing grazing pressure. Long-term improvements in rangeland conditions could occur, helping to restore a thriving ecological balance between wild horses and their environment.

Other alternatives, including the No Action Alternative, were considered but not selected. Management objectives could not be met in a timely and cost-effective manner by the other options.

The proposed action is in conformance with the Caliente Resource Area Management Framework Plan and the approved Las Vegas District Normal Fire Rehabilitation Plan.

Recommend Approval:

Terry Lee Smith Acting for

Curtis G. Tucker
Area Manager
Caliente Resource Area

9/23/93
Date

Approved:

for Gary Ryan
Acting District Manager
Las Vegas District

9/28/93
Date

NV-050-94-01,02,03

ENVIRONMENTAL ASSESSMENT
NV-055-93-31

FOR THE

MEADOW VALLEY MOUNTAINS EMERGENCY WILD HORSE REMOVAL

PREPARED BY Terry Lee Smith
ALAN B. SHEPHARD
for WILD HORSE AND BURRO SPECIALIST

DATE 9-23-93

CALIENTE RESOURCE AREA
LAS VEGAS DISTRICT

CALIENTE RESOURCE AREA
LAS VEGAS DISTRICT

I. INTRODUCTION

Between July 28 and August 7, 1993, two wildland fires (Meadow Fire #Y416 and Pass Fire #Y454) burned in the Meadow Valley Mountains and adjacent areas, consuming a total of 27,186 acres of public land (see Map 1). Approximately 21 percent (21,000 acres) of the wild horse habitat within the 98,775 acre Meadow Valley Mountain Herd Management Area (HMA) was burned by these fires.

The Caliente Resource Area has prepared a fire rehabilitation plan for the areas affected by the two fires. A number of options were considered, using guidelines and criteria from the approved Las Vegas District Normal Fire Rehabilitation Plan. The recommended management action would allow natural revegetation to occur, facilitated by closure of the burned areas to grazing for a period of at least two growing seasons. Use of the burned areas by livestock and wild horses would be restricted (closed) for that period.

II. PURPOSE AND NEED

In order to implement the closure to grazing of the burned areas within the Meadow Valley Mountains, as identified within the Normal Fire Rehabilitation Plan, and to protect the wild horses and their habitat, emergency measures are required. As a consequence of the fires, the condition of the natural habitat has been adversely affected, ungrazed recovery for a minimum of two growing seasons is essential for the protection of the wild horse and its habitat, and available forage is limited for approximately 160 wild horses within the Meadow Valley Mountains Herd Management Area (HMA) and adjacent areas. Twenty-one percent of the HMA was consumed by the wild fires; 50 percent of the remaining HMA has been evaluated as being in the "severe" use category. From field observations of remaining available forage and review of monitoring data (water availability and use pattern mapping), it has been determined the wild horses and their habitat could be negatively impacted if horses are allowed to remain in this area.

III. LEGAL DESCRIPTION OF THE PROPOSED EMERGENCY GATHER AREA

The proposed emergency gather area is located in southern Lincoln County, Nevada, approximately 22 miles south of Caliente, Nevada (refer to Map 1). The area is bordered by the Meadow Valley Mountains on the west and the Mormon Mountains on the east. Meadow Valley Wash runs through the area. The legal description of the emergency area is as follows:

Mount Diablo Meridian

T. 8-12 S., R. 64-67 E., All Sections

IV. PROPOSED ACTION

ALTERNATIVE 1 -PROPOSED ACTION

The proposed action would remove approximately 145 wild horses, burros, and mules from within the established HMA boundaries (Henrie Complex allotment), as well as from outside the HMA boundaries within the Breedlove and Rox-Tule allotments (refer to Map #1). Both allotments were identified as horse-free areas in the Caliente Resource Area Management Framework Plan.

Use of a helicopter and/or water trapping would be the proposed method to capture and remove the targeted animals. A private party contractor would be utilized for the gather operation. Helicopter trapping would be the primary capture method, due to the expedient nature of the method. Water trapping would be used in only those areas where helicopter use is limited by safety concerns.

All horses ages 1 through 9 years old which are removed from the Meadow Valley Mountains Emergency Gather Area would be placed into the National adoption program. Under the guidelines of the Bureau's Strategic Plan for Management of Wild Horses, only 1 to 3 year old horses can entered into the adoption program. The remaining animals can be relocated to HMAs without an established Appropriate Management Level (AML), where resource data support increased animal numbers. Wild horses could also be relocated to those HMAs with numbers under AML levels. In emergency situations, Nevada State BLM policy allows for the removal of animals (up to age 9) which are located outside HMA boundaries.

Approximately 15-20 horses would be released back to the HMA to maintain the gene pool and knowledge of water and forage sources. The remaining horses over the 9 yr. age limit would be relocated to another appropriate HMA, as defined above. Horses would not be relocated to adjacent HMAs, since, in most cases, there are no physical barriers to prevent the animals from returning to their original HMA.

The Bureau of Land Management (BLM) would administer and evaluate the gather operation at all times, with Bureau employees familiar with the gather plan and contract requirements. The Contracting Officer's Representative (COR) or Project Inspectors (PI) would determine specific gather areas and numbers of animals within these areas, as dictated by animal concentration, terrain, physical barriers and weather conditions. Following identification of the specific gather areas, the COR/PI and gather contractor would select the general location of trap sites in which to herd the animals. Animal concentration, terrain, physical barriers, and weather conditions would be considered when selecting trap sites. Corral type traps, constructed of portable pipe panels would be used to capture the herded animals.

The gather operation would be evaluated according to compliance with the following stipulations and standard operating procedures:

Use of Motorized Equipment:

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals.

2. Vehicles shall be in good repair, of adequate rated capacity and operated so as to insure that captured animals are transported without undue risk of injury.

3. Only stock trailers shall be allowed for transporting animals from traps to temporary holding facilities, only Bobtail trucks, stock trailers or single deck trucks shall be used to transport animals from temporary holding facilities to final destination. Sides of stock racks of transporting vehicles shall be a minimum height of 6 feet 6 inches from vehicle floor. Single deck trucks with trailers 40 feet or longer shall have two partition gates to separate animals. Trailers less than 40 feet shall have at least one partition gate to separate the animals. Each partition shall be a minimum of six feet high and shall have a minimum 5 foot wide swinging gate. The use of double deck trailers is unacceptable and shall not be allowed.

4. All vehicles used to transport animals to final destination shall be equipped with at least one door at the rear end of the vehicle which is capable of sliding either horizontally or vertically.

5. Floors of vehicles and loading chute shall be covered and maintained with a non-skid surface such as sand, mineral soil or wood shavings to prevent the animals from slipping. This will be confirmed by the COR/PI prior to loading (every load).

6. Animals to be loaded and transported in any vehicle shall be as directed by the COR/PI and may include limitations on numbers according to age, size, sex, temperament and animal condition. A minimum of 1.4 linear foot per adult animal and .75 linear foot per foal shall be allowed per standard eight foot wide stock trailer/truck.

   The BLM employee supervising the loading of the wild horses to be transported from the trap to the temporary holding corral will require separation of small foals and weak horses from the rest, if they could be injured during the trip. Distance and condition of the road and animals will be considered in making this determination. Horses shipped from the temporary holding corral to the BLM holding facility will normally be separated by studs, mares and foals (including small yearlings). However, if the numbers of these classes of animals are too few in one compartment and too many in another, animals may be shifted between compartments to properly distribute the animals in the trailer. This may include placing a younger, lighter stud with the mares or a weak mare with the foals. Further separation may be required should condition of the animals warrant.

   The BLM employee supervising the loading will exercise authority to off-load animals should there be to many horses on the trailer or truck.

7. The COR/PI shall consider the condition of the animals, weather conditions, type of vehicles, distance to be transported and other factors when planning for the movement of captured animals. The COR/PI shall provide for any brand inspection or other inspection services required for the captured animals.

   It is currently planned to ship all horses to the Palomino Valley facility. Communication lines have been established with the Palomino valley personnel involved in off-loading the horses, to receive feedback on the condition of shipped horses. Should problems arise, shipping methods or separation of the horses will be changed in an attempt to alleviate the problems.

8. If the COR/PI determines that dust conditions are such that the animals could be endangered during transportation, the contractor will be instructed to adjust speed. The maximum distance over which animals may have to be transported on dirt road is approximately 40 miles.

   Periodic checks by BLM employees will be made as the horses are transported along dirt roads. If speed restrictions are placed in effect, then BLM employees will, at times, follow or time trips to ensure compliance.

Trapping and Care:

1. The helicopter shall be used in such a manner that bands of horses will remain together. Foals shall not be left behind. The Las Vegas District may use an observation helicopter to supervise the use of the project helicopter. In the absence of an observation helicopter, a saddle horse may be used to place a BLM observer on a point overlooking the area of the helicopter herding operations.

2. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI, who will consider terrain, physical barriers, weather, condition of the animals and other factors.

   BLM will not allow horses to be herded more than 10 miles nor faster than 20 miles per hour. The COR/PI may decrease the rate of travel or distance moved should the route to the trap site be steep or rocky enough to pose a danger or cause avoidable stress. Animal condition will also be considered in making distance and speed restrictions.

   Special attention will be given to avoiding physical hazards such as fences. Map 1 shows locations of fences and any other potential hazards.

3. It is estimated that five trap locations will be required to accomplish the work. All trap locations and holding facilities must be approved by the COR/PI prior to construction. The contractor may also be required to change or move trap locations as determined by the COR/PI. All traps and holding facilities not located on public land must have prior written approval of the landowner.

If tentative trap sites (Map 1) are not located near enough to the concentrations of horses, then the trap site will not be approved. The COR/PI will move the general location of the trap closer to the horses. Trap sites will not be approved where barbed-wire fences are used as wings, wing extensions or to turn the horses, during herding unless covered with jute material or black plastic.

4. Class III intensive field inventory for cultural and paleontological values will be completed at each proposed trapping location and holding facility. All cultural and paleontological sites will be recorded and evaluated. Section 106 consultation with the Nevada State Historic Preservation Officer will initiated, in accordance with the Programmatic Agreement among the BLM, State Historic Preservation Officer and the Advisory Council on Historic Preservation. In the event that National Register-eligible or listed sites are identified within the Area of Potential Effect from the proposed Action, any impacts to those properties will be avoided through project redesign or relocation.

5. All proposed trapping locations and holding facilities will be inventoried for the occurrence of desert tortoise, burrows and/or sign. Upon completion of the inventory, a may effect or no effect determination will be made. If a may effect situation is determined, Section 7 consultation with the U.S. Fish and Wildlife Service will be initiated. Trap sites and holding facilities may be relocated to obtain a no effect determination if desert tortoises or their sign is observed.

The following are desert tortoise specific stipulations to be enforced during the emergency gather:

a. The contractor and all employees will be instructed of the likelihood of the occurrence of desert tortoise and of their threatened status. Each shall be advised of the potential impacts to desert tortoises and potential penalties (up to $50,000 in fines and one year in prison) for taking a Federally protected species.

b. The discharge of firearms will be prohibited at all trap and holding facilities except in the case of euthanasia of a captured animal (wild horse, mule or burro) by an authorized BLM employee.

c. All vehicles use in desert tortoise habitat will be restricted to existing roads and vehicles speed shall not exceed 25 mph.

d. Garbage and similar items will be placed in appropriate contains and not allowed to accumulate in order to discourage the attraction of ravens to the area.

e. If a desert tortoise should be observed within the vicinity of the trap sites and/or holding facilities, all activities will cease until the tortoise moves out of harms way under its own power.

6. All traps, wings and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:

a. Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high, the bottom rail of which shall not be more than 12 inches from the ground level. All traps and holding facilities shall be oval or round in design.

b. The loading chute shall also be a minimum of 6 feet high.

c. All runways shall be a minimum of 20 feet long and a minimum of 6 feet high.

d. Wings shall not be constructed out of barbed wire or other materials injurious to animals and must be approved by the COR/PI.

e. All crowding pens including the gates leading to the runways shall be covered with material which prevents the animals from seeing out (plywood, burlap, etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level. Eight linear feet of this material shall be capable of being removed or let down to provide a viewing window.

7. No fence modification will be made without authorization from the COR/PI. The contractor shall be responsible for restoration of any fence modification which he has made.

   If the route the contractor wishes to herd horses passes through a fence, the contractor will be required to roll up the fencing material and pull up the posts to provide at least one-eighth mile gap. The standing fence on each side of the gap will be well-flagged for a distance of 300 yards from the gap on each side.

8. When dust conditions occur within or adjacent to the trap or holding facility, the contractor shall be required to wet down the ground with water.

9. Alternate pens, within the holding facility shall be furnished by the contractor to separate mares with small foals, sick and injured animals, and estray animals from the other horses. Animals shall be sorted as to age, number, size, temperament, sex, and condition when in the holding facility so as to minimize injury due to fighting and trampling. As a minimum, studs will be separated from the mares and foals when the animals are held overnight.

10. Animals shall be transported to final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the COR/PI for unusual circumstances. Animals shall not be held in traps or temporary holding facilities on days when there is no work being conducted except as specified by the COR/PI. The contractor shall schedule shipments or animals to arrive at final destination between 6:00 a.m. and 4:00 p.m.

11. The contractor shall provide animals held for 5 hours or more in the traps or holding facilities with a continuous supply of fresh clean water at a minimum of 10 gallons per animal per day. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day.

12. It is the responsibility of the contractor to provide security to prevent loss, injury or death of captured animals until delivery to final destination.

13. The contractor shall restrain sick or injured animals if treatment by the government is required. The COR/PI will determine if injured animals must be destroyed and provide for destruction of such animals. The contractor may be required to dispose of the carcasses as directed by the COR/PI.

14. When refueling, the helicopter shall remain a distance of at least 1,000 feet or more from animals, vehicles (other than fuel truck), and personnel not involved in refueling.

V. CONFORMANCE WITH LAND USE PLANS AND OTHER LEGAL AND REGULATORY MANDATES

Authority for this proposed action is contained in the Wild Horse and Burro Act of 1971 (Public Law 92-195) and regulations contained in Title 43 Code of Federal Regulations (CFR) 4720.1 and 4770.3 (c).

Policy guidelines from the Las Vegas District Normal Fire Rehabilitation Plan state that in order to allow recovery of the burned area, closure will be accomplished either through fencing or grazing deferment. The closure will remain in place for not less than two growing seasons. Monitoring on a yearly basis will determine when grazing can resume." This grazing closure pertains to livestock, wild horses and wild burros.

This proposal is in conformance with the Caliente Resource Area Management Framework Plan (MFP) Final Step 3 Decisions WH&B 1.1, WH&B 1.2 and WH&B 1.5.

VI. ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

BAIT-WATER TRAPPING ALTERNATIVE

This alternative would conduct the horse removal by bait/water trapping at existing water sources. The use of this alternative as the exclusive capture method would not meet management objectives due to the following constraints:

a. Vehicular access to the water sources within Hackberry Canyon (Upper and Lower Hackberry Springs) is extremely limited.

b. Though a large number of horses are using the above-ground water flow within Meadow Valley Wash, it would be impossible to control access to all portions of this flow in order to trap the animals.

c. Time is a factor in using bait/water trapping, in order to familiarize the animals with the trap. This process would be significantly longer than the period required to capture the animals by helicopter.

d. Though bait/water trapping is less expensive on a per animal basis than helicopter capture, other expenses are higher. Length of capture time would raise the total cost because of extra feed days needed for holding the animals for a longer period of time. Manpower costs (per diem, wages, vehicle costs) would be higher as a result of the extended capture time when compared to helicopter trapping.

Since bait/water trapping could not meet management objectives in a timely and cost-effective manner, this alternative will not be analyzed further in this Environmental Assessment (EA).

FENCING AND REMOVAL ALTERNATIVE

This alternative considered the construction of a fence around the burned area to restrict access by wild horses and the removal of a smaller percentage of the existing herd numbers to reduce pressure on the remaining habitat. Approximately 65 percent of the burned area is within the Meadow Valley Mountain Wilderness Study Area (WSA). In order to fence the burned area within the HMA, a minimum of 15 miles of fence would be required, with approximately 10 miles of fence to be constructed within the WSA boundaries. The introduction of fencing within the WSA was determined to have the potential to impair wilderness values and violate guidelines contained within the Interim Management Policy for lands under wilderness review.

In order to reduce grazing pressure by wild horses on the remaining available habitat, at least 50 percent of the horse population would be removed. The remaining horses would continue to depend on forage within areas that have documented heavy to severe use levels. Further degradation of rangeland conditions could be anticipated, potentially threatening the long-term survival of the wild horse population. Rehabilitation of the burned areas through natural revegetation would be slowed as a result of grazing by approximately 80 wild horses which would continue to have access to those areas.

Fencing and partial removal of the wild horse population would not conform to existing mandates and policy guidelines for Wilderness Study Areas and fire rehabilitation management options identified in the Las Vegas District Normal Fire Rehabilitation Plan. This alternative would not meet management objectives for rehabilitation of the burn areas and long-term preservation of a thriving ecological balance between wild horse herds and their environment. This alternative will not be further analyzed in this document.

NO ACTION ALTERNATIVE

The No Action Alternative would not authorize the removal of wild horses, as described in the proposed action. This alternative would not conform to rehabilitation options identified in the approved Las Vegas District Normal Fire Rehabilitation Plan, which mandate the closure of burn areas to all grazing during at least two growing seasons. Regulations contained in title 43 CFR 4720.1 and 4770.3 (c) also require closure of burned areas to grazing to allow for rehabilitation. The Wild Horse and Burro Act of 1971 (PL 92-195) mandates that agency actions maintain a thriving ecological balance between wild horses and their environment. Since this alternative does not conform to existing policy and legal mandates, and would not achieve management objectives, it will not be analyzed further in this analysis.

VII. AFFECTED ENVIRONMENT

A. Soil Resources

The soils within the emergency area are generally characterized as aridisols and entisols and are situated on landforms which range from nearly level to strongly sloping surfaces. The soil depth is described as very deep and deep; however, shallow soils are also present to a lesser extent. Soil surface textures are generally coarse and moderately coarse. While medium textured soils also occur, they are less prevalent. Water erodibility hazard generally varies from slight to moderate.

B. Water and Riparian Resources

Two riparian zones are located within the emergency area: Hackberry Canyon and Meadow Valley Wash. Both have been documented to be in the severe use category and are in a degraded condition, due to historic overgrazing. The above-ground water flow found within these areas are the primary water sources for the wild horses and livestock within the emergency area.

C. Vegetative Resources

The vegetation occurring in the emergency gather area is composed of primarily blackbrush and creosote/galleta grass communities. At the proposed trap sites and holding facilities, the vegetation would be anticipated to be predominantly creosote bushes and annual grasses.

D. Wildlife Habitat

The emergency gather area supports two big game species: mule deer and desert bighorn sheep. The desert bighorn sheep population in the Meadow Valley Mountains is estimated to be 75 animals. Furbearers in the area include coyotes, kit and gray fox, bobcats, and mountain lions. Gambel's quail and chukar partridge can be found throughout the region, as well as a variety of reptiles and song birds.

E. Threatened and Endangered Species

The desert tortoise, a federally listed threatened species, occurs in the southern portion of the emergency area. No other listed or sensitive plant or animal species are known to occur in within the proposed project area.

F. Livestock Grazing

Livestock use occurs within this HMA on a yearlong basis, with a total active preference of 2210 AUMs. Use by livestock within the emergency area is primarily made during late fall and winter when temperatures are cooler and ephemeral waters are generally available.

As mandated by the Las Vegas District Normal Fire Rehabilitation Plan, livestock grazing would be restricted (closed) within the burned area for a minimum of two growing seasons to allow natural revegetation.

G. Wild Horses and Burros

The Meadow Valley Mountain HMA is located approximately 22 miles south of Caliente, Nevada, adjacent to Meadow Valley Wash. The HMA is approximately 98,775 acres in size. Over 20 percent of the HMA was consumed by wild fire during the weeks of July 27, 1993 and August 7, 1993. The remaining habitat has documented use levels of over 50 percent, thus limiting forage availability.

Based on the latest census data (September 1992), approximately 160 wild horses occur within the emergency area. This number includes wild horses within the HMA's established boundaries, as well as those wild horses, burros, and mules found in the Breedlove and Rox-Tule grazing allotments.

F. Wilderness Study Areas

Sixty-five percent of the burned area is within the Meadow Valley WSA. The southern half of the emergency gather area is comprised of a portion of the Meadow Valley Mountain HMA, Meadow Valley Range WSA, as well as the western portions of the Breedlove and Rox-Tule allotments. The eastern portions of the Breedlove and Rox-Tule allotments are within the identified boundaries of the Mormon Mountains WSA.

VIII. ENVIRONMENTAL IMPACTS

The following critical elements of the human environment are not present or would not affected by the proposed action in this EA: Air Quality, Areas of Critical Environmental Concern, Cultural Resources, Farm lands (prime or unique), Floodplain, Native American Religious Concerns, Wastes (hazardous or solid), Water Quality (drinking/ground), Visual Resources, Wild and Scenic Rivers, and Socio-Economic Values.

ALTERNATIVE 1-Proposed Action

Impacts to Soils, Water, and Vegetative Resources

Areas within the vicinity of the trap sites and holding facilities would be trampled by horses, disturbing the soil surface structure. Soils could also be compacted at these facilities, due to wetting to minimize dust levels and hoof action. Coarse soils would compact less frequently and to a lesser density than the medium textured soils. The total area of disturbance would be approximately 5 acres.

In the short term, small, localized areas within the vicinity of trap sites and holding facilities would be trampled, with the subsequent loss of vegetation on a total of approximately 5 acres. The removal of approximately 145 wild horses, burros and mules from the emergency gather area would allow the burned areas to revegetate naturally, without concentrated use by grazing animals. Grass species (Indian ricegrass, needlegrass, big galleta and bottlebrush squirreltail) would increase in quantity, quality and vigor when relieved of yearlong grazing pressure from wild horses and livestock. Forage availability, quality and vigor should increase with a reduction in utilization levels. Gradually increasing plant cover will help to reduce soil erosion rates, ultimately improving the Meadow Valley Wash watershed.

Impacts to Wildlife Habitat

Wildlife species would be minimally impacted by removal activities. Helicopter usage and the location of traps and holding facilities could displace individual animals during the short duration of the removal. Long-term improvements in rangeland conditions, as natural revegetation occurs under lessened grazing pressure, would benefit all forage consumers.

Impacts to Threatened and Endangered Species

No impacts would occur to threatened desert tortoise, as the trap sites would be inventoried and approved prior to any facility construction. Any findings of desert tortoise or sign would result in the facilities being moved to a more suitable site.

Long-term benefits to desert tortoises would be anticipated, as vegetation is allowed to reestablish during the grazing closure period. Grasses and forbs would likely increase in quantity under lessened grazing pressure, resulting in an improved forage base for tortoises.

Impacts to Wild Horses and Burros

Unavoidable impacts in the form of injuries to the horses may occur as a result of the removal process. Data obtained from prior gathers have indicated that death loss would not exceed 5 percent of the horses captured (BLM 1990). Potential injuries and fatalities would be minimized through enforcement of contract specifications for safety and humane treatment of the captured animals. BLM representatives would monitor the contractor's activities at all times during the gather to ensure compliance. In the event that BLM personnel conduct this gather, the same stipulations would apply to all staff and all aspects of the removal.

Some stress to the horses would be associated with the helicopter herding operations. These would be minimal impacts to individual animals which would be anticipated to be of short duration, given the standard operating procedures and mitigation measures attached to this proposal.

Removal of wild horses would prevent the harm and possible death of a substantial number of horses and further deterioration of the range (soil erosion, continued degraded vegetative conditions). Wild horses would not be concentrated on the burned areas. Grazing pressure would be reduced during critical growing periods, thus allowing revegetation to occur under optimum conditions. The 15 to 20 animals allowed to remain within the HMA would minimally impact recovering vegetation.

Impacts to Wilderness Study Areas

To the extent possible, potential trap sites would be located outside of the boundaries of the Meadow Valley Mountains and Mormon Mountains Wilderness Study Areas, adjacent to existing roads. In the event that locations within these boundaries are proposed for use, trap sites and/or holding facilities would be located in or immediately adjacent to active washes. No roads or trails would be authorized for this project. The short-term period of use during this proposed action and natural erosional processes would quickly eliminate any traces of the activity, thus avoiding possible impairment of wilderness values.

IX. COORDINATION AND CONSULTATION

Coordination with affected parties has been on-going during the development of this proposal; concerns and comments were incorporated, as appropriate, into the analysis. Copies of the environmental assessment and capture plan were sent to the following persons, groups, and government agencies.

American Bashkir Curley Register
American Horse Protection Association
American Humane Association
American Wild Mustang & Burro Foundation
Animal Protection Institute
Bureau of Reclamation
Las Vegas District Grazing Advisory Board
Commission for the Preservation of Wild Horses
Compassion for Animals
Fund for Animals
Humane Society of So. NV.
International Society for the Protection of Wild Horses and Burros
Life Foundation
National Mustang Association
National Wild Horse Association
Nevada Cattlemen's Association
Nevada Department of Wildlife
Nevada Federation of Animal Protection Organization
Nevada Humane Society
Nevada State Clearinghouse
Nevada State Division of Agriculture
Resource Concepts
Save the Mustangs
Sierra Club
The Nature Conservancy
U.S. Fish and Wildlife Service
U.S. Humane Society
United States Wild Horse and Burro Foundation
Wild Horse Organized Assistance

Reviewers:

Terry L. Smith	CRA Supervisory Range Conservationist
Dawna Ferris	CRA Archeologist and Environmental Coordinator
Kyle Teel	CRA Wildlife Biologist
Marc Pierce	CRA Wilderness Coordinator
Trudy Rhoades	CRA Soil, Water and Air Specialist
Gary McFadden	LVDO Wild Horse and Burro Specialist
Curtis G. Tucker	Caliente Resource Area Manager
Gary Ryan	Las Vegas Acting District Manager

X. Prepared by:

Terry Lee Smith — 9-23-93
Date

Alan B. Shepherd
Wild Horse and Burro Specialist
Caliente Resource Area

Concurred by:

Gary McFadden — 9-28-93
Date

Gary McFadden
Wild Horse and Burro Specialist
Las Vegas District

Dawna E. Ferris — 9-23-93
Date

Dawna Ferris
Environmental Coordinator
Caliente Resource Area

MEADOW VALLEY MOUNTAIN HERD MANAGEMENT AREA

Map Legend

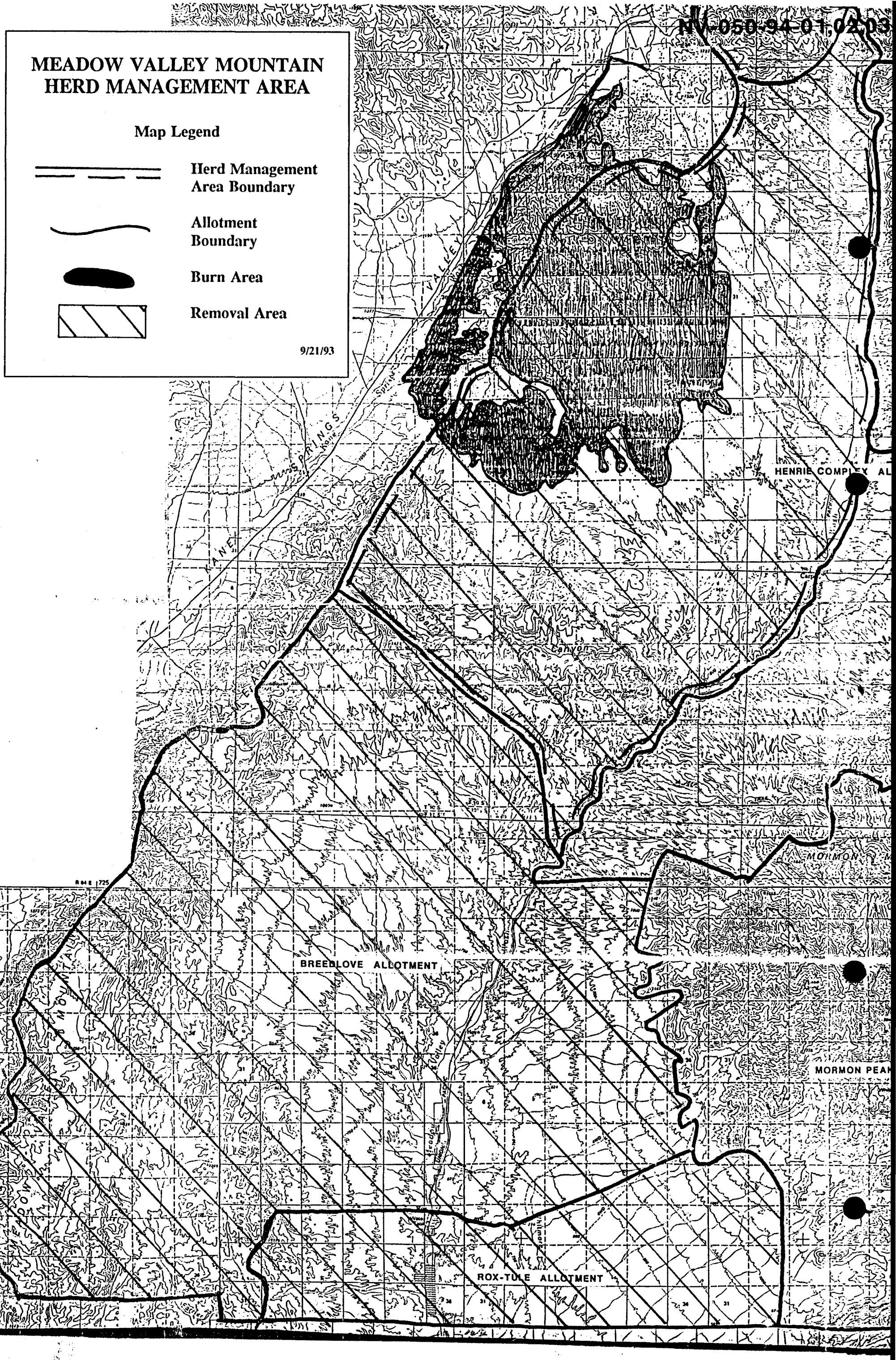
Herd Management Area Boundary

Allotment Boundary

Burn Area

Removal Area

9/21/93



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Nevada State Office
850 Harvard Way
P.O. Box 12000
Reno, Nevada 89520-0006

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

4700 (NV-960)

APR 29 1994

Wild Horse Organized Assistance
c/o Dawn Lappin
P.O. Box 555
Reno, Nevada 89504

Dear Ms. Lappin:

Enclosed is a copy of the Administrative Record for Appeal N5-94-01, 02 and 03 for your records. The Wild Horse Organized Assistance appeal is assigned appeal number N5-94-01.

Sincerely,

Billy R. Templeton
For State Director, Nevada

1 - Enclosure
1. Administrative Record

SECTION 2

1. Chronology of Events Leading to the Appeals of the Meadow Valley Mountain Herd Management Area Emergency Removal and Environmental Assessment No. NV-055-93-31

NV-050-94-01,02,03

CHRONOLOGY OF EVENTS RELATED TO THE
APPEAL OF THE MEADOW VALLEY MOUNTAIN HMA
AND FULL FORCE AND EFFECT GRAZING DECISIONS

Las Vegas District
Caliente Resource Area
March 17, 1994

DATE	TOPIC AND/OR DISCUSSION
July 28, 1993	Meadow Fire (Y416) started on the northwest boundary of the Henrie Complex allotment. The fire burned for 5 days consuming 21,686 acres of the Henrie Complex, Boulder Springs, and Lower Riggs allotments.
Aug. 7, 1993	Kane Fire (Y454) started adjacent to the southern edge of the Meadow Fire in the Henrie Complex. The fire burned for 3 days and consumed 5,500 acres within the Henrie Complex and Boulder Springs allotments.
Aug. 11, 1993	Fire rehabilitation team put together to develop a fire rehabilitation plan for the Meadow and Kane fires.
Sept. 23, 1993	Meadow Valley Mountain HMA Emergency Wild Horse Removal Plan and Environmental Assessment (EA #NV-055-93-31) completed.
	Nevada State Director approved the emergency wild horse removal.
	Caliente Area Manager signs FONSI for EA #NV-055-93-31.
Sept. 27, 1993	Las Vegas District Manager signs Full Force and Effect Decision for wild horse removal.
Sept. 28, 1993	Las Vegas District Manager signs FONSI for EA #NV-055-93-31.
Sept. 29, 1993	Emergency removal within Meadow Valley Mountain HMA initiated.
Oct. 5, 1993	Las Vegas District Manager sent memo to Caliente Area Manager directing him to issue the allotment grazing decisions consistent with the Environmental Assessment.
Oct. 7, 1993	Las Vegas District Manager issued Notices of Closure to the livestock permittees for the burn areas at the request of the Caliente Area Manager.
Oct. 11, 1993	Emergency removal completed.
Oct. 12, 1993	Caliente Area Manager sent by certified mail copies of the emergency removal plan, record of decision and environmental assessment to affected interests.
Oct. 15, 1993	Caliente Area Manager issued Full Force and Effect grazing decisions to the Henrie Complex permittees. These decisions closed the burn areas to grazing but allowed livestock use in the adjacent areas that the wild horses were removed from. The permittees were directed to herd their livestock to keep them off the burn area.
Nov. 2 & 29, 1993	Caliente Area Manager received appeals from the Wild

SECTION 3

1. Robert Lewis Ten Year Grazing Permit Accepted March 18, 1993 with Attached Burn Terms and Conditions

2. Kevin Olson Ten Year Grazing Permit Accepted December 15, 1993 with Attached Burn Terms and Conditions

3. Robert Lewis Ten Year Grazing Permit Accepted November 25, 1993

4. Kevin Olson Ten Year Grazing Permit Accepted February 19, 1993

Form 4130-2a
(September 1987)

NV-050-94-01,02,03

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

GRAZING PERMIT

STATE	NV
OFFICE	055
OPERATOR NUMBER	275062
PREFERENCE CODE	03
DATE PRINTED	03/18/94
TERM	11/24/1993 TO 02/28/20

LEWIS, ROBERT C. AND
VIVIAN C.

P.O.BOX 520
MOAPA, NV 89025

BUREAU OF LAND MANAGEMENT
CALIENTE R.A.
P.O. BOX 237
CALIENTE, NV 89008

THIS GRAZING PERMIT IS OFFERED TO YOU BASED ON YOUR RECOGNIZED GRAZING PREFERENCE ON THE PUBLIC LANDS AND/OR OTHER LANDS ADMINISTERED BY THE BLM. YOU ARE AUTHORIZED TO MAKE GRAZING USE TO THE EXTENT OF YOUR ACTIVE GRAZING PREFERENCE AS SHOWN BELOW UPON YOUR ACCEPTANCE OF THE TERMS AND CONDITIONS INCORPORATED HEREIN AND YOUR PAYMENT OF GRAZING FEES.

ALLOT / PASTURE	LIVESTOCK NUMBER	KIND	GRAZING PERIOD BEGIN	END	%PL	TYPE USE	AUM
1010 BREEDLOVE							
	75	CATTLE	06/15	02/28	90	ACTIVE	57
	38	HORSE	06/15	02/28	90	ACTIVE	29
1032 GRAPEVINE							
	47	CATTLE	03/01	02/28	100	ACTIVE	56
1034 HENRIE COMPLEX							
	81	CATTLE	03/01	02/28	100	ACTIVE	97

TERMS AND CONDITIONS:

REFER TO ATTACHMENT 1 FOR LISTING OF THE HENRIE COMPLEX ALLOTMENT TERMS AND CONDITIONS AS STATED IN THE FULL FORCE AND EFFECT GRAZING DECISION JANUARY 31, 1992.

REFER TO ATTACHMENT 2 FOR LISTING OF THE BREEDLOVE ALLOTMENT TERMS AND CONDITIONS AS STATED IN THE FULL FORCE AND EFFECT GRAZING DECISION JANUARY 31, 1992.

REFER TO ATTACHMENT 3 FOR LISTING OF THE GRAPEVINE ALLOTMENT TERMS AND CONDITIONS AS STATED IN THE FULL FORCE AND EFFECT GRAZING DECISION JANUARY 31, 1992.

REFER TO ATTACHMENT 4 FOR TERMS AND CONDITIONS FOR THE MEADOW AND PASS FIRE CLOSURE AREA ON HENRIE COMPLEX ALLOTMENT.

CASE FI

Form 4f30-2a
(September 1987)

OPERATOR NUMBER: 275062

APPROVED BY: _____ _____
AREA MANAGER DATE

LOTMENT SUMMARY (AUM'S)

LOT	PREFERENCE ACTIVE	SUSP	TOTAL
010 BREEDLOVE	864		864
032 GRAPEVINE	560		560
034 HENRIE COMPLEX	975		975

S PERMIT ; 1. CONVEYS NO RIGHT, TITLE OR INTEREST HELD BY THE UNITED STATES ANY LANDS OR RESOURCES AND 2. IS SUBJECT TO (A) MODIFICATION, SUSPENSION OR CELLATION AS REQUIRED BY LAND PLANS AND APPLICABLE LAW; (B) ANNUAL REVIEW TO MODIFICATION OF TERMS AND CONDITIONS AS APPROPRIATE; AND (C) THE TAYLOR ZING ACT, AS AMENDED, THE FEDERAL LAND POLICY AND MANAGEMENT ACT, AS NDED, THE PUBLIC RANGELANDS IMPROVEMENT ACT, AND THE RULES AND REGULATIONS OR HEREAFTER PROMULGATED THEREUNDER BY THE SECRETARY OF THE INTERIOR.

EPTED:
NATURE OF PERMITTEE: Robert C Lewis (under protest) DATE March 17-94

A MANAGER: Curtis R Tucker DATE 3-21-94

CASE FILE

ATTACHMENT A

SPECIFIC TERMS AND CONDITIONS FOR THE NEW FEDERAL GRAZING PERMIT

Henrie Complex Allotment

1. Grazing will be permitted in accordance with grazing Prescriptions 1 and 2 identified in the Opinion as amended.

2. Grazing prescription areas within your allotment are delineated on Attachment 1, titled **Henrie Complex Allotment Map.**

3. Livestock grazing use shall be authorized in the Henrie Complex allotment 06/15 through 02/28 in Prescription 1 and 03/01 through 02/28 in the Prescription 2 area and Non-Prescription area as identified in the following table and Attachment I.

SPECIFIC USE AREAS AND
IDENTIFIED PERIODS OF USE

PRESCRIPTION AREAS[1/]	SEASON OF USE BEGIN DATE	END DATE
Prescription 1 [2/]	06/15	02/28
Prescription 2 [3/]	03/01	02/28
Non-Prescription	03/01	02/28

[1/] Refer to Attachment I.
[2/] Prescription 1, Tortoise Habitat Categories I, II, and Intensive III.
[3/] Prescription 2, Tortoise Habitat Category III non-intensive.

4. All vehicle use in desert tortoise habitat within the **Henrie Complex allotment** shall be restricted to existing roads and trails.

5. Trash and garbage shall be removed from each camp site that is associated with livestock grazing operations (branding, sheep herding, roundup, etc.) and disposed of off site in a designated facility. No trash or garbage shall be buried at camp sites.

6. Use of hay or grains as a feeding supplemental shall be prohibited in desert tortoise habitat to avoid the introduction of non-native plant species. Mineral, protein and salt blocks are authorized subject to 43 CFR section 4130.6-2(c).

7. The allotment shall include at a minimum the following key species for monitoring purposes **where appropriate based upon density and availability:** galleta grass (*Hilaria jamesii*) and (*H. rigida*), bush muhly (*Muhlenbergia porteri*), sand dropseed (*Sporobolus cryptandrus*), Indian ricegrass (*Oryzopsis hymenoides*), black grama (*Bouteloua eriopoda*), desert needlegrass (*Stipa speciosa*), range ratany (*Krameria parvifolia*), ephedra (*Ephedra spp.*), white burrobrush (*Hymenoclea salsola*) and winterfat (*Eurotia lanata*).

8. The following table identifies key areas, species and the maximum allowable use levels for specified periods lof livestock grazing use, which shall be used at a min-imum for monitoring purposes within Prescription 1 and 2 areas in the Henrie Complex allotment. As additional key species and or key areas are determined necessary for monitoring purposes, maximum allowable use levels will be estab-

lished based upon the conditions as set forth in the Opinion for Prescription 1 and/or 2 areas.

EXISTING KEY AREAS, SPECIES AND ALLOWABLE USE LEVELS

KEY AREA & LEGAL DESCRIPTION	KEY SPECIES	PRESCRIPTION 2	
		10/15 TO 02/28	03/01 TO 10/14
1 T.10S., R.66E., Sec.6 (M-W)	Big galleta grass Nevada ephedra	≤50% ≤45%	≤40% ≤40%

9. The following table identifies the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes within Prescription 1 and/or 2 areas.

ALLOTMENT NAME	PRESCRIPTION	ALLOWABLE USE LEVELS AND USE PERIODS PER GRAZING PRESCRIPTION		
HENRIE COMPLEX	PRESCRIPTION 1	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	Key Perennial Grasses - ≤50% Key Perennial Shrubs and Forbs - ≤40%	No livestock use will be allowed during this period.
	PRESCRIPTION 2	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	Key perennial grasses - ≤ 50% Key perennial shrubs & forbs - ≤ 45%	All Perennial Species - ≤40%

10. When the allowable use levels are reached for the Prescription 1 and/or 2 areas, the livestock must be removed from the allotment unless other management alternatives are authorized by the Caliente Resource Area Manager that are consistent with the Opinion and this decision.

11. Adequate livestock control must be provided by existing range improvements within the Henrie Complex allotment to prevent livestock from continually migrating into the Prescription 1 area during the period 03/01 through 06/14. If livestock continually migrate into the Prescription 1 area, the entire allotment will be required to be managed under Prescription 1 until range improvements become available to stop such action.

12. By March 1, 1993 all cattle (six months of age or older at turn out) will be required to be ear tagged by you with BLM issued ear tags. Additionally, you are required to submit a list of ear tag numbered cattle turned out/authorized on the Henrie Complex allotment. The list must be submitted to the Caliente Resource Area office within seven (7) days of turn out. At the end of the authorized grazing period, any ear tag numbers not accounted for, shall be reported to the Caliente Resource Area office within 15 days.

a. Since your operation is of a year round nature and it would be difficult to ear tag all cattle prior to the March 1, 1992 date, I have extended the date to ear tag all your cattle to March 1, 1993. In order to assure adequate cattle control is provided to prevent cattle from continually migrating into the Prescription 1 area, all cattle found in the Prescription 1 area during the period 03/01/92 through 06/14/92 shall be ear tagged by you with a BLM ear tag. Terms and Conditions number 15 and 16 will then be followed.

13. You are required to remove and return to the Caliente Resource Area office all BLM issued ear tags of cattle shipped/sold. This must be done prior to being issued replacement tags.

14. Replacement tags for brush loss, unfound death loss, or other unexplained losses will be issued on a case by case basis at the determination of the Caliente Resource Area Manager.

15. Any livestock found in the Prescription 1 area during the period of 03/01 through 06/14 shall be relocated to the Prescription 2 and/or Non-Prescription area within 72 hours. The ear tag numbers of any cattle found in the Prescription 1 area during the period 03/01 through 06/14 shall be recorded and submitted in writing to the Caliente Resource Area office within five (5) days of being observed.

16. Any livestock found in the Prescription 1 area during the period of 03/01 through 06/14 and which were previously recorded and relocated to the Prescription 2 and/or Non-Prescription area shall be removed from the Henrie Complex allotment within 72 hours of being observed.

17. Applications for changes in grazing use must be in written form and be received by the Caliente Resource Area office no later than 15 days prior to the desired date of change.

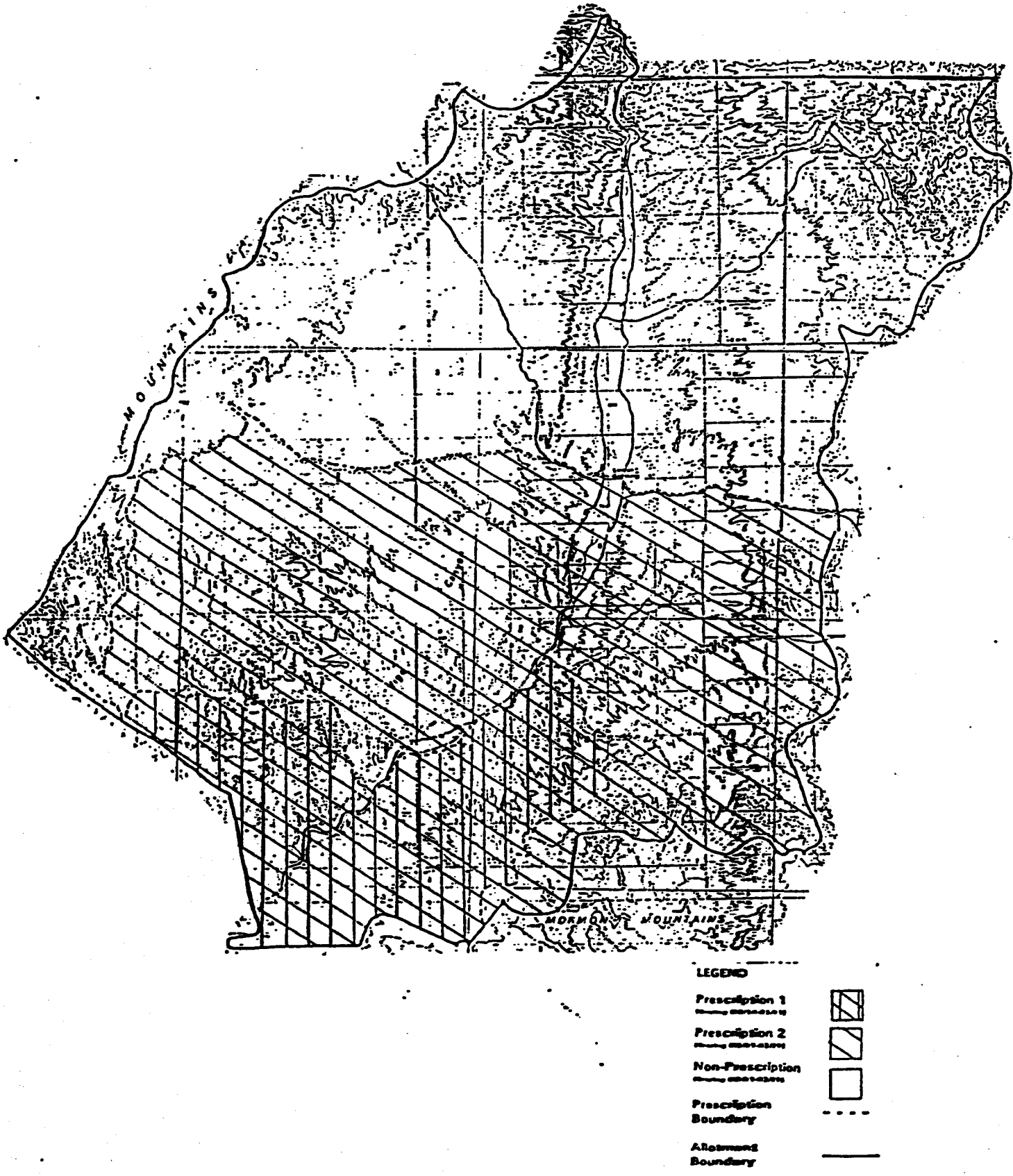
18. Applications for changes in grazing use filed after a billing notice has been issued, and which require the issuance of a replacement bill or supplemental bill shall be subject to a ten (10) dollar service charge.

19. Grazing Applications will be issued on a yearly basis showing all grazing use as active by Prescription 1, 2 and/or Non-Prescription areas. If you desire to take all or partial non-use for the grazing year, you must indicate this in writing on your Grazing Application, along with your reason(s).

20. A statement of Actual Grazing Use made on the Henrie Complex allotment by grazing Prescription area, 1, 2 and/or Non-Prescription areas must be received in the Caliente Resource Area office no later than 15 days after the last day of authorized grazing use. In the case of year round grazing, this Actual Grazing Use statement must be received in the Caliente Resource Area office no later than March 15th of each year.

ATTACHMENT 1

HENRIE COMPLEX ALLOTMENT



ATTACHMENT B

SPECIFIC TERMS AND CONDITIONS FOR THE MEADOW AND PASS FIRE CLOSURE AREA

1. These specific Terms and Conditions shall remain in effect for a minimum of two years, beginning November 24, 1993 and continuing until monitoring indicates resource objectives for the burn area have been attained.

2. Livestock use will only be authorized to the east of the Union Pacific Railroad in the Henrie Complex allotment (Attachment 2), if you can show evidence the railroad right-of-way fence has been repaired and maintained by January 1, 1994. Should this right-of-way fence not be maintained and repaired than the **entire** Henrie Complex allotment will be closed to livestock grazing.

3. Should continued maintenance and repair of the right-of-way fence after January 1, 1994 fail to keep livestock from the burn closure area, livestock shall be removed from the allotment immediately. The total closure of the Henrie Complex allotment to grazing, in order to insure protection of the burn area, will be implemented by the Bureau of Land Management under the authority of this decision.

4. Monitoring data (i.e. frequency, utilization, plant cover, density and or Community Structure information) will be collected to determine if the closure resource objectives have been met. Attachment 3 explains the methodologies to be employed in collecting the respective monitoring data.

5. Resource objectives established for the burn area in the Henrie Complex allotment for **Key Areas 1 and 2** are identified below:

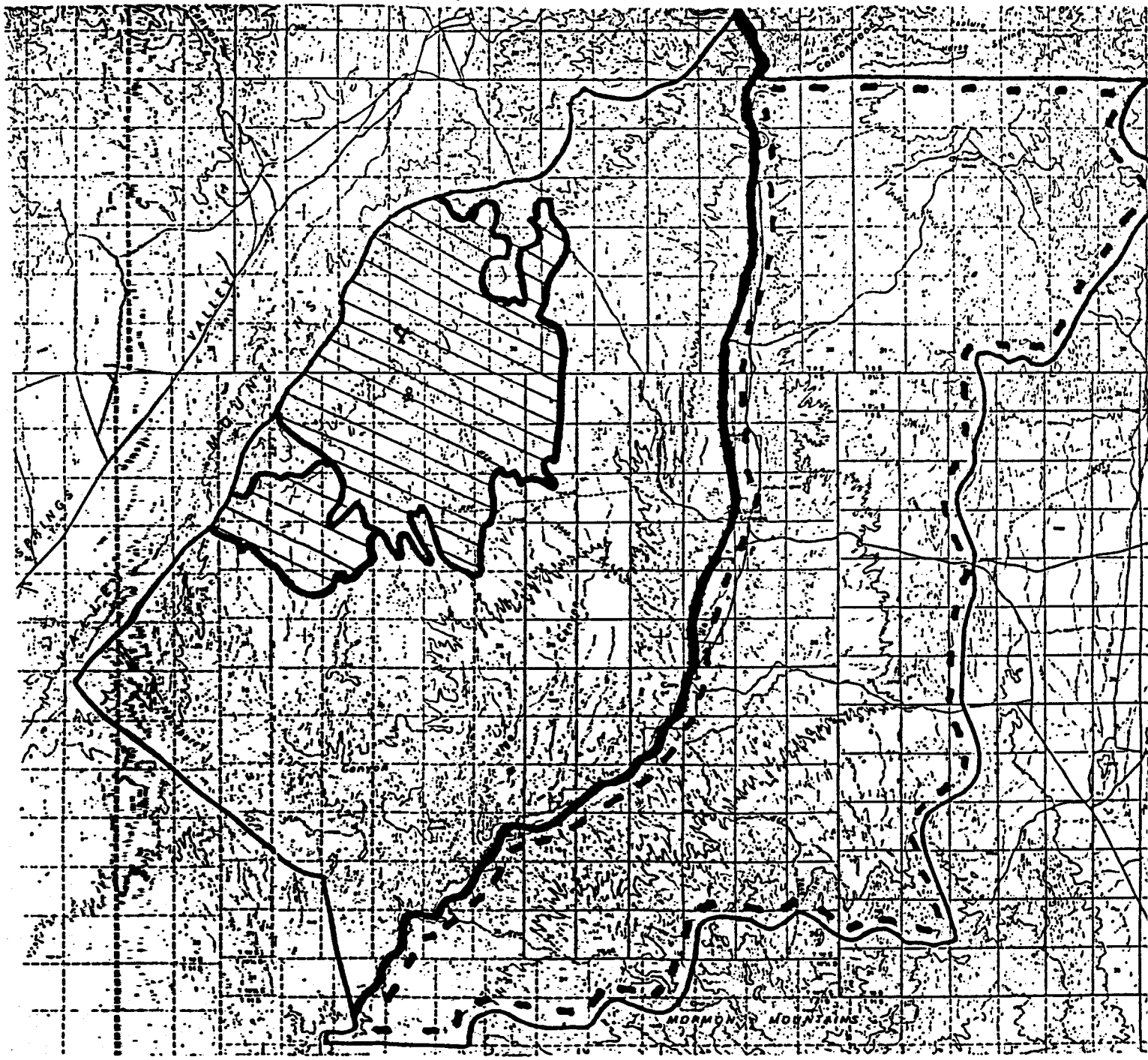
   The frequency of occurrence of key perennial species shall fall within the range of values identified in **Table 1.** The ranges identified in **Table 1** are based on a statistical analysis of the frequency data collected at the two Key Areas. The age class of key perennial species sampled shall be mature plants, 2 years or older, in order to insure plant establishment and improved rehabilitative conditions.

Table 1. Percent Frequency Value Ranges.

Key Area Number	Key Perennial Species	Frequency Value Ranges
1	HIRI	21%-37%
2	ARPU9	45%-69%

ATTACHMENT 1

Henrie Complex Allotment
Authorized Livestock Use Area



LEGEND

Authorized Use Area:

Meadow and Pass Burns:

Allotment Boundary:

Reservoir:

Spring:

ATTACHMENT 3

5.22 OCULAR ESTIMATE METHOD. The Ocular Estimate Method is used to determine utilization along a transect by ocular estimate of the percentage by weight of forage removed from individual plants of the key species or from all plants of the key species on small plots.

a. Areas of Use. This method has wide applicability and is suited for use with grasses and forbs.

RANGELAND MONITORING - UTILIZATION STUDIES

b. Advantages and Limitations. The most important advantage is speed. The method is also reasonably accurate, depending upon the ability of the examiners. Vegetation is not disturbed. Reliability of estimates is increased by limiting observations to individual plants or small areas (plots). Errors in personal judgment on individual plants or plots frequently tend to be compensating. A limitation is that exclosures, cages, or fenced areas may be needed for training.

c. Equipment.

(1) Study Location and Documentation Data Form. (See Illustration 1.)

(2) Utilization Study Data - Ocular Estimate Method Form. (See Illustration 3.)

(3) Frames to delineate plots (if necessary).

(4) Clipping shears.

(5) Paper sacks.

(6) Spring scale, calibrated in grams.

d. Training. The accuracy of utilization percentage estimates is dependent upon thoroughness of training and ability of examiners to identify the plant species and to estimate amount of use. The examiners must first compare their ocular estimates against actual weight values obtained by clipping and weighing. (See Section 3, this Reference, and Section 4, Technical Reference 4400-1.)

(1) Training Sites. Locate sites for training purposes on key areas or on similar unforaged or protected sites. If it is unlikely that a site containing unforaged vegetation will be available after the foraging season, it will be necessary to construct temporary exclosures or install cages on key areas prior to the period of use.

(2) Making Ocular Estimates. Training involves estimating utilization on individual plants of the key species or on all plants of the key species on a small plot. If plots are to be used for the studies, use plots of the same size for training. (See Section 3.73c.) The plots should be small enough so that the entire plot is clearly visible to the examiner. Examiners should practice making ocular estimates as follows:

(a) Clip individual plants of the key species, or plants of the key species on a plot, to simulate foraging (sample A).

(b) Estimate the percentage of weight removed.

(c) Clip the remaining forage of the selected plants by removing all current year's growth available to the foraging animals (sample B).

(d) Put the clippings for samples A and B in separate paper sacks.

(e) Weigh samples A and B separately and subtract sack weight from the weight of each sample.

(f) Calculate the percent simulated use by dividing the weight of sample A by the combined weight of samples A and B and multiplying the value by 100.

(g) Compare estimates with the actual percent forage removed and determine the error of the estimates. Continue training until examiners can recognize the different percentages of use with minimum acceptable error.

(3) Checking Ocular Estimates. Training checks should be mad and recorded each day prior to field estimation. This gives a permanent record of the accuracy of each examiner's ocular estimates.

e. Establishing Studies. Select key area(s) and key species and determine the number, length, and location of the transects. (See Section 3, this Reference, and Section 5, Technical Reference 4400-1.) Document the location and other pertinent information concerning a transect on the Study Location and Documentation Data Form. (See Illustration 1, this Reference, an Section 6, Technical Reference 4400-1.)

f. Sampling Process. After examiners are trained and are confident in their ability to recognize various degrees of utilization, proceed with the collection of utilization data.

(1) At each interval along a transect, select the plant of th key species nearest the toe and estimate and record the percent utilization.

(2) If a plot is being used, place the frame immediately in front of the toe or on the nearest site having the key species and estimate and record the percent utilization.

(3) Record the percent utilization on the Utilization Study Data - Ocular Estimate Method Form. (See Illustration 3.)

g. Calculating Percent Utilization. Calculate the average percen utilization by totaling the utilization estimates for the plants or plots along the transect and dividing the total by the number of sampled plants or plots. Record the average utilization on the Utilization Study Data - Ocular Estimate Method Form. (See Illustration 3.)

RANGELAND MONITORING - UTILIZATION STUDIES

5.23 KEY FORAGE PLANT METHOD. The Key Forage Plant Method is an ocular estimate of forage utilization within one of six utilization classes. Observations are made of the appearance of the rangeland and especially the key species, along a transect which traverses the key area.

a. Areas of Use. This method is adapted to areas where perennial grasses, forbs, and/or browse plants are the key species and utilization data must be obtained over large areas using few examiners.

b. Advantages and Limitations. This method is rapid and does not require unused areas for training purposes. Estimates are based on a descriptive term representing a broad range (class) of utilization rather than a precise amount. Different examiners are more likely to estimate utilization in the same classes than to estimate the same utilization percentages.

c. Equipment.

(1) Study Location and Documentation Data Form. (See Illustration 1.)

(2) Utilization Study Data - Key Forage Plant Method Form. (See Illustration 4.)

(3) Tally counter (optional).

d. Training. Personal judgment is involved in any estimation method. Estimates are only as good as the training and experience of the examiners. (See Section 3, this Reference, and Section 4, Technical Reference 4400-1.) The training described for the Ocular Estimate Method often helps examiners using this method make the utilization class estimations. (See Section 5.22d.) This method requires that the examiners be trained to:

(1) Identify the plant species.

(2) Recognize the six herbaceous or six browse utilization classes using the written class descriptions.

(3) Think in terms of the general appearance of the rangeland (slightly used, heavily used, etc.) at each observation point, rather than weight or height removed.

e. Establishing Studies. Select key area(s) and key species and determine the number, length, and location of the transects. (See Section 3, this Reference, and Section 5, Technical Reference 4400-1.) Document the location and other pertinent information concerning a transect on the Study Location and Documentation Data Form. (See Illustration 1, this Reference, and Section 6, Technical Reference 4400-1.)

RANGELAND MONITORING - UTILIZATION STUDIES

f. Sampling Process. After examiners are trained and have confidence in their ability to judge utilization by utilization class ("light", "heavy", etc.), proceed with the collection of utilization data. At each observation point along the transect, estimate the utilization class using the written description of the class. In those cases where part of a class description does not apply (example: percentage of seedstalks remaining), judge utilization based on those parts of the description that do apply. An observation point is the immediate area containing the key species visible to examiners when standing at a particular location along the transect. (See Section 3.73b.) Record the estimates by dot count by utilization class on the Utilization Study Data - Key Forage Plant Method Form. (See Illustration 4.)

(1) Herbaceous Utilization Classes. Six utilization classes are used to show relative degrees of use of key herbaceous species (grasses and forbs). Each class represents a numerical range of percent utilization. Estimate utilization within one of the six classes. Utilization classes are described as follows:

(a) No Use (0-5%). The rangeland shows no evidence of grazing use; or the rangeland has the appearance of negligible grazing.

(b) Slight (6-20%). The rangeland has the appearance of very light grazing. The key herbaceous forage plants may be topped or slightly used. Current seedstalks and young plants of key herbaceous species are little disturbed.

(c) Light (21-40%). The rangeland may be topped, skimmed, or grazed in patches. The low value herbaceous plants are ungrazed and 60 to 80 percent of the number of current seedstalks of key herbaceous plants remain intact. Most young plants are undamaged.

(d) Moderate (41-60%). The rangeland appears entirely covered as uniformly as natural features and facilities will allow. Fifteen to 25 percent of the number of current seedstalks of key herbaceous species remain intact. No more than 10 percent of the number of low value herbaceous forage plants are utilized. (Moderate use does not imply proper use.)

(e) Heavy (61-80%). The rangeland has the appearance of complete search. Key herbaceous species are almost completely utilized with less than 10 percent of the current seedstalks remaining. Shoots of rhizomatous grasses are missing. More than 10 percent of the number of low value herbaceous forage plants have been utilized.

(f) Severe (81-100%). The rangeland has a mown appearance and there are indications of repeated coverage. There is no evidence of reproduction or current seedstalks of key herbaceous species. Key herbaceous forage species are completely utilized. The remaining stubble of preferred grasses is grazed to the soil surface.

RANGELAND MONITORING - UTILIZATION STUDIES

(2) Browse Utilization Classes. Six utilization classes show relative degrees of use of available current year's growth (leaders) of key browse plants (shrubs, half shrubs, woody vines, and trees). Each class represents a numerical range of percent utilization. Estimate utilization within one of the six classes. Utilization classes are described as follows:

(a) No Use (0-5%). Browse plants show no evidence of use; or browse plants have the appearance of negligible use.

(b) Slight (6-20%). Browse plants have the appearance of very light use. The available leaders of key browse plants are litle disturbed.

(c) Light (21-40%). There is obvious evidence of leader use. The available leaders appear cropped or browsed in patches and 60 to 80% of the available leader growth of the key browse plants remains intact.

(d) Moderate (41-60%). Browse plants appear rather uniformly utilized and 40 to 60% of the available leader growth of key browse plants remains intact.

(e) Heavy (61-80%). The use of the browse gives the appearance of complete search. The preferred browse plants are hedged and some plant clumps may be slightly broken. Nearly all available leaders are used and few terminal buds remain on key browse plants. Between 20 to 40% of the available leader growth of the key browse plants remains intact.

(f) Severe (81-100%). There are indications of repeated coverage. There is no evidence of terminal buds and usually less than 20% of available leader growth on the key browse plants remains intact. Some, and often much, of the second and third years' growth of the browse plants has been utilized. Hedging is readily apparent and the browse plants are more frequently broken.

g. Calculating Percent Utilization. Calculate the percent utilization as follows:

(1) Convert the dot count to the number of observations for each utilization class.

(2) Multiply the number of observations in each utilization class times the midpoints of the class intervals.

(3) Total the products for all classes.

(4) Divide the sum by the total number of observations on the transect.

(5) Record the average percent utilization on the Utilization Study Data - Key Forage Plant Method Form. (See Illustration 4.)

RANGELAND MONITORING - TREND STUDIES

4.42 COMMUNITY STRUCTURE ANALYSIS (CSA) METHOD.

a. General Description. The Community Structure Analysis (CSA) Method assigns an "importance value" to each species to describe its status in the community. This value is based on relative cover, relative density, and relative frequency. A 100-point pace transect is run to collect the vegetation data. Close-up and general view photographs should be used with this method. The following indicators of trend are monitored with this method: (See Section 3.3.)

(1) Foliar cover (including litter)

(2) Density

(3) Frequency

(4) Composition by foliar cover and density

b. Areas of Use. This method is recommended for grass-shrub vegetation types.

c. Advantages and Limitations. The method is easy to use and interpret. Because the importance is based on "relative" rather than "absolute" values, it is less affected by estimator bias. The relative position of a plant species in the community is essentially undisturbed by year-to-year differences in rainfall, as density and frequency tend to compensate for fluctuations in production.

d. Equipment.

(1) Study Location and Documentation Data Form (See Illustration 3.)

(2) Trend Study Data - Community Structure Analysis Method--Foliar Cover Data Form (See Illustration 10.)

(3) Trend Study Data - Community Structure Anlaysis Method--Density and Frequency Data Form (See Illustration 11.)

(4) Trend Study Data - Community Structure Analysis Method--Summary Form (See Illustration 12.)

(5) Photo Identification Label (See Illustration 2.)

(6) Frame to delineate the 3- X 3-foot photo plots

(7) Stakes - 3/4- or 1-inch angle iron not less than 16 inches long

RANGELAND MONITORING - TREND STUDIES

(8) Hammer

(9) Permanent yellow or orange spray paint

(10) Camera - 35-mm with a 28-mm wide-angle lens

(11) Exposure meter (if camera is not equipped with one)

(12) Film

(13) Tripod (optional)

(14) Black felt-tip pen

(15) Microplot frame - 5 X 10 centimeters divided into quarters

(16) Circular plot frame - 9.6 square feet or smaller if vegetation is dense

(17) Tally counter (optional)

(18) Compass

(19) Steel post

(20) Post driver

e. Training. The accuracy of the data depends on the training and ability of the examiners. (See Section 3, this Reference, and Section 4, Technical Reference 4400-1.)

(1) Examiners must be able to identify the plant species.

(2) Examiners must know how to collect foliar cover data.

(3) Examiners should be consistent in determining the number of individual plants. For most plant species, individuals are readily distinguished. However, most communities contain some species that reproduce vegetatively. Determination of what constitutes a plant unit in such cases is somewhat arbitrary. For rhizomatous grasses such as western wheatgrass (Agropyron smithii), each culm group can be visualized as an actual or potential plant unit, as can rooted stoloniferous units of such species as vine mesquite (Panicum obtusum). Mat or sod-forming plants such as blue grama (Bouteloua gracilis) or alkali sacaton (Sporobolus airoides) usually start growth as small, distinct clumps, but may spread to plants a yard or more in

diameter. As this occurs, they tend to fragment into more-or-less separate units, and it is these separate units that should be counted as actual or potential individuals.

(4) Examiners must be familiar with the operation of the camera equipment.

f. Establishing Transects. Careful establishment of transects is a critical element in obtaining meaningful data. (See Sections 5.2 through 5.4, Technical Reference 4400-1.)

(1) Site Selection. Stratify the allotment, wildlife habitat area, herd management area, watershed area, or other designated management area; select the key area(s) and key species; and determine the number, length, and location of the transects. (See Section 5.1, Technical Reference 4400-1.)

(2) Number of Transects. Establish one transect on each key area; establish more if needed. (See Sections 1 and 5, Technical Reference 4400-1.)

(3) Transect Layout.

(a) Drive an angle iron location stake into the ground to permanently mark the location of each transect. (See Illustration 13.)

(b) At the location stake, determine the transect bearing and select a prominent distant landmark such as a peak, rocky point, etc., that can be used as the transect bearing point. Drive an angle iron stake into the ground at a point 6 feet from the location stake along the transect bearing. (See Illustration 13.)

(c) Paint the transect location and transect bearing stakes with bright-colored permanent spray paint (yellow or orange) to aid in relocation. Repaint these stakes when subsequent readings are made.

(4) Reference Post or Point. Permanently mark the location of each transect by means of a reference post (steel post) placed about 100 feet from the transect location stake. Record the bearing and distance from the post to the transect location stake. An alternative is to select a reference point, such as a prominent natural or physical feature, and record the bearing and distance from that point to the transect location stake. If a post is used, it should be tagged to indicate that it marks the location of a monitoring study established by the Bureau of Land Management and that it should not be disturbed.

(5) Transect Identification. Number transects for proper identification to ensure that the data collected can be positively associated with specific sites on the ground. (See Illustration 1.)

(6) Transect Documentation. Document the location, starting point, bearing, sampling interval, and other pertinent information concerning a transect on the Study Location and Documentation Data Form. (See Illustration 3, this Reference, and Section 6, Technical Reference 4400-1.) Plot the precise location of the transects on detailed maps and/or aerial photos.

g. Taking Photographs. The directions for taking close-up and general view photographs are described in Section 3.4.

h. Sampling Process. The studies data are collected by species along a 100-point pace transect. (See Section 3.1.) Microplots are read at each point and a 9.6-square-foot, or other size, circular plot is read at each tenth microplot. (See Section 3.2.) Data are recorded on the Trend Study Data - Community Structure Analysis Method--Foliar Cover Data Form and the Trend Study Data - Community Structure Analysis Method--Density and Frequency Data Form. (See Illustrations 10 and 11.) When the transects are reread, follow the same process that was used when they were established. In addition to collecting the specific studies data, general observations should be made of the study sites. (See Section 3.5.)

(1) Collecting Cover Data.

(a) Beginning at one pace from the transect bearing stake, along the transect bearing, collect cover data with a 5- X 10-cm microplot frame at every pace (every alternate step), or other prescribed interval, along the transect for a total of 100 samples. Center the microplot frame in front of the toe. (See Illustration 13.)

(b) With each placement of the microplot frame, estimate the foliar coverage of each perennial plant species. Record the data by dot count tally, by species, by cover class, on the Trend Study Data - Community Structure Analysis Method--Foliar Cover Data Form. (See Illustration 10.) Foliar coverage data may also be collected for annual plant species. The cover classes are as follows:

Cover Class	Range of Coverage	Midpoint of Range
1	1-5%	2.5%
2	5-25%	15.0%
3	25-50%	37.5%
4	50-75%	62.5%
5	75-95%	85.0%
6	95-100%	97.5%

(c) Alternative cover classes can be used with this method. When transects are reread, use the same cover classes used when the studies were established. An example of ten cover classes is as follows:

RANGELAND MONITORING - TREND STUDIES

Cover Class	Range of Coverage	Midpoint of Range
1	1 - 5%	2.5%
2	5 - 12.5%	8.75%
3	12.5 - 25%	18.75%
4	25 - 37.5%	31.25%
5	37.5 - 50%	43.75%
6	50 - 62.5%	56.25%
7	62.5 - 75%	68.75%
8	75 - 87.5%	81.25%
9	87.5 - 95%	91.25%
10	95 - 100%	97.5%

(d) Estimate the undisturbed foliar cover for grasses, forbs, and shrubs. Consider all individuals of a plant species in the microplot as a unit. All other kinds of plants are ignored as each plant species is considered. The plants do not have to be rooted in the plot.

(e) The 5- X 10-cm microplot frame is divided into fourths to assist in estimation.

(f) Overlapping foliar cover is included in the cover estimates by species; therefore, total cover may exceed 100 percent. Total cover may not reflect actual ground cover.

(g) Estimate and record the cover for litter (loose plant material or standing dead material) and rock (1/2 inch in diameter and larger).

(2) Collecting Density and Frequency Data.

(a) At each tenth microplot, collect density data with a 9.6-square-foot circular plot. Center the circular plot frame in front of the toe. (See Illustration 13.) A total of ten samples is collected. Depending on the density of the vegetation, a smaller size circular plot may be used. Record the number of plants by species for all perennial grasses, forbs, and shrubs on the Trend Study Data - Community Structure Analysis Method--Density and Frequency Data Form. (See Illustration 11.) Density and frequency data may also be collected for annual plant species.

(b) Count by species all plants rooted within the plot. The majority of the base of the plant must be in the plot to be counted.

i. Calculations.

(1) Cover. Calculate the percent cover by species as follows:

(a) Convert the dot count for each species in each cover class to the number of plots that included that species in that cover class.

(b) Multiply this value times the midpoint of the appropriate cover class.

(c) Total the products for all cover classes by species.

(d) Divide the sum by the total number of microplots sampled on the transect (usually 100).

(e) Record the percent cover by species on the Trend Study Data - Community Structure Analysis Method--Foliar Cover Data Form and on the Trend Study Data - Community Structure Analysis Method--Summary Form. (See Illustrations 10 and 12.)

(2) Density. Calculate the density for each plant species by adding the number of plants of the species counted in the 10 circular plots. Record the totals on the Trend Study Data - Community Structure Analysis Method--Density and Frequency Data Form and on the Trend Study Data - Community Structure Analysis Method--Summary Form. (See Illustrations 11 and 12.)

(3) Frequency. Calculate the percent frequency for each plant species by dividing the number of circular plots in which the species occurred by the total number of circular plots sampled (usually 10) and multiplying the value by 100. Record the percent frequency on the Trend Study Data - Community Structure Analysis Method--Density and Frequency Data Form and on the Trend Study Data - Community Structure Analysis Method--Summary Form. (See Illustrations 11 and 12.)

(4) Importance Value. The importance value of a species is a composite score of the relative cover, relative density, and relative frequency; it represents the relative importance of that species in the plant community. Calculate the relative values by dividing the individual species values for cover, density, and frequency, by the total values for these data categories for all species. Plant species can be ranked by importance value. The total community has an importance value of 3.00. The importance value is calculated and recorded on the Trend Study Data - Community Structure Analysis Method--Summary Form. The percent plant cover, litter cover, rock cover, and bare ground are also recorded on this form. (See Illustration 12.)

RANGELAND MONITORING - TREND STUDIES

4.45 QUADRAT FREQUENCY METHOD.

a. General Description. The Quadrat Frequency Method consists of the observation of 10 (or more) quadrats along 10 or 20 transects randomly selected and run perpendicularly to a 100-foot baseline tape. Close-up and general view photographs should be used with this method. The following indicators of trend are monitored with this method: (See Section 3.3.)

(1) Frequency

(2) Basal cover and general cover categories (including litter)

(3) Reproduction of key species (if seedling frequency data are collected)

b. Areas of Use. This method is applicable to a wide variety of vegetation types and is suited for use with grasses, forbs, and shrubs.

c. Advantages and Limitations.

(1). Frequency sampling is simple to perform and easy to duplicate from year to year by the same or different examiners. Human decision is limited to identifying the plant species and determining whether or not plants of the listed species are rooted within the quadrats or whether or not plants of the listed tree or shrub species overhang the quadrats (presence or absence). The method encourages consistent and accurate observations while minimizing bias among different examiners.

(2) Varying amounts of cover data, in addition to frequency data, can be collected with this method.

d. Equipment.

(1) Study Location and Documentation Data Form (See Illustration 3.)

(2) Trend Study Data - Quadrat Frequency Method Form (See Illustration 21.)

(3) Photo Identification Label (See Illustration 2.)

(4) Frame to delineate the 3- X 3-foot photo plots

(5) Stakes - 3/4- or 1-inch angle iron not less than 16 inches long

(6) Hammer

RANGELAND MONITORING - TREND STUDIES

(7) Permanent yellow or orange spray paint

(8) Camera - 35-mm with a 28-mm wide-angle lens

(9) Exposure meter (if camera is not equipped with one)

(10) Film

(11) Tripod (optional)

(12) Black felt-tip pen

(13) Stakes which are stout enough to have a tape stretched between them

(14) Steel tape - 100-foot

(15) Two small "C" clamps

(16) Set of quadrat frames (See Illustration 22.)

(17) Tally counter (optional)

(18) Compass

(19) Steel post

(20) Post driver

e. Training. A minimum amount of training is needed for this method. The examiners must be able to identify the plant species and be able to tell whether or not a species occurs, according to study specifications, within a quadrat. Examiners must be familiar with the cover categories and how to collect cover data using the tines on the quadrat frames. They must also be familiar with the operation of the camera equipment. (See Section 3, this Reference, and Section 4, Technical Reference 4400-1.)

f. Establishing Studies. Careful establishment of studies is a critical element in obtaining meaningful data. (See Sections 5.2 through 5.4, Technical Reference 4400-1.)

(1) Site Selection. Stratify the allotment, wildlife habitat area, herd management area, watershed area, or other designated management area; select the key area(s) and key species; and determine the number and location of the quadrat frequency studies. (See Section 5.1, Technical Reference 4400-1.)

RANGELAND MONITORING - TREND STUDIES

(2) Number of Studies. Establish one quadrat frequency study on each key area; establish more if needed. (See Sections 1 and 5, Technical Reference 4400-1.)

(3) Number of Transects and Quadrats. Evaluate the rangeland plant communities where studies will be located and determine the number of transects and quadrats needed. The objective is to collect the best possible sample for the greatest number of species in any plant community. Some examples of the number of transects and quadrats recommended for several rangeland plant communities in Nevada are shown in Illustration 23.

(a) Number of Transects. Either 10 or 20 transects are run perpendicularly to the baseline for each study depending on the intensity of sample needed. (See Illustration 24.) The number of transects depends on such things as the homogeneity of the vegetation, values or "special values" for the area, and other considerations regarding the similarity or uniqueness of the plant communities.

(b) Number of Quadrats per Transect. Transects consist of groups of quadrats placed at specified intervals along a belt. (See Illustration 24.) Quadrats may be contiguous except where the points of both side tines of the frames are used to collect cover data. (See Sections .5h(2) and (3).) Depending on the intensity of the sampling, 10 to 20 or more quadrats are located and read along each belt transect. (Increasing the number of quadrats to 30 or 40 per transect can greatly improve precision for minimal extra time expense.)

(4) Study Layout.

(a) Baseline.

i. Permanently locate the baseline by means of two stakes placed 100 feet apart. (See Illustration 24.) Stretch a 100-foot tape between the stakes as close to the ground as possible. Secure the tape to these stakes with "C" clamps. Align the zero point on the tape with the stake which is the beginning point of the baseline.

ii. Paint the stakes with bright-colored permanent spray paint (yellow or orange) to aid in relocation. Repaint these stakes when subsequent readings are made.

(b) Transects. The transects are run perpendicularly to the baseline. Each transect originates at a randomly selected foot mark along the baseline. The randomization is restricted so that half of the transects are randomized on each side of the 50-foot mark. (See Illustration 24.)

i. An example of 10 and 20 random numbers and directions are as follows:

Ten Random Foot Marks			
1.	2R	6.	52L
2.	17L	7.	61R
3.	25L	8.	69R
4.	37R	9.	80R
5.	42L	10.	85R

Twenty Random Foot Marks			
1.	2R	11.	52L
2.	7L	12.	54L
3.	17L	13.	61R
4.	20L	14.	62R
5.	25L	15.	69R
6.	29R	16.	77R
7.	37R	17.	80R
8.	40L	18.	81L
9.	42L	19.	85R
10.	45R	20.	98L

R = Right side of tape.
L = Left side of tape

ii. Transects may originate from alternating intervals of five or ten feet (running right and then left of the baseline) along the baseline.

(5) Reference Post or Point. Permanently mark the location of each study by means of a reference post (steel post) placed about 100 feet from the baseline beginning point stake. Record the bearing and distance from the post to the baseline beginning point stake. An alternative is to select a reference point, such as a prominent natural or physical feature, and record the bearing and distance from that point to the baseline beginning point stake. If a post is used, it should be tagged to indicate that it marks the location of a monitoring study established by the Bureau of Land Management and that it should not be disturbed.

(6) Study Identification. Number studies for proper identification to ensure that the data collected can be positively associated with specific sites on the ground. (See Illustration 1.)

(7) Study Documentation. Document the location of the baseline, bearing, number of transects, transect locations along the baseline, number of quadrats per transect, frame size(s), number of cover points per quadrat, and other pertinent information concerning a study on the Study Location and Documentation Data Form. (See Illustration 3, this Reference, and Section 6, Technical Reference 4400-1.) Plot the precise location of the studies on detailed maps and/or aerial photos.

g. Taking Photographs. The directions for taking close-up and general view photographs are described in Section 3.4.

RANGELAND MONITORING - TREND STUDIES

h. Sampling Process. In addition to collecting the specific studies data, general observations should be made of the study sites. (See Section 3.5.)

(1) Selecting Quadrat Size. The selection of quadrat size is important and is dependent on the characteristics of the vegetation to be sampled. (See Section 3.2.)

(a) As a rule of thumb, it is expected that all frequency percentages for important species should fall between 10 and 90 percent or if possible, between 20 and 80 percent. This will provide the greatest possible chance for detecting an important trend for a species when the study is read again. Use a quadrat size that will produce frequencies falling in this range for the greatest number of species possible.

(b) Determine the proper size quadrat(s) to use by doing preliminary sampling with different size frames. (See Illustration 22.) Frame size recommendations for several rangeland plant communities in Nevada are shown in Illustration 23.

(c) Use the same size quadrat thoughout a study and for re-ading the study. If frequencies approach the extremes of either 0 or 100 cent, it may be necessary to change the quadrat size.

(2) Running the Transects.

(a) Start each transect by placing the rear corner of the quadrat frame at the selected foot mark along the baseline tape.

(b) Place the quadrat frame at the designated interval in a line (belt) perpendicular to the baseline until the specified number of quadrats have been read. (See Illustration 24.)

(c) The quadrats may be placed contiguously or at a specified interval. The interval is either estimated, or a rapid measurement method, such as the width of the frame, or segment of the frame, is used to measure the interval.

(d) When a transect is completed, move to the next selected foot mark on the baseline tape and run the next transect.

(3) Collecting Cover Data. Use the points on the four corners of the quadrat frame and the point on the center tine to collect cover data. (See Illustration 22.)

(a) With each placement of the frame, record by dot count tally, by transect, the cover category that is directly in front of each

point. The cover categories are bare ground (rock less than 1/2 inch in diameter is tallied as bare ground), persistent litter, non-persistent litter, rock (1/2 inch and larger), and basal hits on live vegetation. Record the data on the Trend Study Data - Quadrat Frequency Method Form. (See Illustration 21.)

(b) If less cover data are desired, read fewer points on the frame. If more cover data are desired, read more points on the frame.

(c) Read the same points on the frame and the same number of points at each placement of the frame throughout a study and when rereading that study.

(4) Collecting Frequency Data. Collect frequency data for all plant species. (See Section 3.1.) Record the data by dot count tally, by species, by transect, on the Trend Study Data - Quadrat Frequency Method Form. (See Illustration 21.) Only one tally is made regardless of the number of individual plants of a species that occurs within a quadrat.

(a) Herbaceous plants (grasses and forbs) must be rooted in the quadrat to be counted.

(b) Trees and shrubs (including half shrubs) are counted if rooted in the quadrat or if the canopy of these plants overhangs the quadrat. In some cases, it may be preferable to count trees and shrubs only if they are rooted in the quadrat.

(c) Annual plants are counted whether green or dried.

(d) Specimens of the plants which are unknown should be collected and marked for later identification.

(e) Frequency occurrence of seedlings by plant species may be tallied.

(f) An alternative method for recording frequency data is explained in Illustration 33.

i. Calculations. Make the calculations and record the results in the appropriate columns on the Trend Study Data - Quadrat Frequency Method Form. (See Illustration 21.)

(1) Cover. The percent cover by cover category, e.g., persistent litter, can be calculated for each transect and/or for the total of all transects.

RANGELAND MONITORING - TREND STUDIES

(a) Cover For Each Transect. On a ten quadrat transect where five cover readings are made with each placement of the frame, calculate the percent cover for each cover category by multiplying the number of hits in each category by two. If there are 20 quadrats in the transect, the percent cover by cover category is equal to the number of hits for that category. Where less than five cover readings are made with each placement of the frame, calculate the percent cover for each cover category by dividing the number of hits in each category by the total number of cover readings for the transect. The percent cover may be entered in the cover category block by transect on the form.

(b) Cover For Total of All Transects. Calculate the percent cover by cover category for the total of all transects by adding the hits by category for all transects and dividing the total by the total number of cover readings for the study. Record the percent cover on the form.

(2) Frequency. The percent frequency by species can be calculated for each transect and/or for the total of all transects.

(a) Frequency For Each Transect. Calculate the percent frequency of a plant species on a transect by multiplying the number of hits, ccurrences, by 10, if there are 10 quadrats, or by 5, if there are 20 ɹrats in the transect. Record the percent frequency in the species block by transect on the form.

(b) Frequency For Total of All Transects. Calculate the percent frequency of a plant species for the total of all transects by adding the hits, or occurrences, for a species on all transects, dividing the total by the total number of quadrats sampled in the study, and multiplying the value by 100. Record the percent frequency on the form.

Form 4130-2a
(September 1987)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

GRAZING PERMIT

STATE NV
OFFICE 055
NV 050-94-01202,03
PREFERENCE CODE 03
DATE PRINTED 12/02/93
TERM 11/24/1993 TO 02/28/2002

OLSON, KEVIN D. &
SANDRA

P.O. BOX 97
PANACA, NV 89042

BUREAU OF LAND MANAGEMENT
CALIENTE R.A.
P.O. BOX 237
CALIENTE, NV 89008

THIS GRAZING PERMIT IS OFFERED TO YOU BASED ON YOUR RECOGNIZED GRAZING PREFERENCE ON THE PUBLIC LANDS AND/OR OTHER LANDS ADMINISTERED BY THE BLM. YOU ARE AUTHORIZED TO MAKE GRAZING USE TO THE EXTENT OF YOUR ACTIVE GRAZING PREFERENCE AS SHOWN BELOW UPON YOUR ACCEPTANCE OF THE TERMS AND CONDITIONS INCORPORATED HEREIN AND YOUR PAYMENT OF GRAZING FEES.

ALLOT PASTURE	LIVESTOCK NUMBER	KIND	GRAZING PERIOD BEGIN	END	%PL	TYPE USE	AUM"S
11034 HENRIE COMPLEX	96	CATTLE	03/01	02/28	85	ACTIVE	979

TERMS AND CONDITIONS:

REFER TO ATTACHMENT A FOR LISTING OF THE HENRIE COMPLEX ALLOTMENT TERMS AND CONDITIONS AS STATED IN THE FULL FORCE AND EFFECT GRAZING DECISION DATED JANUARY 31, 1992.

REFER TO ATTACHMENT B FOR TERMS AND CONDITIONS FOR THE MEADOW AND PASS FIRE CLOSURE AREA.

CASE FILE

Form 4130-2a
(September 1987)

OPERATOR NUMBER: 275043

ALLOTMENT SUMMARY (AUM'S)

ALLOT	PREFERENCE ACTIVE	SUSP	TOTAL
11034 HENRIE COMPLEX	975	2210	3185

THIS PERMIT ; 1. CONVEYS NO RIGHT, TITLE OR INTEREST HELD BY THE UNITED STATES IN ANY LANDS OR RESOURCES AND 2. IS SUBJECT TO (A) MODIFICATION, SUSPENSION OR CANCELLATION AS REQUIRED BY LAND PLANS AND APPLICABLE LAW; (B) ANNUAL REVIEW AND TO MODIFICATION OF TERMS AND CONDITIONS AS APPROPRIATE; AND (C) THE TAYLOR GRAZING ACT, AS AMENDED, THE FEDERAL LAND POLICY AND MANAGEMENT ACT, AS AMENDED, THE PUBLIC RANGELANDS IMPROVEMENT ACT, AND THE RULES AND REGULATIONS NOW OR HEREAFTER PROMULGATED THEREUNDER BY THE SECRETARY OF THE INTERIOR.

ACCEPTED:
SIGNATURE OF PERMITTEE: Kevin D. Olsen DATE 12-15-93

AREA MANAGER: Curtis R. Tucker DATE 12-15-93

CASE FILE

ATTACHMENT 1

SPECIFIC TERMS AND CONDITIONS FOR THE NEW FEDERAL GRAZING PERMIT

Henrie Complex Allotment

1. Grazing will be permitted in accordance with grazing Prescriptions 1 and 2 identified in the Opinion as amended.

2. Grazing prescription areas within your allotment are delineated on Attachment 2, titled **Henrie Complex Allotment Map.**

3. Livestock grazing use shall be authorized in the Henrie Complex allotment 06/15 through 02/28 in Prescription 1 and 03/01 through 02/28 in the Prescription 2 area and Non-Prescription area as identified in the following table and Attachment 2.

SPECIFIC USE AREAS AND
IDENTIFIED PERIODS OF USE

PRESCRIPTION AREAS[1/]	SEASON OF USE BEGIN DATE	END DATE
Prescription 1 [2/]	06/15	02/28
Prescription 2 [3/]	03/01	02/28
Non-Prescription	03/01	02/28

[1/] Refer to Attachment 2.
[2/] Prescription 1, Tortoise Habitat Categories I, II, and Intensive III.
[3/] Prescription 2, Tortoise Habitat Category III non-intensive.

4. All vehicle use in desert tortoise habitat within the **Henrie Complex allotment** shall be restricted to existing roads and trails.

5. Trash and garbage shall be removed from each camp site that is associated with livestock grazing operations (branding, sheep herding, roundup, etc.) and disposed of off site in a designated facility. No trash or garbage shall be buried at camp sites.

6. Use of hay or grains as a feeding supplemental shall be prohibited in desert tortoise habitat to avoid the introduction of non-native plant species. Mineral, protein and salt blocks are authorized subject to 43 CFR section 4130.6-2(c).

7. The allotment shall include at a minimum the following key species for monitoring purposes where appropriate based upon density and availability: galleta grass (*Hilaria jamesii*) and (*H. rigida*), bush muhly (*Muhlenbergia porteri*), sand dropseed (*Sporobolus cryptandrus*), Indian ricegrass (*Oryzopsis hymenoides*), black grama (*Bouteloua eriopoda*), desert needlegrass (*Stipa speciosa*), range ratany (*Krameria parvifolia*), ephedra (*Ephedra spp.*), white burrobrush (*Hymenoclea salsola*) and winterfat (*Eurotia lanata*).

8. The following table identifies key areas, species and the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes within Prescription 1 and 2 areas in the Henrie Complex allotment. As additional key species and or key areas are determined necessary for monitoring purposes, maximum allowable use levels will be established based upon the conditions as set forth in the Opinion for Prescription 1 and/or 2 areas.

EXISTING KEY AREAS, SPECIES AND ALLOWABLE USE LEVELS

KEY AREA & LEGAL DESCRIPTION	KEY SPECIES	PRESCRIPTION 2	
		10/15 TO 02/28	03/01 TO 10/14
1 ~~T.10S., R.66E., Sec.6 (M.W)~~	Big galleta grass Nevada ephedra	≤50% ≤45%	≤40% ≤40%

9. The following table identifies the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes within Prescription 1 and/or 2 areas.

ALLOTMENT NAME	PRESCRIPTION	ALLOWABLE USE LEVELS AND USE PERIODS PER GRAZING PRESCRIPTION		
HENRIE COMPLEX	PRESCRIPTION 1	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	Key Perennial Grasses - ≤50% Key Perennial Shrubs and Forbs - <40%	No livestock use will be allowed during this period.
	PRESCRIPTION 2	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	Key perennial grasses - ≤ 50% Key perennial shrubs & forbs - ≤ 45%	All Perennial Species - ≤40%

10. When the allowable use levels are reached for the Prescription 1 and/or 2 areas, the livestock must be removed from the allotment unless other management alternatives are authorized by the Caliente Resource Area Manager that are consistent with the Opinion and this decision.

11. Adequate livestock control must be provided by existing range improvements within the Henrie Complex allotment to prevent livestock from continually migrating into the Prescription 1 area during the period 03/01 through 06/14. If livestock continually migrate into the Prescription 1 area, the entire allotment will be required to be managed under Prescription 1 until range improvements become available to stop such action.

12. By March 1, 1993 all cattle (six months of age or older at turn out) will be required to be ear tagged by you with BLM issued ear

tags. Additionally, you are required to submit a list of ear tag numbered cattle turned out/authorized on the Henrie Complex allotment. The list must be submitted to the Caliente Resource Area office within seven (7) days of turn out. At the end of the authorized grazing period, any ear tag numbers not accounted for, shall be reported to the Caliente Resource Area office within 15 days.

a. Since your operation is of a year round nature and it would be difficult to ear tag all cattle prior to the March 1, 1992 date, I have extended the date to ear tag all your cattle to March 1, 1993. In order to assure adequate cattle control is provided to prevent cattle from continually migrating into the Prescription 1 area, all cattle found in the Prescription 1 area during the period 03/01/92 through 06/14/92 shall be ear tagged by you with a BLM ear tag. Terms and Conditions number 15 and 16 will then be followed.

13. You are required to remove and return to the Caliente Resource Area office all BLM issued ear tags of cattle shipped/sold. This must be done prior to being issued replacement tags.

14. Replacement tags for brush loss, unfound death loss, or other unexplained losses will be issued on a case by case basis at the determination of the Caliente Resource Area Manager.

15. Any livestock found in the Prescription 1 area during the period of 03/01 through 06/14 shall be relocated to the Prescription 2 and/or Non-Prescription area within 72 hours. The ear tag numbers of any cattle found in the Prescription 1 area during the period 03/01 through 06/14 shall be recorded and submitted in writing to the Caliente Resource Area office within five (5) days of being observed.

16. Any livestock found in the Prescription 1 area during the period of 03/01 through 06/14 and which were previously recorded and relocated to the Prescription 2 and/or Non-Prescription area shall be removed from the Henrie Complex allotment within 72 hours of being observed.

17. Applications for changes in grazing use must be in written form and be received by the Caliente Resource Area office no later than 15 days prior to the desired date of change.

18. Applications for changes in grazing use filed after a billing notice has been issued, and which require the issuance of a replacement bill or supplemental bill shall be subject to a ten (10) dollar service charge.

19. Grazing Applications will be issued on a yearly basis showing all grazing use as active by Prescription 1, 2 and/or Non-Prescription areas. If you desire to take all or partial non-use for the grazing year, you must indicate this in writing on your Grazing Application, along with your reason(s).

20. A statement of Actual Grazing Use made on the Henrie Complex allotment by grazing Prescription area, 1, 2 and/or Non-Prescription areas must be received in the Caliente Resource Area office no later than 15 days after the last day of authorized grazing use. In the case of year round grazing, this Actual Grazing Use statement must be received in the Caliente Resource Area office no later than March 15th of each year.

ATTACHMENT B

SPECIFIC TERMS AND CONDITIONS FOR THE MEADOW AND PASS FIRE CLOSURE AREA

1. These specific Terms and Conditions shall remain in effect for a minimum of two years, beginning November 24, 1993 and continuing until monitoring indicates resource objectives for the burn area have been attained.

2. **2210 AUMs** shall be held in temporary suspended preference for the duration of the closure period.

3. Livestock use will only be authorized to the east of the Union Pacific Railroad in the Henrie Complex allotment (Attachment 2), if you can show evidence the railroad right-of-way fence has been repaired and maintained by January 1, 1994 . Should this right-of-way fence not be maintained and repaired than the entire Henrie Complex allotment will be closed to livestock grazing.

4. Should continued maintenance and repair of the right-of-way fence after January 1, 1994 fail to keep livestock from the burn closure area, livestock shall be removed from the allotment immediately. The total closure of the Henrie Complex allotment to grazing, in order to insure protection of the burn area, will be implemented by the Bureau of Land Management under the authority of this decision.

5. Monitoring data (i.e. frequency, utilization, plant cover, density and or Community Structure information) will be collected to determine if the closure resource objectives have been met. Attachment 3 explains the methodologies to be employed in collecting the respective monitoring data.

6. Resource objectives established for the burn area in the Henrie Complex allotment for **Key Areas 1 and 2** are identified below:

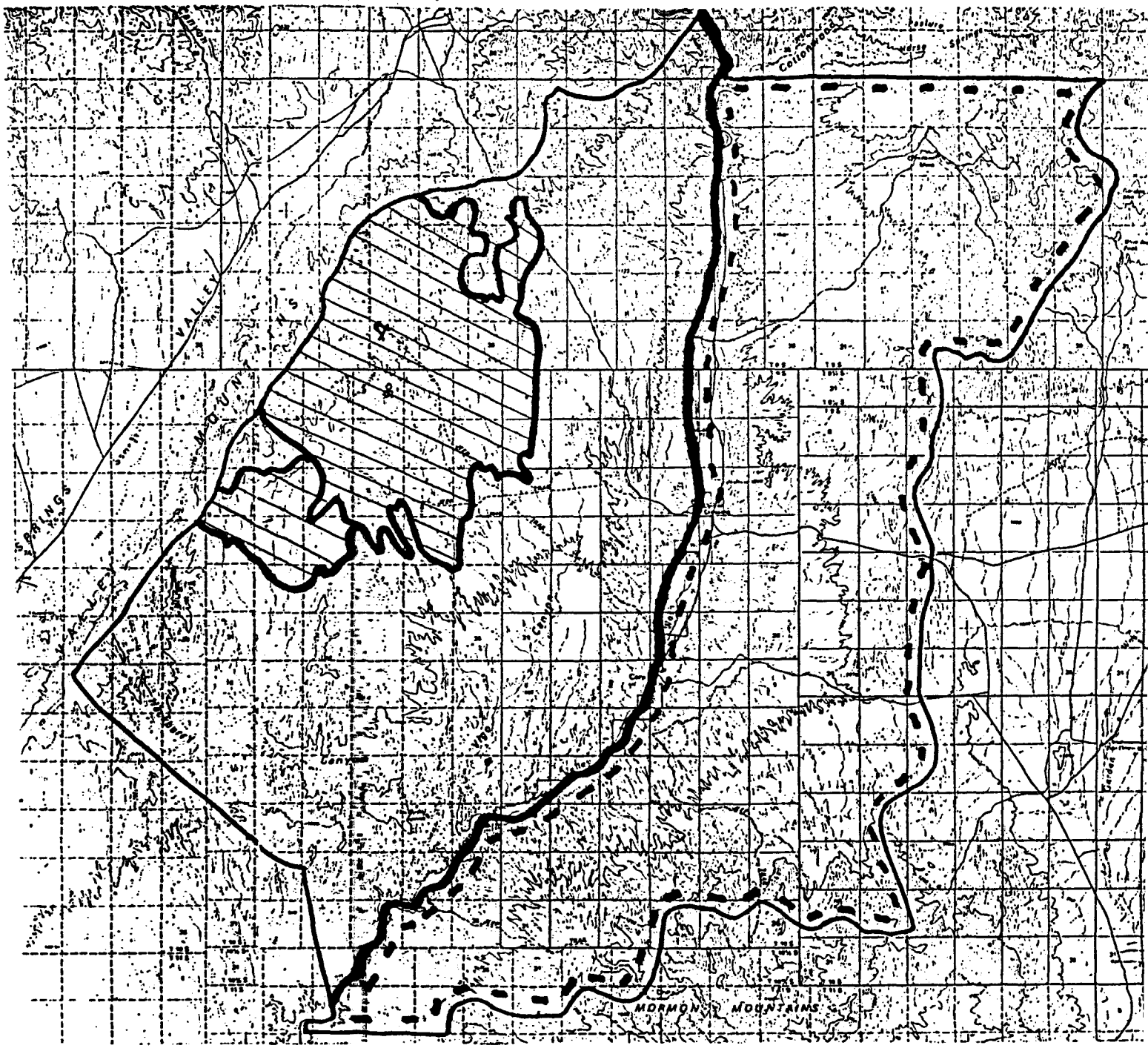
The frequency of occurrence of key perennial species shall fall within the range of values identified in **Table 1**. The ranges identified in **Table 1** are based on a statistical analysis of the frequency data collected at the two Key Areas. The age class of key perennial species sampled shall be mature plants, 2 years or older, in order to insure plant establishment and improved rehabilitative conditions.

Table 1. Percent Frequency Value Ranges.

Key Area Number	Key Perennial Species	Frequency Value Ranges
1	HIRI	21%-37%
2	ARPU9	45%-69%

ATTACHMENT #2

Henrie Complex Allotment
Authorized Livestock Use Area



LEGEND

- Authorized Use Area:
- Meadow and Pass Burns:
- Allotment Boundary:
- Reservoir:
- Spring:

5.22 OCULAR ESTIMATE METHOD. The Ocular Estimate Method is used to determine utilization along a transect by ocular estimate of the percentage by weight of forage removed from individual plants of the key species or from all plants of the key species on small plots.

a. Areas of Use. This method has wide applicability and is suited for use with grasses and forbs.

RANGELAND MONITORING - UTILIZATION STUDIES

b. Advantages and Limitations. The most important advantage is speed. The method is also reasonably accurate, depending upon the ability of the examiners. Vegetation is not disturbed. Reliability of estimates is increased by limiting observations to individual plants or small areas (plots). Errors in personal judgment on individual plants or plots frequently tend to be compensating. A limitation is that exclosures, cages, or fenced areas may be needed for training.

c. Equipment.

(1) Study Location and Documentation Data Form. (See Illustration 1.)

(2) Utilization Study Data - Ocular Estimate Method Form. (See Illustration 3.)

(3) Frames to delineate plots (if necessary).

(4) Clipping shears.

(5) Paper sacks.

(6) Spring scale, calibrated in grams.

d. Training. The accuracy of utilization percentage estimates is dependent upon thoroughness of training and ability of examiners to identify the plant species and to estimate amount of use. The examiners must first compare their ocular estimates against actual weight values obtained by clipping and weighing. (See Section 3, this Reference, and Section 4, Technical Reference 4400-1.)

(1) Training Sites. Locate sites for training purposes on key areas or on similar unforaged or protected sites. If it is unlikely that a site containing unforaged vegetation will be available after the foraging season, it will be necessary to construct temporary exclosures or install cages on key areas prior to the period of use.

(2) Making Ocular Estimates. Training involves estimating utilization on individual plants of the key species or on all plants of the key species on a small plot. If plots are to be used for the studies, use plots of the same size for training. (See Section 3.73c.) The plots should be small enough so that the entire plot is clearly visible to the examiner. Examiners should practice making ocular estimates as follows:

(a) Clip individual plants of the key species, or plants of the key species on a plot, to simulate foraging (sample A).

(b) Estimate the percentage of weight removed.

(c) Clip the remaining forage of the selected plants by removing all current year's growth available to the foraging animals (sample B).

(d) Put the clippings for samples A and B in separate paper sacks.

(e) Weigh samples A and B separately and subtract sack weight from the weight of each sample.

(f) Calculate the percent simulated use by dividing the weight of sample A by the combined weight of samples A and B and multiplying the value by 100.

(g) Compare estimates with the actual percent forage removed and determine the error of the estimates. Continue training until examiners can recognize the different percentages of use with minimum acceptable error.

(3) Checking Ocular Estimates. Training checks should be made and recorded each day prior to field estimation. This gives a permanent record of the accuracy of each examiner's ocular estimates.

e. Establishing Studies. Select key area(s) and key species and determine the number, length, and location of the transects. (See Section 3, this Reference, and Section 5, Technical Reference 4400-1.) Document the location and other pertinent information concerning a transect on the Study Location and Documentation Data Form. (See Illustration 1, this Reference, and Section 6, Technical Reference 4400-1.)

f. Sampling Process. After examiners are trained and are confident in their ability to recognize various degrees of utilization, proceed with the collection of utilization data.

(1) At each interval along a transect, select the plant of the key species nearest the toe and estimate and record the percent utilization.

(2) If a plot is being used, place the frame immediately in front of the toe or on the nearest site having the key species and estimate and record the percent utilization.

(3) Record the percent utilization on the Utilization Study Data - Ocular Estimate Method Form. (See Illustration 3.)

g. Calculating Percent Utilization. Calculate the average percent utilization by totaling the utilization estimates for the plants or plots along the transect and dividing the total by the number of sampled plants or plots. Record the average utilization on the Utilization Study Data - Ocular Estimate Method Form. (See Illustration 3.)

RANGELAND MONITORING - UTILIZATION STUDIES

5.23 KEY FORAGE PLANT METHOD. The Key Forage Plant Method is an ocular estimate of forage utilization within one of six utilization classes. Observations are made of the appearance of the rangeland and especially the key species, along a transect which traverses the key area.

a. Areas of Use. This method is adapted to areas where perennial grasses, forbs, and/or browse plants are the key species and utilization data must be obtained over large areas using few examiners.

b. Advantages and Limitations. This method is rapid and does not require unused areas for training purposes. Estimates are based on a descriptive term representing a broad range (class) of utilization rather than a precise amount. Different examiners are more likely to estimate utilization in the same classes than to estimate the same utilization percentages.

c. Equipment.

(1) Study Location and Documentation Data Form. (See Illustration 1.)

(2) Utilization Study Data - Key Forage Plant Method Form. (See Illustration 4.)

(3) Tally counter (optional).

d. Training. Personal judgment is involved in any estimation method. Estimates are only as good as the training and experience of the examiners. (See Section 3, this Reference, and Section 4, Technical Reference 4400-1.) The training described for the Ocular Estimate Method often helps examiners using this method make the utilization class estimations. (See Section 5.22d.) This method requires that the examiners be trained to:

(1) Identify the plant species.

(2) Recognize the six herbaceous or six browse utilization classes using the written class descriptions.

(3) Think in terms of the general appearance of the rangeland (slightly used, heavily used, etc.) at each observation point, rather than weight or height removed.

e. Establishing Studies. Select key area(s) and key species and determine the number, length, and location of the transects. (See Section 3, this Reference, and Section 5, Technical Reference 4400-1.) Document the location and other pertinent information concerning a transect on the Study Location and Documentation Data Form. (See Illustration 1, this Reference, and Section 6, Technical Reference 4400-1.)

RANGELAND MONITORING - UTILIZATION STUDIES

f. Sampling Process. After examiners are trained and have confidence in their ability to judge utilization by utilization class ("light", "heavy", etc.), proceed with the collection of utilization data. At each observation point along the transect, estimate the utilization class using the written description of the class. In those cases where part of a class description does not apply (example: percentage of seedstalks remaining), judge utilization based on those parts of the description that do apply. An observation point is the immediate area containing the key species visible to examiners when standing at a particular location along the transect. (See Section 3.73b.) Record the estimates by dot count by utilization class on the Utilization Study Data - Key Forage Plant Method Form. (See Illustration 4.)

(1) Herbaceous Utilization Classes. Six utilization classes are used to show relative degrees of use of key herbaceous species (grasses and forbs). Each class represents a numerical range of percent utilization. Estimate utilization within one of the six classes. Utilization classes are described as follows:

(a) No Use (0-5%). The rangeland shows no evidence of grazing use; or the rangeland has the appearance of negligible grazing.

(b) Slight (6-20%). The rangeland has the appearance of very light grazing. The key herbaceous forage plants may be topped or slightly used. Current seedstalks and young plants of key herbaceous species are little disturbed.

(c) Light (21-40%). The rangeland may be topped, skimmed, or grazed in patches. The low value herbaceous plants are ungrazed and 60 to 80 percent of the number of current seedstalks of key herbaceous plants remain intact. Most young plants are undamaged.

(d) Moderate (41-60%). The rangeland appears entirely covered as uniformly as natural features and facilities will allow. Fifteen to 25 percent of the number of current seedstalks of key herbaceous species remain intact. No more than 10 percent of the number of low value herbaceous forage plants are utilized. (Moderate use does not imply proper use.)

(e) Heavy (61-80%). The rangeland has the appearance of complete search. Key herbaceous species are almost completely utilized with less than 10 percent of the current seedstalks remaining. Shoots of rhizomatous grasses are missing. More than 10 percent of the number of low value herbaceous forage plants have been utilized.

(f) Severe (81-100%). The rangeland has a mown appearance and there are indications of repeated coverage. There is no evidence of reproduction or current seedstalks of key herbaceous species. Key herbaceous forage species are completely utilized. The remaining stubble of preferred grasses is grazed to the soil surface.

RANGELAND MONITORING - UTILIZATION STUDIES

(2) Browse Utilization Classes. Six utilization classes show relative degrees of use of available current year's growth (leaders) of key browse plants (shrubs, half shrubs, woody vines, and trees). Each class represents a numerical range of percent utilization. Estimate utilization within one of the six classes. Utilization classes are described as follows:

(a) No Use (0-5%). Browse plants show no evidence of use; or browse plants have the appearance of negligible use.

(b) Slight (6-20%). Browse plants have the appearance of very light use. The available leaders of key browse plants are litle disturbed.

(c) Light (21-40%). There is obvious evidence of leader use. The available leaders appear cropped or browsed in patches and 60 to 80% of the available leader growth of the key browse plants remains intact.

(d) Moderate (41-60%). Browse plants appear rather uniformly utilized and 40 to 60% of the available leader growth of key browse plants remains intact.

(e) Heavy (61-80%). The use of the browse gives the appearance of complete search. The preferred browse plants are hedged and some plant clumps may be slightly broken. Nearly all available leaders are used and few terminal buds remain on key browse plants. Between 20 to 40% of the available leader growth of the key browse plants remains intact.

(f) Severe (81-100%). There are indications of repeated coverage. There is no evidence of terminal buds and usually less than 20% of available leader growth on the key browse plants remains intact. Some, and often much, of the second and third years' growth of the browse plants has been utilized. Hedging is readily apparent and the browse plants are more frequently broken.

g. Calculating Percent Utilization. Calculate the percent utilization as follows:

(1) Convert the dot count to the number of observations for each utilization class.

(2) Multiply the number of observations in each utilization class times the midpoints of the class intervals.

(3) Total the products for all classes.

(4) Divide the sum by the total number of observations on the transect.

(5) Record the average percent utilization on the Utilization Study Data - Key Forage Plant Method Form. (See Illustration 4.)

4.42 COMMUNITY STRUCTURE ANALYSIS (CSA) METHOD.

a. General Description. The Community Structure Analysis (CSA) Method assigns an "importance value" to each species to describe its status in the community. This value is based on relative cover, relative density, and relative frequency. A 100-point pace transect is run to collect the vegetation data. Close-up and general view photographs should be used with this method. The following indicators of trend are monitored with this method: (See Section 3.3.)

(1) Foliar cover (including litter)

(2) Density

(3) Frequency

(4) Composition by foliar cover and density

b. Areas of Use. This method is recommended for grass-shrub vegetation types.

c. Advantages and Limitations. The method is easy to use and interpret. Because the importance is based on "relative" rather than "absolute" values, it is less affected by estimator bias. The relative position of a plant species in the community is essentially undisturbed by year-to-year differences in rainfall, as density and frequency tend to compensate for fluctuations in production.

d. Equipment.

(1) Study Location and Documentation Data Form (See Illustration 3.)

(2) Trend Study Data - Community Structure Analysis Method--Foliar Cover Data Form (See Illustration 10.)

(3) Trend Study Data - Community Structure Anlaysis Method--Density and Frequency Data Form (See Illustration 11.)

(4) Trend Study Data - Community Structure Analysis Method--Summary Form (See Illustration 12.)

(5) Photo Identification Label (See Illustration 2.)

(6) Frame to delineate the 3- X 3-foot photo plots

(7) Stakes - 3/4- or 1-inch angle iron not less than 16 inches long

RANGELAND MONITORING - TREND STUDIES

(8) Hammer

(9) Permanent yellow or orange spray paint

(10) Camera - 35-mm with a 28-mm wide-angle lens

(11) Exposure meter (if camera is not equipped with one)

(12) Film

(13) Tripod (optional)

(14) Black felt-tip pen

(15) Microplot frame - 5 X 10 centimeters divided into quarters

(16) Circular plot frame - 9.6 square feet or smaller if vegetation is dense

(17) Tally counter (optional)

(18) Compass

(19) Steel post

(20) Post driver

e. Training. The accuracy of the data depends on the training and ability of the examiners. (See Section 3, this Reference, and Section 4, Technical Reference 4400-1.)

(1) Examiners must be able to identify the plant species.

(2) Examiners must know how to collect foliar cover data.

(3) Examiners should be consistent in determining the number of individual plants. For most plant species, individuals are readily distinguished. However, most communities contain some species that reproduce vegetatively. Determination of what constitutes a plant unit in such cases is somewhat arbitrary. For rhizomatous grasses such as western wheatgrass (Agropyron smithii), each culm group can be visualized as an actual or potential plant unit, as can rooted stoloniferous units of such species as vine mesquite (Panicum obtusum). Mat or sod-forming plants such as blue grama (Bouteloua gracilis) or alkali sacaton (Sporobolus airoides) usually start growth as small, distinct clumps, but may spread to plants a yard or more in

diameter. As this occurs, they tend to fragment into more-or-less separate units, and it is these separate units that should be counted as actual or potential individuals.

(4) Examiners must be familiar with the operation of the camera equipment.

f. Establishing Transects. Careful establishment of transects is a critical element in obtaining meaningful data. (See Sections 5.2 through 5.4, Technical Reference 4400-1.)

(1) Site Selection. Stratify the allotment, wildlife habitat area, herd management area, watershed area, or other designated management area; select the key area(s) and key species; and determine the number, length, and location of the transects. (See Section 5.1, Technical Reference 4400-1.)

(2) Number of Transects. Establish one transect on each key area; establish more if needed. (See Sections 1 and 5, Technical Reference 4400-1.)

(3) Transect Layout.

(a) Drive an angle iron location stake into the ground to permanently mark the location of each transect. (See Illustration 13.)

(b) At the location stake, determine the transect bearing and select a prominent distant landmark such as a peak, rocky point, etc., that can be used as the transect bearing point. Drive an angle iron stake into the ground at a point 6 feet from the location stake along the transect bearing. (See Illustration 13.)

(c) Paint the transect location and transect bearing stakes with bright-colored permanent spray paint (yellow or orange) to aid in relocation. Repaint these stakes when subsequent readings are made.

(4) Reference Post or Point. Permanently mark the location of each transect by means of a reference post (steel post) placed about 100 feet from the transect location stake. Record the bearing and distance from the post to the transect location stake. An alternative is to select a reference point, such as a prominent natural or physical feature, and record the bearing and distance from that point to the transect location stake. If a post is used, it should be tagged to indicate that it marks the location of a monitoring study established by the Bureau of Land Management and that it should not be disturbed.

(5) Transect Identification. Number transects for proper identification to ensure that the data collected can be positively associated with specific sites on the ground. (See Illustration 1.)

(6) Transect Documentation. Document the location, starting point, bearing, sampling interval, and other pertinent information concerning a transect on the Study Location and Documentation Data Form. (See Illustration 3, this Reference, and Section 6, Technical Reference 4400-1.) Plot the precise location of the transects on detailed maps and/or aerial photos.

g. Taking Photographs. The directions for taking close-up and general view photographs are described in Section 3.4.

h. Sampling Process. The studies data are collected by species along a 100-point pace transect. (See Section 3.1.) Microplots are read at each point and a 9.6-square-foot, or other size, circular plot is read at each tenth microplot. (See Section 3.2.) Data are recorded on the Trend Study Data - Community Structure Analysis Method--Foliar Cover Data Form and the Trend Study Data - Community Structure Analysis Method--Density and Frequency Data Form. (See Illustrations 10 and 11.) When the transects are reread, follow the same process that was used when they were established. In addition to collecting the specific studies data, general observations should be made of the study sites. (See Section 3.5.)

(1) Collecting Cover Data.

(a) Beginning at one pace from the transect bearing stake, along the transect bearing, collect cover data with a 5- X 10-cm microplot frame at every pace (every alternate step), or other prescribed interval, along the transect for a total of 100 samples. Center the microplot frame in front of the toe. (See Illustration 13.)

(b) With each placement of the microplot frame, estimate the foliar coverage of each perennial plant species. Record the data by dot count tally, by species, by cover class, on the Trend Study Data - Community Structure Analysis Method--Foliar Cover Data Form. (See Illustration 10.) Foliar coverage data may also be collected for annual plant species. The cover classes are as follows:

Cover Class	Range of Coverage	Midpoint of Range
1	1-5%	2.5%
2	5-25%	15.0%
3	25-50%	37.5%
4	50-75%	62.5%
5	75-95%	85.0%
6	95-100%	97.5%

(c) Alternative cover classes can be used with this method. When transects are reread, use the same cover classes used when the studies were established. An example of ten cover classes is as follows:

RANGELAND MONITORING - TREND STUDIES

Cover Class	Range of Coverage	Midpoint of Range
1	1 - 5%	2.5%
2	5 - 12.5%	8.75%
3	12.5 - 25%	18.75%
4	25 - 37.5%	31.25%
5	37.5 - 50%	43.75%
6	50 - 62.5%	56.25%
7	62.5 - 75%	68.75%
8	75 - 87.5%	81.25%
9	87.5 - 95%	91.25%
10	95 - 100%	97.5%

(d) Estimate the undisturbed foliar cover for grasses, forbs, and shrubs. Consider all individuals of a plant species in the microplot as a unit. All other kinds of plants are ignored as each plant species is considered. The plants do not have to be rooted in the plot.

(e) The 5- X 10-cm microplot frame is divided into fourths to assist in estimation.

(f) Overlapping foliar cover is included in the cover estimates by species; therefore, total cover may exceed 100 percent. Total cover may not reflect actual ground cover.

(g) Estimate and record the cover for litter (loose plant material or standing dead material) and rock (1/2 inch in diameter and larger).

(2) Collecting Density and Frequency Data.

(a) At each tenth microplot, collect density data with a 9.6-square-foot circular plot. Center the circular plot frame in front of the toe. (See Illustration 13.) A total of ten samples is collected. Depending on the density of the vegetation, a smaller size circular plot may be used. Record the number of plants by species for all perennial grasses, forbs, and shrubs on the Trend Study Data - Community Structure Analysis Method--Density and Frequency Data Form. (See Illustration 11.) Density and frequency data may also be collected for annual plant species.

(b) Count by species all plants rooted within the plot. The majority of the base of the plant must be in the plot to be counted.

i. Calculations.

(1) Cover. Calculate the percent cover by species as follows:

(a) Convert the dot count for each species in each cover class to the number of plots that included that species in that cover class.

(b) Multiply this value times the midpoint of the appropriate cover class.

(c) Total the products for all cover classes by species.

(d) Divide the sum by the total number of microplots sampled on the transect (usually 100).

(e) Record the percent cover by species on the Trend Study Data - Community Structure Analysis Method--Foliar Cover Data Form and on the Trend Study Data - Community Structure Analysis Method--Summary Form. (See Illustrations 10 and 12.)

(2) Density. Calculate the density for each plant species by adding the number of plants of the species counted in the 10 circular plots. Record the totals on the Trend Study Data - Community Structure Analysis Method--Density and Frequency Data Form and on the Trend Study Data - Community Structure Analysis Method--Summary Form. (See Illustrations 11 and 12.)

(3) Frequency. Calculate the percent frequency for each plant species by dividing the number of circular plots in which the species occurred by the total number of circular plots sampled (usually 10) and multiplying the value by 100. Record the percent frequency on the Trend Study Data - Community Structure Analysis Method--Density and Frequency Data Form and on the Trend Study Data - Community Structure Analysis Method--Summary Form. (See Illustrations 11 and 12.)

(4) Importance Value. The importance value of a species is a composite score of the relative cover, relative density, and relative frequency; it represents the relative importance of that species in the plant community. Calculate the relative values by dividing the individual species values for cover, density, and frequency, by the total values for these data categories for all species. Plant species can be ranked by importance value. The total community has an importance value of 3.00. The importance value is calculated and recorded on the Trend Study Data - Community Structure Analysis Method--Summary Form. The percent plant cover, litter cover, rock cover, and bare ground are also recorded on this form. (See Illustration 12.)

RANGELAND MONITORING - TREND STUDIES

4.45 QUADRAT FREQUENCY METHOD.

a. General Description. The Quadrat Frequency Method consists of the observation of 10 (or more) quadrats along 10 or 20 transects randomly selected and run perpendicularly to a 100-foot baseline tape. Close-up and general view photographs should be used with this method. The following indicators of trend are monitored with this method: (See Section 3.3.)

(1) Frequency

(2) Basal cover and general cover categories (including litter)

(3) Reproduction of key species (if seedling frequency data are collected)

b. Areas of Use. This method is applicable to a wide variety of vegetation types and is suited for use with grasses, forbs, and shrubs.

c. Advantages and Limitations.

(1). Frequency sampling is simple to perform and easy to duplicated from year to year by the same or different examiners. Human decision is limited to identifying the plant species and determining whether or not plants of the listed species are rooted within the quadrats or whether or not plants of the listed tree or shrub species overhang the quadrats (presence or absence). The method encourages consistent and accurate observations while minimizing bias among different examiners.

(2) Varying amounts of cover data, in addition to frequency data, can be collected with this method.

d. Equipment.

(1) Study Location and Documentation Data Form (See Illustration 3.)

(2) Trend Study Data - Quadrat Frequency Method Form (See Illustration 21.)

(3) Photo Identification Label (See Illustration 2.)

(4) Frame to delineate the 3- X 3-foot photo plots

(5) Stakes - 3/4- or 1-inch angle iron not less than 16 inches long

(6) Hammer

(7) Permanent yellow or orange spray paint

(8) Camera - 35-mm with a 28-mm wide-angle lens

(9) Exposure meter (if camera is not equipped with one)

(10) Film

(11) Tripod (optional)

(12) Black felt-tip pen

(13) Stakes which are stout enough to have a tape stretched between them

(14) Steel tape - 100-foot

(15) Two small "C" clamps

(16) Set of quadrat frames (See Illustration 22.)

(17) Tally counter (optional)

(18) Compass

(19) Steel post

(20) Post driver

e. Training. A minimum amount of training is needed for this method. The examiners must be able to identify the plant species and be able to tell whether or not a species occurs, according to study specifications, within a quadrat. Examiners must be familiar with the cover categories and how to collect cover data using the tines on the quadrat frames. They must also be familiar with the operation of the camera equipment. (See Section 3, this Reference, and Section 4, Technical Reference 4400-1.)

f. Establishing Studies. Careful establishment of studies is a critical element in obtaining meaningful data. (See Sections 5.2 through 5.4, Technical Reference 4400-1.)

(1) Site Selection. Stratify the allotment, wildlife habitat area, herd management area, watershed area, or other designated management area; select the key area(s) and key species; and determine the number and location of the quadrat frequency studies. (See Section 5.1, Technical Reference 4400-1.)

RANGELAND MONITORING - TREND STUDIES

(2) Number of Studies. Establish one quadrat frequency study on each key area; establish more if needed. (See Sections 1 and 5, Technical Reference 4400-1.)

(3) Number of Transects and Quadrats. Evaluate the rangeland plant communities where studies will be located and determine the number of transects and quadrats needed. The objective is to collect the best possible sample for the greatest number of species in any plant community. Some examples of the number of transects and quadrats recommended for several rangeland plant communities in Nevada are shown in Illustration 23.

(a) Number of Transects. Either 10 or 20 transects are run perpendicularly to the baseline for each study depending on the intensity of sample needed. (See Illustration 24.) The number of transects depends on such things as the homogeneity of the vegetation, values or "special values" for the area, and other considerations regarding the similarity or uniqueness of the plant communities.

(b) Number of Quadrats per Transect. Transects consist of groups of quadrats placed at specified intervals along a belt. (See Illustration 24.) Quadrats may be contiguous except where the points of both side tines of the frames are used to collect cover data. (See Sections .5h(2) and (3).) Depending on the intensity of the sampling, 10 to 20 or more quadrats are located and read along each belt transect. (Increasing the number of quadrats to 30 or 40 per transect can greatly improve precision for minimal extra time expense.)

(4) Study Layout.

(a) Baseline.

i. Permanently locate the baseline by means of two stakes placed 100 feet apart. (See Illustration 24.) Stretch a 100-foot tape between the stakes as close to the ground as possible. Secure the tape to these stakes with "C" clamps. Align the zero point on the tape with the stake which is the beginning point of the baseline.

ii. Paint the stakes with bright-colored permanent spray paint (yellow or orange) to aid in relocation. Repaint these stakes when subsequent readings are made.

(b) Transects. The transects are run perpendicularly to the baseline. Each transect originates at a randomly selected foot mark along the baseline. The randomization is restricted so that half of the transects are randomized on each side of the 50-foot mark. (See Illustration 24.)

i. An example of 10 and 20 random numbers and directions are as follows:

Ten Random Foot Marks			
1.	2R	6.	52L
2.	17L	7.	61R
3.	25L	8.	69R
4.	37R	9.	80R
5.	42L	10.	85R

Twenty Random Foot Marks			
1.	2R	11.	52L
2.	7L	12.	54L
3.	17L	13.	61R
4.	20L	14.	62R
5.	25L	15.	69R
6.	29R	16.	77R
7.	37R	17.	80R
8.	40L	18.	81L
9.	42L	19.	85R
10.	45R	20.	98L

R = Right side of tape.
L = Left side of tape

ii. Transects may originate from alternating intervals of five or ten feet (running right and then left of the baseline) along the baseline.

(5) Reference Post or Point. Permanently mark the location of each study by means of a reference post (steel post) placed about 100 feet from the baseline beginning point stake. Record the bearing and distance from the post to the baseline beginning point stake. An alternative is to select a reference point, such as a prominent natural or physical feature, and record the bearing and distance from that point to the baseline beginning point stake. If a post is used, it should be tagged to indicate that it marks the location of a monitoring study established by the Bureau of Land Management and that it should not be disturbed.

(6) Study Identification. Number studies for proper identification to ensure that the data collected can be positively associated with specific sites on the ground. (See Illustration 1.)

(7) Study Documentation. Document the location of the baseline, bearing, number of transects, transect locations along the baseline, number of quadrats per transect, frame size(s), number of cover points per quadrat, and other pertinent information concerning a study on the Study Location and Documentation Data Form. (See Illustration 3, this Reference, and Section 6, Technical Reference 4400-1.) Plot the precise location of the studies on detailed maps and/or aerial photos.

g. Taking Photographs. The directions for taking close-up and general view photographs are described in Section 3.4.

RANGELAND MONITORING - TREND STUDIES

h. Sampling Process. In addition to collecting the specific studies data, general observations should be made of the study sites. (See Section 3.5.)

(1) Selecting Quadrat Size. The selection of quadrat size is important and is dependent on the characteristics of the vegetation to be sampled. (See Section 3.2.)

(a) As a rule of thumb, it is expected that all frequency percentages for important species should fall between 10 and 90 percent or if possible, between 20 and 80 percent. This will provide the greatest possible chance for detecting an important trend for a species when the study is read again. Use a quadrat size that will produce frequencies falling in this range for the greatest number of species possible.

(b) Determine the proper size quadrat(s) to use by doing preliminary sampling with different size frames. (See Illustration 22.) Frame size recommendations for several rangeland plant communities in Nevada are shown in Illustration 23.

(c) Use the same size quadrat thoughout a study and for re-ading the study. If frequencies approach the extremes of either 0 or 100 cent, it may be necessary to change the quadrat size.

(2) Running the Transects.

(a) Start each transect by placing the rear corner of the quadrat frame at the selected foot mark along the baseline tape.

(b) Place the quadrat frame at the designated interval in a line (belt) perpendicular to the baseline until the specified number of quadrats have been read. (See Illustration 24.)

(c) The quadrats may be placed contiguously or at a specified interval. The interval is either estimated, or a rapid measurement method, such as the width of the frame, or segment of the frame, is used to measure the interval.

(d) When a transect is completed, move to the next selected foot mark on the baseline tape and run the next transect.

(3) Collecting Cover Data. Use the points on the four corners of the quadrat frame and the point on the center tine to collect cover data. (See Illustration 22.)

(a) With each placement of the frame, record by dot count tally, by transect, the cover category that is directly in front of each

point. The cover categories are bare ground (rock less than 1/2 inch in diameter is tallied as bare ground), persistent litter, non-persistent litter, rock (1/2 inch and larger), and basal hits on live vegetation. Record the data on the Trend Study Data - Quadrat Frequency Method Form. (See Illustration 21.)

(b) If less cover data are desired, read fewer points on the frame. If more cover data are desired, read more points on the frame.

(c) Read the same points on the frame and the same number of points at each placement of the frame throughout a study and when rereading that study.

(4) Collecting Frequency Data. Collect frequency data for all plant species. (See Section 3.1.) Record the data by dot count tally, by species, by transect, on the Trend Study Data - Quadrat Frequency Method Form. (See Illustration 21.) Only one tally is made regardless of the number of individual plants of a species that occurs within a quadrat.

(a) Herbaceous plants (grasses and forbs) must be rooted in the quadrat to be counted.

(b) Trees and shrubs (including half shrubs) are counted if rooted in the quadrat or if the canopy of these plants overhangs the quadrat. In some cases, it may be preferable to count trees and shrubs only if they are rooted in the quadrat.

(c) Annual plants are counted whether green or dried.

(d) Specimens of the plants which are unknown should be collected and marked for later identification.

(e) Frequency occurrence of seedlings by plant species may be tallied.

(f) An alternative method for recording frequency data is explained in Illustration 33.

i. Calculations. Make the calculations and record the results in the appropriate columns on the Trend Study Data - Quadrat Frequency Method Form. (See Illustration 21.)

(1) Cover. The percent cover by cover category, e.g., persistent litter, can be calculated for each transect and/or for the total of all transects.

RANGELAND MONITORING - TREND STUDIES

(a) Cover For Each Transect. On a ten quadrat transect where five cover readings are made with each placement of the frame, calculate the percent cover for each cover category by multiplying the number of hits in each category by two. If there are 20 quadrats in the transect, the percent cover by cover category is equal to the number of hits for that category. Where less than five cover readings are made with each placement of the frame, calculate the percent cover for each cover category by dividing the number of hits in each category by the total number of cover readings for the transect. The percent cover may be entered in the cover category block by transect on the form.

(b) Cover For Total of All Transects. Calculate the percent cover by cover category for the total of all transects by adding the hits by category for all transects and dividing the total by the total number of cover readings for the study. Record the percent cover on the form.

(2) Frequency. The percent frequency by species can be calculated for each transect and/or for the total of all transects.

(a) Frequency For Each Transect. Calculate the percent frequency of a plant species on a transect by multiplying the number of hits, ccurrences, by 10, if there are 10 quadrats, or by 5, if there are 20 ırats in the transect. Record the percent frequency in the species block by transect on the form.

(b) Frequency For Total of All Transects. Calculate the percent frequency of a plant species for the total of all transects by adding the hits, or occurrences, for a species on all transects, dividing the total by the total number of quadrats sampled in the study, and multiplying the value by 100. Record the percent frequency on the form.

Form 4130-2a
(September 1987)

NV-050-94-01,02,03

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

GRAZING PERMIT

STATE	NV
OFFICE	055
OPERATOR NUMBER	275062
PREFERENCE CODE	03
DATE PRINTED	11/24/92
TERM	09/24/1992 TO 02/28/2002

LEWIS, ROBERT C. AND
VIVIAN C.

P.O.BOX 520
MOAPA, NV 89025

BUREAU OF LAND MANAGEMENT
CALIENTE R.A.
P.O. BOX 237
CALIENTE, NV 89008

THIS GRAZING PERMIT IS OFFERED TO YOU BASED ON YOUR RECOGNIZED GRAZING PREFERENCE ON THE PUBLIC LANDS AND/OR OTHER LANDS ADMINISTERED BY THE BLM. YOU ARE AUTHORIZED TO MAKE GRAZING USE TO THE EXTENT OF YOUR ACTIVE GRAZING PREFERENCE AS SHOWN BELOW UPON YOUR ACCEPTANCE OF THE TERMS AND CONDITIONS INCORPORATED HEREIN AND YOUR PAYMENT OF GRAZING FEES.

ALLOT / PASTURE	LIVESTOCK NUMBER	KIND	GRAZING PERIOD BEGIN	END	%PL	TYPE USE	AUM"S
11010 BREEDLOVE							
	75	CATTLE	06/15	02/28	90	ACTIVE	575
	38	HORSE	06/15	02/28	90	ACTIVE	291
11032 GRAPEVINE							
	47	CATTLE	03/01	02/28	100	ACTIVE	564
11034 HENRIE COMPLEX							
	81	CATTLE	03/01	02/28	100	ACTIVE	972

TERMS AND CONDITIONS:

REFER TO ATTACHMENT 1 FOR LISTING OF THE HENRIE COMPLEX ALLOTMENT TERMS AND CONDITIONS AS STATED IN THE FULL FORCE AND EFFECT GRAZING DECISION JANUARY 31, 1992.

REFER TO ATTACHEMENT 2 FOR LISTING OF THE BREEDLOVE ALLOTMENT TERMS AND CONDITIONS AS STATED IN THE FULL FORCE AND EFFECT GRAZING DECISION JANUARY 31, 1992.

REFER TO ATTACHMENT 3 FOR LISTING OF THE GRAPEVINE ALLOTMENT TERMS AND CONDITIONS AS STATED IN THE FULL FORCE AND EFFECT GRAZING DECISION JANUARY 31, 1992.

CASE FILE

Form 4130-2a
(September 1987)

OPERATOR NUMBER: 275062

ALLOTMENT SUMMARY (AUM'S)

ALLOT	PREFERENCE ACTIVE	SUSP	TOTAL
11010 BREEDLOVE	864		864
11032 GRAPEVINE	560		560
11034 HENRIE COMPLEX	975		975

THIS PERMIT ; 1. CONVEYS NO RIGHT, TITLE OR INTEREST HELD BY THE UNITED STATES IN ANY LANDS OR RESOURCES AND 2. IS SUBJECT TO (A) MODIFICATION, SUSPENSION OR CANCELLATION AS REQUIRED BY LAND PLANS AND APPLICABLE LAW; (B) ANNUAL REVIEW AND TO MODIFICATION OF TERMS AND CONDITIONS AS APPROPRIATE; AND (C) THE TAYLOR GRAZING ACT, AS AMENDED, THE FEDERAL LAND POLICY AND MANAGEMENT ACT, AS AMENDED, THE PUBLIC RANGELANDS IMPROVEMENT ACT, AND THE RULES AND REGULATIONS NOW OR HEREAFTER PROMULGATED THEREUNDER BY THE SECRETARY OF THE INTERIOR.

Signed under protest of the Desert Tortoise Relates Removal March Draft June 15

ACCEPTED:

SIGNATURE OF PERMITTEE: Robert C Lewis DATE Nov. 24 1992

AREA MANAGER: Curtis H Tucker DATE 11-25-92

CASE FILE

ATTACHMENT 1

SPECIFIC TERMS AND CONDITIONS
FOR THE NEW FEDERAL GRAZING PERMIT

Breedlove allotment

1. Grazing will be permitted in accordance with grazing Prescriptions 1 as identified in the Opinion as amended.

2. Grazing prescription areas within your allotment are delineated on the **Breedlove Allotment** Map.

3. Livestock grazing use shall be authorized in the Breedlove allotment from 06/15 through 02/28 as identified in the following table and Breedlove allotment map.

SPECIFIC USE AREAS AND
IDENTIFIED PERIODS OF USE

PRESCRIPTION AREAS[1/]	SEASON OF USE	
	BEGIN DATE	END DATE
Prescription 1 [2/]	06/15	02/28

[1/] Refer to map.
[2/] Prescription 1, Tortoise Habitat Categories I, II, and Intensive III.

4. All vehicle use in desert tortoise habitat within the **Breedlove allotment** shall be restricted to existing roads and trails.

5. Trash and garbage shall be removed from each camp site that is associated with livestock grazing operations (branding, sheep herding, roundup, etc.) and disposed of off site in a designated facility. No trash or garbage shall be buried at camp sites.

6. Use of hay or grains as a feeding supplemental shall be prohibited in desert tortoise habitat to avoid the introduction of non-native plant species. Mineral, protein and salt blocks are authorized subject to 43 CFR section 4130.6-2(c).

7. The allotment shall include at a minimum the following key species for monitoring purposes where **appropriate based upon density and availability:** galleta grass (*Hilaria jamesii*) and (*H. rigida*), bush muhly (*Muhlenbergia porteri*), sand dropseed (*Sporobolus cryptandrus*), Indian ricegrass (*Oryzopsis hymenoides*), black grama (*Bouteloua eriopoda*), desert needlegrass (*Stipa speciosa*), range ratany (*Krameria parvifolia*), ephedra (*Ephedra spp.*), white burrobrush (*Hymenoclea salsola*) and winterfat (*Eurotia lanata*).

8. The following table identifies key areas, species and the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes in the Breedlove allotment. As additional key species and or key areas are determined necessary for monitoring purposes, maximum allowable use levels will be established based upon the conditions as set forth in the Biological Opinion for Prescription 1 areas.

EXISTING KEY AREAS, SPECIES AND ALLOWABLE USE LEVELS

KEY AREA & LEGAL DESCRIPTION	KEY SPECIES	PRESCRIPTION 1		
		10/15 - 02/28	03/01 - 06/14	06/15 - 10/14
1 (T.12S., R.66E., Sec. 17)	Big galleta grass Nevada ephedra	≤ 50% ≤ 40%	No livestock use will be made during this period.	≤ 40% ≤ 40%

9. The following table identifies the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes within Prescription 1 areas.

ALLOTMENT NAME	PRESCRIPTION	ALLOWABLE USE LEVELS AND USE PERIODS PER GRAZING PRESCRIPTION		
BREEDLOVE	PRESCRIPTION 1	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	Key Perennial Grasses - ≤50% Key Perennial Shrubs and Forbs - ≤40%	No livestock use will be allowed during this period.

10. When the allowable use levels are reached for the Prescription 1 areas, the livestock must be removed from the allotment unless other management alternatives are authorized by the Caliente Resource Area Manager that are consistent with the Opinion and this decision.

11. Applications for changes in grazing use must be in written form and be received by the Caliente Resource Area office no later than 15 days prior to the desired date of change.

12. Applications for changes in grazing use filed after a billing notice has been issued, and which require the issuance of a replacement bill or supplemental bill shall be subject to a ten (10) dollar service charge.

13. Grazing Applications will be issued on a yearly basis showing all grazing use as active. If you desire to take all or partial non-use for the grazing year, you must indicate this in writing on your Grazing Application, along with your reason(s).

14. A statement of Actual Grazing Use made on the Breedlove allotment must be received in the Caliente Resource Area office no later than 15 days after the last day of authorized grazing use.

ATTACHMENT 1

SPECIFIC TERMS AND CONDITIONS FOR THE NEW FEDERAL GRAZING PERMIT

Henrie Complex Allotment

1. Grazing will be permitted in accordance with grazing Prescriptions 1 and 2 identified in the Opinion as amended.

2. Grazing prescription areas within your allotment are delineated on the **Henrie Complex Allotment Map.**

3. Livestock grazing use shall be authorized in the Henrie Complex allotment 06/15 through 02/28 in Prescription 1 and 03/01 through 02/28 in the Prescription 2 area and Non-Prescription area as identified in the following table and Henrie Complex allotment map.

SPECIFIC USE AREAS AND
IDENTIFIED PERIODS OF USE

PRESCRIPTION AREAS[1/]	SEASON OF USE BEGIN DATE	END DATE
Prescription 1 [2/]	06/15	02/28
Prescription 2 [3/]	03/01	02/28
Non-Prescription	03/01	02/28

[1/] Refer to map.
[2/] Prescription 1, Tortoise Habitat Categories I, II, and Intensive III.
[3/] Prescription 2, Tortoise Habitat Category III non-intensive.

4. All vehicle use in desert tortoise habitat within the **Henrie Complex allotment** shall be restricted to existing roads and trails.

5. Trash and garbage shall be removed from each camp site that is associated with livestock grazing operations (branding, sheep herding, roundup, etc.) and disposed of off site in a designated facility. No trash or garbage shall be buried at camp sites.

6. Use of hay or grains as a feeding supplemental shall be prohibited in desert tortoise habitat to avoid the introduction of non-native plant species. Mineral, protein and salt blocks are authorized subject to 43 CFR section 4130.6-2(c).

7. The allotment shall include at a minimum the following key species for monitoring purposes **where appropriate based upon density and availability:** galleta grass (*Hilaria jamesii*) and (*H. rigida*), bush muhly (*Muhlenbergia porteri*), sand dropseed (*Sporobolus cryptandrus*), Indian ricegrass (*Oryzopsis hymenoides*), black grama (*Bouteloua eriopoda*), desert needlegrass (*Stipa speciosa*), range ratany (*Krameria parvifolia*), ephedra (*Ephedra spp.*), white burrobrush (*Hymenoclea salsola*) and winterfat (*Eurotia lanata*).

8. The following table identifies key areas, species and the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes within Prescription 1 and 2 areas in the Henrie Complex allotment. As additional key species and or key areas are determined necessary for monitoring purposes, maximum allowable use levels will be established based upon the conditions as set forth in the Opinion for Prescription 1 and/or 2 areas.

EXISTING KEY AREAS, SPECIES AND ALLOWABLE USE LEVELS

KEY AREA & LEGAL DESCRIPTION	KEY SPECIES	PRESCRIPTION 2	
		10/15 TO 02/28	03/01 TO 10/14
1 T.10S., R.66E., Sec.6 (M-W)	Big galleta grass Nevada ephedra	≤50% ≤45%	≤40% ≤40%

9. The following table identifies the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes within Prescription 1 and/or 2 areas.

ALLOTMENT NAME	PRESCRIPTION	ALLOWABLE USE LEVELS AND USE PERIODS PER GRAZING PRESCRIPTION		
HENRIE COMPLEX	PRESCRIPTION 1	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	Key Perennial Grasses - ≤50% Key Perennial Shrubs and Forbs - <40%	No livestock use will be allowed during this period.
	PRESCRIPTION 2	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	Key perennial grasses - ≤ 50% Key perennial shrubs & forbs - ≤ 45%	All Perennial Species - ≤40%

10. When the allowable use levels are reached for the Prescription 1 and/or 2 areas, the livestock must be removed from the allotment unless other management alternatives are authorized by the Caliente Resource Area Manager that are consistent with the Opinion and this decision.

11. Adequate livestock control must be provided by existing range improvements within the Henrie Complex allotment to prevent livestock from continually migrating into the Prescription 1 area during the period 03/01 through 06/14. If livestock continually migrate into the Prescription 1 area, the entire allotment will be required to be managed under Prescription 1 until range improvements become available to stop such action.

12. By March 1, 1993 all cattle (six months of age or older at turn out) will be required to be ear tagged by you with BLM issued ear tags. Additionally, you are required to submit a list of ear tag numbered cattle turned out/authorized on the Henrie Complex allotment. The list must be submitted to the Caliente Resource Area office within seven (7) days of turn out. At the end of the authorized grazing period, any ear tag numbers not accounted for, shall be reported to the Caliente Resource Area office within 15 days.

    a. Since your operation is of a year round nature and it would be difficult to ear tag all cattle prior to the March 1, 1992 date, I have extended the date to ear tag all your cattle to March 1, 1993. In order to assure adequate cattle control is provided to prevent cattle from continually migrating into the Prescription 1 area, all cattle found in the Prescription 1 area during the period 03/01/92 through 06/14/92 shall be ear tagged by you with a BLM ear tag. Terms and Conditions number 15 and 16 will then be followed.

13. You are required to remove and return to the Caliente Resource Area office all BLM issued ear tags of cattle shipped/sold. This must be done prior to being issued replacement tags.

14. Replacement tags for brush loss, unfound death loss, or other unexplained losses will be issued on a case by case basis at the determination of the Caliente Resource Area Manager.

15. Any livestock found in the Prescription 1 area during the period of 03/01 through 06/14 shall be relocated to the Prescription 2 and/or Non-Prescription area within 72 hours. The ear tag numbers of any cattle found in the Prescription 1 area during the period 03/01 through 06/14 shall be recorded and submitted in writing to the Caliente Resource Area office within five (5) days of being observed.

16. Any livestock found in the Prescription 1 area during the period of 03/01 through 06/14 and which were previously recorded and relocated to the Prescription 2 and/or Non-Prescription area shall be removed from the Henrie Complex allotment within 72 hours of being observed.

17. Applications for changes in grazing use must be in written form and be received by the Caliente Resource Area office no later than 15 days prior to the desired date of change.

18. Applications for changes in grazing use filed after a billing notice has been issued, and which require the issuance of a replacement bill or supplemental bill shall be subject to a ten (10) dollar service charge.

19. Grazing Applications will be issued on a yearly basis showing all grazing use as active by Prescription 1, 2 and/or Non-Prescription areas. If you desire to take all or partial non-use for the grazing year, you must indicate this in writing on your Grazing Application, along with your reason(s).

20. A statement of Actual Grazing Use made on the Henrie Complex allotment by grazing Prescription area, 1, 2 and/or Non-Prescription areas must be received in the Caliente Resource Area office no later than 15 days after the last day of authorized grazing use. In the case of year round grazing, this Actual Grazing Use statement must be received in the Caliente Resource Area office no later than March 15th of each year.

ATTACHMENT 1

SPECIFIC TERMS AND CONDITIONS
FOR THE NEW FEDERAL GRAZING PERMIT

Grapevine allotment

1. Grazing will be permitted in accordance with grazing Prescriptions 1 and 2 identified in the Opinion as amended.

2. Grazing prescription areas within your allotment are delineated on the **Grapevine Allotment Map.**

3. Livestock grazing use shall be authorized in the Grapevine allotment from 06/15 through 02/28 in the South pasture, Prescription 1, and 03/01 through 02/28 in the Northwest and Northeast Pastures, Prescription 2, as identified in the following table and Grapevine allotment map.

SPECIFIC USE AREAS AND
IDENTIFIED PERIODS OF USE

PRESCRIPTION AREAS[1/]	SEASON OF USE BEGIN DATE	END DATE
Prescription 1 [2/]	06/15	02/28
Prescription 2 [3/]	03/01	02/28
Non-Prescription	03/01	02/28

[1/] Refer to map.
[2/] Prescription 1, Tortoise Habitat Categories I, II, and Intensive III.
[3/] Prescription 2, Tortoise Habitat Category III non-intensive.

4. All vehicle use in desert tortoise habitat within the **Grapevine allotment** shall be restricted to existing roads and trails.

5. Trash and garbage shall be removed from each camp site that is associated with livestock grazing operations (branding, sheep herding, roundup, etc.) and disposed of off site in a designated facility. No trash or garbage shall be buried at camp sites.

6. Use of hay or grains as a feeding supplemental shall be prohibited in desert tortoise habitat to avoid the introduction of non-native plant species. Mineral, protein and salt blocks are authorized subject to 43 CFR section 4130.6-2(c).

7. The allotment shall include at a minimum the following key species for monitoring purposes **where appropriate based upon density and availability:** galleta grass (*Hilaria jamesii*) and (*H. rigida*), bush muhly (*Muhlenbergia porteri*), sand dropseed (*Sporobolus cryptandrus*), Indian ricegrass (*Oryzopsis hymenoides*), black grama (*Bouteloua eriopoda*), desert needlegrass (*Stipa speciosa*), range ratany (*Krameria parvifolia*), ephedra (*Ephedra spp.*), white burrobrush (*Hymenoclea salsola*) and winterfat (*Eurotia lanata*).

8. The following table identifies key areas, species and the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes in the Grapevine allotment. As additional key species and or key areas are determined necessary for monitoring purposes, maximum allowable use levels will be established based upon the conditions as set forth in the Biological Opinion for Prescription 1 and/or 2 areas.

KEY AREAS, SPECIES AND ALLOWABLE USE LEVELS

KEY AREA & LEGAL DESCRIPTION	KEY SPECIES	PRESCRIPTION 1			PRESCRIPTION 2	
		10/15 TO 02/28	03/01 TO 06/14	06/15 TO 10/14	10/15 TO 02/28	03/01 TO 10/14
1 (T.9 S., R.65 E., Sec. 6) NE #1	Big galleta Indian rice grass Sand dropseed				≤ 50% ≤ 50% ≤ 50%	≤ 40% ≤ 40% ≤ 40%
2 (T.9 S., R.65 E., Sec. 31) NE #2	Big galleta				≤ 50%	≤ 40%
3 (T.9S., R.64 E., Sec. 24) NE #4	Big galleta				≤ 50%	≤ 40%
4 (T.9S., R.64 E., Sec. 22) NE #5	Big galleta				≤ 50%	≤ 40%
5 (T.9S., R.64 E., Sec. 25) NW #1	Big galleta		No livestock use will be made during this period.		≤ 50%	≤ 40%
6 (T.9S., R.64 E., Sec. 36) NW #2	Fourwing saltbush Spiny hopsage Big galleta Indian rice grass				≤ 45% ≤ 45% ≤ 50% ≤ 50%	≤ 40% ≤ 40% ≤ 40% ≤ 40%
7 ((T.10S., R.64E., Sec.22) S #1	Big galleta	≤ 50%		≤ 40%		
8 (T.10S., R.63., Sec. 16) S #2	Big galleta Nevada ephedra	≤ 50% ≤ 40%		≤ 40% ≤ 40%		
9 (T.10S., R.64 E., Sec. 22) S #3	Big galleta Indian rice grass Desert trumpet	≤ 50% ≤ 50% ≤ 40%		≤ 40% ≤ 40% ≤ 40%		

9. The following table identifies the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes within Prescription 1 and 2 areas.

ALLOTMENT NAME	PRESCRIPTION	ALLOWABLE USE LEVELS AND USE PERIODS PER GRAZING PRESCRIPTION		
GRAPEVINE	PRESCRIPTION 1	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	Key Perennial Grasses - ≤50% Key Perennial Shrubs and Forbs - ≤40%	No livestock use will be allowed during this period.
	PRESCRIPTION 2	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	same as above for grasses Key perennial Shrubs and Forbs - ≤45%	All Perennial Species - ≤40%

10. When the allowable use levels are reached for the Prescription 1 and/or 2 areas, the livestock must be removed from the allotment unless other management alternatives are authorized by the Caliente Resource Area Manager that are consistent with the Opinion and this decision.

11. Use may be authorized on a temporary non-renewable basis and shall remain in effect until monitoring indicates a need for adjustment. AUMs in excess of 560 may be authorized on Grapevine but will be issued on a temporary non-renewable basis. At no time shall total AUMs exceed 1200 or total livestock numbers exceed 100 head.

12. Adequate livestock control must be provided by existing range improvements within the Grapevine allotment to prevent livestock from continually migrating into the Prescription 1 area during the period 03/01 through 06/15. If livestock continually migrate into the Prescription 1 area, the entire allotment will be required to be managed under Prescription 1 until range improvements become available to stop such action.

13. Applications for changes in grazing use must be in written form and be received by the Caliente Resource Area office no later than 15 days prior to the desired date of change.

14. Applications for changes in grazing use filed after a billing notice has been issued, and which require the issuance of a replacement bill or supplemental bill shall be subject to a ten (10) dollar service charge.

15. Grazing Applications will be issued on a yearly basis showing all grazing use as active by Prescription 1, 2 and/or Non-Prescription areas. If you desire to take all or partial non-use for the grazing year, you must indicate this in writing on your Grazing Application, along with your reason(s).

16. A statement of Actual Grazing Use made on the Grapevine allotment by grazing Prescription area, 1, 2 and/or Non-Prescription, must be received in the Caliente Resource Area office no later than 15 days after the last day of authorized grazing use. In the case of year round grazing, this Actual Grazing Use statement must be received in the Caliente Resource Area office no later than March 15th of each year.

Form 4130-2a
(September 1987)

UNITED S[illegible]ES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

GRAZING PERMIT

STA[illegible] NV
OFFICE 055
OPERATOR NUMBER 275043
PREFERENCE [illegible]
DATE PRINTED 02/11/92
TERM 03/01/1992 TO 02/28/2002

NV-050-94-01,02,03

RECEIVED
07:30 A.M.
FEB 1[illegible] 1992
CALIENTE RESOURCE AREA
BUREAU OF
LAND MANAGEMENT

OLSON, KEVIN D. &
SANDRA

P.O. BOX 97
PANACA, NV 89042

BUREAU OF LAND MANAGEMENT
CALIENTE R.A.
P.O. BOX 237
CALIENTE, NV 89008

THIS GRAZING PERMIT IS OFFERED TO YOU BASED ON YOUR RECOGNIZED GRAZING PREFERENCE ON THE PUBLIC LANDS AND/OR OTHER LANDS ADMINISTERED BY THE BLM. YOU ARE AUTHORIZED TO MAKE GRAZING USE TO THE EXTENT OF YOUR ACTIVE GRAZING PREFERENCE AS SHOWN BELOW UPON YOUR ACCEPTANCE OF THE TERMS AND CONDITIONS INCORPORATED HEREIN AND YOUR PAYMENT OF GRAZING FEES.

ALLOT / PASTURE	LIVESTOCK NUMBER	KIND	GRAZING PERIOD BEGIN	END	%PL	TYPE USE	AUM'S
11034 HENRIE COMPLEX							
	313	CATTLE	03/01	02/28	85	ACTIVE	3193

TERMS AND CONDITIONS:

REFER TO ATTACHMENT 1 FOR LISTING OF THE HENRIE COMPLEX ALLOTMENT TERMS AND CONDITIONS AS STATED IN THE FULL FORCE AND EFFECT GRAZING DECISION DATED JANUARY 31, 1992 AND ATTACHMENT 2, HENRIE COMPLEX ALLOTMENT MAP.

ALLOTMENT SUMMARY (AUM'S)

ALLOT	PREFERENCE ACTIVE	SUSP	TOTAL
11034 HENRIE COMPLEX	3193		3193

THIS PERMIT ; 1. CONVEYS NO RIGHT, TITLE OR INTEREST HELD BY THE UNITED STATES IN ANY LANDS OR RESOURCES AND 2. IS SUBJECT TO (A) MODIFICATION, SUSPENSION OR CANCELLATION AS REQUIRED BY LAND PLANS AND APPLICABLE LAW; (B) ANNUAL REVIEW AND TO MODIFICATION OF TERMS AND CONDITIONS AS APPROPRIATE; AND (C) THE TAYLOR GRAZING ACT, AS AMENDED, THE FEDERAL LAND POLICY AND MANAGEMENT ACT, AS AMENDED, THE PUBLIC RANGELANDS IMPROVEMENT ACT, AND THE RULES AND REGULATIONS NOW OR HEREAFTER PROMULGATED THEREUNDER BY THE SECRETARY OF THE INTERIOR.

ACCEPTED:
SIGNATURE OF PERMITTEE: Kevin D. Olson DATE 2-14-92

AREA MANAGER: Curtis R. Tucker DATE 2-19-92

CASE FILE

ATTACHMENT 1

SPECIFIC TERMS AND CONDITIONS FOR THE NEW FEDERAL GRAZING PERMIT

Henrie Complex Allotment

1. Grazing will be permitted in accordance with grazing Prescriptions 1 and 2 identified in the Opinion as amended.

2. Grazing prescription areas within your allotment are delineated on Attachment 2, titled **Henrie Complex Allotment Map.**

3. Livestock grazing use shall be authorized in the Henrie Complex allotment 06/15 through 02/28 in Prescription 1 and 03/01 through 02/28 in the Prescription 2 area and Non-Prescription area as identified in the following table and Attachment 2.

SPECIFIC USE AREAS AND
IDENTIFIED PERIODS OF USE

PRESCRIPTION AREAS[1/]	SEASON OF USE BEGIN DATE	END DATE
Prescription 1 [2/]	06/15	02/28
Prescription 2 [3/]	03/01	02/28
Non-Prescription	03/01	02/28

[1/] Refer to Attachment 2.
[2/] Prescription 1, Tortoise Habitat Categories I, II, and Intensive III.
[3/] Prescription 2, Tortoise Habitat Category III non-intensive.

4. All vehicle use in desert tortoise habitat within the **Henrie Complex allotment** shall be restricted to existing roads and trails.

5. Trash and garbage shall be removed from each camp site that is associated with livestock grazing operations (branding, sheep herding, roundup, etc.) and disposed of off site in a designated facility. No trash or garbage shall be buried at camp sites.

6. Use of hay or grains as a feeding supplemental shall be prohibited in desert tortoise habitat to avoid the introduction of non-native plant species. Mineral, protein and salt blocks are authorized subject to 43 CFR section 4130.6-2(c).

7. The allotment shall include at a minimum the following key species for monitoring purposes **where appropriate based upon density and availability:** galleta grass (*Hilaria jamesii*) and (*H. rigida*), bush muhly (*Muhlenbergia porteri*), sand dropseed (*Sporobolus cryptandrus*), Indian ricegrass (*Oryzopsis hymenoides*), black grama (*Bouteloua eriopoda*), desert needlegrass (*Stipa speciosa*), range ratany (*Krameria parvifolia*), ephedra (*Ephedra spp.*), white burrobrush (*Hymenoclea salsola*) and winterfat (*Eurotia lanata*).

8. The following table identifies key areas, species and the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes within Prescription 1 and 2 areas in the Henrie Complex allotment. As additional key species and or key areas are determined necessary for monitoring purposes, maximum allowable use levels will be established based upon the conditions as set forth in the Opinion for Prescription 1 and/or 2 areas.

EXISTING KEY AREAS, SPECIES AND ALLOWABLE USE LEVELS

KEY AREA & LEGAL DESCRIPTION	KEY SPECIES	PRESCRIPTION 2	
		10/15 TO 02/28	03/01 TO 10/14
1 ~~T.10S., R.66E., Sec.6 (M.W)~~	Big galleta grass Nevada ephedra	≤50% ≤45%	≤40% ≤40%

9. The following table identifies the maximum allowable use levels for specified periods of livestock grazing use, which shall be used at a minimum for monitoring purposes within Prescription 1 and/or 2 areas.

ALLOTMENT NAME	PRESCRIPTION	ALLOWABLE USE LEVELS AND USE PERIODS PER GRAZING PRESCRIPTION		
HENRIE COMPLEX	PRESCRIPTION 1	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	Key Perennial Grasses - ≤50% Key Perennial Shrubs and Forbs - ≤40%	No livestock use will be allowed during this period.
	PRESCRIPTION 2	06/15 - 10/14	10/15 - 02/28	03/01 - 06/14
		All Perennial Species - ≤40%	Key perennial grasses - ≤ 50% Key perennial shrubs & forbs - ≤ 45%	All Perennial Species - ≤40%

10. When the allowable use levels are reached for the Prescription 1 and/or 2 areas, the livestock must be removed from the allotment unless other management alternatives are authorized by the Caliente Resource Area Manager that are consistent with the Opinion and this decision.

11. Adequate livestock control must be provided by existing range improvements within the Henrie Complex allotment to prevent livestock from continually migrating into the Prescription 1 area during the period 03/01 through 06/14. If livestock continually migrate into the Prescription 1 area, the entire allotment will be required to be managed under Prescription 1 until range improvements become available to stop such action.

12. By March 1, 1993 all cattle (six months of age or older at turn out) will be required to be ear tagged by you with BLM issued ear

tags. Additionally, you are required to submit a list of ear tag numbered cattle turned out/authorized on the Henrie Complex allotment. The list must be submitted to the Caliente Resource Area office within seven (7) days of turn out. At the end of the authorized grazing period, any ear tag numbers not accounted for, shall be reported to the Caliente Resource Area office within 15 days.

a. Since your operation is of a year round nature and it would be difficult to ear tag all cattle prior to the March 1, 1992 date, I have extended the date to ear tag all your cattle to March 1, 1993. In order to assure adequate cattle control is provided to prevent cattle from continually migrating into the Prescription 1 area, all cattle found in the Prescription 1 area during the period 03/01/92 through 06/14/92 shall be ear tagged by you with a BLM ear tag. Terms and Conditions number 15 and 16 will then be followed.

13. You are required to remove and return to the Caliente Resource Area office all BLM issued ear tags of cattle shipped/sold. This must be done prior to being issued replacement tags.

14. Replacement tags for brush loss, unfound death loss, or other unexplained losses will be issued on a case by case basis at the determination of the Caliente Resource Area Manager.

15. Any livestock found in the Prescription 1 area during the period of 03/01 through 06/14 shall be relocated to the Prescription 2 and/or Non-Prescription area within 72 hours. The ear tag numbers of any cattle found in the Prescription 1 area during the period 03/01 through 06/14 shall be recorded and submitted in writing to the Caliente Resource Area office within five (5) days of being observed.

16. Any livestock found in the Prescription 1 area during the period of 03/01 through 06/14 and which were previously recorded and relocated to the Prescription 2 and/or Non-Prescription area shall be removed from the Henrie Complex allotment within 72 hours of being observed.

17. Applications for changes in grazing use must be in written form and be received by the Caliente Resource Area office no later than 15 days prior to the desired date of change.

18. Applications for changes in grazing use filed after a billing notice has been issued, and which require the issuance of a replacement bill or supplemental bill shall be subject to a ten (10) dollar service charge.

19. Grazing Applications will be issued on a yearly basis showing all grazing use as active by Prescription 1, 2 and/or Non-Prescription areas. If you desire to take all or partial non-use for the grazing year, you must indicate this in writing on your Grazing Application, along with your reason(s).

20. A statement of Actual Grazing Use made on the Henrie Complex allotment by grazing Prescription area, 1, 2 and/or Non-Prescription areas must be received in the Caliente Resource Area office no later than 15 days after the last day of authorized grazing use. In the case of year round grazing, this Actual Grazing Use statement must be received in the Caliente Resource Area office no later than March 15th of each year.

SECTION 4

1. 43 CFR Quoted in Decision and Rational for Full Force and Effect

(2) Permittee(s) or lessee(s) in proportion to the amount of their grazing preference; and/or

(3) Other qualified applicants under §4130.1-2 of this title.

[53 FR 10233, Mar. 29, 1988]

§4110.3-2 Decreasing active use.

(a) Active use may be suspended in whole or in part on a temporary basis due to drought, fire, or other natural causes, or to facilitate installation, maintenance, or modification of range improvements.

(b) When monitoring shows active use is causing an unacceptable level or pattern of utilization or exceeds the livestock carrying capacity as determined through monitoring, the authorized officer shall reduce active use if necessary to maintain or improve rangeland productivity, unless the authorized officer determines a change in management practices would achieve the management objectives.

(c) Where active use is reduced it shall be held in suspension or in nonuse for conservation/protection purposes, until the authorized officer determines that active use may resume.

[53 FR 10234, Mar. 29, 1988]

§4110.3-3 Implementation of changes in available forage.

(a) Changes in active use in excess of 10 percent shall be implemented over a 5-year period, unless after consultation with the affected permittees or lessees and other affected interests, an agreement is reached to implement the increase or decrease in less than 5 years.

(b) After consultation, coordination and cooperation, suspensions of preference shall be implemented through a documented agreement or by decision. If data acceptable to the authorized officer are available, an initial reduction shall be taken on the effective date of the agreement or decision and the balance taken in the third and fifth years following that effective date, except as provided in paragraph (a) of this section. If data acceptable to the authorized officer to support an initial reduction are not available, additional data will be collected through monitoring. Adjustments based on the additional data shall be implemented by agreement or decision that will initiate the 5-year implementation period.

(c) When the authorized officer determines that the soil, vegetation, or other resources on the public lands require temporary protection because of conditions such as drought, fire, flood, or insect infestation, after consultation with affected permittees or lessees and other affected interests, action shall be taken to close allotments or portions of allotments to grazing by any kind of livestock or to modify authorized grazing use. Notices of closure and decisions requiring modification of authorized grazing use shall be issued as final decisions which are placed in full force and effect under §4160.3(c) of this title.

[49 FR 6451, Feb. 21, 1984, as amended at 53 FR 10234, Mar. 29, 1988]

§4110.4 Changes in public land acreage.

§4110.4-1 Additional land acreage.

When lands outside designated allotments become available for livestock grazing under the administration of the Bureau of Land Management, the forage available for livestock shall be made available to qualified applicants at the discretion of the authorized officer. Grazing use shall be apportioned under §4130.1-2 of this title.

[53 FR 10234, Mar. 29, 1988]

§4110.4-2 Decrease in land acreage.

(a) Where there is a decrease in public land acreage available for livestock grazing within an allotment:

(1) Grazing permits or leases may be canceled, suspended, or modified as appropriate to reflect the changed area of use.

(2) Grazing preference may be canceled or suspended in whole or in part. Cancellations or suspensions determined by the authorized officer to be necessary to protect the public lands will be equitably apportioned by the authorized officer based upon the level of available forage and the magnitude of the change in public land acreage available, or as agreed to among the authorized users and the authorized officer.

[43 FR 29067, July 5, 1978, as amended at 47 FR 41711, Sept. 21, 1982]

§4130.5 Ownership and identification of livestock.

(a) The permittee or lessee shall own or control and be responsible for the management of the livestock which graze the public land under a grazing permit or lease.

(b) Authorized users shall comply with the requirements of the State in which the public lands are located relating to branding of livestock, breed, grade, and number of bulls, health and sanitation.

(c) The authorized officer may require counting and/or additional special marking or tagging of the authorized livestock in order to promote the orderly administration of the public lands.

(d) Where a permittee or lessee controls but does not own the livestock which graze the public lands, the agreement that gives the permittee or lessee control of the livestock shall be filed with the authorized officer.

(e) The brand and other identifying marks on livestock controlled, but not owned, by the permittee or lessee shall be filed with the authorized officer.

[49 FR 6453, Feb. 21, 1984; 49 FR 12704, Mar. 30, 1984, as amended at 50 FR 45827, Nov. 4, 1985]

§§4130.5–1—4130.5–3 [Reserved]

§4130.6 Terms and conditions.

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.

[49 FR 6453, Feb. 21, 1984, as amended at 53 FR 10234, Mar. 29, 1988]

§4130.6–1 Mandatory terms and conditions.

(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 §4130.3, 4130.3–1 and 4110.3–2.

(b) All permits and leases shall be made subject to cancellation, suspension, or modification for any violation of these regulations or of any term or condition of the permit or lease.

[49 FR 6453, Feb. 21, 1984, as amended at 53 FR 10234, Mar. 29, 1988]

§4130.6–2 Other terms and conditions.

The authorized officer may specify in grazing permits or 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. These may include but are not limited to:

(a) The class of livestock that will graze on an allotment;

(b) The breed of livestock in allotments within which two or more permittees or lessees are authorized to graze;

(c) Authorization to use, and directions for placement of supplemental feed, including salt, for improved livestock and rangeland management on the public lands;

(d) A requirement that permittees or lessees operating under a grazing permit or lease submit within 15 days after completing their annual grazing use, or as otherwise specified in the permit or lease, the actual use made;

(e) The kinds of indigenous animals authorized to graze under specific terms and conditions;

(f) Provision for livestock grazing to be temporarily delayed, discontinued or modified to allow for the reproduction, establishment, or restoration of vigor to plants, or to prevent compaction of wet soils, such as where delay of spring turnout is required because of weather conditions or lack of plant growth; and

(g) The percentage of public land use determined by the proportion of livestock forage available on public lands within the allotment compared to the total amount available from both public lands and those owned or controlled by the permittee or lessee.

[49 FR 6453, Feb. 21, 1984; 49 FR 12704, Mar. 30, 1984]

lic sale to the highest bidder by the authorized officer under these regulations or, if a suitable agreement is in effect, by the State. If a satisfactory bid is not received, the livestock may be reoffered for sale, condemned and destroyed or otherwise disposed of under these regulations, or if a suitable agreement is in effect, in accordance with State Law.

[43 FR 29067, July 5, 1978. Redesignated and amended at 47 FR 41712, Sept. 21, 1982]

Subpart 4160—Administrative Remedies

§4160.1 Proposed decisions.

§4160.1-1 Proposed decisions on permits or leases.

In the absence of a documented agreement between the authorized officer and the permittee(s) or lessee(s), the authorized officer shall serve a proposed decision on any applicant, permittee or lessee, or the agent of record, or both, who is affected by the proposed action on applications for permits (including range improvement permits) or leases, or by the proposed action relating to terms and conditions of permits (including range improvement permits) or leases, by certified mail or personal delivery. The authorized officer shall also send copies to other affected interests. The proposed decision shall state reasons for the action, including reference to pertinent terms, conditions and/or provisions of these regulations, and shall provide for a period of 15 days after receipt for the filing of a protest.

[46 FR 5791, Jan. 19, 1981, as amended at 47 FR 41713, Sept. 21, 1982; 49 FR 6454, Feb. 21, 1984; 49 FR 12705, Mar. 30, 1984]

§4160.1-2 Proposed decisions on alleged violations.

If the authorized officer determines that a permittee or lessee appears to have violated any provision of this part he shall serve a proposed decision on the permittee or lessee, or his agent, or both, by certified mail or personal delivery. The proposed decision shall state the alleged violation and refer to the specific terms, conditions, and/or provisions of these regulations alleged to have been violated and the reasons for the proposed decision. As applicable, the proposed decision shall state the amount due under §4130.7-1 or §4150.3 and the action to be taken under §4170.1. The proposed decision shall provide for a period of 15 days after receipt for the filing of a protest.

[43 FR 29067, July 5, 1978, as amended at 47 FR 41713, Sept. 21, 1982; 49 FR 6455, Feb. 21, 1984]

§4160.2 Protests.

Any applicant, permittee, lessee or other affected interests may protest the proposed decision under §4160.1 of this title in person or in writing to the authorized officer within 15 days after receipt of such decision.

[47 FR 41713, Sept. 21, 1982, as amended at 49 FR 6455, Feb. 21, 1984]

§4160.3 Final decisions.

(a) In the absence of a protest, the proposed decision shall become the final decision of the authorized officer without further notice.

(b) Upon the timely filing of a protest, the authorized officer shall reconsider his proposed decision in light of the protestant's statement of reasons for protest and in light of other information pertinent to the case. At the conclusion to his review of the protest, the authorized officer shall serve his final decision on the protestant or his agent, or both, and on other affected interests.

(c) A period of 30 days after receipt of the final decision is provided for filing an appeal. Decisions that are appealed shall be suspended pending final action except as otherwise provided in this section. Except where grazing use the preceding year was authorized on a temporary basis under §4110.3-1(a) of this title, an applicant who was granted grazing use in the preceding year may continue at that level of authorized active use pending final action on the appeal. The authorized officer may place the final decision in full force and effect in an emergency to stop resource deterioration. Full force and effect decisions shall take effect on the date specified, regardless of an appeal.

[43 FR 29067, July 5, 1978, as amended at 46 FR 5791, Jan. 19, 1981; 47 FR 41713, Sept. 21,

duction Project, 1004–0042, Washington, DC 20503.

[57 FR 29654, July 6, 1992]

Subpart 4710—Management Considerations

§4710.1 Land use planning.

Management activities affecting wild horses and burros, including the establishment of herd management areas, shall be in accordance with approved land use plans prepared pursuant to part 1600 of this title.

§4710.2 Inventory and monitoring.

The authorized officer shall maintain a record of the herd areas that existed in 1971, and a current inventory of the numbers of animals and their areas of use. When herd management areas are established, the authorized officer shall also inventory and monitor herd and habitat characteristics.

§4710.3 Management areas.

§4710.3–1 Herd management areas.

Herd management areas shall be established for the maintenance of wild horse and burro herds. In delineating each herd management area, the authorized officer shall consider the appropriate management level for the herd, the habitat requirements of the animals, the relationships with other uses of the public and adjacent private lands, and the constraints contained in §4710.4. The authorized officer shall prepare a herd management area plan, which may cover one or more herd management areas.

§4710.3–2 Wild horse and burro ranges.

Herd management areas may also be designated as wild horse or burro ranges to be managed principally, but not necessarily exclusively, for wild horse or burro herds.

§4710.4 Constraints on management.

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 objectives identified in approved land use plans and herd management area plans.

§4710.5 Closure to livestock grazing.

(a) If necessary to provide habitat for wild horses or burros, to implement herd management actions, or to protect wild horses or burros, to implement herd management actions, or to protect wild horses or burros from disease, harassment or injury, the authorized officer may close appropriate areas of the public lands to grazing use by all or a particular kind of livestock.

(b) All public lands inhabited by wild horses or burros shall be closed to grazing under permit or lease by domestic horses and burros.

(c) Closure may be temporary or permanent. After appropriate public consultation, a Notice of Closure shall be issued to affected and interested parties.

§4710.6 Removal of unauthorized livestock in or near areas occupied by wild horses or burros.

The authorized officer may establish conditions for the removal of unauthorized livestock from public lands adjacent to or within areas occupied by wild horses or burros to prevent undue harassment of the wild horses or burros. Liability and compensation for damages from unauthorized use shall be determined in accordance with subpart 4150 of this title.

§4710.7 Maintenance of wild horses and burros on privately controlled lands.

Individuals controlling lands within areas occupied by wild horses and burros may allow wild horses or burros to use these lands. Individuals who maintain wild free-roaming horses and burros on their land shall notify the authorized officer and shall supply a reasonable estimate of the number of such animals so maintained. Individuals shall not remove or entice will horses or burros from the public lands.

Subpart 4720—Removal

§4720.1 Removal of excess animals from public lands.

Upon examination of current information and a determination by the au-

thorized officer that an excess of wild horses or burros exists, the authorized officer shall remove the excess animals immediately in the following order.

(a) Old, sick, or lame animals shall be destroyed in accordance with subpart 4730 of this title;

(b) Additional excess animals for which an adoption demand by qualified individuals exists shall be humanely captured and made available for private maintenance in accordance with subpart 4750 of this title; and

(c) Remaining excess animals for which no adoption demand by qualified individuals exists shall be destroyed in accordance with subpart 4730 of this title.

§ 4720.2 Removal of strayed or excess animals from private lands.

§ 4720.2–1 Removal of strayed animals from private lands.

Upon written request from the private landowner to any representative of the Bureau of Land Management, the authorized officer shall remove stray wild horses and burros from private lands as soon as practicable. The private landowner may also submit the written request to a Federal marshal, who shall notify the authorized officer. The request shall indicate the numbers of wild horses or burros, the date(s) the animals were on the land, legal description of the private land, and any special conditions that should be considered in the gathering plan.

§ 4720.2–2 Removal of excess animals from private lands.

If the authorized officer determines that proper management requires the removal of wild horses and burros from areas that include private lands, the authorized officer shall obtain the written consent of the private owner before entering such lands. Flying aircraft over lands does not constitute entry.

Subpart 4730—Destruction of Wild Horses or Burros and Disposal of Remains

§ 4730.1 Destruction.

Except as an act of mercy, no wild horse or burro shall be destroyed without the authorization of the authorized officer. Old, sick, or lame animals shall be destroyed in the most humane manner possible. Excess animals for which adoption demand does not exist shall be destroyed in the most humane and cost efficient manner possible.

§ 4730.2 Disposal of remains.

Remains of wild horses or burros that die after capture shall be disposed of in accordance with State or local sanitation laws. No compensation of any kind shall be received by any agency or individual disposing of remains. The products of rendering are not considered remains.

Subpart 4740—Motor Vehicles and Aircraft

§ 4740.1 Use of motor vehicles or aircraft.

(a) Motor vehicles and aircraft may be used by the authorized officer in all phases of the administration of the Act, except that no motor vehicle or aircraft, other than helicopters, shall be used for the purpose of herding or chasing wild horses or burros for capture or destruction. All such use shall be conducted in a humane manner.

(b) Before using helicopters or motor vehicles in the management of wild horses or burros, the authorized officer shall conduct a public hearing in the area where such use is to be made.

§ 4740.2 Standards for vehicles used for transport of wild horses and burros.

(a) Use of motor vehicles for transport of wild horses or burros shall be in accordance with appropriate local, State and Federal laws and regulations applicable to the humane transportation of horses and burros, and shall include, but not be limited to, the following standards:

(1) The interior of enclosures shall be free from protrusion that could injure animals;

(2) Equipment shall be in safe conditions and of sufficient strength to withstand the rigors of transportation;

(3) Enclosures shall have ample head room to allow animals to stand normally;

(b) The authorized officer may place in full force and effect decisions to cancel a Private Maintenance and Care Agreement so as to allow repossession of wild horses or burros from adopters to protect the animals' welfare. Appeals and petitions for stay of decisions shall be filed with the Interior Board of Land Appeals as specified in this part.

(c) The authorized officer may place in full force and effect decisions to remove wild horses or burros from public or private lands if removal is required by applicable law or to preserve or maintain a thriving ecological balance and multiple use relationship. Full force and effect decisions shall take effect on the date specified, regardless of an appeal. Appeals and petitions for stay of decisions shall be filed with the Interior Board of Land Appeals as specified in this part.

[56 FR 786, Jan. 9, 1991, as amended at 57 FR 29654, July 6, 1992]

§4770.4 Arrest.

The Director of the Bureau of Land Management may authorize an employee who witnesses a violation of the Act or these regulations to arrest without warrant any person committing the violation, and to take the person immediately for examination or trial before an officer or court of competent jurisdiction. Any employee so authorized shall have power to execute any warrant or other process issued by an officer or court of competent jurisdiction to enforce the provisions of the Act or these regulations.

§4770.5 Criminal penalties.

Any person who commits any act prohibited in §4770.1 of these regulations shall be subject to a fine of not more than $2,000 or imprisonment for not more than 1 year, or both, for each violation. Any person so charged with such violation by the authorized officer may be tried and sentenced by a United States Commissioner or magistrate, designated for that purpose by the court by which he/she was appointed, in the same manner and subject to the same conditions as provided in 18 U.S.C. 3401.

TAB 0

TAB 1

SECTION 5

1. Site-Specific Environmental Assessment for Fire Rehabilitation of Two Wildland Fires in Caliente Resource Area Under the Las Vegas District Normal Fire Rehabilitation Plan (EA #NV-055-93-29)

2. Las Vegas District Normal Fire Rehabilitation Plan and Environmental Assessment (EA #NV-054-9-24)

NV-050-94-01,02,03

SITE-SPECIFIC ENVIRONMENTAL ASSESSMENT FOR FIRE REHABILITATION OF TWO WILDLAND FIRES IN CALIENTE RESOURCE AREA UNDER THE LAS VEGAS DISTRICT NORMAL FIRE REHABILITATION PLAN

EA#-NV-055-93-29

PREPARED BY:

TRUDY RHOADES
CALIENTE SOIL SCIENTIST
CALIENTE RESOURCE AREA

INTRODUCTION

The Las Vegas District Normal Fire Rehabilitation Plan, approved in February of 1992, recommended land treatments for use in the emergency rehabilitation of public lands following wildland fires. These included Treatment #1: Natural Revegetation with Closure to Livestock Grazing; Treatment #2: Vegetative Rehabilitation with Closure to Livestock Grazing; and Treatment #3: Use of Erosion Control Structures. Each of these treatments described management situations and/or environmental variables (i.e. Wilderness Study Areas or average precipitation levels) which would determine the selection of the most appropriate method to achieve land use objectives for emergency fire rehabilitation (EFR). Environmental Assessment (EA) # NV-054-9-24 analyzed the impacts associated with implementation of any of the treatments proposed in Normal Fire Rehabilitation Plan (the Proposed Action). Alternatives to the proposed action, which included a Crested Wheat Grass Only Seeding Alternative and the No Action Alternative, were also analyzed in this document. The approved Normal Fire Rehabilitation Plan and accompanying environmental assessment authorized the Las Vegas District to initiate emergency fire rehabilitation projects requiring expenditures of less than $100,000 per fire in areas designated by the plan.

This site-specific EA recommends treatment for the emergency rehabilitation of two wildland fires areas in the Caliente Resource Area. The treatment options considered were derived from the approved Las Vegas District Normal Fire Rehabilitation Plan. The supporting environmental assessment analyses site-specific impacts associated with the implementation of the alternatives and is tiered to EA # NV-054-9-24.

FIRE HISTORY AND FIELD EVALUATIONS

The following presents a synopsis of events for the two fires and the results of interdisciplinary resource evaluations of the burned areas.

The Meadow Fire (#Y416) was reported July 28, 1993 and contained on July 31, 1993. This wildland fire burned a total of 21,686 acres of public land before it was determined to be out; the cause of the fire is unknown at this time (Map 1).

The Pass Fire (#Y454) was reported August 7, 1993 and burned a total of 5500 acres directly adjacent to the southern edge of the Meadow Fire. An estimated 486 acres of previously unburned terrain within the Meadow Fire boundary also burned during this second event. The Pass Fire was determined to be out on August 10, 1993; the cause of the fire is believed to have been a lightening strike. The total acreage of the combined fires was 27,186 acres, with approximately 65 percent of that total located within the Meadow Valley Wilderness Study Area (refer to Maps 1 & 2).

An interdisciplinary team from Caliente Resource Area office conducted a field review of the fire areas on August 5, 6 and 9, 1993. The inspections revealed that the fires had been quick, cool burns which resulted in a mosaic pattern of vegetation destruction. In areas where the burn had been more intense, "pockets" of vegetation continued to survive.

PURPOSE AND NEED

The purpose and need for Emergency Fire Rehabilitation (EFR) have been adequately described in EA # NV-054-9-24, prepared in support of the approved Las Vegas District Normal Fire Rehabilitation Plan.

LEGAL LOCATIONS OF THE ACTIVITY AREA

The general legal locations of the proposed fire rehabilitation areas are:

T. 8 S., R. 66 E. and T. 9 S., R. 66 E.

PROPOSED ACTION AND ALTERNATIVES

ALTERNATIVE #1 - NATURAL REVEGETATION WITH CONTROLLED LIVESTOCK GRAZING

This alternative proposes to facilitate natural revegetation through closure of the burn areas to livestock grazing for a minimum of two growing seasons. Livestock grazing within the affected allotments would be controlled by applying one or more of the following options: 1) herding; 2) developing restrictive fencing; 3) controlling access to waters; 4) making temporary adjustments in seasons of use; and 5) reducing the permitted active preference. Management actions would be implemented as follows:

Henrie Complex Allotment (Map 3):

The permittees would herd livestock to eliminate cattle grazing within the burned areas. Livestock access to Avertt Reservoir would be restricted by the construction of a temporary fence around that water source. The two permittees active grazing preference would be temporarily reduced by 10 percent for a minimum of two years.

The temporary fence proposed for construction around Avertt Reservoir would conform to Bureau of Land Management (BLM) specifications and would allow access for bighorn sheep and deer. The fence would be designed to permit access to an adjacent mining claim. The permittees would be responsible for funding, construction, and maintenance of this fence. Environmental impacts relating to the construction of the fence would be analyzed in a site-specific EA. Authorization for the fence construction would be issued after all appropriate compliance-related inventories (i.e. cultural, threatened and endangered species) have been completed.

Boulder Spring Allotment:

The permittee would be required to 1) herd livestock to keep them out of the burn area; 2) control livestock distribution by turning off specified water troughs; and 3) graze the unburned portion of the allotment during the late fall/winter period (12/01 - 02/28). The permittee's active grazing preference would be temporarily reduced by 30 percent for a minimum of two years. The additional option of installing a temporary electric fence to restrict livestock access to the burn would be implemented, should herding and water restriction fail to prevent utilization within the burn area. The design of this fence would conform to BLM specifications; authorization for construction would not be issued until all required compliance-related inventories (i.e. cultural, threatened and endangered species) had been completed. Impacts to natural and cultural resources would be analyzed in a site-specific EA. The permittees would be responsible for funding, construction, and maintenance of the fence.

Lower Riggs Allotment:

The permittee would be required to 1) herd livestock to keep them out of the burn area; 2) restrict livestock access to any water within proximity to the burn, to discourage trailing into the burn area; and 3) graze livestock in the unburned portions of the allotment during the late fall/winter period (11/15 to 03/24), with no reduction in active preference.

The following General Conditions would also comprise components of this alternative:

Affected permittees would be required under the Terms and Conditions of a livestock grazing agreement or decision to implement the options which would prevent grazing of the burn area during the closure period. These practices, if properly implemented, could prevent utilization of perennial species in the burn area during the closure period. Observed livestock utilization of perennial species within the burn area in specific allotments during the two year closure period would be cause for total closure of the allotment and removal of livestock. Livestock not removed from the allotment would be considered in trespass with appropriate action taken by the Bureau of Land Management (BLM) under Title 43 Code of Federal Regulations 4150 and 4160.

The Bureau would monitor use of the burn area and the effects of the grazing strategies to assess if management objectives are being met. A determination would be made by BLM at the end of the closure period when and if livestock grazing could resume, given sufficient recovery of the burn areas.

Closure of the burn area also included a reduction of wild horse numbers. An emergency wild horse gather plan was approved to reduce horse numbers to between 15 and 20 animals in the Meadow Valley Mountain Herd Management Area (HMA) (see Map 4). When vegetation has been successfully reestablished in the burned areas

of the HMA, wild horses numbers could be adjusted, based on established Appropriate Management Levels (AMLs).

ALTERNATIVE #2 - NATURAL REVEGETATION WITH TOTAL CLOSURE

The proposed action would allow natural revegetation to occur, in conjunction with closure of the burned area to grazing by livestock. The Henrie Complex, Boulder Spring, and Lower Riggs Allotments would be closed to livestock grazing for a minimum of two growing seasons. After the second growing season, the burned areas would be monitored to determine when livestock grazing could resume on the allotments.

Closure of the burn area also included a reduction of wild horse numbers. An emergency wild horse gather plan was approved to reduce horse numbers to between 15 and 20 animals in the Meadow Valley Mountain Herd Management Area (HMA) (see Map 4). When vegetation has been successfully reestablished in the burned areas of the HMA, wild horses numbers could be re-adjusted, based on established Appropriate Management Levels (AMLs).

ALTERNATIVE #3 (PROPOSED ACTION) - NATURAL REVEGETATION WITH PARTIAL CLOSURE

This alternative would facilitate closure of the burned areas to livestock grazing through fencing. The permittees would have the option to fence the burned portion(s) of the allotment upon which their livestock graze. Funding of the fencing and maintenance would be the responsibility of the permittees. Any fencing proposed for construction would conform to appropriate BLM specification. Impacts to natural and cultural resources relating to any fence construction would be analyzed in site-specific EAs. Fencing would be authorized only after appropriate compliance-related inventories (i.e. cultural, threatened and endangered species) had been completed.

The active preference for each permittee within the respective allotments (see Map 3) would be adjusted, based upon the number of suitable acres burned and Animal Unit Months (AUMs) lost due to the fire. The burned areas would not be grazed for at least two growing seasons. The following identifies specific management actions for each of the affected allotments.

Henrie Complex Allotment:

This alternative would implement closure of the western portion of the Henrie Complex Allotment to livestock grazing through repair and maintenance of the Union Pacific Railroad right-of-way fence which divides the allotment. The eastern portion of the Henrie Complex Allotment (old Henrie Allotment) could then be grazed. A maximum of 1950 AUMs would be authorized for use within the eastern portion of the allotment (975 AUMs per permittee).

Boulder Spring Allotment:

An estimated 10 miles of temporary electric fence would be installed within the Boulder Spring Allotment to restrict grazing on the burned acreage. The AUMS would be reduced to 291 for the remaining unburned portion of the allotment.

Lower Riggs Allotment:

The Lower Riggs Allotment burned acreage would be closed through the installation of approximately 3 miles of temporary electric fencing. The remaining unburned portion of the allotment would have the AUMs reduced to 1337.

Closure of the burn area also included a reduction of wild horse numbers. An emergency wild horse gather plan was approved to reduce horse numbers to between 15 and 20 animals in the Meadow Valley Mountain Herd Management Area (HMA) (see Map 4). When vegetation has been successfully reestablished in the burned areas of the HMA, wild horses numbers could be re-adjusted, based on established Appropriate Management Levels (AMLs).

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER DETAILED ANALYSIS

ALTERNATIVE #4 - NO ACTION

Under this alternative, no emergency fire rehabilitation efforts would be implemented. This alternative was considered but eliminated from detailed analysis because BLM policy requires the closure of the burned area to livestock grazing for a minimum of at least two growing seasons, even if no rehabilitation efforts are planned. Authority and direction for this action is contained within Bureau Manuals H-1742-1 and H-4110-1 and 43 CFR 4110.3-2 (a) and 4110.3-3.

ALTERNATIVE #5 - USE OF EROSION CONTROL STRUCTURES

This alternative was considered but eliminated from detailed analysis for the following reasons. The Las Vegas Normal Fire Rehabilitation Plan recommends the use of structures where the possibility of damage to property and/or critical resources may exist and where such devices which could help to control erosion, sediment yields, and flood water. No property or critical resources were identified as being at risk as a result of these fires.

Soils in the burned areas are characterized as having slight to moderate erosion hazard. High erosion hazards exist on some south-facing mountain slopes. On-site observations and information available from the *South Lincoln Soil Survey Draft Final Correlation* indicated that many soil surfaces have a gravel surface or a gravel mulch covering the surface which affords some protection. The soil surface is not suspected to have been

sterilized since the burn was relatively quick and cool, fueled by dried annuals. At many locations, unburned or scorched duff material still remains under the ash.

In many areas, the fire burned a mosaic pattern, leaving viable vegetation on site. This vegetation provides cover and root strength to protect soils. The viable vegetation also provides a seed source for the site. Sufficient viable vegetation appears to remain on site to deter watershed degradation and natural revegetation could occur within two growing seasons. Intense precipitation events are less likely to occur during the fall months and are not anticipated to cause severe erosion. Therefore, control structures are not practical to control erosion, sediment yields or flood water in the burned areas.

ALTERNATIVE #6 - CRESTED WHEAT SEEDING

The Las Vegas District Normal Fire Rehabilitation Plan states that "[o]nly those areas already seeded with crested wheat will be considered for the crested wheat only alternative"(1992:30). As this area was not previously a crested wheat seeding, this alternative was eliminated from further analysis.

ALTERNATIVE #7 - VEGETATIVE REHABILITATION OF BURNED AREAS

The Las Vegas District Normal Fire Rehabilitation Plan's management direction for all EFR efforts within the Las Vegas District includes the following constraints: 1) vegetative rehabilitation will not be considered on burned areas receiving less than 8 inches of mean annual precipitation; 2) burned areas within Wilderness Study Areas (WSAs) will not be seeded unless they include critical municipal watersheds and will be seeded only with species native to the area. Approximately 65 percent of the burned areas are within a WSA and not within a critical municipal watershed. The burned acreage outside of the WSA generally receives less than 8 inches of precipitation and has a predominantly slight to moderate erosion hazard. The precipitation limitation, therefore, excludes a majority of the remaining areas outside of the WSA from vegetative rehabilitation through artificial means.

CONFORMANCE WITH LAND USE PLANS

Management actions proposed for EFR in this document conform to direction contained in various portions of the Caliente Management Framework Plan (1982).

AFFECTED ENVIRONMENT

CLIMATE AND TOPOGRAPHY

Burned acreage occurs on concave and/or south-facing mountain slopes, fan piedmont remnants, hills, and mountain toeslopes. These areas generally receive about 5 to 8 inches of precipitation,

the mountain slopes average from 8 to 10 inches of precipitation. Exceptions include the south-facing mountain slopes, which average only 5 to 8 inches of precipitation.

SOILS

The soils of the Meadow Fire area have been recently mapped in the *South Lincoln Soil Survey Draft Final Correlation (#754)* by the Soil Conservation Service (SCS). Those soils outside the Meadow Valley Wilderness Study Area are shown in **Figure 1.** Soils within the WSA are described in **Figure 2.**

WATER RESOURCES

The burned areas are located in the Lower Meadow Valley Wash and the Kane Springs Valley watersheds of the Colorado River Basin Region, none of which are within any critical municipal watersheds.

VEGETATION RESOURCES

The predominant range sites are as follows:

29-10 Loamy slope 8-10"

Potential Native Vegetation: Wyoming big sagebrush, needle and thread and Indian ricegrass. Other important species are fourwing saltbush and ephedra.

Potential Composition: 45% grasses, 5% forbs and 50% shrubs.

29-77 Shallow gravelly loam, 8-10"

Potential Native Vegetation: Blackbrush, with other important species are desert bitterbrush, ephedra and desert needlegrass.

Potential composition: 15% grasses, 5% forbs and 80% shrubs.

30-28 Valley Wash 5-8"

Potential Native Vegetation: creosotebush, bursage and big galleta.

Potential Composition: 20% grasses, 15% forbs and 65% shrubs.

Figure 1.

MAP UNIT	SERIES	SURFACE TEXTURE	SALIN-ITY	RUN-OFF	WATER EROSION HAZARD	RANGE SITE	LANDFORM
1080	Kaspell	very gravelly sandy loam	<2	med	slight	30-29	fan piedmont remnants
	Canutio	very gravelly sandy loam	<4	med	slight	30-39	fan aprons
1300	Mor-mount	gravelly very fine sandy loam	<2	med	moderate	30-29	fan piedmont remnants
	Arizo	very gravelly loamy sand	<2	slow	slight	30-28	adjacent to channels
1401	Cave	very gravelly sandy loam	<4	med	slight	30-29	fan piedmont remnants
	Arizo	very gravelly loamy sand	<2	slow	slight	30-28	adjacent to channels
1660	Dewrust	very gravelly sandy loam	<2	slow	slight	29-77	fan piedmont remnants
	Veet	gravelly sandy loam	<2	med	slight	29-09	inset fans
1832	Zaqua	very gravelly sandy loam	<2	rapid	moderate	29-77	mt. slopes
	Winklo	very gravelly sandy loam	<2	rapid	moderate	29-77	concave mt. slopes
	Kane Springs	very gravelly sandy loam	<2	rapid	high	30-29	S. facing mt. slopes

Figure 2.

MAP UNIT	SERIES	SURFACE TEXTURE	SALI-NITY	RUN-OFF	WATER EROSION HAZARD	RANGE SITE	LANDFORM
1080	Kaspell	very gravelly sandy loam	<2	med	slight	30-29	fan piedmont remnants
	Canutio	very gravelly sandy loam	<4	med	slight	30-39	fan aprons
1110	Kane Springs	very cobbly sandy loam	<2	rapid	moderate	30-29	mt. slopes
	Kanackey	very gravelly loam	<2	rapid	moderate	30-29	mt. slopes
	Rock Outcrop	-	-	-	-	-	-
1113	Kane Spring	very cobbly sandy loam	<2	rapid	moderate	30-29	fan piedmont remnants
	Gabb-vally	very stony loam	<2	rapid	moderate	29-10	high elev mt. slopes
1300	Mormount	gravelly very fine sandy loam	<2	med	moderate	30-29	fan piedmont remnants
	Arizo	very gravelly loamy sand	<2	slow	slight	30-28	adjacent to channels
1404	Cave	very gravelly sandy loam	<4	med	slight	30-29	fan piedmont remnants
	Mormount	gravelly sandy loam	<2	med	slight	30-29	high position fan piedmont remnants
	Canutio	very gravelly sandy loam	<2	med	slight	30-29	inset fans
1832	Zaqua	very gravelly sandy loam	<2	rapid	moderate	29-77	mt. slopes
	Winklo	very gravelly sandy loam	<2	rapid	moderate	29-77	concave mt.slopes
	Kane springs	very gravelly sandy loam	<2	rapid	high	30-29	S. facing mt.slopes

VEGETATIVE RESOURCES

Predominant range sites (concluded):

30-29 Shallow Gravelly Loam, 5-8"

Potential Native Vegetation: blackbrush, with minor Nevada ephedra,fourwing saltbush and yuccas.

Potential composition: 10% grasses, 5% forbs and 85% shrubs.

30-39 Limy Fan 5-8"

Potential Native Vegetation: Big galleta, bush muly, Indian rice grass, winterfat, spiny hopsage and Nevada ephedra.

Potential composition: 65% grass; 5% forbs and 30% shrubs.

THREATENED AND ENDANGERED SPECIES

The desert tortoise, a federally listed threatened species, is located in Kane Springs Valley and on the east side of the Meadow Valley Mountain Range (Map 5).

The Meadow Valley Wash contains two Candidate fish species, the Meadow Valley Wash Desert Sucker and the Meadow Valley Wash Speckled Dace.

WILDLIFE HABITAT

The fire areas support two big game species: mule deer and desert bighorn sheep. The desert bighorn sheep population in the Meadow Valley Mountains is estimated to be 75 animals. Furbearers in the area include coyotes, kit and gray fox, bobcats and mountain lions. Gambels quail and chukar partridge can be found throughout the Kane Springs Valley. Guzzlers located in the valley provide water for these species and other small animals. Various reptiles and birds can be also be found throughout the area.

WILD HORSES AND BURROS

Wild horses are forage consumers within the burned areas. A majority of the area burned is contained within the Meadow Valley Herd Management Area (HMA). The Meadow Valley HMA contains approximately 98,775 acres, of which 21,026 acres (21.3 percent of HMA) were burned during the two fires. During a 1992 census, the wild horse population was observed to be 63 horses. Based on this data and professional judgement, the wild horse population was estimated to be 100 animals. Under the authority of an emergency removal, wild horse numbers were reduced to between 15 and 20 animals following the fire.

Wild horses use in the burned areas occurs primarily from late fall to early spring, when the temperatures are cooler and ephemeral water available. Use has been documented on a year-round basis near Avertt Reservoir (located within the burned area) when water is present. Horses trail to water sources across the southern one-third of the burned area (Hackberry Canyon).

WILDERNESS STUDY AREAS

Approximately 65 percent of the burned area is within the Meadow Valley Range WSA. Management of WSAs is guided by the Interim Management Policy (IMP) until such time as the area is either designated as wilderness or released from wilderness review. This WSA has been described in the Nevada BLM Statewide Wilderness Report, Volume Five.

LIVESTOCK GRAZING

Henrie Complex Allotment:

The Henrie Complex Allotment (comprised of the Morrison-Wengert and Henrie Allotments) is grazed year-round by cattle owned by Kevin Olson and Robert Lewis. Active Preference Animal Unit Months (AUMs) is 3193 AUMs for Kevin Olson and 975 AUMs for Robert Lewis. Robert Lewis is not currently licensed on the allotment. Kevin Olson is licensed at full preference of 313 cows year-round.

Boulder Spring Allotment:

The Boulder Spring Allotment is licensed for livestock grazing by Henry and Joi Brackenbury. The allotment is 13,537 acres in size with an active preference of 416 animal unit months (AUMs). The season of use for the allotment is 10/31 to 3/31 for 75 cows. The Meadow and Pass Fires consumed 5300 acres or 30 percent of the suitable portion of the allotment.

Lower Riggs Allotment:

The Lower Riggs Allotment is licensed for livestock grazing by James and George Tennille. The allotment is 19,569 acres in size with an active preference of 1408 AUMs, licensing 131 cows. The season of use is 5/1 to 2/28 and 3/1 to 3/24. The Meadow Valley wildfire burned approximately 860 acres or 5 percent of the allotment, along the southeast side of the Kane Springs Road.

ENVIRONMENTAL CONSEQUENCES

The anticipated impacts to forestry products and visual resources which might result from implementation of any of the alternatives were adequately analyzed in EA # NV-054-9-24, prepared in support of the approved Las Vegas District Normal Fire Rehabilitation Plan.

No impacts to air quality, prime and unique farmlands, Areas of Critical Environmental Concern, significant paleontological properties, floodplains, and Wild and Scenic Rivers would be

anticipated to occur under the proposed alternatives; these resources are either not present in the area or would not sustain impacts. Compliance-related cultural resource and Traditional Lifeways inventories would be conducted prior to the authorization of any fencing projects and avoidance of National Register-eligible or listed properties achieved through project design, in the event that such resources are identified within the project areas. Biological inventories for threatened and endangered species and Section 7 consultation, as needed, would be completed prior to the authorization of any surface-disturbing activities associated with the alternatives.

Only those resource-specific impacts which could result from implementation of the alternatives are addressed in this section of the EA.

ALTERNATIVE #1 - Natural Revegetation with Controlled Livestock Grazing

SOILS

Many of the anticipated impacts to soil resources which could result from implementation of this alternative were addressed in EA # NV-054-9-24. However, if livestock herding were not properly and diligently conducted on the Henrie Complex Allotment, 282 head of livestock could concentrate on the burn area during the spring vegetative growth period. No physical barriers (i.e. fencing) are in place to restrict livestock access to the burned areas. Ephemeral waters could be available during the late winter-early spring months within or immediately adjacent to the burned areas. These ephemeral waters would allowing grazing animals to concentrate within the burned areas for extended periods of time. Between 15 and 20 wild horses could also be anticipated to graze on the spring green-up vegetation. The reduction of vegetative cover and slowdown of plant recovery due to grazing pressure could make soils in the burned areas susceptible to raindrop impact and increased runoff energy. Increased sediment yields, rill, sheet and gully erosion could result. Wind erosion could also occur, creating fugitive dust which would degrade air quality in the short term. A delayed vegetation recovery could result in the loss of watershed cover and on-site soil productivity; the goal of reducing watershed degradation might not be met through this alternative.

WATER RESOURCES

Cattle and wild horses would continue to impact the Meadow Valley Wash riparian areas if Avertt Reservoir were no longer accessible to livestock on the Henrie Complex Allotment. Livestock use patterns could change so that the lower elevation areas and riparian zones may receive greater use. Bank trampling would be anticipated to increase in severity. Water quality could be degraded by siltation and dissolved solids, caused by the effects of concentrated cattle and (to a lesser extent) wild horses grazing pressure within and adjacent to the riparian areas.

VEGETATIVE RESOURCES

Anticipated impacts to vegetation in the Henrie Complex Allotment would be minimal, if livestock herding were to be properly and diligently conducted within the burned areas and fencing installed at Avertt Reservoir. Given that no physical barriers are in place to restrict livestock access, the potential for some livestock trespass to occur within the burn areas during the critical growing period could be anticipated. Livestock would be attracted to the new spring growth, as perennial species begin to green-up. Any grazing pressure during the growing period would be detrimental to the plants. Perennial vegetation could be physiologically stressed, seedlings could be uprooted, species might not complete their physiological development (seed set, storage of carbohydrates in root reserves), and ground cover for soil stability could be reduced. The loss of native perennial grass and forb species due to repeated utilization during the growing season, coupled with an increase in introduced annual species, could result in a change in the vegetative community to a closed fire cycle annual species ecosystem.

Riparian vegetation communities could be impacted if use patterns change so that the riparian zones receive greater utilization within the Henrie Complex Allotment. Native vegetation could be replaced by undesirable species due to over-utilization. Riparian communities currently dominated by undesirable vegetative types would not be projected to improve in condition or composition.

Anticipated impacts to vegetation would be minimal under this alternative on the Boulder Spring and Lower Riggs Allotments. Grazing would occur only during the late fall/winter period, with no livestock grazing pressure being placed on the burned areas during the critical growing season for a minimum of two years. Natural revegetation, seedling establishment, and completion of individual species physiological development would occur under a no grazing regime. The success of natural revegetation would be dependent upon local weather conditions and the restriction by herding of livestock access to the burned areas.

THREATENED AND ENDANGERED SPECIES

The fencing of Avertt Reservoir would result in livestock and wild horses concentrating closer to the Meadow Valley Wash. Increased degradation of the riparian and aquatic resources could be projected to occur, potentially impacting the habitat of the two Candidate fish species (Meadow Valley Wash Desert Sucker and Meadow Valley Wash Speckled Dace) know to be present in this perennial stream.

Should the herding of livestock not be done properly and diligently conducted, as many as 282 head of livestock could concentrate on the burned areas during the critical growing season. This could result in increased competition for forage between livestock and the federally listed threatened desert tortoise which are found in the burned area.

WILDLIFE HABITAT

If livestock herding and restricted access to Avertt Reservoir are successful in reducing grazing pressure, wildlife species and their habitat could benefit in the short term. During the closure period, wildlife would not compete with livestock for forage, potentially resulting in improved individual survival and reproductive rates. However, in the event that grazing control mechanisms are not diligently practiced, livestock and a small number of wild horses could concentrate on the burned areas, particularly during the spring growth period. Such concentrated use of limited resources would increase competition for forage and reduce available cover for many wildlife species.

WILD HORSES AND BURROS

The wild horses within the Meadow Valley Mountain HMA would be impacted by the implementation of the proposed action. From 15 to 20 wild horses remain within the HMA, following the emergency gather. These animals would be attracted to the burned areas by the presence of sprouting grasses and other vegetation. Grazing use could be concentrated in the burn areas, especially during the spring growth period, which may prolong the establishment of the sprouting vegetation. The re-establishment of native vegetation would result in long-term benefits to the wild horses by supplying a more desirable forage source (grasses) when compared to the existing forage within the Meadow Valley Mountain HMA.

Fencing Avertt Reservoir to livestock would also exclude wild horses. The Las Vegas District Normal Fire Rehabilitation Plan and Environmental Assessment states: "[I]n those situations where water sources within the burn area are critical to maintain a healthy herd, fencing will be constructed in a manner that would allow access to water". It is unlikely that a design can be created that would allow for only horse use and not cattle use. The remaining 15 to 20 horses would lose an important water source. The nearest watering points would be the Two-Fer ephemeral spring sources approximately 5 to 6 miles away and Meadow Valley Wash, a distance of approximately 6 miles from Avertt Reservoir.

WILDERNESS STUDY AREAS

A number of objectives were intended to be accomplished through ratification of the 1964 Wilderness Preservation Act. Although the primary emphasis was to provide opportunities for "wilderness experiences", another important aspect was to create "outdoor laboratories" where natural ecological processes could run their course without being impeded or altered by man's influences. Therefore, a rehabilitation strategy of "Natural Revegetation with Closure" would satisfy this intent, and cause no negative environmental consequences in relation to wilderness resources. This alternative would result in no negative consequences to wilderness values, provided that the permittees restrict livestock access to the burned areas by herding. Such closure would allow vegetation to naturally reestablish, thus meeting the intent of the Wilderness Act of 1964.

LIVESTOCK GRAZING

This alternative places the responsibility on the permittees to assure that livestock are continually herded away from the burn area and that access to waters is restricted. The intensity to which these practices would need to be implemented is dependent upon when livestock would be authorized within the respective allotments. Grazing in the Boulder Springs and Lower Riggs Allotments would be authorized during the late fall/winter period, with removal occurring prior to the critical growing season. Herding, fence inspection and maintenance, as well as control of waters, would be necessary only for a four month period during each of the two years of the closure.

Grazing in the Henrie Complex Allotment (outside of the burn area) would be authorized year round. In the burned areas, herding, fence inspection/maintenance, and control of water would be necessary during the two years period of closure. These practices would require an unquantifiable increase in the amount of time and manpower to be expended by the permittees to insure that livestock do not graze in the burn area.

SOCIO-ECONOMIC IMPACTS

Implementation of this alternative would close the burn area to livestock grazing for two growing seasons. The permittees currently holding grazing permits could be economically impacted by reduction in AUMs (Henrie Complex 10 percent and Boulder Springs 30 percent), temporary changes in the season of use, and costs due to intensified management resulting from herding and fencing responsibilities. These costs are not easily quantifiable, but would not be anticipated to significantly effect the local economy. Economic effects which are measurable are projected to be the following:

Henrie Complex Allotment:

Kevin Olson would be issued a grazing permit for 282 cows, 2874 AUMs; Robert Lewis would receive a permit for 73 cows, 877 AUMs. Both permittees would be required to remove livestock from the allotment and could be forced to sell, feed, or pasture cattle . In Kevin Olson's case, 31 cows (313 Animal Units minus 282 (10 percent or less)) would be removed from the allotment. Pasturing costs for these 31 cows would be approximately $5,580 ($10/31 head/18 months), haying cost $20,100 (31 head/800 pounds consumed/month/18 months/$90 per ton of hay). If the livestock are sold, it is unlikely these 31 cows could be replaced for less than $45,000.

Boulder Spring Allotment:

Henry Brackenbury would be permitted to graze 70 percent or 291 AUMs from 12/01 to 2/28. Twenty-one cows (30 percent) would have to be removed from the Boulder Spring Allotment; pasturing costs for these 21 cows are estimated to be approximately $3,780, haying costs $13,608.

Lower Riggs Allotment:

The Lower Riggs Allotment would not be economically impacted by this alternative. George and Lavette Tennille's active preference would not be changed.

ALTERNATIVE #2 - Natural Revegetation with Total Closure

Impacts to Wild Horses and Burros and Wilderness Study Areas under this alternative would be similar to those analyzed under Alternative #1.

SOILS

Exposed soil surfaces could be susceptible to increased erosion during the revegetative period. Increase runoff during intense storm events could initiate sheet, rill or gully erosion. Exposed soil are vulnerable to rain splash as well. Impacts are further discussed in the EA NV-054-9-24.

WATER RESOURCES

An increase in sediment contribution to the Meadow Valley Wash from tributaries originating within the burn could occur. Salinity contribution to the Meadow Valley Wash from overland and sheet erosion is not likely, as surface salinity of the soils is non or very slight saline. Impacts are further discussed in the EA NV-054-9-24.

VEGETATION

Potential impacts to vegetation under this alternative were addressed in the Las Vegas District Normal Fire Rehabilitation E.A. No. NV-054-9-24.

THREATENED AND ENDANGERED SPECIES

The closure of the allotments to livestock grazing could have short-term positive impacts on desert tortoises. Desert tortoises would not compete with livestock for forage during the period of closure, thus benefitting the survival rates of individual animals and the population as a whole.

WILDLIFE HABITAT

Natural revegetation with closure to grazing could also have positive short-term effects on wildlife species and their habitat. During the closure period, wildlife would not compete with livestock for forage, potentially resulting in improved individual survival and reproductive rates.

LIVESTOCK GRAZING

Impacts to livestock grazing relating to this alternative were addressed in the Las Vegas District Normal Fire Rehabilitation E.A. No. NV-054-9-24.

SOCIO-ECONOMIC IMPACTS

Implementation of Alternative #2 (closure of allotments to grazing for a period of no less than 18 months) would place 4,168 AUMs into non-use on the Henrie Complex Allotment (3,193 Kevin Olson, 975 Robert Lewis). Economic and social impacts would be inevitable due to the year-round season of use on the allotment. Livestock are currently not gathered from the allotment and develop experience in locating water and forage sources which serve to maintain herd viability. Both permittees would be required to remove livestock from the allotment and be forced to either sell or feed their herds. In Kevin Olson's case, approximately 300 head would have to be removed and either pastured ($9-12/head/month, e.g. $10/300 head/18 months = $54,000) or hay fed ($145,000 for hay for 18 months). If sold, it is unlikely that these cattle could be replaced for less than $150,000. In the event that cattle are reintroduced to allotment following revegetation, the potential for viable herds is diminished since new animals would have no experience locating water and forage sources on the allotment.

The alternative would affect the permittee on the Boulder Springs Allotment, due to loss of income from livestock operations. The Boulder Spring Allotment would be closed to grazing for a period of no less than 18 months. As a result, 416 AUMs would be placed into non-use on the allotment. The permittee would be required to: 1) lease pasture land elsewhere at an estimated cost of $10.00 per head, totalling approximately $13,500 for 75 cows for 18 months; 2) feed livestock on private land incurring a cost of $36,450 for hay. The permittee has also been purchasing stock in anticipation of licensing twice the herd size for half the time on Boulder Spring. In light of the reduced forage availability, the permittee would not be able to license the stock as planned and could face the sale of a large number of livestock at a loss.

Under this alternative, Lower Riggs Allotment would be closed to grazing for a period of no less than 18 months, during which 1408 AUMs would be placed into non-use. The permittee would be compelled to : 1) lease pasture land elsewhere at an estimated cost of $10.00 per head, totalling approximately $23,580 for 131 cows for 18 months; 2) pasture livestock on private land incurring a cost of $63,666 for hay feed; or 3) sell livestock, possibly at a loss.

Individual livestock operators would be impacted economically by this proposal. Such impacts could also create a ripple effect within the local Lincoln County economy, assuming that these operators spend money in the communities or provide employment opportunities for local residents. These would not be significant impacts within the total economic picture of the county and would be of a short-term duration, estimated not to exceed 5 years.

ALTERNATIVE #3 (Proposed Action) - Natural Revegetation with Partial Closure

Impacts to water resources, wild horses and burros, wilderness study areas, threatened and endangered species, and wildlife

habitat would be similar to those analyzed for Alternative #2. The effects on vegetative resources and livestock grazing were adequately addressed in EA No. NV-054-9-24, to which this document is tiered.

SOILS

Impacts to soil and water resources would be similar to those analyzed for Alternative #2. Minimal impacts could be expected due to fence construction, which would be addressed in a site-specific EA.

SOCIO-ECONOMIC IMPACTS

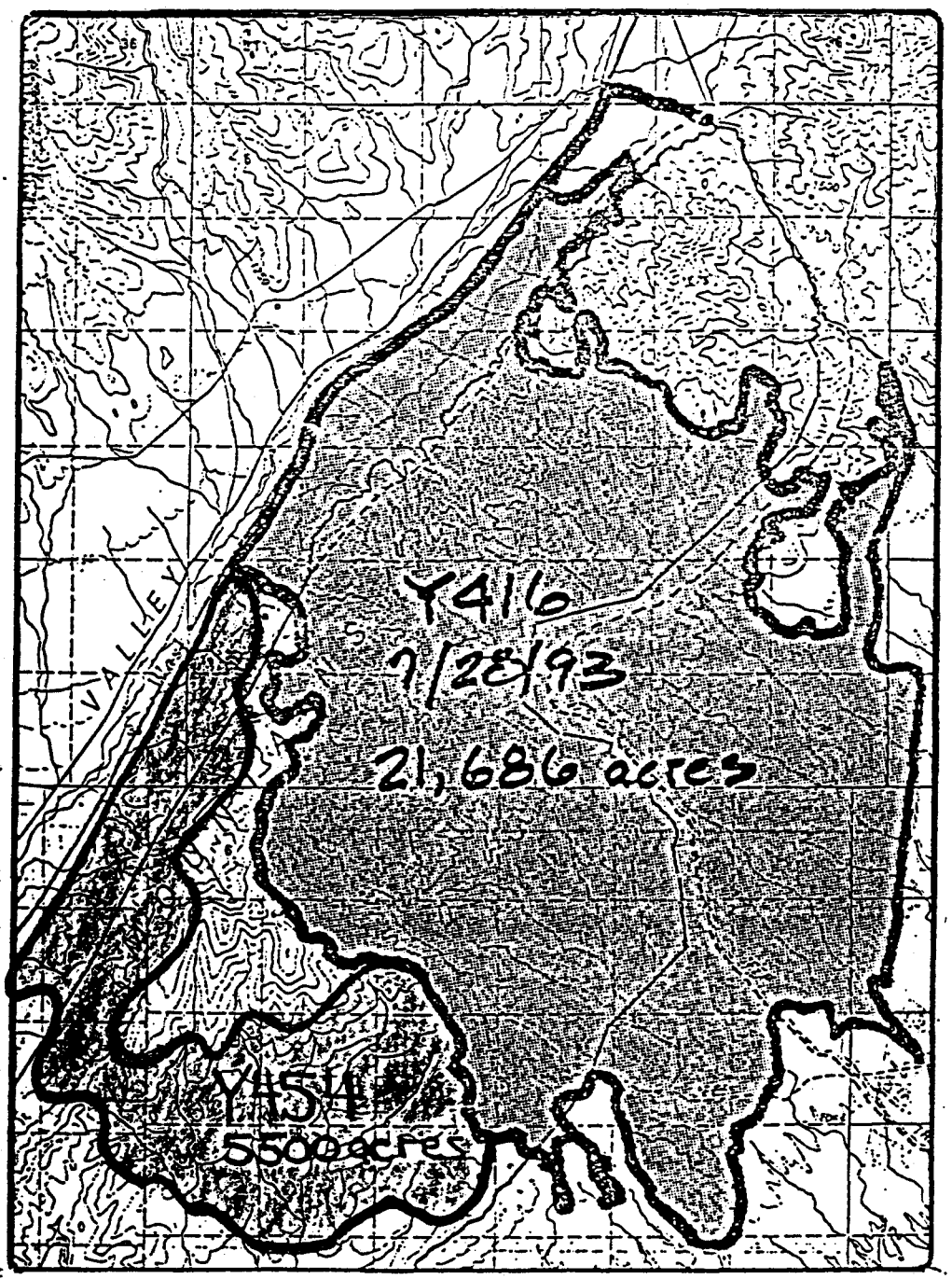
Under this alternative, socio-economic impacts to individual permittees could be partially mitigated through fencing of the burned areas. On the Henrie Complex Allotment, the permittees would be responsible for maintaining the railroad right-of-way fence which divides the allotment along the Meadow Valley Wash. As no physical barriers are currently in place to restrict livestock access to the burned areas within the Lower Riggs and Boulder Spring Allotments, the permittees would be responsible for building and maintaining a 10 mile temporary electric fence, at an estimated cost of $4,000 per mile.

Livestock grazing would be authorized in the unburned portions of the allotments. All permittees would still relatively long-term (>10 years) financial impacts due to the large AUM reductions. In light of these reductions and the attendant costs of installing and/or maintaining fencelines, some permittees may elect not to graze livestock. This would constitute a similar economic impact to that analyzed above for Alternative #1.

CONSULTATION AND COORDINATION

Dawna Ferris, Archeologist/Environmental Coordinator, C.R.A.
Kyle Teel, Wildlife Biologist, C.R.A.
Trent Shaskan, Range Conservationist, C.R.A.
Shirley Christman, Range Conservationist, C.R.A.
Terry Smith, Supervisory Range Conservationist, C.R.A.
Bob Stager, Range Conservationist, L.V.D.O.
Alan Shepherd, Wildhorse and Burro Specialist, C.R.A.
Gary McFadden, Wildhorse and Burro Specialist, L.V.D.O.
Marc Pierce, Forester/Recreation/Wilderness Specialist, C.R.A.
Bob Taylor, Recreation/Wilderness Specialist, L.V.D.O
Gayle Marrs-Smith, Botanist, L.V.D.O.
Phil Medica, Ecologist, L.V.D.O.
Curtis Tucker, Area Manager, C.R.A.

MAP 1

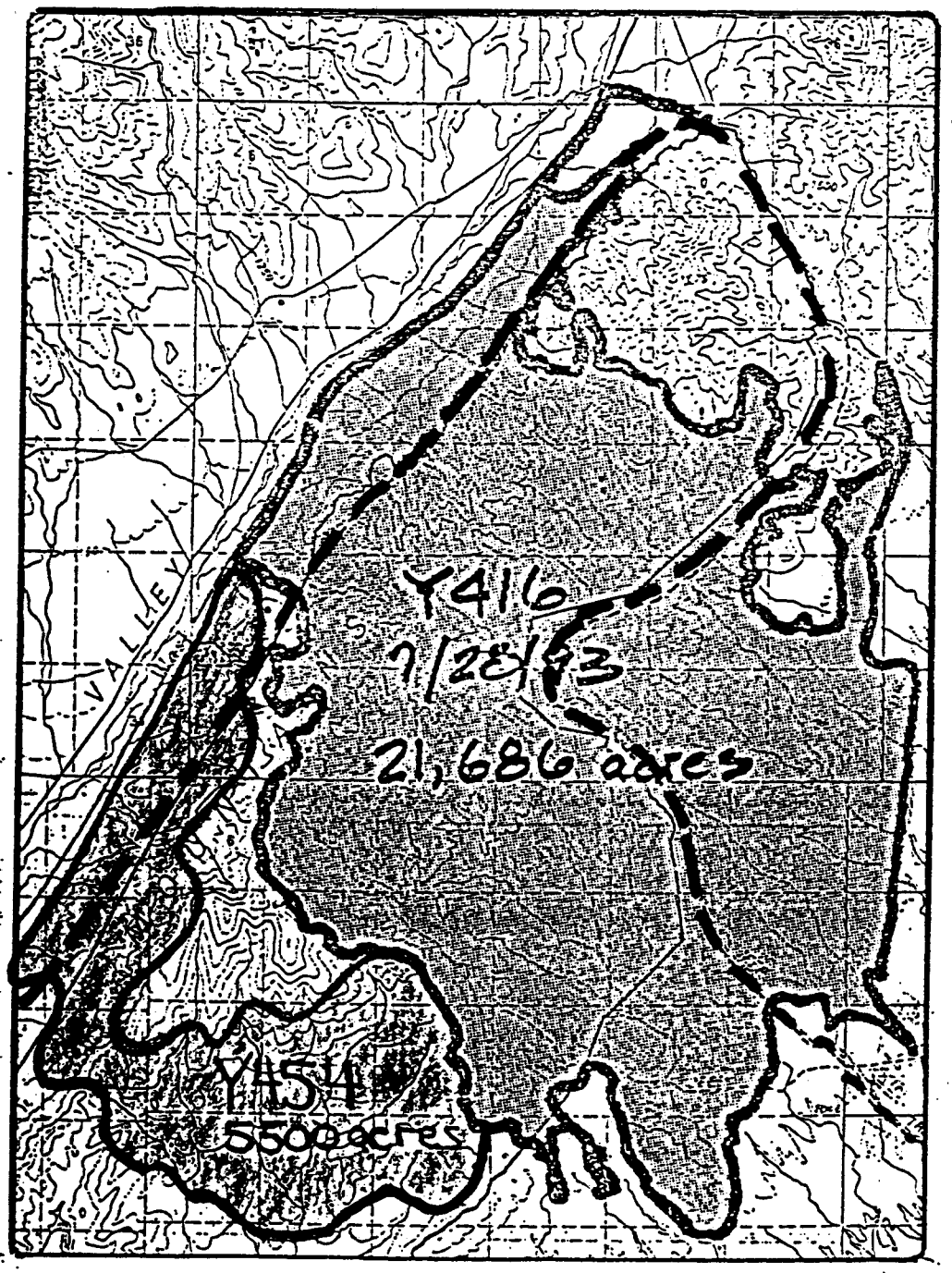


THE MEADOW AND PASS FIRE

T. 8 S. & T. 9 S., R. 66 E. & R. 65 E.

N

MAP 2



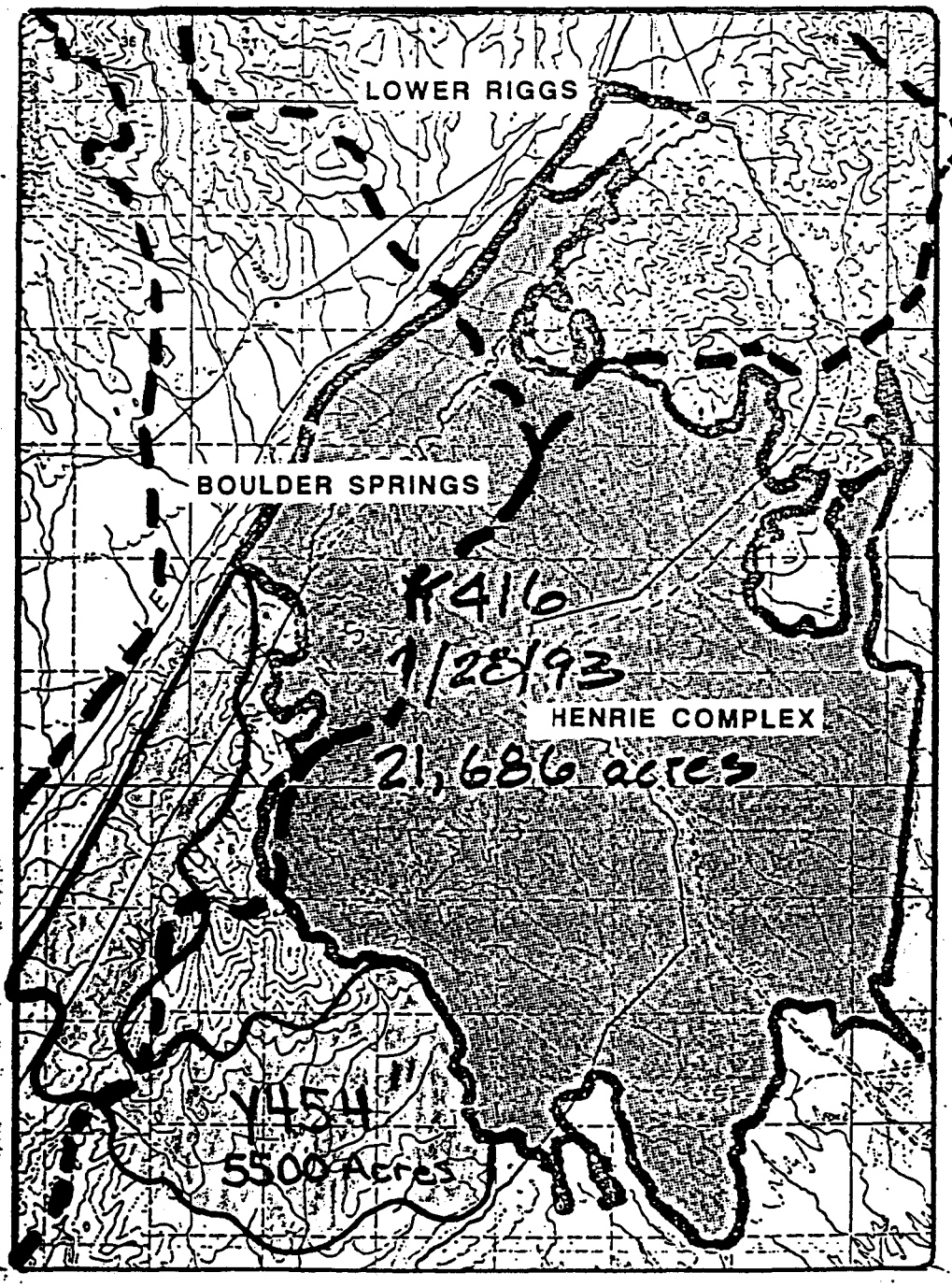
THE MEADOW AND PASS FIRE

T. 8 S. & T. 9 S., R. 66 E. & R. 65 E.

WILDERNESS STUDY AREA

N

MAP 3



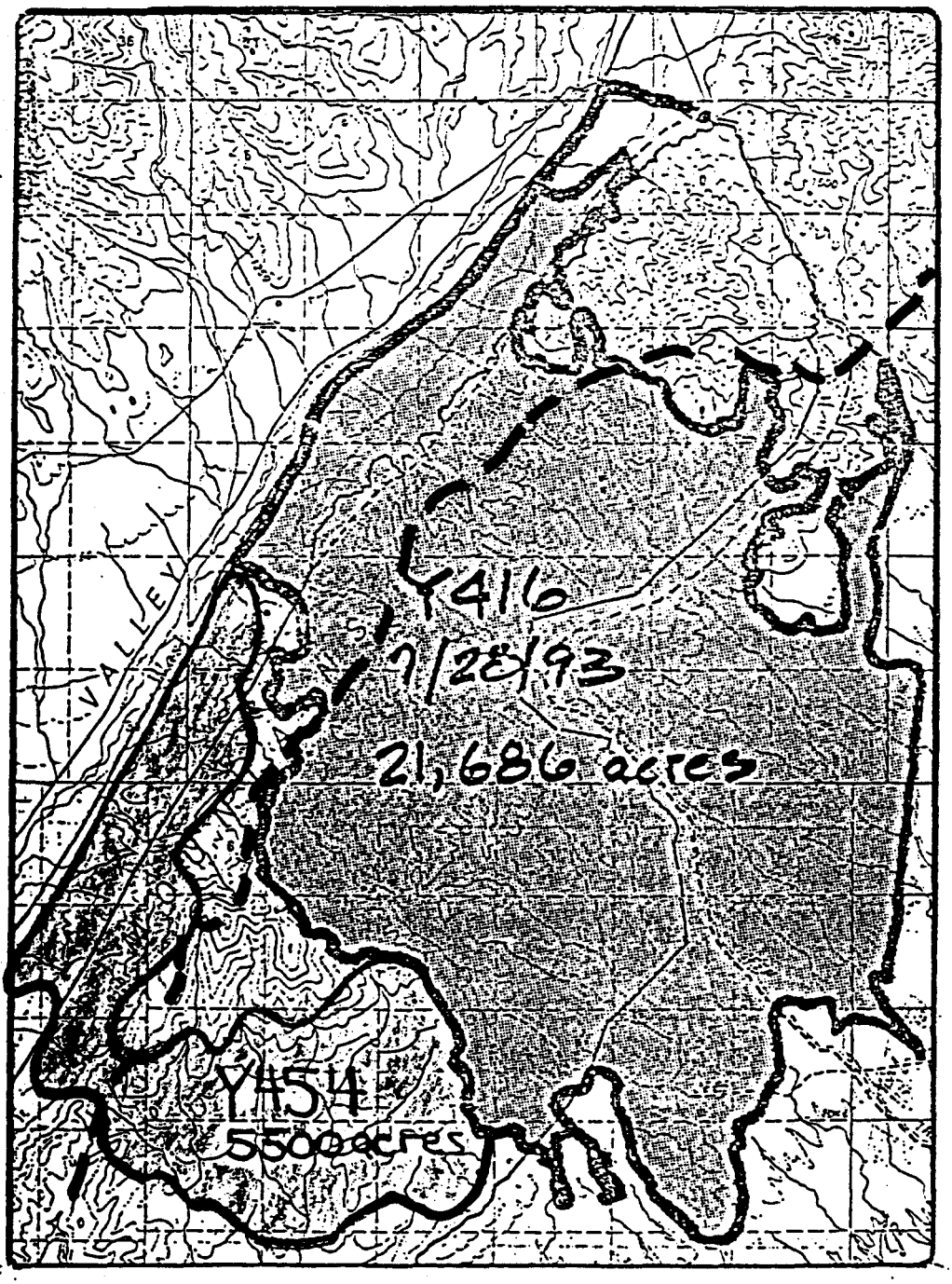
THE MEADOW AND PASS FIRE

T. 8 S. & T. 9 S., R. 66 E. & R. 65 E.

ALLOTMENT BOUNDARIES

N

MAP 4



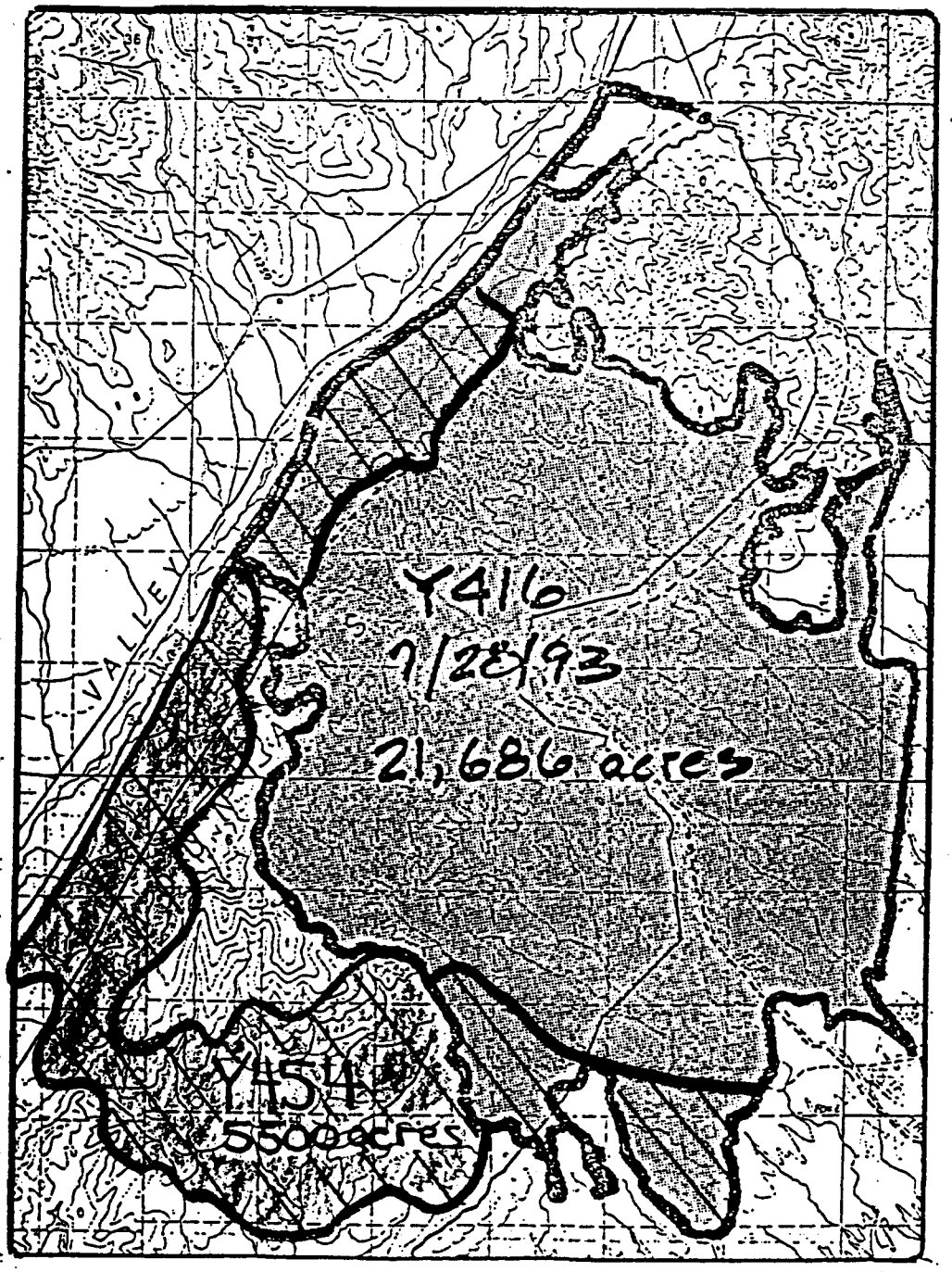
THE MEADOW AND PASS FIRE

T. 8 S. & T. 9 S., R. 66 E. & R. 65 E.

HORSE MANAGEMENT AREA (EAST OF LINE)

N

MAP 5



THE MEADOW AND PASS FIRE

T. 8 S. & T. 9 S., R. 66 E. & R. 65 E.

TORTOISE HABITAT

N

FINDING OF NO SIGNIFICANT IMPACT
AND
DECISION RECORD

FIRE REHABILITATION OF TWO WILDLAND FIRES, CALIENTE RESOURCE AREA

EA#-NV-055-93-29

DECISION

It is my decision to implement alternative #1 as described in Environmental Assessment NV-055-93-29, to monitor the burned area to determine that herding is effectively meeting the livestock closure requirements for the burned area and to recommend a reduction removal of the wild horses within the herd management area as presented in the alternative.

If monitoring determines that herding fails to keep livestock from the area of closure, the responsible permittee(s) will be directed to immediately remove the offending livestock and pursue fencing as presented in Alternative #3.

Following a determination through monitoring that the burned area has successfully recovered, the burn closure will be lifted, appropriate livestock grazing authorized and the wild horse population be augmented to support appropriate management levels.

MONITORING

Monitoring will be accomplished by both ground and aerial observations to be conducted by both Bureau employees and volunteers.

RATIONALE

This decision provides the opportunity for recovery of the natural resources within the area affected by the burn. It also affords the greatest latitude for the affected permittees to pursue actions of their choice to meet their operational needs, while minimizing the economic burden they must suffer. In return for that latitude, the ranchers also assume an added burden of responsibility to ensure that they fully comply with the Bureau's closure. They will enjoy or suffer the consequences that directly result from their choices and actions.

This decision will have a short term adverse affect upon the wild horse population within the herd management area. In the long term, the habitat for the wild horses will be more productive and provide for the health and vigor of the reestablished population.

FINDING OF NO SIGNIFICANT IMPACT

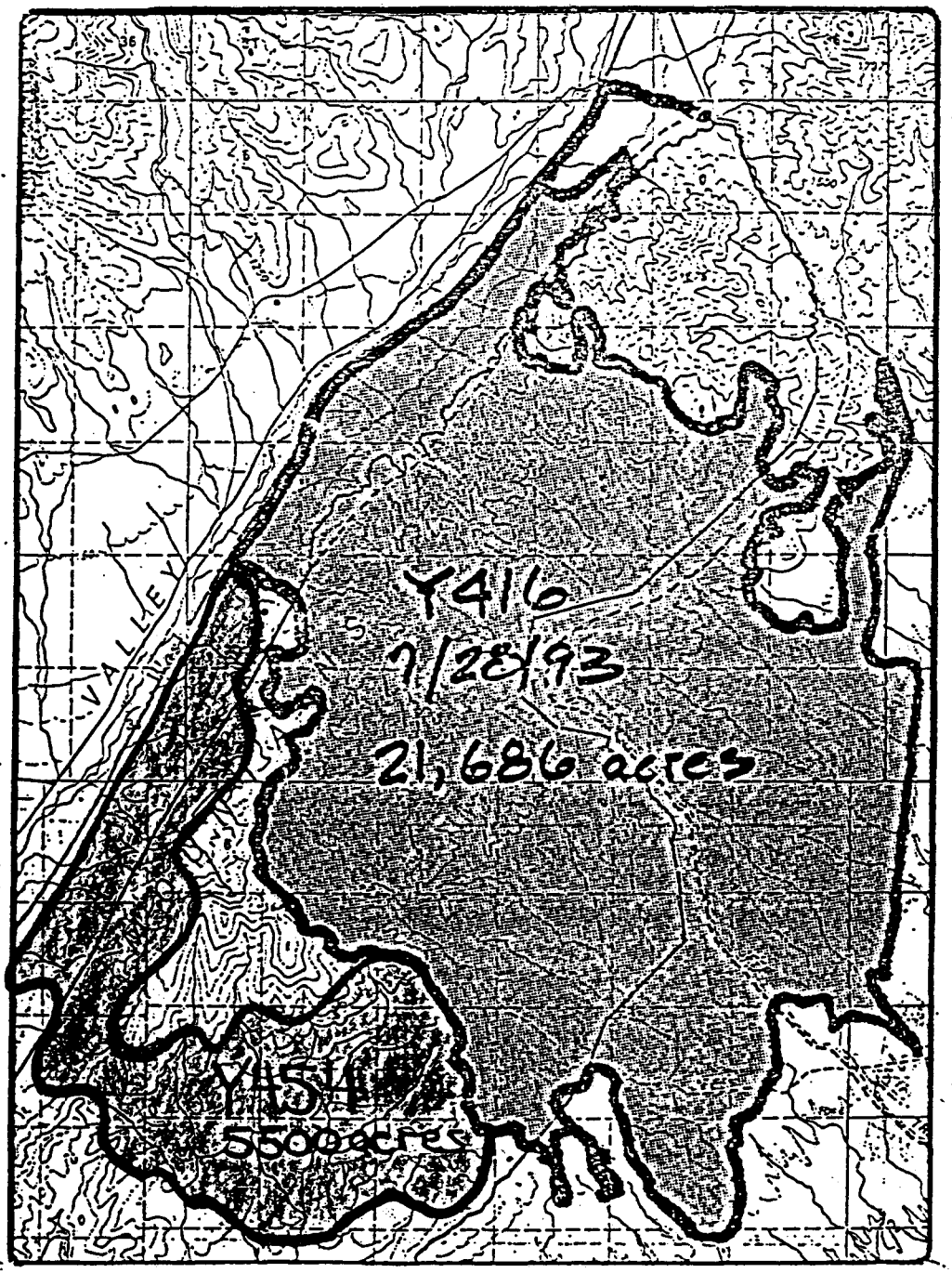
Based on the analysis of potential environmental impacts contained in Environmental Assessment NV-055-93-29, and the mitigation proposed in the decision, I have determined that the selected action will not have a significant effect on the human environment, and therefore, an environmental impact statement will not be prepared.

The proposed action is in conformance with direction contained in the Caliente Management Framework Plan.

Curtis A. Tucker
Area Manager

Date 9-24-93

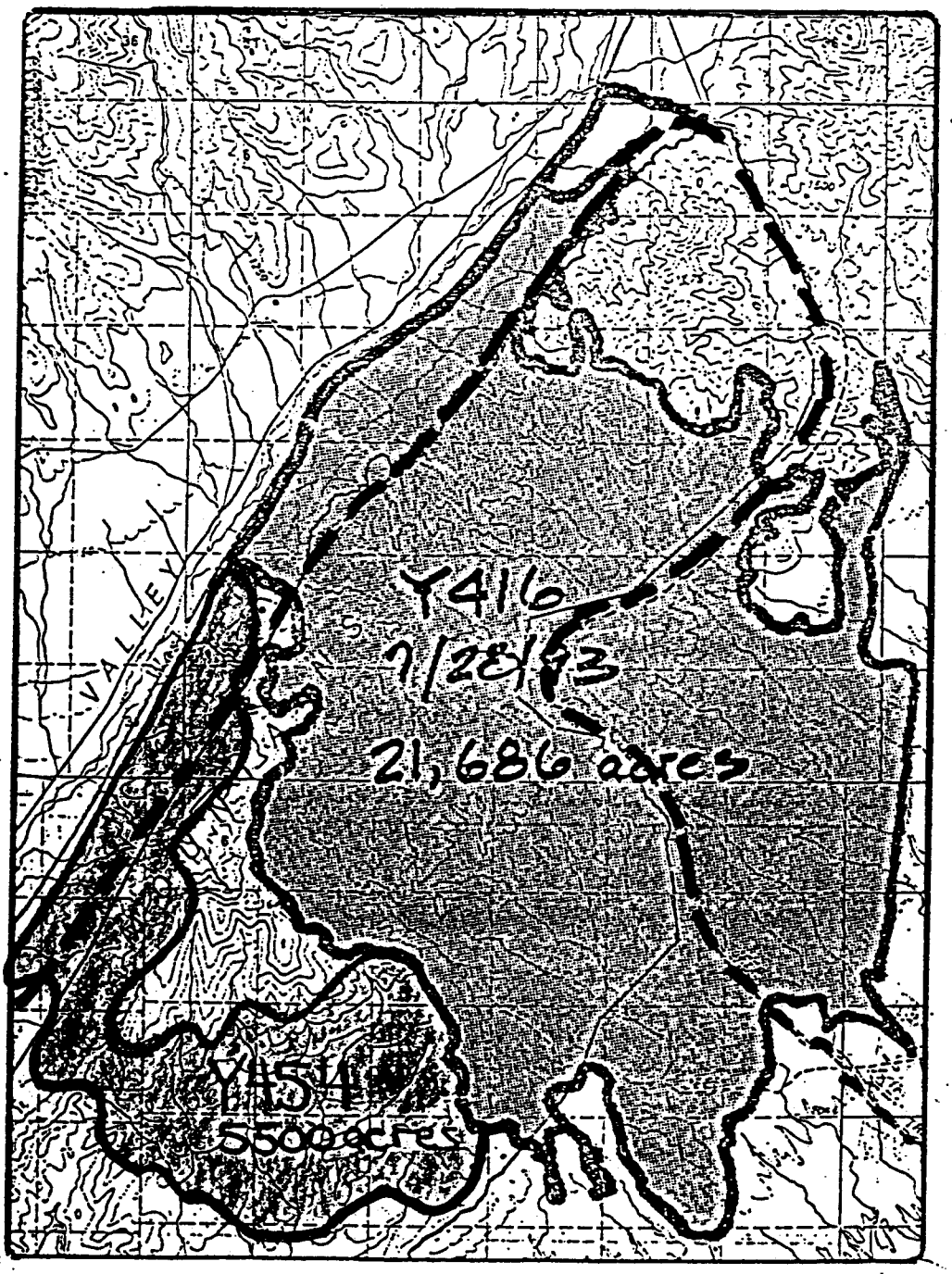
MAP 1



THE MEADOW AND PASS FIRE

T. 8 S. & T. 9 S., R. 66 E. & R. 65 E.

MAP 2



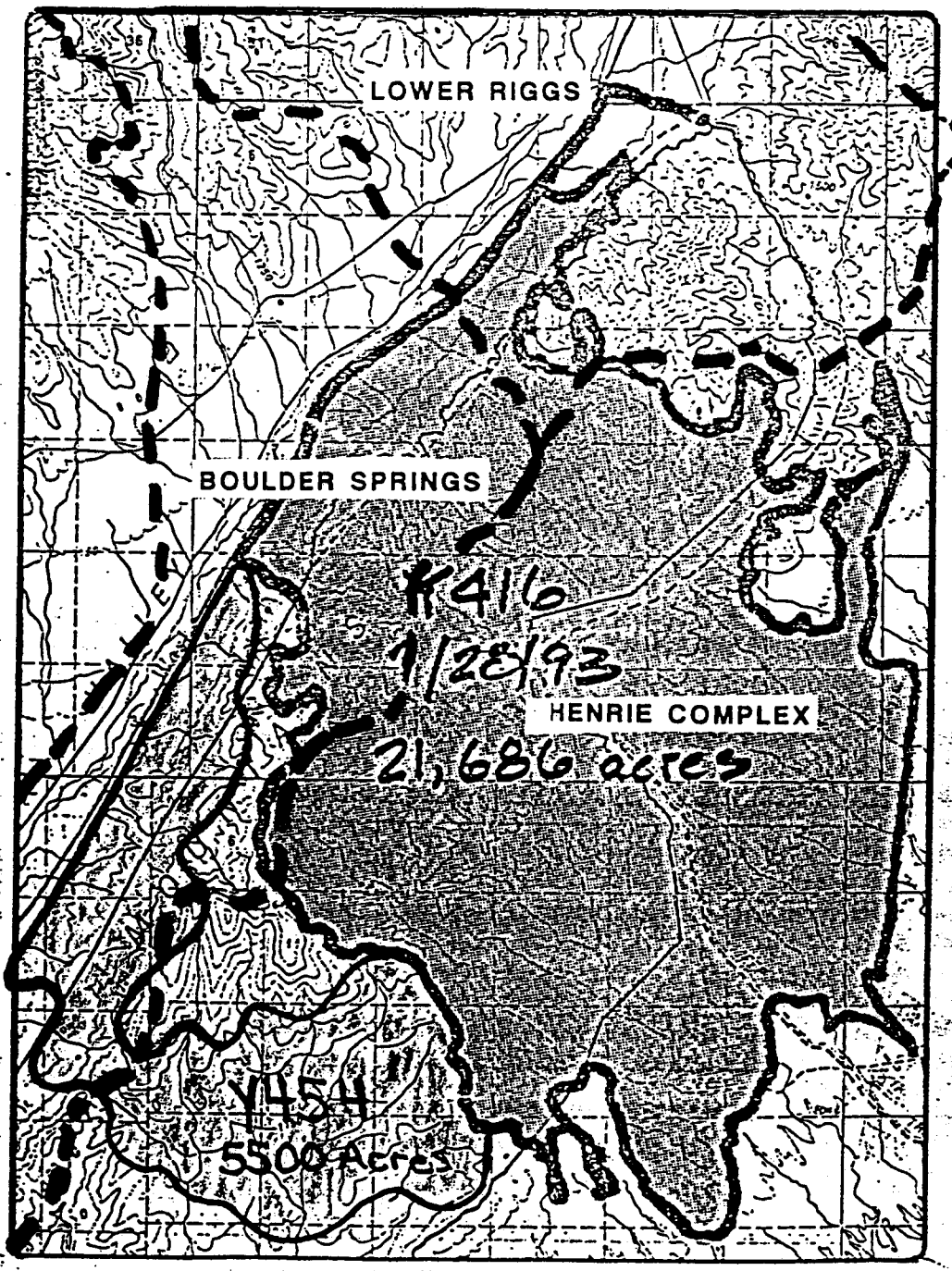
THE MEADOW AND PASS FIRE

T. 8 S. & T. 9 S., R. 66 E. & R. 65 E.

WILDERNESS STUDY AREA

N

MAP 3

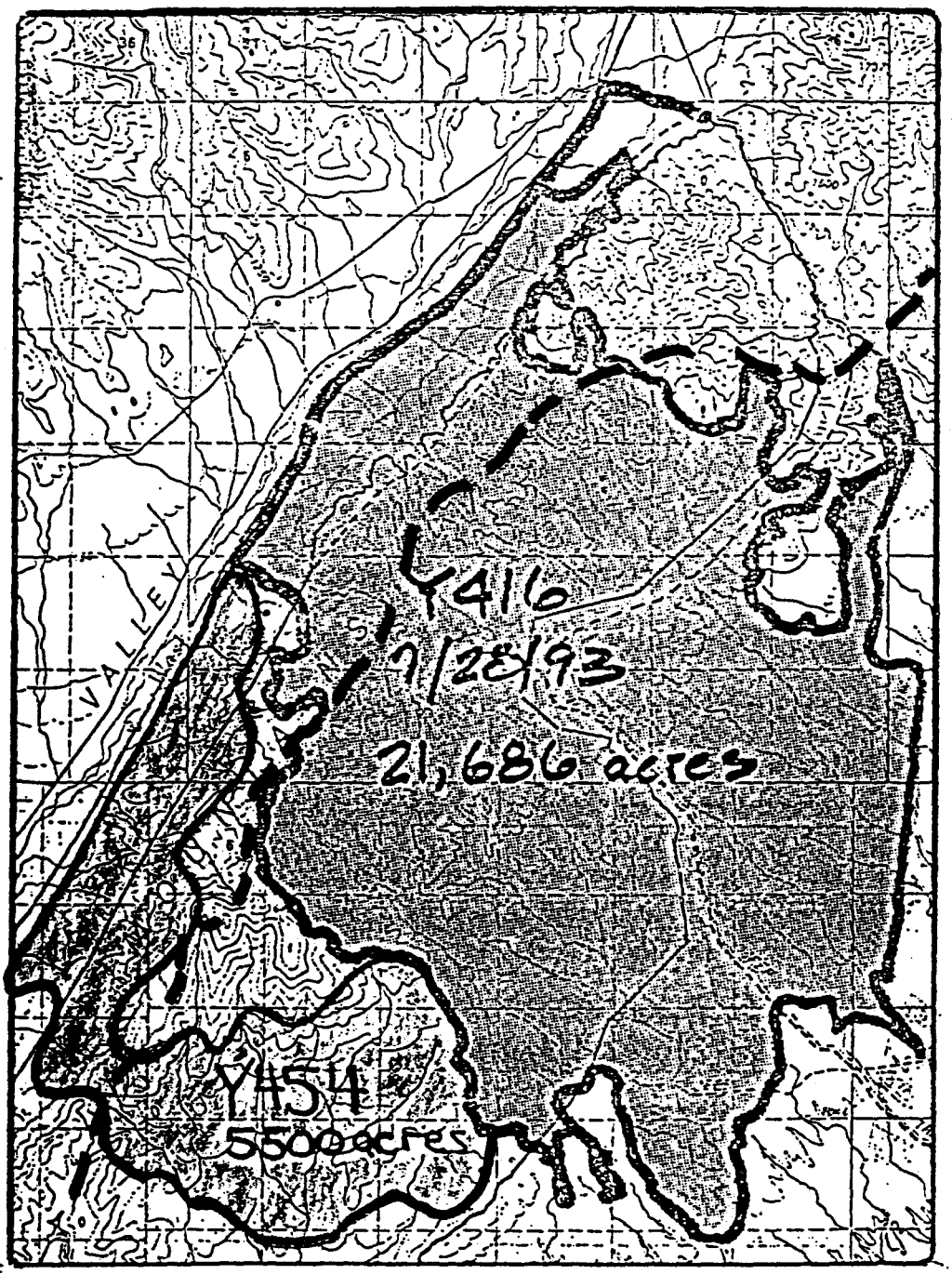


THE MEADOW AND PASS FIRE

T. 8 S. & T. 9 S., R. 66 E. & R. 65 E.

ALLOTMENT BOUNDARIES

MAP 4



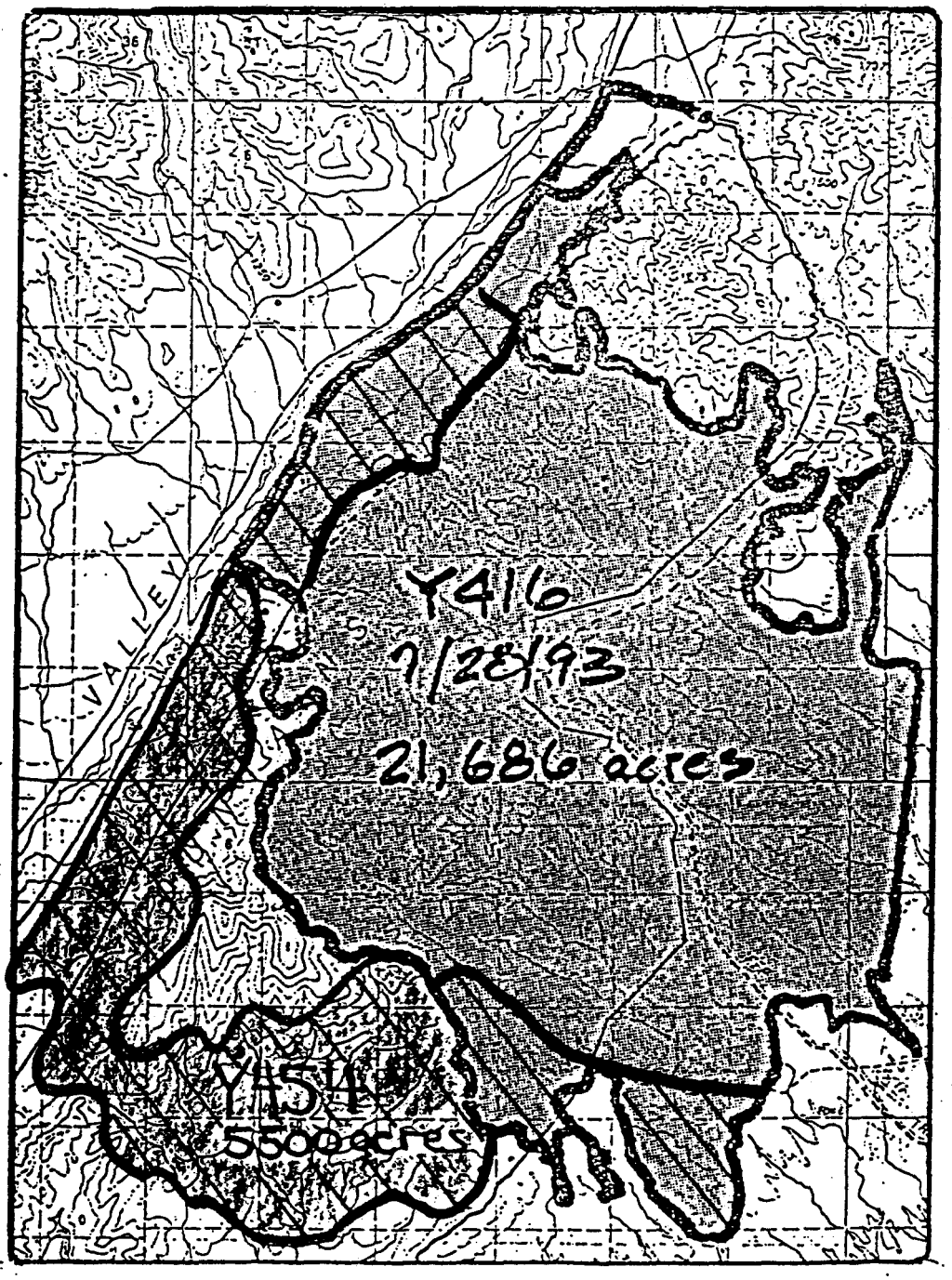
THE MEADOW AND PASS FIRE

T. 8 S. & T. 9 S., R. 66 E. & R. 65 E.

HORSE MANAGEMENT AREA (EAST OF LINE)

N

MAP 5



THE MEADOW AND PASS FIRE

T. 8 S. & T. 9 S., R. 66 E. & R. 65 E.

TORTOISE HABITAT

N

NV-050-94-01,02,03

Las Vegas District
Normal Fire Rehabilitation Plan
and
Environmental Assessment

E.A. No. NV-054-9-24

TIER

Table of Contents

List of Maps

I. INTRODUCTION

A. Objective and Purpose

The purpose of the Normal Fire Rehabilitation Plan(NFRP) is to expedite the Emergency Fire Rehabilitation(EFR) process for the completion of emergency land treatments, on public land, that are consistent with the urgent nature of fire rehabilitation. An approved plan and environmental assessment will authorize the District to initiate EFR projects requiring less than $30,000 per fire in the areas designated by this plan. It is estimated that an approved NFRP, with advanced procurement and administrative planning, will enable the District to begin rehabilitation of a fire within one month of its suppression.

The objective of EFR is to implement a combination of planned actions in a time frame necessary to reduce watershed degradation as a result of wildfire. The outcome of these actions will be to minimize:

1. Damage to property, on and off site, from increased runoff and sediment yields.
2. Loss of water control and deterioration of water quality.
3. Loss of watershed cover (vegetation).
4. Loss of soil and on-site productivity.
5. Invasion of burned areas by highly flammable plants and noxious weeds.
6. Loss of wildlife habitat.

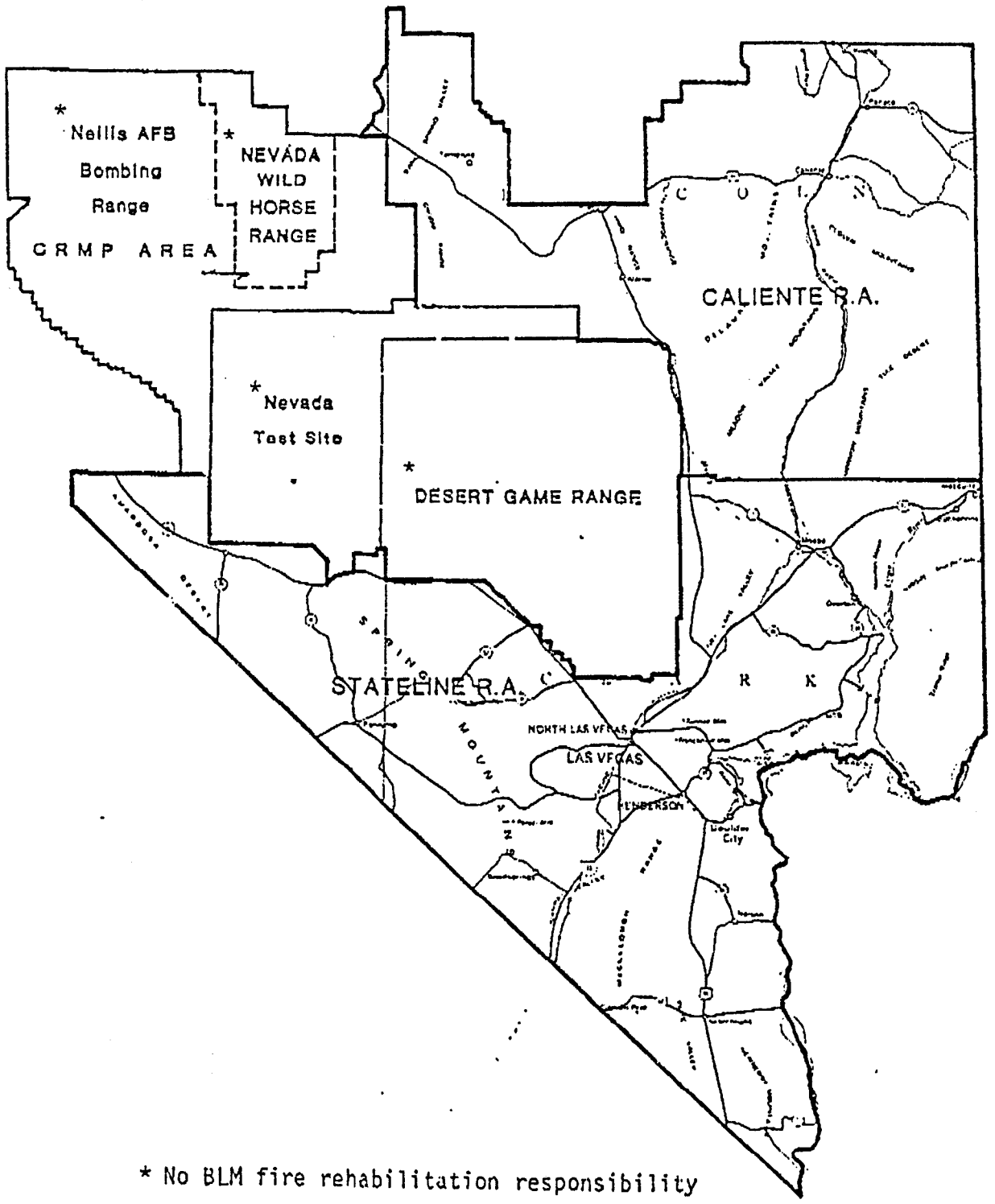
B. Area Covered by NFRP

The NFRP covers all Federal land where the BLM has fire rehabilitation responsibility(see Map #1).

C. Land Use Plan Objectives and Constraints

The EFR practices and standard operating procedures outlined within this document are consistent with the land use plans developed for the Las Vegas District. Completion and approval of this NFRP, will fulfill the MFP decisions in 3.4 of forestry and 4.1 of watershed within the Clark County Management Framework Plan(MFP) which calls for the development of a programmatic fire rehabilitation plan. This NFRP is also consistent with the Southern Nye RMP and Caliente MFP.

MAP 1



* No BLM fire rehabilitation responsibility

LAS VEGAS DISTRICT

D. Ten Year Fire History

Based on a 10 year period from 1978 to 1988 approximately 116,000 acres of Bureau administered land burned within the District. Fire occurrence was concentrated in the Spring and Mormon Mountains with 64 percent of all wildfires, burning more than 100 acres, occurring in these areas. A fire occurrence map is available at the Las Vegas District Office. A ten year fire history for the District is summarized in the following table.

Las Vegas Fire History

Year	Number	BLM Acres	Other
78	29	5,460	6
79	52	3,596	20
80	108	64,009	4,615
81	33	2,630	3,010
82	8	4,836	1
83	37	1,916	650
84	38	841	2,244
85	240	2,300	67
86	223	8,990	100
87	243	8,178	568
88	190	13,455	21,626
	Total	116,211	32,908

E. Ten Year EFR History

In the last 10 years there have been five EFR efforts(1980, 1981(2), 1982, and 1987) on 7,910 acres within the Las Vegas District. Four of the five rehabilitation efforts took place in the Spring Mountain Range west of Las Vegas, Nevada. The last rehabilitation took place in the mountains east of Panaca Nevada. The total rehabilitated acreage on record(1962 to 1989), within the District, is 13,135 as outlined below.

Name	Year	Acres	Aerial	Drill
Wheeler Pass	1962	4,375	4,375	0
Mt. Sterling	1975	850	500	350
C.C. Springs	1980	660	660	0
Marks Canyon	1981	2,300	1,200	1,100
Wheeler Spring	1981	350	350	0
Sky Fire	1982	4,450	4,450	0
Panaca Burn	1987	150	000	125
		13,135	11,835	1,575

The above table indicates that eighty-nine percent of the total acreage rehabilitated, within the District, was accomplished by

aerially broadcasting seed. Except for the Wheeler Spring fire rehabilitation in 1981, the Las Vegas District has had good success with aerial application. These successful seedings are directly related to adequate moisture in the two years following planting and, closure to grazing. Failure to exclude grazing from the Wheeler Spring rehabilitation appears to have been responsible for its poor response.

F. EFR Team

The following positions are designated as members of the District Emergency Fire Rehabilitation Team.

1.	Area Soil Scientist	Team Leader
2.	Area Range Conservationist	Team Member
3.	Area Wildlife/Fisheries Biologist	Team Member
4.	District Hydrologist	Team Member
5.	Area Forester	Team Member*
6.	Resource Advisor from the Fire	Team Member**

* (Team member on those fires involving the timber resource)

** (If no Resource Advisor is assigned to the fire, the position may be filled by the Fire Management Officer)

Duties and responsibilities of each team member are defined below and within Appendix A. Personnel in these positions should become familiar with this NFRP and the EFR Manual(1742).

1. Area Soil Scientist/Team Leader

Mobilizes the EFR Team at the direction of the District Manager/Area Manager(DM/AM). Notifies the Nevada State Office counterpart once the EFR effort is initiated, and establishes a time frame for completion of the EFR plan. Assigns individual responsibilities to team members and coordinates efforts of the team. Responsible for preparation of the burned area report and Benefit/Cost analysis(if required), Addendum to the NFRP, Record of Decision, FONSI, and memo to the State Director. Assembles and presents to the DM/AM, for approval, the completed EFR package. Responsible for coordination with other divisions (i.e. Operations and Administration), of the implementation of the EFR plan.

Informs the DM/AM of progress on the EFR effort. The Team Leader may request support from any personnel within the District, with the approval of the District Manager.

In addition to his/her duties, the Team Leader will serve as the team's Soil Scientist and provide soils input to the EFR plan.

2. Area Range Conservationist

Coordinates EFR efforts with permittees, including preparation of any necessary correspondence. Provides necessary information regarding the vegetative and range improvement portion of the Addendum to the NFRP. Responsible for preparation of the decision of closure, and JDR's. Assists the Team Leader in preparation of the rehabilitation plan as each situation requires. Responsible for coordination, with the Divisions of Operations and Administration, of the construction of protective fencing.

3. Area Wildlife/Fisheries Biologist

Assesses damage to wildlife habitat and/or aquatic and riparian habitat. Informs the Nevada Department of Wildlife(NDOW) of the Bureau's rehabilitation efforts and solicits their concerns. Provides necessary information regarding wildlife, and T&E plants and animals. Assists the Team Leader in preparation of the rehabilitation plan as each situation requires.

4. District Hydrologist

Assesses increased flood and sediment hazards as a result of fire. Evaluates damage to water resources within the burned area and potential impacts to water sources outside burned areas. Responsible for watershed portions of the burned area report. In the case of two EFR plans occurring simultaneously in the same resource area, he/she may be responsible for the Addendum to the NFRP and EFR Plan. Assists the Team Leader in preparation of the rehabilitation plan as each situation requires.

5. Area Forester

When burn areas are located in commercial timber or woodland products areas, the Area Forester will be included on the EFR Team to coordinate timber restoration with the EFR. Assists the Team Leader in the preparation of the rehabilitation plan as each situation requires.

6. Fire Resource Advisor

Provides the EFR Team Leader with an official fire report and accurate map of the fire. Provides information concerning resource damage, due to suppression efforts,

which he/she may be aware of. Assists the Team Leader in preparation of the rehabilitation plan as each situation requires.

II. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action

The proposed action is to implement rehabilitation activities following wildfires, in a timely and cost effective manner, in order to accomplish the purposes, for EFR, outlined in the introduction.

EFR vegetative treatments will only be considered for those areas receiving a mean annual precipitation of 8 inches or greater(see Map #2). Generally, the 8 inch plus precipitation zone exists above 4,800 feet(Map 1) and includes the desert shrub, sagebrush, mountain shrub, pinyon-juniper, riparian and conifer vegetative communities. Historically, for those areas receiving less than 8 inches of annual precipitation, the success rate of seed germination and plant establishment has been inadequate.

Within the Stateline Resource Area, approximately 30,000 acres meet the above criteria for vegetative rehabilitation. This entire acreage occurs in the Virgin Mountains. The Virgin Mountains are located 12 miles south of Mesquite, Nevada and extend east to the Arizona border.

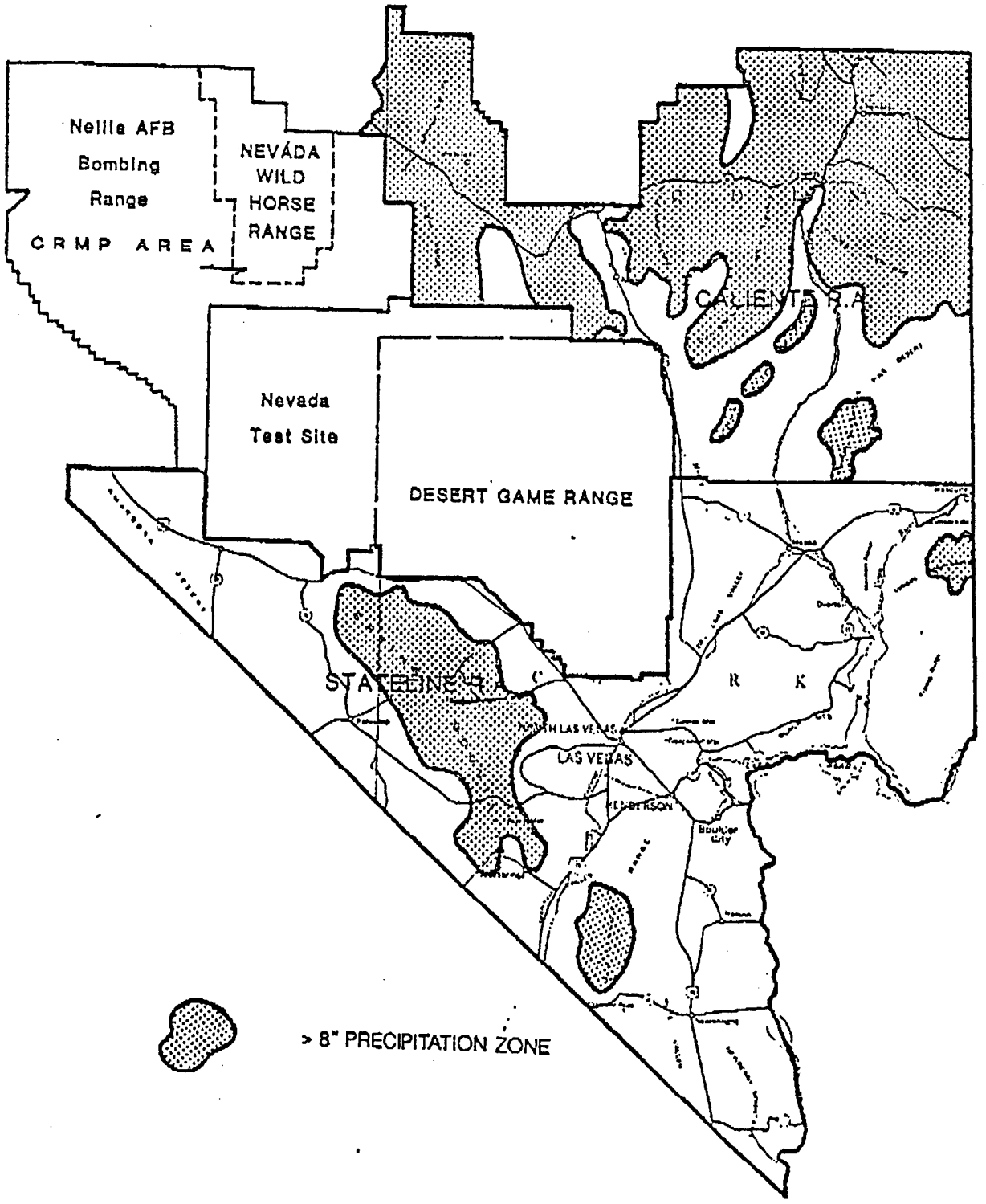
The Caliente Resource Area contains approximately 1.8 million acres which meet the criteria for vegetative rehabilitation. In general, this acreage exists north of Elgin, Nevada with the exclusion of the lower elevations of Tikaboo, Pahranagat, Delamar, and Dry Lake Valleys which receive less than eight inches of precipitation annually.

As noted in the Fire History section, the majority of the rehabilitation efforts have occurred within the Spring Mountain Range. With the transfer of 250,000 acres of the Spring Mountains to the U. S. Forest Service, it is anticipated that the number of fire rehabilitation projects will be reduced to two or three during the ten year period following the implementation of this NFRP.

Standard operating procedures are identified within Appendix A.

Three options, for EFR treatment, will be considered by the District and will be used either individually or in combinations. These land treatment options are described below. Standard operating procedures for implementation of these treatments, are outlined in Appendix A and are hereby incorporated into the proposed action.

MAP 2



LAS VEGAS DISTRICT
PRECIPITATION ZONE

(8 INCH OR GREATER)

Treatment #1: Natural Revegetation with Closure

Natural revegetation with closure will be considered following fires that do not completely destroy the existing vegetation or, where seeding is not possible do to precipitation, topography or soil type. Following Manual 1742 guidelines, the EFR Team will determine if there is sufficient viable vegetation, that will reestablish, to prevent watershed degradation within two growing seasons. In order to allow recovery, of the burned area, closure will be accomplished either through fencing or grazing deferment. The closure will remain in place for not less than two growing seasons. The burned area will be monitored on a yearly basis to determine when livestock grazing can resume.

Treatment #2: Vegetative rehabilitation of burned areas.

Vegetative rehabilitation will only be considered for those areas outlined in the introduction and, if the EFR team determines that natural vegetation will not successfully reestablish in a reasonable time frame. Exclusion of livestock, wild horses and wild burros, will be required for at least two growing seasons in areas vegetatively rehabilitated. Seed mixtures have been formulated for specific precipitation zones(see Appendix B). These seed mixtures are intended as a guide and may be modified as each EFR situation requires. Methods of application will include rangeland drill and broadcast seeding. A rangeland drill will be used to incorporate seed into the ground at the desired depth, and will be equipped to cover the seed with soil. If the broadcast method of application is used, the seed will be covered by either raking it into the soil or dragging some type of device behind the broadcaster to cover the seed. If seeding is accomplished by aerial broadcasting, the seed will be driven into the ground by the momentum of the aircraft and therefore the seed will not be mechanically covered. Seedings will be completed in the fall or early winter. EFR seedings will be considered only in areas receiving eight inches or more of precipitation. In order to allow recovery, of the burned area, closure will be accomplished either through fencing or grazing deferment. The closure will remain in place for not less than two growing seasons. The burned area will be monitored on a yearly basis to determine when livestock grazing can resume.

Precipitation is mainly influenced by elevation, ranging from less than 4 inches per year in some valley bottoms to over 16 inches per year at Mt. Charleston. A majority of the yearly precipitation occurs during the winter months, however, intense summer convective storms are common to the area.

A. Soils

The soils of the Las Vegas District vary widely with differing parent material, landform, elevation, slope, aspect and climate. Soils range from those on the valley floor that are commonly deep, poorly drained and alkaline with a high salt content, to shallow mountain soils formed over bedrock, with near neutral pH. The majority of the soils within the District are aridisols, entisols and mollisols with some inceptisols.

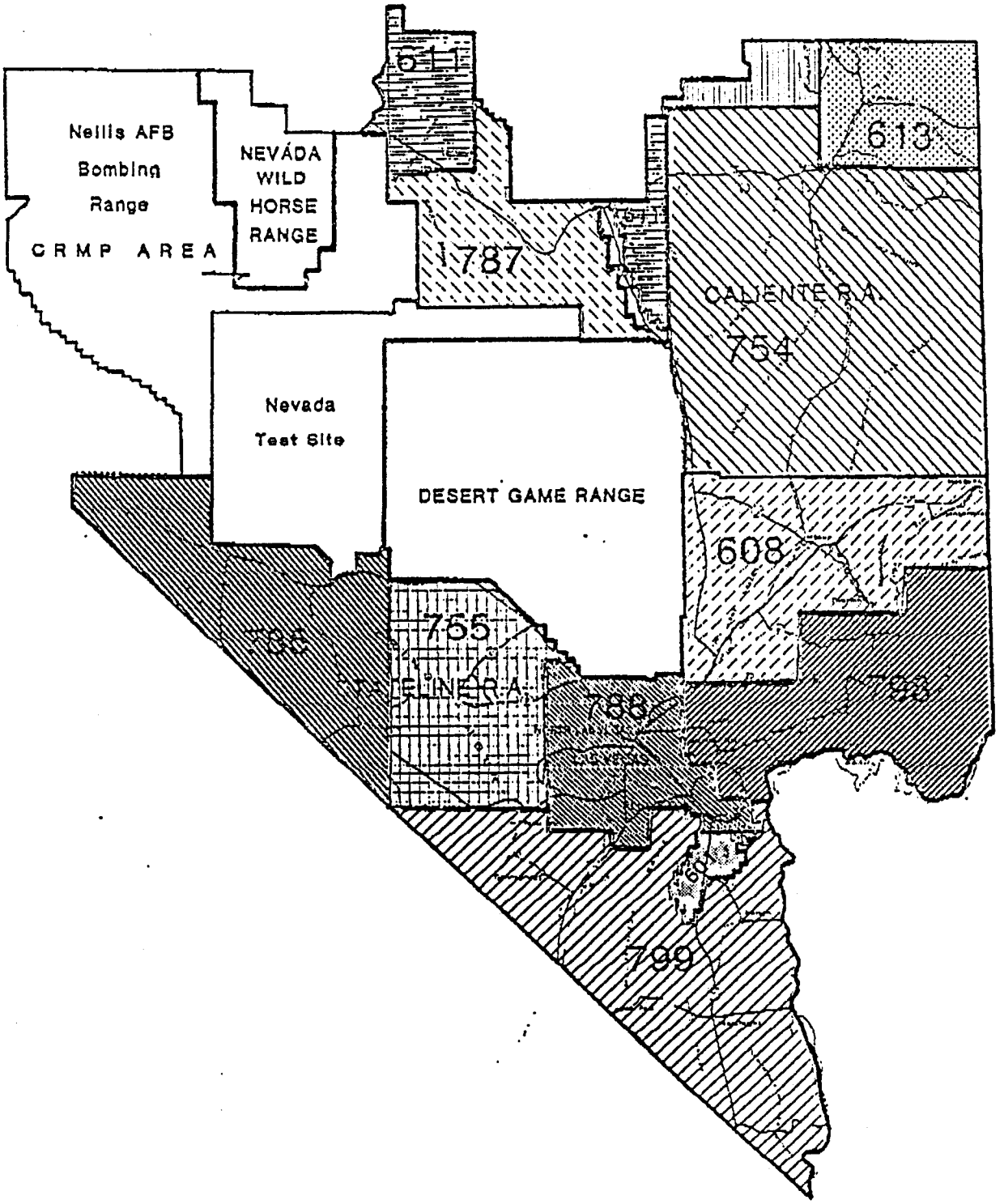
Detailed soils information is contained within the following published or interim soil surveys. See Map #3 for the area covered by each survey.

Soil Survey Name	Soil Survey No.
Las Vegas Valley & Eldorado Valley	601 Published
Virgin Valley	608 Published
Pahranagat/Penoyer Valley	611 Published
Meadow Valley Wash	613 Published
Lincoln County South	754 On Going
Clark County NW	755 Interim
Nye County SW	785 Interim
Unnamed	787 Unpublished
Las Vegas Valley	788 Published
Gold Butte**	798 Interim
Clark County SW**	799 Interim

**(Those surveys are now combined with 755).

B. Water and Air Resources

The District is located within the Lower Colorado, Great Basin, and California Hydrologic regions. Major drainages include the Colorado River, Virgin River, Muddy River, Meadow Valley Wash and Clover Creek. Major lakes and reservoirs include upper and lower Paharanagat Lakes, Lake Mead, and Lake Mohave. Springs are generally located within the mountain ranges and alluvial fans and provide important sources of water for livestock, wild horses, burros, and wildlife. Ground water is of great importance due to limited surface water supplies. The principal sources of groundwater are the younger and older alluvium which form the valley fill reservoirs.



LAS VEGAS DISTRICT

SOIL SURVEYS

Water quality is highly variable within the District. Generally, surface water occurring in the higher elevations is considered to be of good quality with a low mineral content. As water moves down to lower elevations, by either surface or subsurface flow, it dissolves parent materials and increases in total dissolved solids, thus decreasing its quality.

Air quality is considered good throughout the District with the exception of the Las Vegas Valley Basin, which has been designated as a non-attainment area. Outside the basin, fugitive dust and pollutants from agricultural burning and mining are the only air quality problems.

C. Vegetation

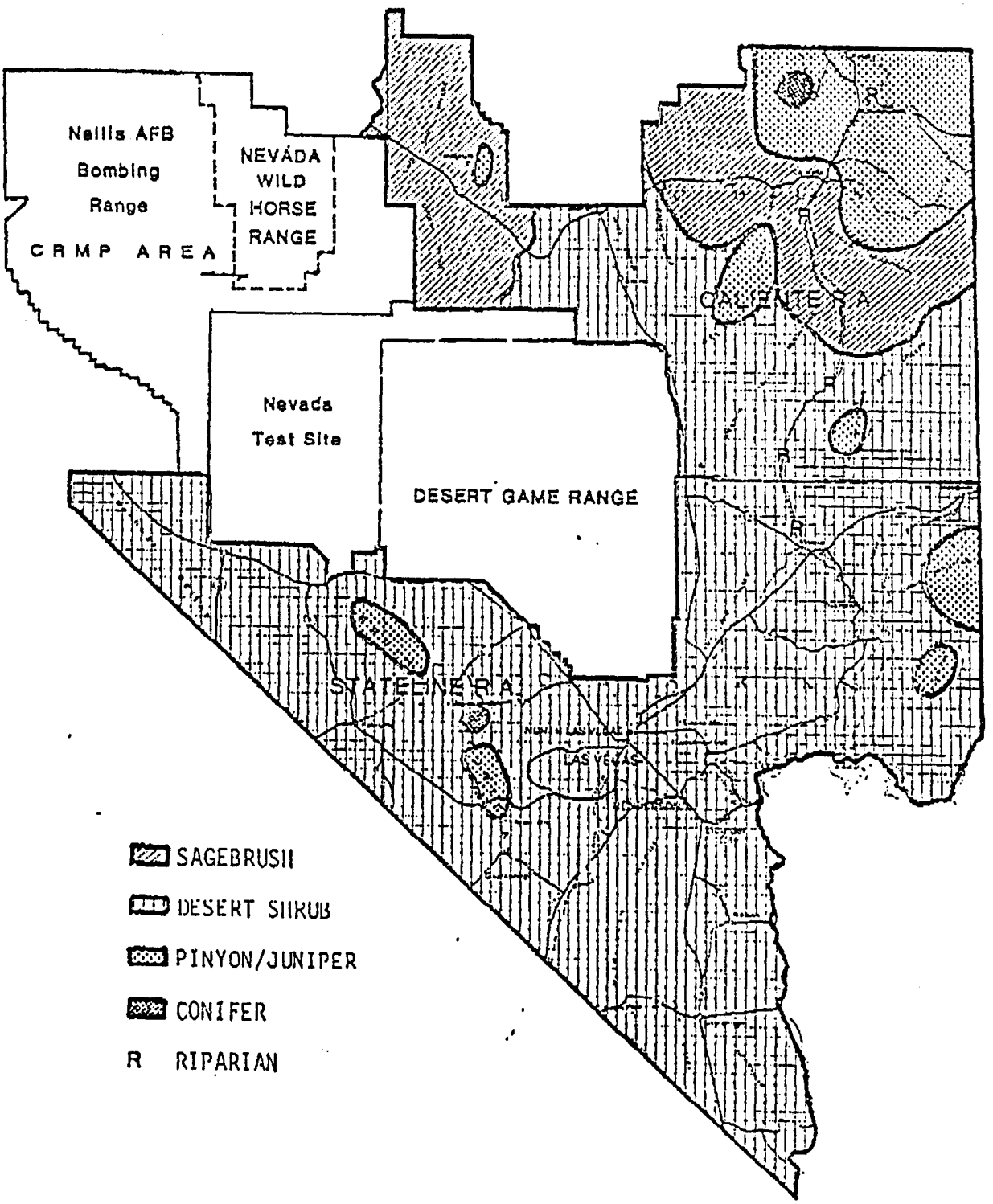
Described below are the six major vegetative communities that will be considered for EFR under this plan(also see Map #4). More specific descriptions can be found in the soil surveys previously listed.

1. Sagebrush - This community constitutes a large acreage, mostly in the northern part of the District. It is made up of Wyoming big sagebrush(Artemisia tridentata) or black sagebrush(Artemisia arbuscula nova) associated with Indian ricegrass(Oryzopsis hymenoides), galleta(Hilaria jamesii), needle and thread(Stipa comata) and bottlebrush squirreltail (Sitanion hystrix). It is found on rolling hills, alluvial fans, alluvial terraces and mountain slopes with a gradient range of 0 to 100 percent, but usually 4 to 20 percent. Elevations range from 5,200 to 8,000 feet.

2. Desert Shrub - This community constitutes a large acreage mostly in the southern part of the District. It occurs on piedmont slopes, alluvial fans, basin floors and alluvial plains on all exposures. Slopes range from 0 to 100 percent but, slopes of 2 to 15 percent are most typical. Elevations range from 3,300 to 6,200 feet. The site is dominated by blackbrush (Coleogyne ramosissima) and Nevada ephedra(Ephedra nevadenis) associated with, yucca(Yucca sp.), big galleta(Hilaria rigida), and Indian rice grass (Oryzopsis hymenoides).

3. Mountain Shrub - This community type occurs on mountain side slopes and valleys. Slopes range from 8 to 100 percent but slopes of 15 to 50 percent are most typical. Elevations range from 5,300 to 7,000 feet. This site is dominated by bitterbrush(Purshia sp.),

MAP 4



LAS VEGAS DISTRICT
VEGETATIVE COMMUNITIES

Gambel oak(Quercus gambelii), ceanothus(Ceanothus sp.) or mountain mahogany(Cercocarpus sp.).

4. Pinon/Juniper - This community type occurs on rolling hills, mountain slopes and alluvial fans throughout the District. Slopes range from 0 to 100 percent but are typically 8 to 45 percent. Elevations range from 5,000 to 8,200 feet. The site is dominated by pinyon pine(Pinus monophylla) and juniper (Juniperus sp.), associated with big sagebrush (Artemisia tridentata), bitterbrush(Purshia sp.), blue grama(Bouteloua gracilis), galleta(Hilaria jamesii) and bottle brush squirreltail(Sitanion hystrix).

5. Conifer - This community type occurs on mountain slopes and ridges at elevations of 7,800 to 11,200 feet. Slopes range from 15 to greater than 100 percent but are typically 15 to 70 percent. It is dominated by ponderosa pine(Pinus ponderosa) with an understory of sagebrush(Artemisia tridentata), bitterbrush(Purshia sp.) and bottle brush squirreltail (Sitanion hystrix).

6. Riparian area vegetation - This community is found alongside springs and streams throughout the District. It is dominated by cottonwood(Populus sp.), willow (Salix sp.), common reed(Phragmites communis), cattail (Typha sp.), alkali sacaton(Sporobolus airoides), and big galleta(Hilaria rigida). Slopes range from 0 to 6 percent but slope of 0 to 2 percent are most typical.

D. Threatened and Endangered Species

1. Plants

Within the Las Vegas District, one species is listed as endangered and six species are listed as threatened. All of these plants are located in the Ash Meadows area which will not be considered for EFR.

Plant	Listing
Armargosa niterwort (Nitrophila mohavensis)	Endangered
Ash Meadows Milk-Vetch (Astragalus phoenix)	Threatened
spring loving centaury (Centaurium namophilum var. namophilum)	Threatened

Plant	Listing
Ash Meadows sunray (Enceliopsis nudicaulis var. corrugata)	Threatened
Ash Meadows gum-plant (Grindelia fraxino-pratensis)	Threatened
Ash Meadows ivesia (Ivesia eremica)	Threatened
Ash Meadow blazing star (Mentzelia leucophylla)	Threatened

In addition to the listed threatened and endangered species, there are forty-six(46) candidate species identified within the District. A list of these Federal candidate plants, along with their status, can be found in Appendix D.

2. Animals

The American peregrine falcon(Falco peregrinus anatum), bald eagle(Haliaeetus leucoccephalus) and the desert tortoise(Scaptochelys agassizii) are federally listed endangered species occurring in the District. Endangered fish species occurring within the District include, the White River springfish(Crenichthys b. baileyi), Moapa dace(Moapa coriacea), Devil's Hole pupfish(Cyprinodon diabolis), Hiko White River springfish(Crenichthys b. grandis), Pahranagat roundtail chub(Gila robusta jordani), Woundfin minnow(Plagopterus argentissimus), Warm Springs Pupfish(Cyprinodon nevadensis pectoralis), Ash Meadows speckled dace(Rhinichthys osculus nevadensis), Ash Meadows Amargosa pupfish (Cyprinodon nevadensis mionectes) and the Pahrump killifish(Empetrichthys latos latos). The Big Springs spinedace(Lepidomeda mollispinis pratensis) and the Ash Meadows naucorid(Ambrysus amargosus) are listed as threatened.

In addition to the threatened and endangered species listed above, a complete list of Federal candidate species can be found in Appendix D.

E. Land Treatments

Currently, the only land treatments in the Las Vegas District are located within the Caliente Resource Area. Those lands, within the Stateline Resource Area, that

contained treatments were transferred to the U.S. Forest Service. The following table identifies the type and acreage of those treatments located within the CRA.

Name of treatment	Type of Treatment	Acres
Abaje	plowed and seeded	1,250
Abacus	plowed and seeded	1,500
Culver Well	plowed and seeded	75
Hackett	plowed and seeded	121
Barclay	plowed and seeded	258
Cave Springs	plowed and seeded	435
Wadsworth	plowed and seeded	356
Beaver Dam Flat	plowed and seeded	740
Uvada	plowed and seeded	790
		5,525
Oak Spring	chained and seeded	1,020
Taylor	chained and seeded	1,280
Mahogany Knoll	chained and seeded	1,100
Heaton-Lytle	chained and seeded	840
Cave Spring	chained and seeded	667
Enterprise	chained and seeded	2,352
Crestline	chained and seeded	700
Wadsworth	chained and seeded	640
Hackett	chained and seeded	640
Blythe Spring	chained and seeded	1,200
Marbles Reservoir	chained and seeded	1,285
Head	chained and seeded	562
Henrie	chained and seeded	625
Kurt Canyon	chained and seeded	645
Simkins	chained and seeded	3,500
Stahei	chained and seeded	-----
		17,056
Sheep Flat	sprayed and seeded	1,900
Mustang Allotment	sprayed	2,600
Conaway	prescribed burn/seeded	1,200
Unnamed	prescribed burn/seeded	3,900
		5,100
Panaca Burn	fire rehab./seeded	150

F. Wildlife

In the Las Vegas District there are approximately 28 species of mammals, 94 species of birds, 27 species of reptiles and amphibians and 25 species of fish. Only those species, of management concern, that could be affected

either in a positive or negative manner, by EFR activities, will be discussed. It should be noted that when wild fire and the associated rehabilitation occur, in riparian areas, all local wildlife will likely be affected.

1. Mammals

The mammals of primary concern with respect to EFR projects are in locations that receive 8 inches or greater precipitation. They are generally the big game species. These include mule deer, antelope, and big horn sheep. Mule deer occur throughout the District at higher elevations. The greatest concentration of mule deer are found in the northeastern part of the District in the Caliente Resource Area(CRA). Within the CRA deer occur yearlong in the Mormon Mountains, Delamar Mountains, Groom Range, Clover Mountains and Tempiute. Mule deer crucial yearlong range is primarily in the Staheli Chaining-seeding. They winter in the Tule Desert, Pahroc Range, Pahranagat Range, Worthington/Quinn Range, Cedar Range and Rose Valley. Crucial winter ranges are located in the Bunker Peak/Middle Pass area, Cedar Range and Pioche-Dry Valley. Deer summer range is located in the Delamar Mountains, Highland Peak and Ella Mountains with the latter being crucial summer range. Within the Stateline Resource Area(SRA), mule deer range includes the following areas: Monte Cristo, Lone Mountain, Silver Peak/Palmetto, Magruder/Sylvania, Montezuma Stonewall, Gold Mountain and Amargosa.

Antelope occur yearlong in Sand Springs Valley and Tikaboo Valley in the Caliente Resource Area.

Bighorn sheep occur in both resource areas. Within the CRA they reside yearlong in the Morman Mountains, Meadow Valley Mountains, Delamar Mountains, the Pahranagat Range and the Hiko Mountains. Crucial yearlong range is located in the Meadow Valley Mountains and the Mormon Mountains. Within the SRA animals currently range in the Monte Cristo Range, Silver Peak Range and the Lone Mountain/Paymaster Range.

2. Birds

Only three species of game birds are likely to be affected by EFR activities. These are the chukar partridge, grouse, and quail.

3. Fish

The following ten(10) streams, within the District, support fisheries: Ash Creek, Pine Creek, Beaver Dam Creek, Clover Creek, Meadow Valley Wash, White River, Head Waters Creek, Cold Creek, Willow Creek, and the Virgin River. Some of the species found in these streams include: rainbow trout(Salmo gardineri), desert sucker(Catostomus clarki), speckled dace (Rhinichthys osculus), big spring Spindace (Lepidomeda mollispinis), Pahranagat roundtail chub (Gila robusta jordani) and cutthroat trout(Salmo clarki).

The location and extent of Bighorn sheep, deer, elk and antelope habitats are illustrated in Maps #5 to #9.

G. Wild Horses and Burros

Free roaming wild horses and burros are common in the Las Vegas District. There are 25 herd management areas within the District containing approximately 7,000 horses and 700 burros. The management areas listed below are scattered throughout the District(also see Map #10 to #12).

Name of Herd Management Area	Identifying No.
Eldorado Mountains	501
Gold Butte	502
Muddy Mountains	503
Red Rock/Bird Springs	504
Blue Diamond	505
Potosi	506
Lucky Strike	507
Mount Sterling/Wallace Canyon	508
Ash Meadows	509
Last Chance	510
Amargosa Valley	511
Mormon Mountains	512
Meadow Valley Mountains	513
Blue Nose Peak	514
Delamar	515
Clover Mountain	516
Clover Creek	517
Apple White	518
Little Mountain	519
Miller Flat	520
Deer Lodge Canyon	521
Highland Peak	522
Rattlesnake	523
Nevada Wild Horse Range	524

H. Wilderness Study Areas (WSA)

Within the Las Vegas District there are 26 Wilderness Study Areas (WSA) totalling approximately 1,144,825 acres. All activity within WSA's is managed under the Interim Management Policy. The names of the WSA's and their acreage are summarized below(see Map #13 to #15).

Name of WSA	Identification No.	Acreage
South Pahroc	NV-050-132	28,600
Clover Mountains	NV-050-139	84,935
Meadow Valley Mtns.	NV-050-156	185,744
Mormon Mountains	NV-050-161	162,887
Tunnel Spring	NV-050-166	5,400
Delamar Mountains	NV-050-177	126,257
Fish and Wildlife #1	NV-050-201	11.090
Arrow Canyon Range	NV-050-215	32.853
Fish and Wildlife #2	NV-050-216	17,242
Fish and Wildlife #3	NV-050-217	22,002
Muddy Mountains	NV-050-229	96,170
Lime Canyon	NV-050-231	34,680
Million Hills	NV-050-233	21,296
Garret Buttes	NV-050-235	11,835
Jumbo Springs	NV-050-236	3,466
Mount Stirling	NV-050-401	69,650
Quail Spring	NV-050-411	12,145
LaMadre Mountains	NV-050-412	59,967
Pine Creek	NV-050-414	24,000
El Dorado	NV-050-423	12,290
North McCullough Range	NV-050-425	47,166
South McCullough Range	NV-050-435	56,623
Ireteba Peaks	NV-050-438	14,994
Resting Springs	NV-050-460	3,850
Evergreen	NV-050-IR-16A,B,C	2,694
Nellis	NV-050-IR-15A,B,C	5,718

I. Grazing

The District is divided into 141 grazing allotments, 55 located in the Stateline Resource Area, and 86 in the Caliente Resource Area(see Map #16 to #18). The total acreage encompassed by these allotments is approximately 7,100,000, with 3,600,000 occurring in the Stateline

Resource Area(SRA) and the remaining 3,500,000 occuring in the Caliente Resource Area(CRA). Out of the total acreage, approximately 3,400,000 acres are classified as ephemeral range. All of the ephemeral range occurs in the SRA. The two major types of livestock operations occurring on these allotments are cow-calf and ewe-lamb.

J. Cultural Resources

Over 4,000 archaeological sites have been identified in the Las Vegas District. To date, a relatively small percentage of the District has been inventoried. These sites include lithic and ceramic scatters, seasonal camp sites, rock art sites, puebloan manifestations along the Muddy and Virgin Rivers, as well as historic buildings, communities and historic trails used by the early immigrants. These sites record human presence within the District over the last 10,000 years. These sites are protected for their continuing scientific value as well as, their contribution to the compilation of knowledge and information regarding the long-term cultural heritage of the area, or are subject to data recovery or other mitigating measures in conjunction with Section 106 of the National Preservation Act of 1966.

K. Visual Resources

Visual setting of the District is typical of the basin and range physiographic province. Contrasts occur throughout the area to varying degrees including power lines, railroad tracks, mines, communication sites, fences, roads, and water developments. Visual resource management classes have been determined for all public lands within each resource area. WSA's are managed under an interim management class II criteria until such time as the areas are released from wilderness review or designated wilderness. For descriptions of specific areas and their scenic quality ratings, refer to the Caliente and Clark County Unit Resource Analysis, steps 3 and 4 and MFP decisions.

IV. ENVIRONMENTAL CONSEQUENCES

A. Proposed Actions

Short term cumulative impacts, resulting from implementation of the proposed action, will include increased soil erosion and compaction; vegetative disturbance; restricted movement of wild horses, livestock, and some wildlife. The long term impacts will be negligible and, the results could produce an environment that has less soil erosion and provides better habitat and

forage to wildlife, cattle and wild horses than previously existed.

The proposed actions will have an effect on visual resources. The effects of the fire and treatments will be seen for years. For the first few years the growth of new plants and, if necessary, the addition of structures will be very visible. Long term effects, which could be noticeable, might be a pocket of grasses and shrubs surrounded by trees or, an area that supports a different and/or more productive vegetative community.

Since there will be a cultural resource clearance conducted prior to any surface disturbing activities, there will be little to no impact associated with the proposed action. All areas found to be of significant cultural importance will be avoided.

Treatment #1: Natural Revegetation with Closure

1. Soils

Soil stabilization will occur with the successful establishment of a stand of native annual and perennial plants by, replacing lost basal cover and litter. The amount of time required for stabilization of the site, will vary depending on site characteristics and the species of plants that reestablish. Stabilization will generally take longer than if the site were seeded but, wind and water erosion can be expected to be significantly reduced within two years of closure. Short term increases in rill/interill and wind erosion are to be expected in the year immediately following a fire.

If fencing is required, the area of construction will be subject to increased compaction and reduced infiltration. Because closure would shift animal use patterns, minor increases in erosion and compaction could occur on adjacent lands.

2. Water and Air Resources

The native vegetation treatment will benefit both water runoff and water quality. As a result of increased cover, an improvement in infiltration rates should occur. This in turn will moderate peak flow events and increase groundwater storage. Water quality will benefit as a result of improved cover, channel stability and reduced peak flows.

Air quality will improve, as native plant communities reestablish, due to decreased wind erosion. Closure of the area to soil disturbing activities will also reduce the

amount of fugitive dust produced from the area. During the first year following a fire, increased levels of blowing dust and ash is to be expected. Not until after vegetation reestablishes will a noticeable reduction, in particulates, be realized.

3. Vegetation

A positive impact to the burned area will occur as the natural plant communities are reestablished thereby, ensuring that natural succession continues. However, the possibility exists that the site may become dominated by annual species, such as cheatgrass, as a result of the slower recovery time involved with natural revegetation. The establishment of cheatgrass would result in a heightened potential for future fire occurrence.

4. Threatened or Endangered Species

The use of natural revegetation could result in a positive impact to T/E animals. The reestablishment of natural vegetation will minimize the interruption within their habitat. T/E fish species will benefit through the reduction of sediments entering the stream habitat. Adverse impacts would result from the slower rate of revegetation associated with Treatment #1.

5. Land Treatments

Treatment #1 would allow the burned area to reestablish itself, to the desired plant community, with little disturbance except for the possible addition of a fence.

6. Wildlife

Depending upon the preburn vegetative community and the potential of the site for natural revegetation, this treatment could have a positive impact on wildlife. This would be particularly true where wildfires occur in a mosaic pattern within pinyon-juniper or sagebrush communities. This would open up relatively sterile communities and allow the production of succulent forbs in a very short period and, could allow the expansion of more desirable plant species such as bitterbrush and cliffrose or various grass species.

Implementation of this option may result in negative impacts to wildlife in areas supporting perennial grass communities. Repeated wildfires, in these areas, could eventually convert the vegetation type to an annual vegetative community if, artificial reseeding is not used to establish perennial species. Likewise, certain

desirable browse species, such as bitterbrush, are intolerant to fire and may not respond well. However, where bitterbrush occurs within a pinyon-juniper community, an opening-up of the overstory will often produce an increase in bitterbrush and therefore have a positive impact on big game species.

7. Wild Horses and Burros

A positive effect will occur as the natural plant community is reestablished and forage becomes available for wild horses and burros. A temporary, negative impact will occur due to the exclusion of wild horses and burros in those cases where fences are constructed. In those situations where water sources, within the burn area, are critical to maintain a healthy herd, fencing will be constructed in a manner that will allow access to water.

8. Wilderness Study Areas (WSA).

Only the La Madre and Pine Creek WSA's will be considered for EFR because of their significance as municipal watersheds. Impacts to the WSA's will be the same as previously discussed for this treatment. Exclusion of livestock will be accomplished through removal.

9. Grazing

Because the burned area will be closed to grazing for at least the first two growing seasons, no direct benefits will be realized during this period. During the temporary closure of the area, to grazing, the permittee could be adversely affected if he/she were forced to pay for private pastures for grazing or had to reduce his/her numbers of livestock. Following the initial closure, the affected permittee will benefit from this treatment through the reestablishment of native vegetation and livestock forage.

10. Cultural Resources

The only impact to cultural resources, resulting from this action, would be due to the construction of a fence. Providing applicable stipulations are adhered to, negative impacts would be minimal.

11. Visual Resources

The mosaic contrast, caused by a burn and the succession of native plant communities, is a normal visual occurrence within the District. Fencing, necessary to protect the

burned area, would be the only visual impact resulting from this option.

Treatment #2: Vegetative rehabilitation of burned areas.

1. Soils

Seeding can result in rapid re-establishment of vegetative cover, root mass and litter. This rapid establishment will result in watershed stabilization through raindrop impact tolerance, reduced runoff and increased infiltration.

Seeding by Rangeland Drill

Areas reseeded by drill will stabilize more rapidly than those reseeded by other means because of, the relatively high success rate of drilled seed. Wind and water erosion would be greatly reduced within two years, on a successful seeding. The use of tractors or cats, to pull drills, can increase compaction and reduce infiltration but, except in rare instances, such impacts will be minimal. Any necessary fence construction would cause limited soil compaction and reduced infiltration.

Seeding by Aerial Broadcasting

Aerial application of seed has no physical impact on the burned area and, if successful, gives generally good results in terms of stabilization. Aerial seeding, by its very nature, is considered to have greater risk and less efficiency. This means that benefits can be expected to be less or take longer than a drilled seeding. A successful aerial seeding, of perennial and annual plants, will significantly reduce erosion by the end of two growing seasons. Fencing would again have minor impacts by increasing compaction and reducing infiltration. All of the past EFR efforts, within the District, have included some aerial seeding resulting in good success.

2. Water and Air Resources

Seeding with Rangeland Drills

A short term negative impact, to water quality, may occur as a result of soil disturbance during seed application. This impact is considered to be slight and may be controlled through use of other land treatment options. Upon establishment of perennial vegetative cover, root mass and litter, impacts to water quality and runoff will be positive. Specifically, this treatment will decrease sediment entering stream channels resulting in reduced

turbidity, total dissolved solids, and suspended sediments. Also, a reduction in surface runoff can be expected as a result of improved cover and infiltration. Impacts associated with soil compaction and reduced infiltration, as a result of fence construction, will be minimal.

A short term increase in blowing dust is anticipated during seed application. Long term improvements in air quality will occur due to increased vegetative cover and resultant decreased wind erosion.

Seeding by Aerial Broadcasting

Seeding, by aerial means, will negate the negative aspects of the rangeland drill, discussed above. Those desireable impacts discussed under the Seeding by Rangeland Drill section apply to this technique as well. However, it is anticipated that these benefits will take longer to be realized.

3. Vegetation

Seeding with Rangeland Drill

Although monoculture seedings will not be utilized, the plant community resulting from this option will be less diversified than the native community that existed prior to the burn. However, it is anticipated that the quantity of plants and thus vegetative cover will be greater than that which existed prior to the fire. Disturbance of existing vegetation, by seeding equipment, is to be expected but should be minimal.

Seeding by Aerial Broadcasting

There will be no impacts to existing vegetation from this method of seeding. As stated above, the plant community resulting from this option will be less diversified than the native community that existed prior to the burn. If the seeding is successful, the rate of erosion will be substantially reduced within two years.

4. Threatened or Endangered Species

Seeding with Rangeland Drills

No impacts to endangered bird species, within the District, are anticipated as a result of implementing this option. Endangered fish species will benefit through the reduction of sediment entering streams, from rehabilitated areas, and a moderation of peak flow events. If any T/E species are adversely impacted by fire, the site specific EFR plan will

address the situation and appropriate Section 7 consultation will be completed.

Seeding by Aerial Broadcasting

The implementation of this option will have similar impacts as those resulting from the use of rangeland drills.

5. Land Treatments

Seeding with Rangeland Drills

This option would stabilize the soil more rapidly due to the relatively high success rate of this type of seeding. The slight compaction caused by using machinery to pull the drill and possible installation of a fence, would be offset by the benefits of rapid soil stabilization.

Seeding by Aerial Broadcasting

This method of seeding would have no impacts to the soil or existing vegetation. The risk of an unsuccessful seeding is higher with this method. However, if the seeding is successful, erosion would be substantially reduced within two years. The only impact to the soil would be if a fence were installed, resulting in some compaction and reduction in infiltration. This impact would be minor when compared to the benefits derived from the rapid establishment of vegetative cover.

6. Wildlife

Seeding with Rangeland Drills

Human disturbance associated with the reseeding projects may have a negative impact on certain wildlife species. However this would be temporary in nature. The successful establishment of the planted species would have various degrees of positive benefits, depending upon associated wildlife species(i.e., Crested wheatgrass would produce desirable forage for antelope but would be of limited value to deer and bighorn sheep). Proposed forbs would benefit all three big game species. Positive impacts to fish species will be realized due to decreased sediment entering fisheries from rehabilitated areas.

Seeding by Aerial Broadcasting

This alternative would reduce short-term human disturbance impacts. Positive impacts would be similar to those addressed under Seeding with Rangeland Drills.

7. Wild Horses and Burros

Seeding with Rangeland Drills

Wild horse and burro populations would benefit from an increased quantity of perennial forage. Temporary negative impacts will occur due to their exclusion from rehabilitated areas.

Seeding by Aerial Broadcasting

This means of seeding will have similar impacts as those resulting from the use of a rangeland drill. It is anticipated, however, that less forage will be available following establishment of vegetation.

8. Wilderness Study Areas (WSA).

Only the La Madre and Pine Creek WSA's will be considered for EFR because of their significance as municipal watersheds. Land treatment options utilized in these areas and their environmental consequences are identified below.

Seeding by Rangeland Drills

This option will not be considered within any WSA.

Seeding by Aerial Broadcasting

Only native species will be utilized within the WSA's. Some visual contrast may occur due to anticipated increases in vegetative cover within the seeded areas. Exclusion of livestock will be accomplished through deferment. Wild horses and burros will not be removed resulting in a slower recovery.

9. Grazing

Seeding with Rangeland Drills

It is anticipated that within two growing seasons, after planting, there will be the same amount of forage, available to livestock, as existed prior to the fire. Because the burned area will be closed initially to grazing, no direct benefits will be realized during this period. During the temporary closure of the area, to grazing, the permittee could be adversely affected if he/she were forced to pay for private pastures or had to reduce his/her numbers of livestock. Following the initial closure, the affected permittee will benefit from this treatment through the relatively rapid establishment of vegetation and livestock forage.

Seeding by Aerial Broadcasting

The impacts of the required closure to the permittee and range resources would be similar to those addressed above. The amount of forage, available for livestock, is anticipated to be somewhat less than the amount resulting from the rangeland drill method.

10. Cultural Resources

Seeding with Rangeland Drills

The potential to negatively impact cultural resources exists with this method of seeding and fence construction. Because there would be surface disturbance to a depth of approximately 15 cm, vertical and horizontal displacement of artifact materials could occur. However, their classification and extent will have been documented as a result of the Section 106 process of the Natural Historic Preservation Act of 1966.

Seeding by Aerial Broadcasting

The only impacts to cultural resources resulting from this action would be due to the construction of required fencing. Impacts to cultural resources would be minimized through the Section 106 process.

11. Visual Resources

Seeding by Rangeland Drill

Some visual impacts will result from this treatment. They include increases in vegetative contrast due to use of non-native species, a vegetative row effect created by rangeland drills, and visual disharmony due to construction of protective fencing. The impact due to fencing would be temporary in nature.

Seeding by Aerial Broadcasting

Some visual contrast will be increased due to use of non-native species and the use of fencing.

Treatment #3: Use of erosion control structures

1. Soils

This treatment, used alone or in combination with seeding, can be expected to control runoff, thus reducing gully erosion and sediment yield in problem areas. Construction phases can result in soil compaction and increased short

term surface erosion. Surface disturbance, however, may aid in seed establishment on those areas treated.

2. Water and Air Resources

The use of structures would result in an improvement in water quality and runoff control. Water quality would benefit by a reduction in erosion and resultant sediment transport. In those areas where increased peak flows are of concern, structures will be used to moderate flows until vegetation becomes established and is capable of performing this function. The construction and implementation phases may result in a short term decrease in water quality.

An increase in fugitive dust may occur during construction and implementation.

3. Vegetation

No adverse impacts, to vegetative communities, are anticipated from the development of erosion control and flood retention structures. Site potential, including the riparian zone, will benefit from the stabilization of channels and the resultant prevention of gullies and sedimentation.

4. Threatened or Endangered Species

T/E fish species may be negatively impacted during the construction of structures due to channel disturbance. However, in the long term, structures will reduce sediment entering streams thereby protecting T/E fisheries.

5. Land Treatments

This option can be expected to control runoff, thus reducing gully and sediment erosion. The construction phases will increase erosion in the short term.

6. Wildlife

Human disturbances associated with construction and implementation of this option would have short-term negative impacts to wildlife. Wildlife will benefit through the preservation of vegetative site potential, including the riparian zone.

7. Wild Horses and Burros

Only minimal impacts to wild horses and burros are anticipated, as a result of this option, due primarily to human disturbance during construction. They will benefit

from reduced gullying and downslope sedimentation, which in turn will result in the preservation of site potential.

8. Wilderness Study Areas (WSA).

Only erosion control structures will be utilized within WSA's. The impacts of these structures would be minimal, providing that natural materials are used as much as possible and applicable stipulations are adhered to.

9. Grazing

No adverse impacts to livestock are anticipated from implementation of this treatment. Grazing will benefit as a result of the protection of vegetative site potential. Site potential will be protected by a reduction in gully formation, sediment transport and deposition.

10. Cultural Resources

The potential exists for impacts to cultural resources through implementation of this treatment. However, site specific cultural clearances will be initiated(Section 106 process of the Natural Historic Preservation Act of 1966) prior to any ground disturbing activities. As a result, impacts will be negligible.

11. Visual Resources

Provided that applicable stipulations are adhered to and natural materials are utilized as much as possible, the visual impacts associated with structures will be minimal.

B. Crested Wheat only Alternative

Only those areas already seeded with Crested Wheat will be considered for the Crested Wheat only Alternative. These areas will be evaluated by the same criteria as other burned areas. Therefore, the treatment(s) and impacts will be similar to those listed earlier in this Section.

1. Soils

Refer to Section IV, Part A, Treatment #'s 1, 2, & 3, Soils.

2. Water & Air Resources

Refer to Section IV, Part A, Treatment #'s 1, 2, & 3, Water & Air.

3. Vegetation

Refer to Section IV, Part A, Treatment #'s 1, 2, & 3, Vegetation.

4. Threatened and Endangered Species

Refer to Section IV, Part A, Treatment #'s 1, 2, & 3, Threatened & Endangered.

5. Land Treatments

Refer to Section IV, Part A, Treatment #'s 1, 2, & 3, Land Treatment.

6. Wildlife

Refer to Section IV, Part A, Treatment #'s 1, 2, & 3, Wildlife.

7. Wild Horses

Refer to Section IV, Part A, Treatment #'s 1, 2, & 3, Wild Horses.

8. Wilderness Study Areas (WSA)

There are no Crested Wheat only areas within any WSA in the Las Vegas District. This treatment will not be consider as an option in any WSA.

9. Grazing

Refer to Section IV, Part A, Treatment #'s 1, 2, & 3, Grazing.

10. Cultural Resources

Refer to Section IV, Part A, Treatment #'s 1, 2, & 3, Cultural Resources.

11. Visual Resources

Refer to Section IV, PArt A, Treatment #'s 1, 2, & 3, Visual Resources.

C. No Action Alternative

1. Soils

An increases in overland flow/runoff, resulting in increased flood hazards and sediment yield, can be

expected. The loss of vegetative cover will leave the burned area vulnerable to raindrop impact and increased runoff energy. The resultant increase in rilling and eventual gully formation could adversely impact vegetative site potential. As gullies deepen, the local water table can be expected to drop, possibly impacting riparian areas and nearby water sources(springs and seeps). The lack of fencing will result in the inability of the area to recover naturally. Utilization of the minimal regrowth, by cattle and wild horses, will not allow an increase in vegetal cover thereby, prolonging the areas vulnerability to erosional processes.

2. Water and Air Resources

A decrease in water quality can be anticipated as a result of increases in suspended and dissolved solids, nitrates, and phosphates. The inability of the burned area to moderate runoff will result in reduced infiltration and water storage. This, in turn, can lead to increased erosion and possibly hazardous runoff events.

In the short-term, air quality can be expected to be adversely impacted by increased wind blown dust and ash. As the area naturally revegetates, air quality should improve to pre-fire levels.

3. Vegetation

Vegetative recovery can be expected to be hindered under the no action alternative. The competition between livestock,wild horses and burros, and wildlife will result in a slow revegetation of the burned area. This hampering of natural native revegetation may lead to establishment of an undesirable cheatgrass community. The result is an area that is less productive and prone to frequent, recurring fires.

4. Threatened & Endangered Species

Both T/E flora and fauna could have their habitat substantially or totally destroyed, which in turn could eliminate the species from the burned area.

5. Land Treatments

Not implementing the proposed treatments will result in the loss of the benefits derived from those land treatments.

6. Wildlife

Wildlife will be impacted by being forced to compete with livestock, wild horses and burros for limited regrowth. This in turn, will lead to a prolonged recovery of desireable vegetative species. In crucial deer winter range this could be significant and may result in animal die off. A reduction in the quality of fisheries and potential loss of fish habitat may occur. In addition to increased sediment yields from the burned area, heavy utilization of riparian vegetation will affect streambank stability thereby, resulting in the deterioration of water quality and habitat characteristics.

7. Wild Horses and Burros

Under the no action alternative, the burn will be left to recover on its own without the assistance of seeding or protective measures such as fencing. Wild horses and burros will not be severely impacted but will be forced to compete with livestock and wildlife for limited regrowth. This in turn, will lead to a prolonged recovery of desireable vegetative species. Wild horses and burros, that have historically used the now burned area, will be forced to move in search of forage thereby, extending the affected area of the burn.

8. Wilderness Study Areas (WSA)

Wilderness Study Areas would not be significantly impacted by the no action alternative. Loss of site potential and the possible increase in erosional processes could permanently alter the visual character of the burned area.

9. Grazing

Livestock will be impacted due to increased competition with wildlife, wild horses and wild burros for limited regrowth. This in turn, will lead to a prolonged recovery of desireable vegetative species. Although in the short-term adverse impacts may not be seen, as the site potential is altered the maintenance of a healthy productive herd may not be possible. The degree of impact will be dependent on the grazing system used and on the severity of the burn. As cattle move, in search of forage, adjacent areas may be impacted by premature vegetative utilization.

10. Cultural Resources

There will be no impact to cultural resources if the no action alternative is selected.

11. Visual Resources

Loss of site potential and the possible increase in erosional processes could permanently alter the visual character of the burned area.

V. PERSONS, GROUPS AND AGENCIES CONSULTED

- Nevada State Clearinghouse
- U.S. Air Force
- Sierra Club
- U.S. Forest Service
- Soil Conservation Service
- Clark County Comprehensive Planning
- Nye County Commissioners
- Lincoln County Commissioners
- U.S. Fish and Wildlife Service

VI. EVALUATION AND REVISION

This document is an update of the 1986 NFRP which was reviewed and approved by the Nevada State Office.

As needed, this NFRP will be updated to reflect changes in the impact analysis, EFR history, treatments and management concerns.

VII. INTENSITY OF PUBLIC INTEREST

As a result of public review, twenty-five(25) comments were received. These comments were considered and incorporated where appropriate.

VIII. PATICIPATING STAFF

A. Prepared By:

Donn Siebert
District Hydrologist/
Air Specialist

3-7-90
Date

Cory Bodman
Area Soil Scientist

3-12-90
Date

B. Reviewed By:

District Office

Frank Maxwell	Environmental Protection Specialist
Roger Alexander	Natural Resource Specialist
Stan Rolf	Archaeologist
Robert Stager	Range Conservationist
Terry Driver	Range Conservationist(WH&B)
Sid Slone	Wildlife Biologist
Bob Taylor	Outdoor Recreation Planner

Stateline Resource Area

Jack Pfeiffer	Range Conservationist
Sue Gray	Range Conservationist
Jeff Steinmetz	Range Conservationist
Mark Maley	Wildlife Biologist
Gary Beckman	Surface Protection Specialist
Jenaye Byergo	Outdoor Recreation Planner
Tim Smith	Outdoor Recreation Planner

Caliente Resource Area

Larry Johnson	Forester
Eddie Guerrero	Wildlife Biologist
Tim Murphy	Range Conservationist
Terry Smith	Range Conservationist
Mike Neff	Range Conservationist
Mike Fewell	Range Technician
Larry Lacey	Surface Protection Specialist

Nevada State Office

Division of Lands and Renewable Resources

IX. APPENDICES

Appendix A: Standard Operating Procedures

The procedures outlined below will be used for all EFR efforts within the Las Vegas District.

1. EFR Inspection Team

The following positions are designated as members of the District Emergency Fire Rehabilitation Team. Personnel in these positions should become familiar with this NFRP and the EFR Manual (7441).

a.	Area Soil Scientist	Team Leader
b.	Area Range Conservationist	Team Member
c.	Area Wildlife/Fisheries Biologist	Team Member
d.	Hydrologist	Team Member
e.	Area Forester	Team Member*
f.	Resource Advisor from the Fire	Team Member**

* (Team member on those fires involving the timber resource)

** (If no Resource Advisor is assigned to the fire, the position may be filled by the Fire Management Officer)

2. Responsibilities of EFR Team Members

a. Area Soil Scientist/Team Leader

Mobilizes the EFR Team at the direction of the District Manager/Area Manager(DM/AM). Notifies the Nevada State Office counterpart once the EFR effort is initiated, and establishes a time frame for completion of the EFR plan. Assigns individual responsibilities to team members and coordinates efforts of the team. Responsible for preparation of the burned area report and Benefit/Cost analysis,(if required), Addendum to the NFRP, Record of Decision, FONSI, and memo to State Director. Assembles and presents to the DM/AM for approval, the completed EFR package. Responsible for coordination with other divisions (i.e. Operations and Administration) in implementation of the EFR plan.

Informs the DM/AM of progress on the EFR effort. The Team Leader may request support from any personnel within the District, with the approval of the District Manager.

In addition to his/her duties, the Team Leader will serve as the team's Soil Scientist and provide soils input for the EFR plan.

b. Area Range Conservationist

Coordinates EFR efforts with permittees, including preparation of any necessary correspondence. Provides necessary information regarding the vegetative and range improvement portion of the Addendum to the NFRP. Responsible for preparation of the decision of closure, and JDR's. Assists the Team Leader in preparation of the rehabilitation plan as each situation requires. Responsible for coordination with Division of Operations and Administration in the construction of protective fencing.

c. Area Wildlife/Fisheries Biologist

Assesses damage to wildlife habitat and/or aquatic and riparian habitat. Informs the Nevada Department of Wildlife(NDOW) of the Bureau's rehabilitation efforts and solicits their concerns. Provides necessary information regarding wildlife, and T&E plants and animals. Assists the Team Leader in preparation of the rehabilitation plan as each situation requires.

d. District Hydrologist

Assesses increased flood and sediment hazards as a result of fire. Evaluates damage to water resources within the burned area and potential impacts to water sources outside burned areas. Responsible for watershed portions of the burned area report. In the case of two EFR plans occurring simultaneously in the same resource area, he/she may be responsible for the Addendum to the NFRP and EFR Plan. Assists the Team Leader in preparation of the rehabilitation plan as each situation requires.

e. Area Forester

When burn areas are located in commercial timber or woodland products areas, the Area Forester will be included on the EFR Team to coordinate timber restoration with the EFR. Assists the Team Leader in the preparation of the rehabilitation plan as each situation requires.

f. Fire Resource Advisor

Provides the EFR Team Leader with an official fire report and accurate map of the fire. Provides information concerning resource damage, due to suppression efforts, which he/she may be aware of. Assists the Team Leader in preparation of the rehabilitation plan as each situation requires.

3. Procedures

a. Implementation of all EFR activities will be in compliance with BLM Handbook H-1742-1, Emergency Fire Rehabilitation.

b. All major fires (greater than 300 acres), all fires in critical municipal watersheds and fires occurring in high erosion susceptibility areas will be reviewed by the EFR Team Leader and, a report will be submitted to the Area/District Manager within five days of control.

c. A Decision of Record and Finding of No Significant Impacts (FONSI) will be written for each EFR Project along with an addendum to the NFRP, which will include a discussion of the fire, resources damaged and at risk, impacts of proposed treatments on T/E candidate plant species, and the proposed land treatment options to be implemented.

d. Prior to conducting any rehabilitation in areas utilized by livestock, the area will either be scheduled to be fenced from livestock, a non-use agreement obtained from the permittee, or a decision issued closing the area to grazing for at least two growing seasons.

e. Vegetative rehabilitation will not be considered on burned areas receiving less than 8 inches of mean annual precipitation.

f. Rangeland drills will be used whenever possible.

g. Burned areas within WSA's will not be seeded unless they include critical municipal watersheds, and will be seeded only with species native to the area. Application of seed will only be by aerial broadcasting. Exclusion of livestock wild horses, and burros in these areas will be accomplished.

h. Cultural clearance will be completed before any ground disturbing activities.

i. Planning, design, and construction of all structures used in EFR will be in compliance with BLM Manual 1972 (Water Control Structures) and the State of Nevada Handbook of Best Management Practices.

j. Erosion susceptibility will be assessed on all burned areas addressed within the NFRP.

4. Time Schedule

The following time frame is the maximum time allowed for completion of an EFR Plan. In some cases, the time frames may be adjusted at the discretion of the Team Leader with the approval of the District Manager/Area Manager and the Nevada State Office.

a. Report submitted, to District Manager/Area Manager summarizing team leader's review of burn and examination of area, within five days of control of fire.

b. All field work will be completed by the EFR Team within ten days of fire control.

c. Input into the Addendum of the NFRP, from individual team members, will be provided within fifteen days of fire control.

d. The EFR Plan will be routed for District review within twenty days of fire control.

e. The EFR Plan will be submitted to the Nevada State Office within thirty days of fire control.

Appendix B: Seed Mixtures

8 to 12 inch precipitation zone

Native vegetation characterized by blackbrush (Coleogyne ramosissima), Yucca, Nevada ephedra (Ephedra nevadensis), Indian ricegrass, (Oryzopsis hymenoides) and joshua trees (Yucca brevifolia) in the south part of the District and Wyoming or black sagebrush in the northern part of the District.

Seed Mix: lb./Ac.	Drill	Aerial
Standard crested wheatgrass (Agropyron desertorum-Nordan variety)	3	4
Western Wheatgrass (Agropyron smithii)	3	4
Alfalfa (Medicago sativa-Ladak variety)	1	2
Yellow sweetclover (Melilotus officinalis)	1	1
Crested Wheatgrass (Agropyron cristatum-ephraim variety)	2	2
TOTAL	10	13

12 inch or more precipitation zone

Native vegetation characterized by pinyon-juniper woodland or pine-fir woodland.

Seed Mix: lb./Ac.	Drill	Aerial
Pubescent wheatgrass (Agropyron trichophorum-Luna variety)	2	3
Smooth Brome (Bromus inermis)	2	2
Western wheatgrass (Agropyron smithii)	3	3
Yellow sweetclover (Melilotus officinalis)	2	2
Small burnet (Sanquisorba minor)	1	2
TOTAL	10	12

A minimum of 2 forbs will be planted (yellow sweetclover, alfalfa, or small burnet) depending on availability, cost and site characteristics.

Areas determined to be highly erosive may be seeded with an additional 5 lbs/acre of Annual rye.

Areas of critical wildlife habitat may have additional forbs and shrubs seeded. Shrubs such as, but not limited to, four-wing saltbush and bitterbrush will be considered on a site specific basis oriented towards importance to wildlife.

Specific needs expressed by other agencies (i.e., Nevada Department of Wildlife) may be met on a site specific basis.

WILDERNESS STUDY AREAS
La Madre Mountains and Pine Creek

8 to 12 inch precipitation zone

Native vegetation characterized by pinyon-juniper woodland, sagebrush, conifers, and riparian habitat.

Seed Mix:	Aerial
Indian ricegrass (Oryzopsis hymenoides)	1 lb./Ac.
4 wing salt bush (Atriplex canescens)	2 lb./Ac.
Black grama (Bouteloua eripoda)	3 lb./Ac.
Canby bluegrass (Poa Canbyi)	2 lb./Ac.
Bluebunch wheatgrass (Agropyron spicatum)	3 lb./Ac.
Total	11 lb./Ac.

12 inch or more precipitation zone:

Native vegetation characterized by pinyon-juniper woodland.

Seed Mix:	Aerial
Bluebunch wheatgrass (Agropyron spicatum)	4 lb./Ac.

Canby bluegrass (Poa Canbyi)	2 lb./Ac.
Blue grama (Bouteloua gracilis)	3 lb./Ac.
Indian ricegrass (Oryzopsis hymenoides)	1 lb./Ac.
Total	10 lb./Ac.

Seed mixtures for WSA's will emphasize use of native species with nursery crops of short-lived biennial and annuals if needed.

Appendix C: Required Documents

The following documents are required components of the EFR Plan:

Addendum to the NFRP
Decision of Record
FONSI
Memo to the State Director
Burned Area Report with B/C Analysis(if required)
Small Scale Map
Notice of Closure
JDR's

Appendix D: Candidate Threatened/Endangered Plants

Listed below are the plants and animals currently listed : : candidate species by the U.S. Fish and Wildlife Service(USFW). Candidate species are those that are being considered for listing as endangered/threatened or are no longer being considered. These plants/animals are assigned to several status categories.

Category	Definition
C1	Taxa for which the USFW Service has on file substantial information on biological vulnerability and threat(s) to support the appropriateness of proposing to list them as endangered or threatened species.
C2	Taxa for which information now in possession of the USFW Service indicates that proposing to list them as endangered or threatened species is possibly appropriate, but for which substantial data on biological vulnerability and threat(s) are not currently known or on file to support the immediate preparation of rules.
3A	Taxa that are no longer being considered for listing as threatened or endangered species. Taxa for which the Service has persuasive evidence of extinction.
3B	Taxa that are no longer being considered for listing as threatened or endangered species. Names that, on the basis of current taxonomic understanding, usually as represented in published revisions and monographs, do not represent taxa meeting the Act's definition of "species."
3C	Taxa that are no longer being considered for listing as threatened or endangered species. Taxa that have proven to be more abundant or widespread than was previously believed and/or those that are not subject to any identifiable threat.

Plant name	Current status
Agave utahensis var. nevadensis	3C
Agave utahensis var. eborispina	3C
Angelica scabrida	C1
Arabis shockleyi	3C
Arctomecon californica	C2
Arctomecon merriamii	3C

Plant name	Current status
Arenaria stenomeres	3C
Asclepias eastwoodiana	C2
Astragalus ackermannii	3C
Astragalus convallarius var. finitimus	3C
Astragalus geyeri var. triquetrus	C2
Astragalus mohavensis var. hemigyrus	C2
Astragalus musimonum	C2
Astragalus nyensis	3C
Astragalus oophorus var. lonchocalyx	3C
Astragalus remotus	C2
Brickellia knappiana	3C
Calochortus striatus	C2
Cordylanthus tecopensis	C2
Coryphantha vivipara var. rosea	3C
Cryptantha insolita	C2*
Cryptantha tumulosa	3C
Erigeron ovinus	C2
Erigeron uncialis var. conjugans	3C
Eriogonum bifurcatum	C2
Eriogonum viscidulum	C2
Forsellesia pungens var. glabra	3C
Fraxinus cuspidata var. macropetala	3C
Gilia ripleyi	3C
Haplopappus watsonii	3C
Lesquerella hitchcockii	3C
Machaeranthera leucanthemifolia	3C
Mirabilis pudica	3C
Opuntia whipplei var. multigeniculata	C2
Penstemon bicolor ssp. bicolor	C2
Penstemon bicolor ssp. roseus	C2
Penstemon fruticiformis ssp. amargosae	C2
Penstemon thompsoniae ssp. jaegeri	3C
Perityle megalocephala var. intricata	3C
Phacelia anelsonii	3C
Phlox gladiformis	3C
Salvia funerea	3C
Sclerocactus pubispinus	3C
Selaginella utahensis	C2
Thelypodium laxiflorum	3C
Townsendia jonesii var. tumulosa	C2

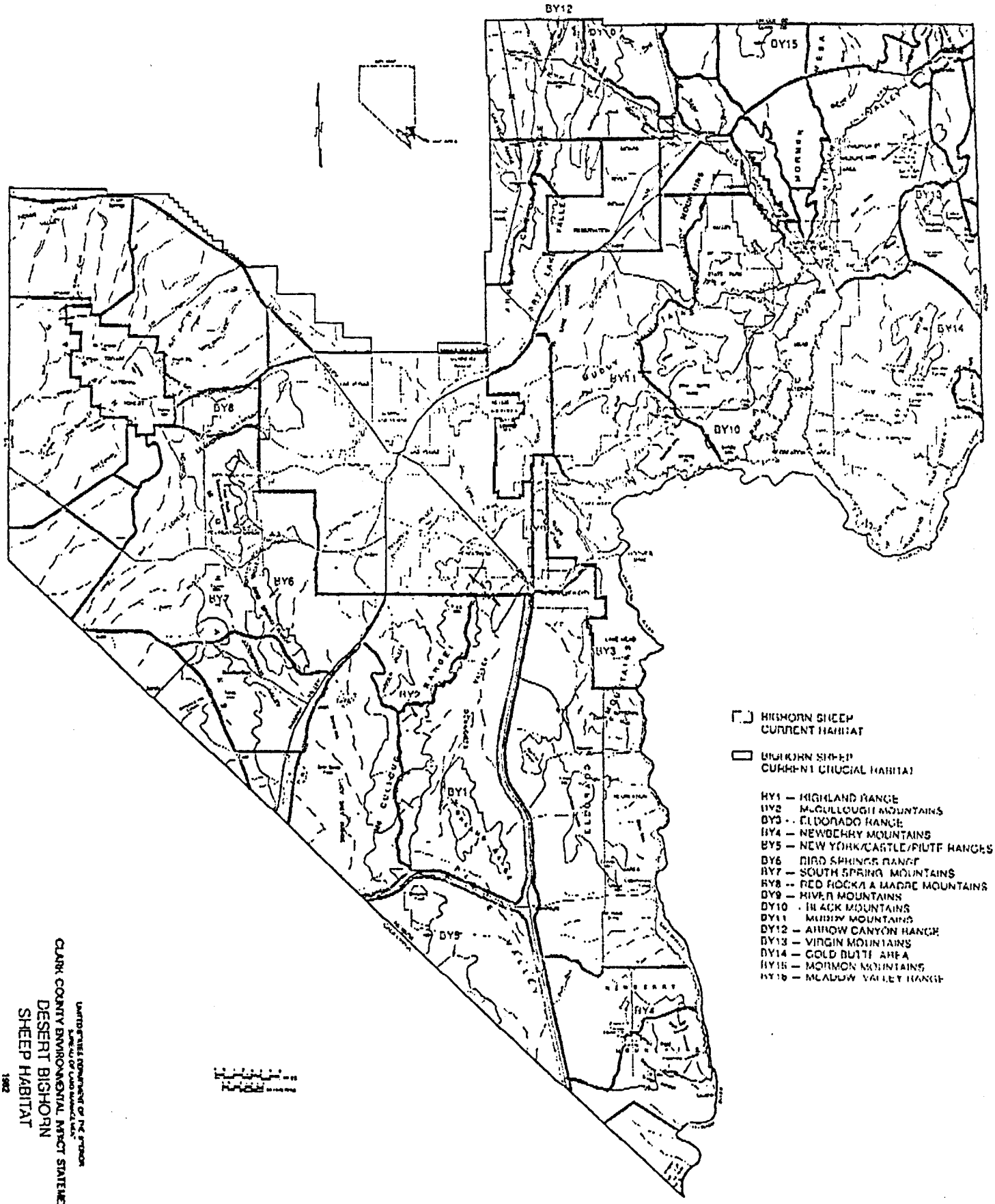
* Possibly extinct.

Animal name	Current status
Gila robusta seminuda(Virgin River chub)	C1
Gila robusta ssp.(Moapa roundtail chub)	C2
Lepidomeda mollispinis mollispinis(Vrgin River spinedace	C2
Rhinichthys osculus moapae(Moapa speckled dace)	C2

Animal name	Current status
Rhinichthys osculus volifer(Pahranagat speckled dace)	C2
Rhinichthys osculus ssp.(Meadow Valley Wash speckled dace)	C2
Catostomus clarki ssp.(Meadow Valley Wash desert sucker)	C2
Crenichthys baileyi moapa(Moapa White River springfish)	C2
Bufo nelsoni(Amargosa toad)	C2
Heloderma suspectum(Gila monster)	C2
Buteo swainsonii(Swainson's hawk)	C2
Buteo regalis(Ferruginous hawk)	C2
Euderma maculatum(Spotted bat)	C2
Microdipodops megacephalus albiventer(Desert Valley kangaroo rat)	C2
Microtus montanus fucosus(Pahranagat Valley vole)	C2
Microtus montanus nevadensis(Ash Meadows vole)	C2

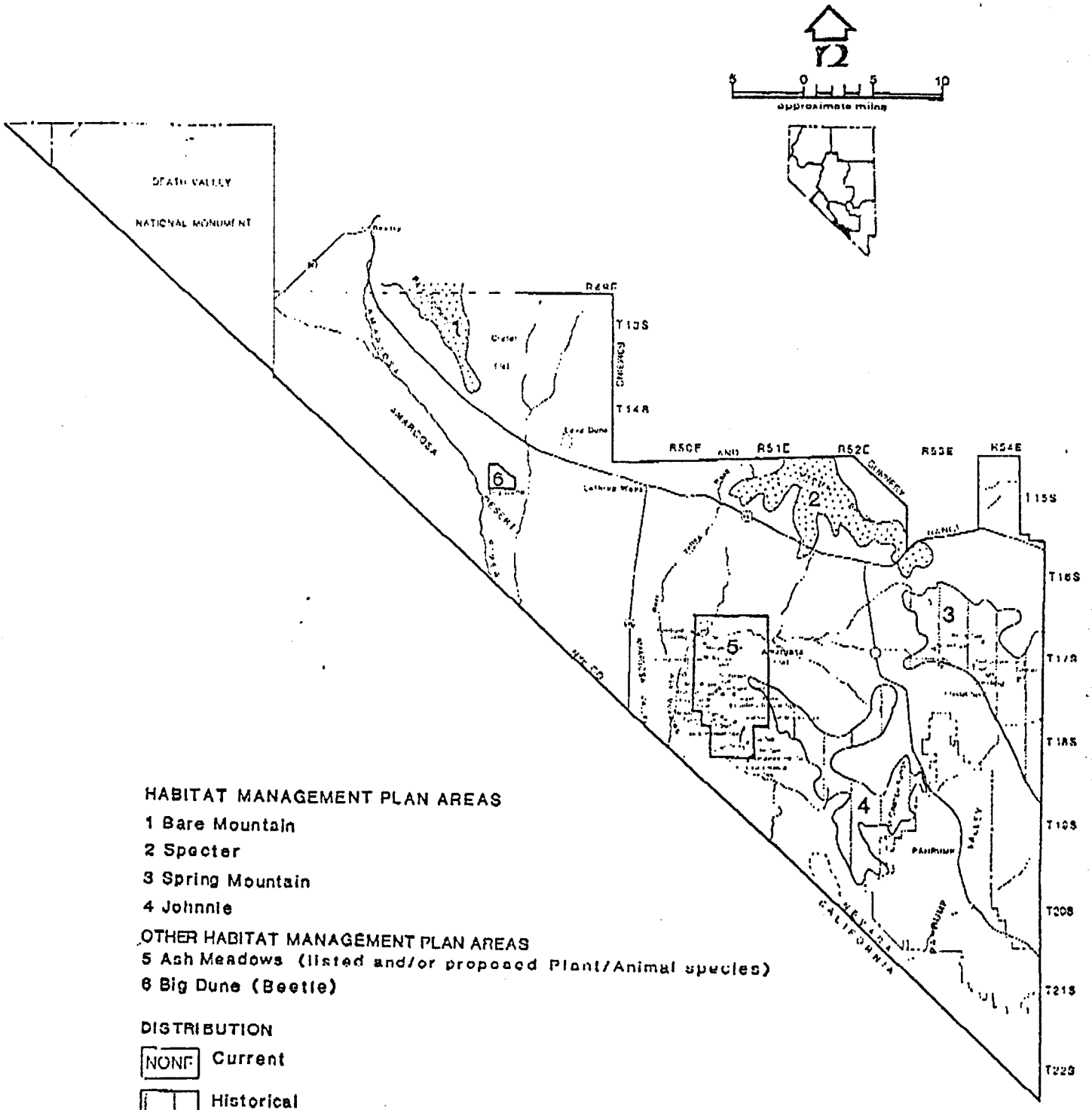
This animal list does not include Candidate invertebrate species.

MAP 5


BY12
BY10
BY15
BY13
BY14
BY11
BY8
BY6
BY7
BY3
BY2
BY1
BY5
BY4
BIGHORN SHEEP CURRENT HABITAT
BIGHORN SHEEP CURRENT CRUCIAL HABITAT
BY1 — HIGHLAND RANGE
BY2 — McCULLOUGH MOUNTAINS
BY3 — ELDORADO RANGE
BY4 — NEWBERRY MOUNTAINS
BY5 — NEW YORK/CASTLE/PIUTE RANGES
BY6 — BIRD SPRINGS RANGE
BY7 — SOUTH SPRING MOUNTAINS
BY8 — RED ROCKS/LA MADRE MOUNTAINS
BY9 — RIVER MOUNTAINS
BY10 — BLACK MOUNTAINS
BY11 — MUDDY MOUNTAINS
BY12 — ARROW CANYON RANGE
BY13 — VIRGIN MOUNTAINS
BY14 — GOLD BUTTE AREA
BY15 — MORMON MOUNTAINS
BY16 — MEADOW VALLEY RANGE
CLARK COUNTY ENVIRONMENTAL IMPACT STATEMENT
DESERT BIGHORN SHEEP HABITAT
1982

UNASSIGNED

MAP 7



HABITAT MANAGEMENT PLAN AREAS

1 Bare Mountain

2 Specter

3 Spring Mountain

4 Johnnie

OTHER HABITAT MANAGEMENT PLAN AREAS

5 Ash Meadows (listed and/or proposed Plant/Animal species)

6 Big Dune (Beetle)

DISTRIBUTION

NONE Current

Historical

Potential

Bureau of Land Management

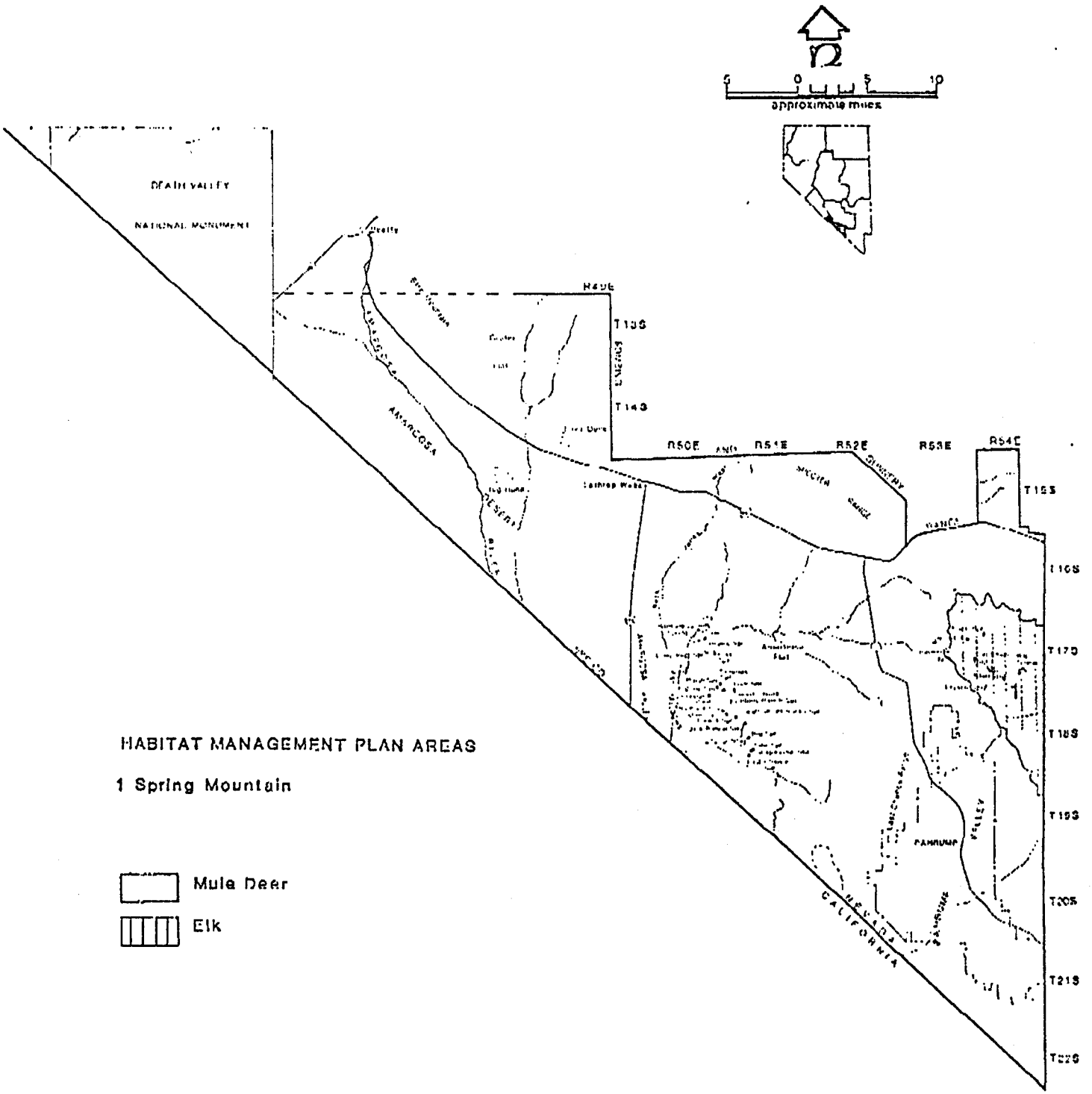
ESMERALDA-SOUTHERN NYE
RECORD OF DECISION

Planning Area B

WILDLIFE HABITAT - BIGHORN SHEEP AND
OTHER HABITAT MANAGEMENT PLAN AREAS

1986

MAP 8



Bureau of Land Management

ESMERALDA-SOUTHERN NYE
RECORD OF DECISION

Planning Area B

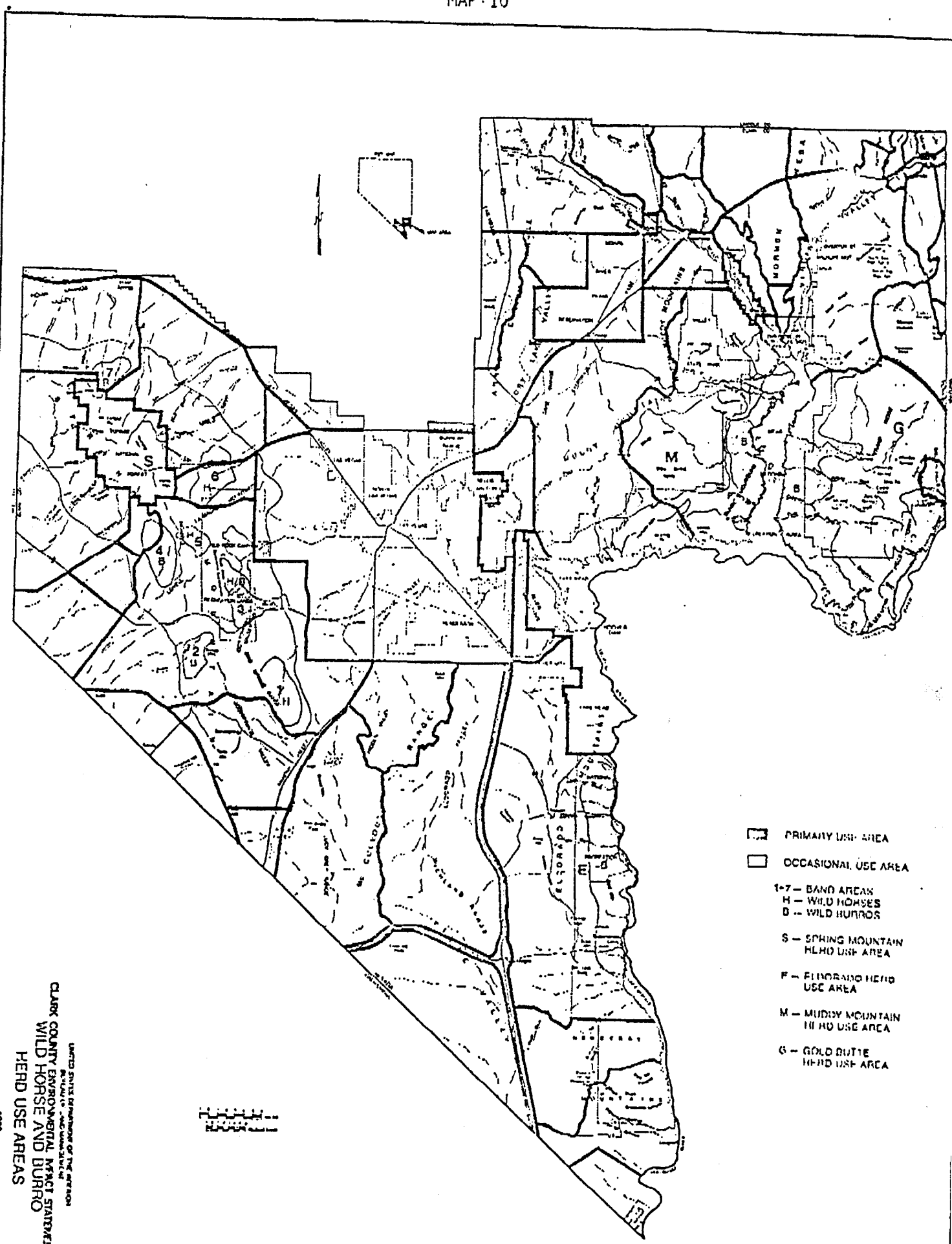
WILDLIFE HABITAT – MULE DEER AND ELK
HABITAT MANAGEMENT PLAN AREAS

1906

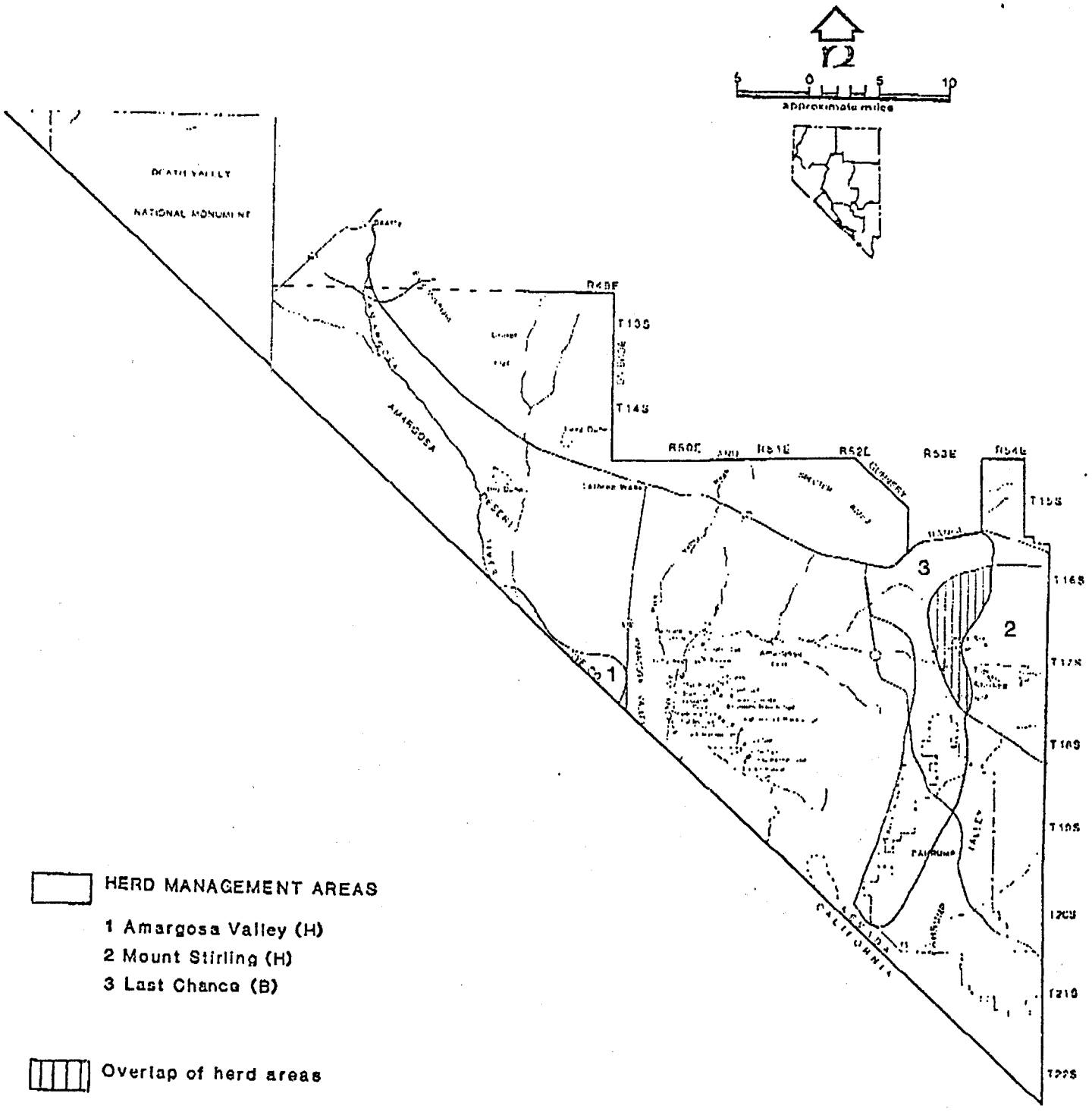
MAP 9

BIGHORN SHEEP
YEARLONG USE
DEER
YEARLONG USE
WINTER USE
SUMMER USE
BIGHORN SHEEP AND DEER
SPECIAL AREA
ANTELOPE
YEARLONG USE
BIG GAME AREAS
1978

MAP · 10


PRIMARY USE AREA
OCCASIONAL USE AREA
1-7 — BAND AREAS
H — WILD HORSES
B — WILD BURROS
S — SPRING MOUNTAIN HERD USE AREA
F — ELDORADO HERD USE AREA
M — MUDDY MOUNTAIN HERD USE AREA
G — GOLD BUTTE HERD USE AREA
CLARK COUNTY ENVIRONMENTAL IMPACT STATEMENT
WILD HORSE AND BURRO
HERD USE AREAS
1982

MAP 11



HERD MANAGEMENT AREAS

1 Amargosa Valley (H)
2 Mount Stirling (H)
3 Last Chance (B)

Overlap of herd areas

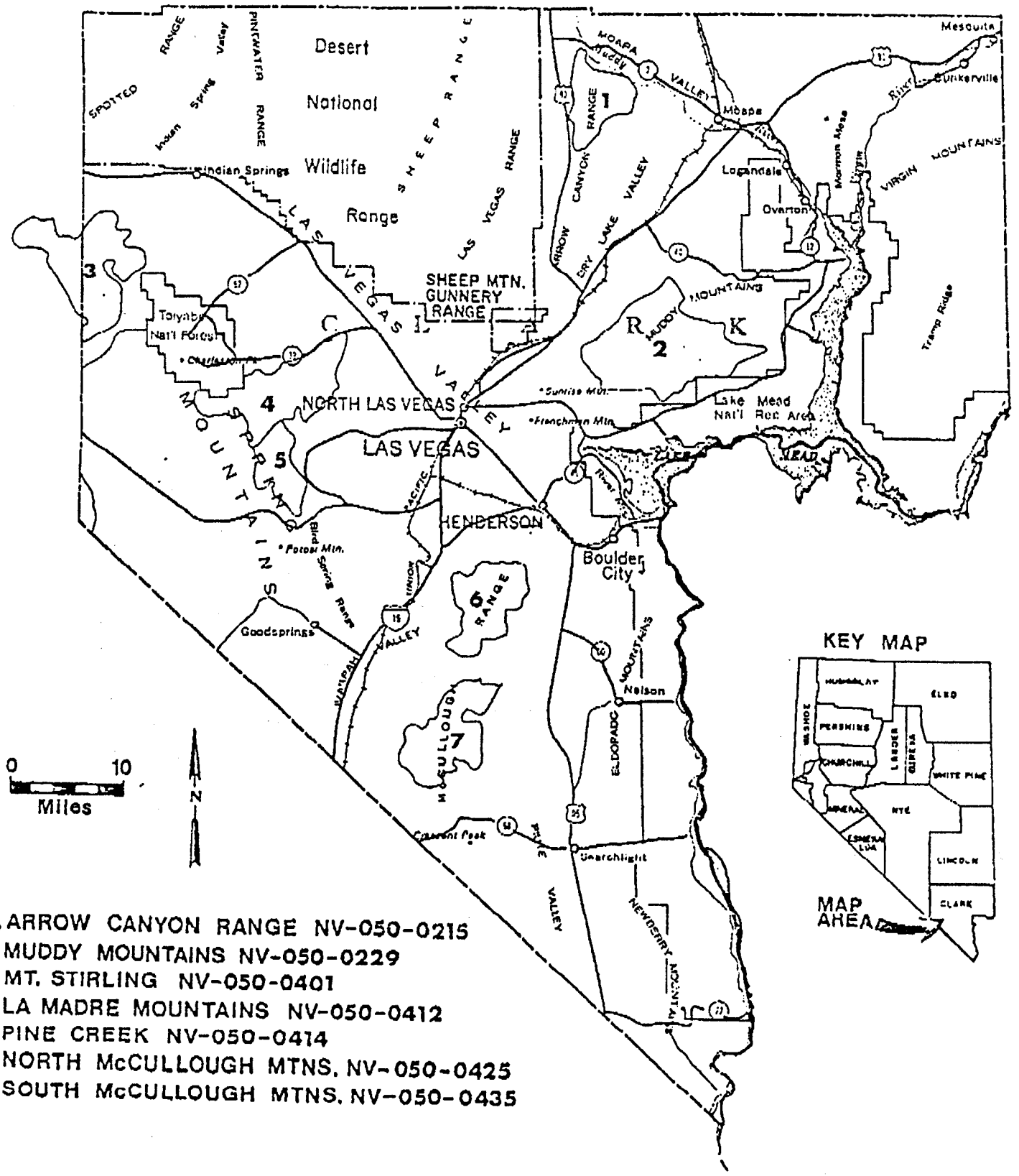
Bureau of Land Management
ESMERALDA-SOUTHERN NYE
RECORD OF DECISION
Planning Area B
WILD HORSE AND BURRO HERD MANAGEMENT AREAS
and HERD MANAGEMENT AREA PLANS

1986

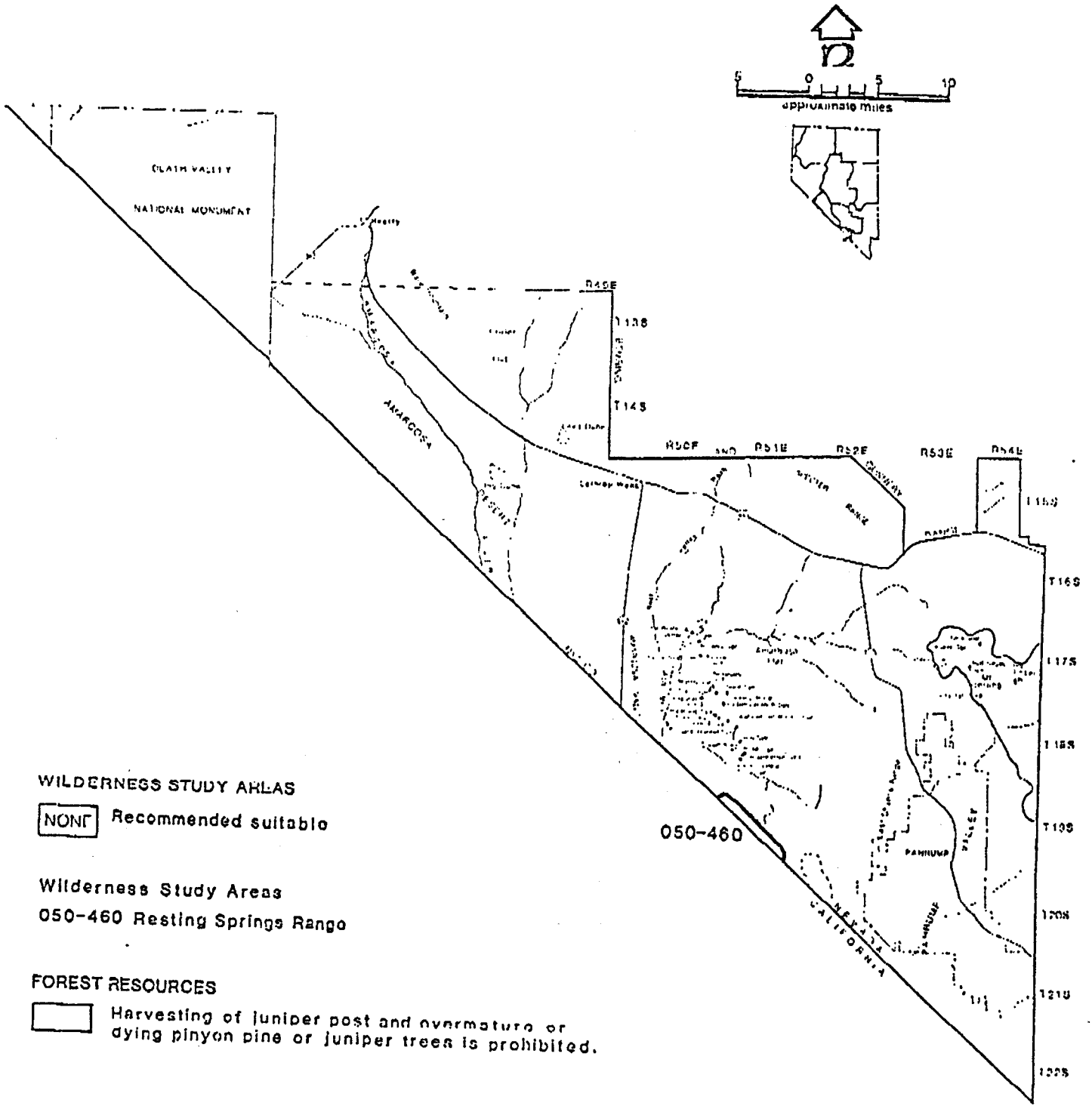
MAP 12

WILD HORSE MANAGEMENT AREAS
WILD HORSE AND BURRO REMOVAL AREA
WILD HORSE MANAGEMENT AREA
CALIENTE ENVIRONMENTAL STATEMENT
WORTHINGTON MOUNTAINS
AIR FORCE RANGE

MAP 13


Desert
National
Wildlife
Range
SHEEP MTN.
GUNNERY
RANGE
NORTH LAS VEGAS
LAS VEGAS
HENDERSON
Boulder City
Nelson
Searchlight
Moapa
Logandale
Overton
Mesquite
Lake Mead
Nat'l Rec Area
Goodsprings
Indian Springs
Tonopah
Nat'l Forest
SPOTTED RANGE
PINTWATER RANGE
LAS VEGAS RANGE
ARROW CANYON RANGE
MUDDY MOUNTAINS
VIRGIN MOUNTAINS
SPRING MOUNTAINS
McCULLOUGH RANGE
NEWBERRY MOUNTAINS
ELDORADO MOUNTAINS
1
2
3
4
5
6
7
0 10
Miles
N
KEY MAP
MAP AREA
1. ARROW CANYON RANGE NV-050-0215
2. MUDDY MOUNTAINS NV-050-0229
3. MT. STIRLING NV-050-0401
4. LA MADRE MOUNTAINS NV-050-0412
5. PINE CREEK NV-050-0414
6. NORTH McCULLOUGH MTNS. NV-050-0425
7. SOUTH McCULLOUGH MTNS. NV-050-0435

MAP 14



WILDERNESS STUDY AREAS

NONE Recommended suitable

Wilderness Study Areas

050-460 Resting Springs Range

FOREST RESOURCES

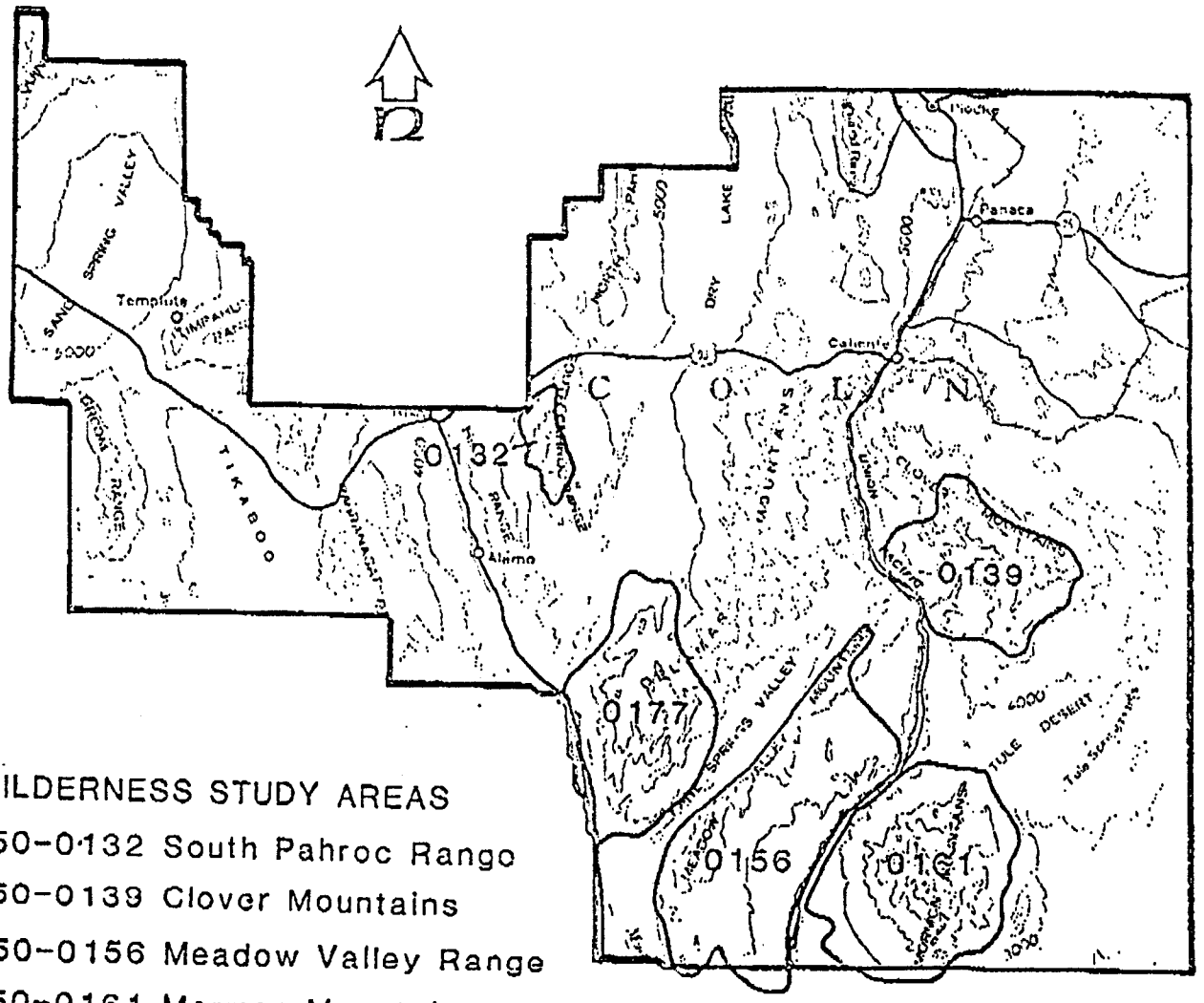
Harvesting of juniper post and overmature or dying pinyon pine or juniper trees is prohibited.

Bureau of Land Management

ESMERALDA-SOUTHERN NYE
RECORD OF DECISION

Planning Area B
WILDERNESS STUDY AREA
RECOMMENDATIONS
and FOREST RESOURCES
1986

MAP 15



WILDERNESS STUDY AREAS

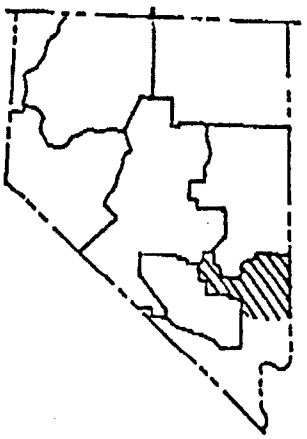
050-0132 South Pahroc Range

050-0139 Clover Mountains

050-0156 Meadow Valley Range

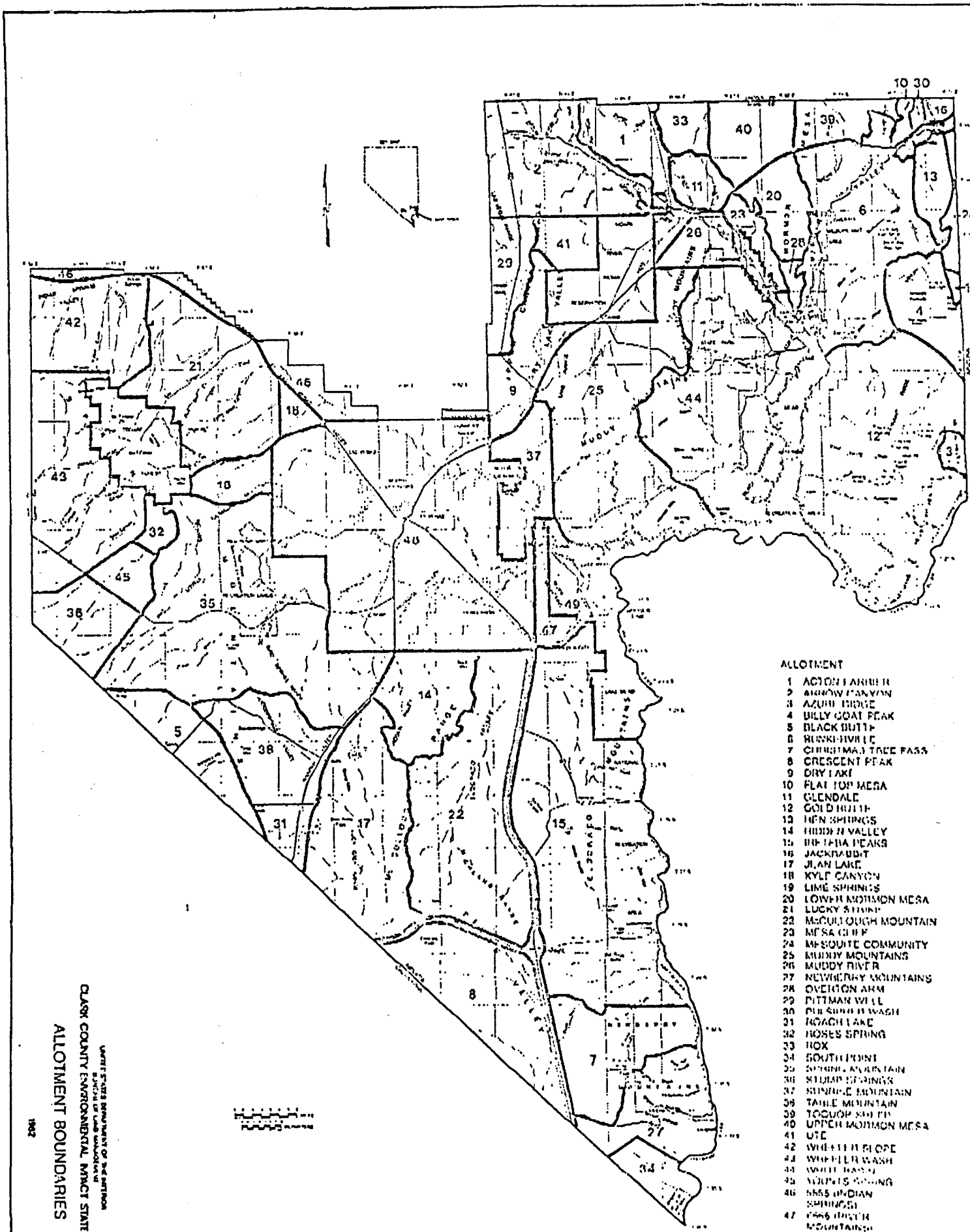
050-0161 Mormon Mountains

050-0177 Delamar Mountains

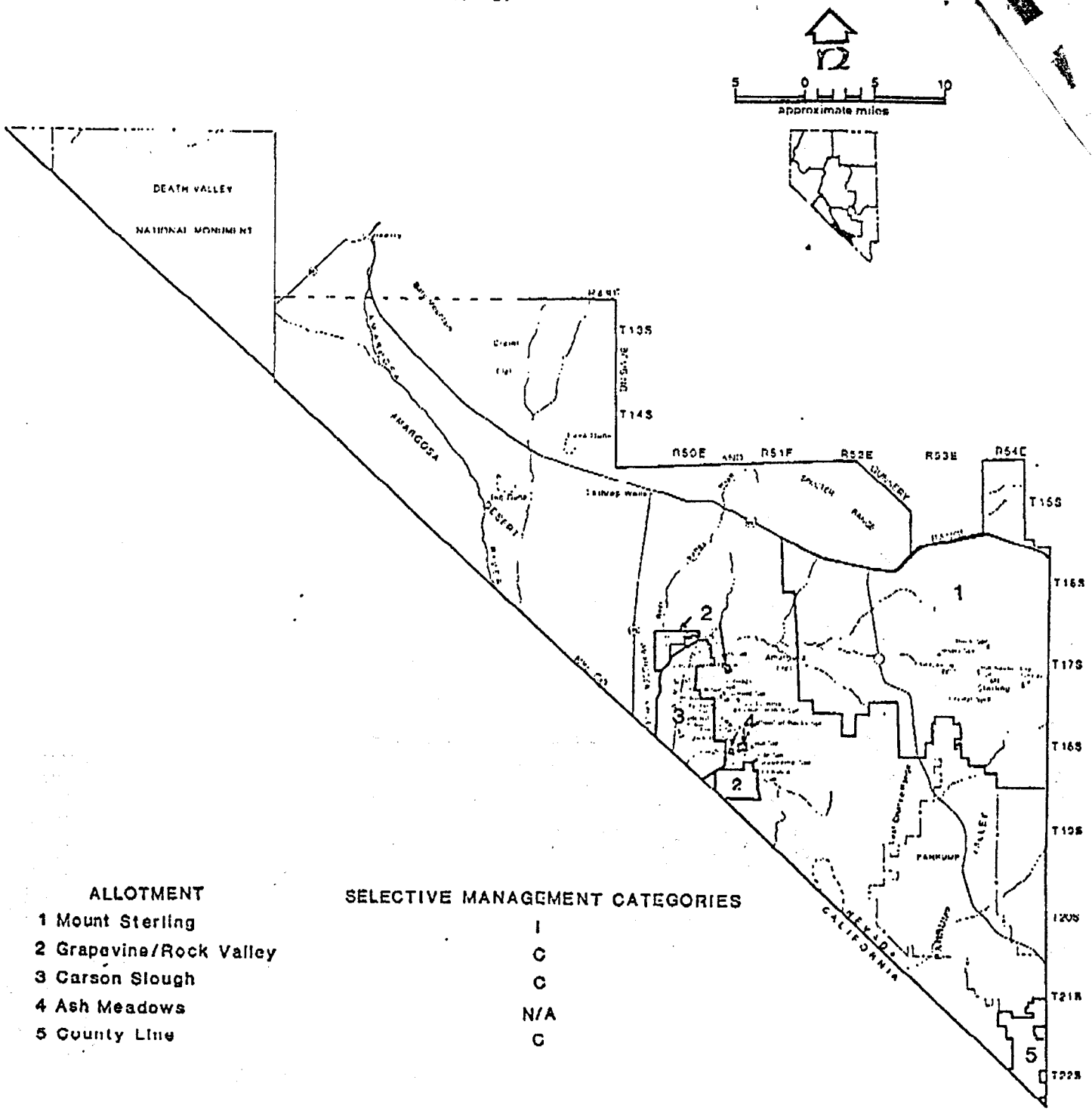


CALIENTE RESOURCE AREA
Location Map
WILDERNESS STUDY AREAS

MAP. 16

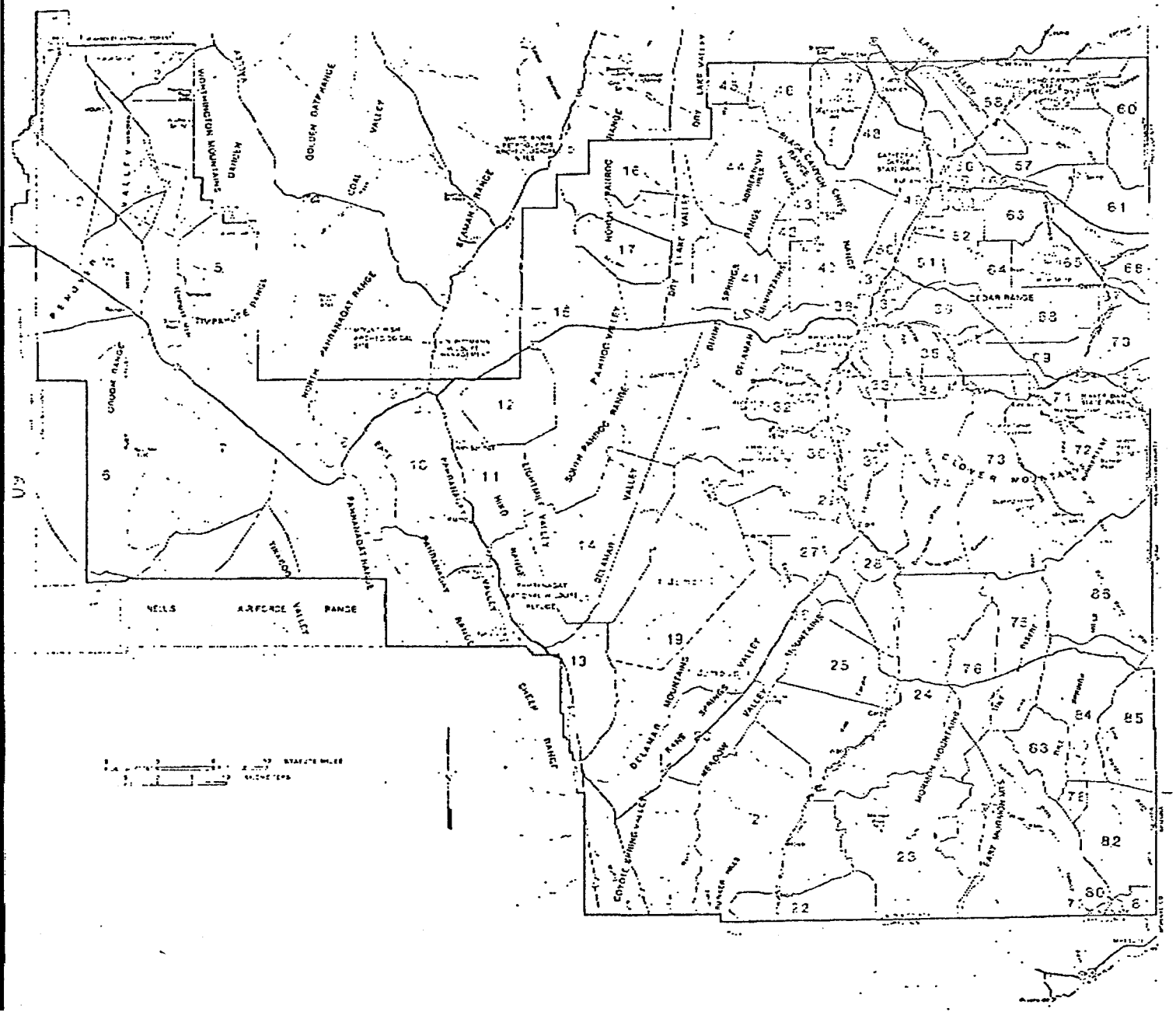

ALLOTMENT
1 ACTON LARRIER
2 ARROW CANYON
3 AZURE RIDGE
4 BILLY GOAT PEAK
5 BLACK BUTTE
6 BURKEVILLE
7 CHRISTMAS TREE PASS
8 CRESCENT PEAK
9 DRY LAKE
10 FLAT TOP MESA
11 GLENDALE
12 GOLD BUTTE
13 HEN SPRINGS
14 HIDDEN VALLEY
15 INDIANA PEAKS
16 JACKRABBIT
17 JEAN LAKE
18 KYLE CANYON
19 LIME SPRINGS
20 LOWER MORMON MESA
21 LUCKY STRIKE
22 McCULLOUGH MOUNTAIN
23 MESA GULF
24 MESQUITE COMMUNITY
25 MUDDY MOUNTAINS
26 MUDDY RIVER
27 NEVERSWEAT MOUNTAINS
28 OVERTON ARM
29 PITTMAN WELL
30 PUMPKIN WASH
31 ROACH LAKE
32 ROSES SPRING
33 ROX
34 SOUTH POINT
35 SPRING MOUNTAIN
36 STUMP SPRINGS
37 SUNRISE MOUNTAIN
38 TABLE MOUNTAIN
39 TOQUOP SHEEP
40 UPPER MORMON MESA
41 UTE
42 WHEELER SLOPE
43 WHEELER WASH
44 WHITE BASIN
45 YOUNTS SPRING
46 5555 (INDIAN SPRINGS)
47 5566 (RIVER MOUNTAINS)
48 7777 (LAS VEGAS VALLEY)
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CLARK COUNTY ENVIRONMENTAL IMPACT STATEMENT
ALLOTMENT BOUNDARIES
1982

MAP 17



ALLOTMENT	SELECTIVE MANAGEMENT CATEGORIES
1 Mount Sterling	I
2 Grapevine/Rock Valley	C
3 Carson Slough	C
4 Ash Meadows	N/A
5 County Line	C

Bureau of Land Management
ESMERALDA-SOUTHERN NYE
RECORD OF DECISION
Planning Area B
GRAZING ALLOTMENTS
SELECTIVE MANAGEMENT CATEGORIES
1986



ALLOTMENTS

1. Red Bluff
2. Sand Springs AMP
3. McCutcheon Spring
4. Shadow Well
5. Crescent
6. Kawich Spring
7. Bare Mountain
8. Pine Cone
9. Cactus Springs
10. Pahranagat West
11. Pahranagat East
12. Six Mile
13. Lower Lake
14. Buckhorn
15. Pahroc
16. Rattlesnake
17. Mustang AMP
18. Oak Springs AMP
19. Eclipse
20. Grapevine
21. Breedlove
22. Fox
23. Mormon Peak
24. Hunt 4
25. Merrill - Wengert
26. Boulder Spring
27. Egan
28. Schlemeir
29. Ash Flat
30. Meadow Valley
31. Pennsylvania
32. Applehill
33. Shanty
34. Mustang Flat
35. Clover Creek
36. Little Rim
37. Cove
38. Caliente
39. Highway
40. Bennett Spring
41. Cliff Spring
42. Klondike
43. Black Canyon
44. Ely Spring AMP
45. Simpson
46. Ely Spring Sheep
47. Pioche
48. Highland Peak
49. Comet
50. Rocky Hill
51. Peck
52. Pioche Cattle
53. White Hills
54. Roadside
55. Marin Spring
56. Bare Hills
57. Condor Canyon
58. N-4
59. Deer Lodge
60. Mahogany Peak
61. Wildhills Spring
62. Pioche BCS
63. Ribbon Spring
64. Buckboard Spring
65. Sheep Spring
66. Leach
67. Crestline
68. Oak Wells
69. Crossroads
70. Enterprise BS.
71. Happiness
72. Barclay AMP
73. Sheep Flat
74. Cottonwood
75. Condor Springs
76. White Rock
77. Gourd Spring
78. Beaver
79. Flat Top Mesa
80. Pahsimpar Wash
81. Jackrabbit
82. Sand Hollow
83. Summit Spring
84. Snow Springs
85. Terry
86. Lime Mountain

MAP 18

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CALIENTE ENVIRONMENTAL STATEMENT

GRAZING ALLOTMENTS

1976

APPROVALS

Reviewed by:

Assistant District Manager, Resources — Date 5/20/91

Area Manager, Caliente Resource Area — Date 5/21-91

Area Manager, Stateline Resource Area — Date 5/20/91

Recommended by:

Ben F. Collins
District Manager, Las Vegas — Date 5/21/91

Approved by:

Billy R. Templeton
State Director, Nevada — Date 7/3/92

SECTION 6