Calico Mtn. G 8-1-00

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Winnemucca Field Office
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Winnemucca, Nevada 89445-2921
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In Reply Refer To:
4700 (NV 22.42)

CERTIFIED MAIL NO. 7012 0500 0000 9662 4662
RETURN RECEIPT REQUESTED

HERDS
15640 Sylvester Road
Reno, NV 89511

Dear Reader:

The Winnemucca Field Office (WFO) is planning to gather excess wild horses and burros from the Calico Complex. The Calico Complex is comprised of four Herd Management Areas (HMAs): Black Rock East, Black Rock West, Calico Mountains, and Warm Springs Canyon. The last gather in this complex occurred in late 2000 and early 2001. The Environmental Assessment (EA) associated with this gather, the 2000 Calico Complex Capture Plan and EA (EA# NV-020-00-27) was sent out for public review and comment on August 1, 2000. The public review period for the EA ended on September 1, 2000. The Decision Record/Finding of No Significant Impact (DR/FONSI) for the EA was signed September 14, 2000. Because the new proposed action and impacts are essentially the same as those analyzed in the 2000 EA, the WFO has determined that, in accordance with section III-1 A and III-5 4b of the National Environmental Policy Act Handbook (H-1790-1), it is appropriate to modify the existing 2000 Calico Complex Capture Plan and EA.

For the proposed 2004 gather five alternatives have been analyzed. These alternatives include:

- The Proposed Action, which is to adjust wild horse and burro numbers to the lower range of the established AML. The Proposed Action also includes a plan to administer a 2-year fertility control drug on 100% of the released mares.
- Alternative I would gather, remove and release the same number of horses and burros as the Proposed Action, but not apply any fertility control drugs.
- Alternative II would adjust wild horse and burro numbers to the higher range of the established AML within the Calico Complex and administer a 2-year fertility control drug on 100% of the released mares.
- Alternative III would gather, remove and release the same number of horses and burros as Alternative II, but not apply any fertility control drugs.
- Alternative IV, No Action, would defer gathering and removing animals. This Alternative postpones direct management of the wild horse and burro populations in the Calico Complex.

Comments are requested by January 16, 2004, on the proposed gather which will be conducted in 2004 if funding is available.

This document and the 2000 Calico Complex Capture Plan and EA are available for review online at http://www.nv.blm.gov/winnemucca/NEPA/2000CalicoEA.pdf and http://www.nv.blm.gov/winnemucca/NEPA/2003CalicoEAmodification.pdf for a 30-day period beginning December 17, 2003. Printed copies are also available from the Winnemucca Field Office (see contact information in the letterhead).

Comments or questions on this EA modification should be directed to Rodger Bryan, Supervisory Fish and Wildlife Biologist, at the Winnemucca Field Office at (775) 623-1500. All comments received during the 30-day comment period will be considered during the decision making process.

Sincerely,

Les W. Boni
Assistant Field Manager
Renewable Resources Division

4-1-00

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Winnemucca Field Office
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Winnemucca, Nevada 89445
http://www.nv.blm.gov/winnemucca

In Reply Refer To:
4720 (NV022-44)

August 1, 2000

Dear Interested Party,

The Winnemucca Field Office of the Bureau of Land Management proposes to capture wild horses and burros within the Calico Mountains, Warm Springs Canyon, and Black Rock Range East & West Herd Management Areas.

A copy of the draft environmental analysis is enclosed for you review. All comments to this draft environmental assessment must be received by this office by September 1, 2000. If no or minimal comments are received the draft will become the final and a Decision Record/Finding of No Significant Impact would be prepared. If you have any questions, please contact Bryan Fuell or Rodger Bryan at 775-623-1500.

Sincerely,

Colin P. Christensen
Assistant Field Manager
Renewable Resources

Enclosure:
1. Calico Complex Capture Environmental Assessment (24 pp)

CALICO COMPLEX CAPTURE
DRAFT ENVIRONMENTAL ASSESSMENT

NV-020-00-27

AUGUST 1, 2000

WINNEMUCCA FIELD OFFICE

Background Information

With passage of the Wild Horse and Burro Act of 1971, Congress found that: "Wild horses are living symbols of the pioneer spirit of the West". In addition, the Secretary was ordered to "manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands". From the passage of the act, through present day, the Bureau of Land Management (BLM) Winnemucca Field Office (WFO) has endeavored to meet the requirements of the act. The procedures and policies implemented to accomplish this mandate have been constantly evolving over the years.

Throughout this period, BLM experience has grown, and knowledge of the effects of current and past management on wild horses and burros has increased. For example, wild horses have been shown to be capable of 16 to 25% increases in numbers annually, and wild burros increase at a slower rate, 11 to 15%. This can result in a doubling of the wild horse population about every 3 years. At the same time, nationwide awareness, and attention has grown. As these factors have come together, the emphasis of the wild horse program has shifted.

Program goals have expanded beyond simply establishing a "thriving natural ecological balance" (by setting and achieving appropriate management level (AML)) for individual herds, to achieving and maintaining viable vigorous and stable populations.

This document has been prepared to assess the environmental impacts of adjusting the numbers of wild horses and burros within the Black Rock Range East and West, Calico Mountains, and Warm Springs Canyon Herd Management Areas (HMA's). Past capture, census, and distribution data collected indicate some inter movement among the horses of these HMA's. For this document the four HMA's will be referred to as the Calico Complex.

The numbers, age, and sex of animals proposed for removal are derived from The Wild Horse Population Model Version 3.2 Developed by Dr. Steven Jenkins, Associate Professor, University of Nevada Reno. Appendix II establishes the parameters used for these HMA's modeling runs.

AML's for these HMA's have been previously established through the Allotment Evaluation /Multiple Use Decision process based on monitoring data and following a thorough public review. Documents containing this information are available for public review at the WFO.

Purpose and Need for Action

The WFO proposes to implement a program of integrated wild horseand burro management in the Calico Mountains, Warm Springs Canyon, and Black Rock Range East & West HMA's.

The emphasis of this integrated management program will be to achieve and maintain wild horse and burro AML's, collect information on herd characteristics, determine herd health, maintain sustainable rangelands, maintain a healthy and viable wild horse population, and conduct fertility research. All activities will be conducted according to a specified set of standardized operating procedures (SOPs) (Appendix I).

Conformance with Existing Land Use Plans

The Paradise-Denio and Sonoma-Gerlach Resource Area Management Framework Plans (MFP)/Final Grazing Environmental Impact Statements (EIS) and Records of Decision, which directs the management in the project area, were approved July 9, 1982. The Proposed Action is in conformance with these Plans and are consistent with federal, state, and local laws, regulations, and plans to the maximum extent possible.

Relationship to Statutes, Regulations, Policies, Plans, or Other Enviromental Analysis

AML's were established through allotment evaluations and final multiple use decisions (FMUDS) for the allotments within the HMA's. These allotments are Soldier Meadows, Paiute Meadows, Buffalo Hills, and Leadville .

The following table shows AML's for wild horses by allotment and HMA:

Allotment	Calico Mtns HMA	Warm Springs Canyon HMA	Black Rock East & West HMA
Soldier Meadows	65 Head	175/24* Head	93 Head
Paiute Meadows			93 Head
Leadville	126 Head		
Buffalo Hills	142 Head		
Total AML	333 Head	175/24* Head	186 Head

* Burros

Environmental analyses have been conducted in past years. These analyses have covered the impacts of various removal methods on wild horses and Burros, and other critical elements of the human environment, to achieve AML. These documents include:

1) Black Rock Range, Warm Springs Canyon, and Calico Mtns Gathering Plan EA (NV-

020-5- 17 (1985)

2) Buffalo Hills, Granite Range, and Calico Mtns HUA WH Gathering Plan EA (NV-020-5-15) (1985)
3) Winnemucca District Wild Horse/Burro Removal Programmatic EA NV-020-7-24 (1987)
4) EA Winter 1994 Wild Horse Removal (NV-020-4-09)

The WFO is supporting research aimed at controlling the reproduction rate of wild horses through a collaborative effort to develop an immunocontraceptive vaccine. The vaccine is a safe, humane and inexpensive tool, when used with management prescriptions, and may reduce the frequency of gathering excess wild horses. The studies have been used on a varied group of HMA's in Nevada and would be used to develop management strategies implementing the fertility control treatment. The analysis of the use this vaccine has been addressed in the Programmatic Enviromental Assessment Wild Horse Fertility Control Research (NV-020-00-02).

These allotment evaluations, FMUD's, and EA's are available in the WFO for public review.

Alternatives Including the Proposed Action

The Proposed Action and alternatives represent a reasonable range of alternatives based on the issues and goals identified through public scoping efforts.

Proposed Action

The Proposed Action is based on the BLM's 2001 Wild Horse Strategy where all HMA's will be gathered to reach AML. The plan outlines a 4 year gather cycle plan to manage horses Bureau wide. The strategy is to implement the management ranges identified in the MUD's, which is to remove wild horses to 40% below AML , then manage at a range were the AML is the maximum number for the HMA.(see table I).

This action for the Calico Complex would be to capture approximately 2,751 wild horses and remove 2,334 wild horses, determine sex, age, and color, acquire blood samples, assess herd health (pregnancy/parasites loading/physical condition/ect.) conduct immunocontraceptive research and monitor results as appropriate, and sort individuals as to age, sex, temperament and/or physical condition, and to return selected animals to the range. Also proposed within the Warms Springs HMA is to capture 45 burros and remove 30 animals. Surplus animals would be transported to BLM holding facilities.

The following table shows the July 2000 census data to determine current wild horse population levels and estimated removal and release numbers:

Table I

HMA	Estimated 2000 Population	Estimated #'s to Remove	AML Range	Estimated #'s to Release
Calico Mtn	1,148	948	200-333	200
Warms Springs Canyon	749/45*	644/30	105-175 15-24*	105/15*
Black Rock East & West	854	742	112-186	112

* Burros

Multiple capture sites (traps) may be used to capture wild horses from the HMAs. Whenever possible, capture sites would be located in previously disturbed areas. All capture and handling activities (including capture site selections) will be conducted in accordance with Standard Operating Procedures (SOPs) described in Appendix I. Selection of capture techniques would be based on several factors such as herd health, season of the year and environmental considerations.

Determination of which horses and burros would be returned to the range would be based on a analysis of existing and past population characteristics and post gather data for age, sex ratio, and colors.

The Proposed Action includes the treatment of released mares with a revised immunocontraceptive vaccine, (Porcine Zona Pellucida). The Programmatic Environmental Assessment Wild Horse Fertility Control Research (NV-020-00-02) provides a district wide analysis of population level fertility control research within the Winnemucca District.

The immunocontraceptive vaccine would inhibit reproduction for two breeding seasons. All treated mares would be freeze branded on the left hip or shoulder to enable the researchers to positively identify animals in the research project during the data collection phase.

In an attempt to predict population dynamics, two computer simulations were run using the wild horse population model developed by Dr. Stephen Jenkins of the University of

Nevada, Reno (Jenkins 1996) The model run two simulations to determine population growth with the use of fertility control and without fertility control. (Appendix I).

The proposed action would be implemented in the fall-winter of 2000 & 2001.

Alternative 1 (Continue Selective Removal Policy)

This Alternative would be to remove all animals utilizing a Selective Removal Strategy in the Calico Complex. The Selective Removal Strategy would be developed for the 2001 fiscal year based on previously established "selective removal" objectives (ie. 0-5 year olds or 0-9 year olds). Selective removal objectives target removal efforts for excess animals, based on specific segments of a given wild horse population. Past selective removals have been age based. Selective removal under this alternative however, would not only be age based, but could also be based on other critical population variables as well (sex Ratios/historic characteristics/genetic viability/etc.). Selective removal under this alternative would be structured to reduce effects of specific population issues. Issues which may be addressed with selective removal strategies include: correction of unusual population variables, maintenance of herd structure and composition, and maintenance of long term herd viability.

The table II shows two examples of selective removal using July 2000 census data to determine current population levels and estimated removal and release numbers for 0-5 and 0-9 age classes:

Table II

HMA	Estimated 2000 Population	AML	Estimated 0-5 's to Remove	Estimated #'s 0-5 to Release	Estimated 0-9's to Remove	Estimated #'s 0-9 to Released
Calico Mtns.	1,148	333	688	460	803	345
Warm Springs Canyon	749	175	449	300	524	225
Black Rock East & West	854	186	512	342	597	257

Alternative 1 includes the treatment of released mares with a revised immunocontraceptive vaccine, PZP. The immunocontraceptive vaccine would inhibit reproduction for two breeding seasons. All treated mares would be freeze branded on the left hip or shoulder to enable the researchers to positively identify animals in the

research project during the data collection phase.

In an attempt to predict population dynamics, two computer simulations were run using the wild horse population model developed by Dr. Stephen Jenkins of the University of Nevada, Reno (Jenkins 1996)(Appendix I).

Alternative 2 (Management without the use of Immunocontraceptives)

Wild horse management under this alternative would still involve the various capture techniques and processing protocols identified in the Proposed Action or Alternative 1. Capture technique selection would be based on the capture area, season of removal, and condition of the horses. This alternative differs from the proposed action and Alternative 1 by not incorporating the use of fertility control measures for research, to regulate reproductive capacity of the herd. This alternative would allow for achievement of the program objectives but at a higher ultimate cost through increased gather intervals and increased numbers of excess horses. In an attempt to predict population dynamics, two computer simulations were run using the wild horse population model developed by Dr. Stephen Jenkins of the University of Nevada, Reno (Jenkins 1996). The model run two simulations to determine population growth with the use of fertility control and without fertility control. (Appendix I).

Alternative 3 (No Action)

This alternative consists of no direct management of wild horse or burro numbers. Wild horses and burros would be allowed to regulate their numbers naturally through predation, disease, and forage, water and space availability. Gather operations would continue at their current irregular interval.

This alternative was eliminated from further consideration due to the inability to achieve the stated objectives, and because of the requirements of the wild horse and burro act of 1971 which mandated the Bureau to "prevent the range from deterioration associated with overpopulation", and "preserve and maintain a thriving natural ecological balance and multiple use relationships in that area".

Affected Environment

Herd Management Areas

Black Rock Range; East (NV-209) & West (NV-227) HMA's

The Black Rock Range East is located within the Paiute Meadows Allotment and the Black Rock Range West is located within the Soldier Meadows Allotment (MAP 1). Elevations range from 4,000 feet at the valley floor to 8,508 feet at Pahute Peak. Vegetative types found within the HMA's vary from black greasewood, shadscale/budsage-grass at lower elevations to mountain sagebrush bunch grass, mountain mahogany and quaking aspen at higher elevations.

Past capture data was used to determine animal colors and approximate percentage of frequency within the herd. The majority of horses exhibit brown(34%), bay(19%), and sorrel(15%) color patterns; however there are roans(10%), blacks(10%), palominos(6%), buckskins(3%), grays(2%), and others(1%).

Post gather data was used to determine age structure within the herd. Approximately 80% of the herd is 0-13 year and 20% is 14-20+.

The federally threatened Lahontan cutthroat trout (LCT) is found in Mahogany Creek, Summer Camp Creek, Pole Creek, and Snow Creek. In addition to the existing populations of LCT, Colman, Bartlett, Paiute, and Battle Creeks have been identified as potential re-introduction streams.

The area is comprised of approximately 195,694 acres; 183,715 acres (94%) of public land and ll,979 acres (6%) of private land.

The capture area contains the entire or portions of North Black Rock Range and Pahute Peak Wilderness Study Areas (WSA's), and the Lahontan Cutthroat Trout Natural Area. The designation of the Lahontan Cutthroat Trout Natural Area resulted in the area receiving Instant Study Area (ISA) status, which affords the same management as a WSA. (Map 2).

Calico Mountains HMA (NV-222)

The Calico Mountains HMA is located within the Buffalo Hills, Leadville, and Soldier Meadows Allotments (Map1). Elevations range from 4,000 feet at the valley floor to 8,491 feet at Donnelly Peak. Vegetative types found within the HMA vary from

shadscale/budsage-grass at lower elevations to mountain sagebrush-bunch grass, low sagebrush-bunch grass and quaking aspen at higher elevations.

Past capture data was used to determine animal colors and approximate percentage of frequency within the herd. The majority of horses exhibit buckskin(31%) or bay(23%) color patterns; however there are paints(11%), sorrels(8%), palominos(7%), brown(5%), chestnuts(5%), blacks(5%), dunns (2%), grullas(1%), and whites(2%).

Post gather data was used to determine age structure within the herd. Approximately 80% of the herd is 0-13 year and 20% is 14-20+.

Donnelly Creek has been identified as a potential LCT reintroduction stream.

The area is comprised of approximately 157,166 acres; 157,066 acres (99.9%) public land and 100 acres (.1%) private land.

The capture area contains portions of the Calico Mountains, High Rock Lake, and Little High Rock Canyon WSA's (Map 2).

Warm Springs Canyon HMA (NV-226)

The Warm Springs Canyon HMA is located within the Soldier Meadows Allotment (Map 1). Elevations range from 4,550 at the valley floor to 7,084 feet at Trough Mountain. Vegetative types found within the HMA vary from shadscale/budsage-grass at lower elevations to mountain sagebrush-bunch grass, low sagebrush-bunchgrass and mountain mahogany at higher elevations.

Past capture data was used to determine wild horse colors and approximate percentage of frequency within the herd. The majority of horses exhibit bay(29%), sorrel(28%), and brown(12%), color patterns; however there are blacks(10%), palominos(7%), buckskins(6%), roans(4%), paints(2%), dunns(1%), and others(1%).

Post gather data was used to determine wild horse age structure within the herd. Approximately 80% of the herd is 0-13 year and 20% is 14-20+.

Census data, ground observations, and post gather data shows the burro population to be approximately 45 animals within the HMA. Warm Springs burros are typically gray in color.

The threatened desert dace is found in a number of hot springs in the southeastern area

of the HMA. Basalt cinquefoil, a BLM sensitive species is also found around these hot springs.

The area is comprised of approximately 83,136 acres; 82,485 acres (99%) public land and 651 acres (1%) private land.

The capture area contains portions of the High Rock Lake and East Fork High Rock Canyon WSA's (Map 2).

Wild Horses and Burros

Wild horses and burros are introduced species within North America and have few natural predators. Few natural controls act upon wild horse and burro herds making them very competitive with native wildlife and other living resources managed by the Bureau. Wild horses have been shown to be capable of 18 to 25% increases in numbers annually and burros are capable of 16% increases. This can result in a doubling of the population about every 3 years. In the Calico Complex, wild horse population growth rates (percentage of foals <1) have been verified as high as **15%**. Estimated herd populations for the Calico Complex as determined from post and current gather data, census, seasonal distribution, and ground observations are as follows:

HMA	Estimated Fall 2000 Population
East & West Black Rock Range	854
Calico Mountains	1,148
Warm Springs Canyon	749/22*

*Burro

The Calico Complex has undergone several removals since passage of the act. These removals have incorporated all of the removal strategies identified in the proposed action, with the exception of fertility control.

Sex ratios for wild horse within the Calico Complex are representative of other HMAs in the WFO and the West at large. At birth, sex ratios are roughly equal. This balance shifts to favor mares throughout the younger age classes. This pattern shifts again at around 15 years of age favoring.

The following critical elements of the human environment are not present and/or not affected by the proposed action: air quality, areas of critical environmental concern, cultural resources, environmental justice, prime or unique farm land, flood plains, native American religious concerns, threatened and endangered species, water quality, or wild

and scenic rivers.

Environmental Consequences (Proposed Action & Alternatives)

Vegetation, Soil, and Water

Implementation of the proposed action or alternatives would reduce the wild horse population to 40% below AML in the Calico Complex which would help to promote and maintain a thriving natural ecological balance for a period of approximately four years. This would result in an increase in forage availability, vegetation density, vigor, reproduction, and productivity.

The proposed action or alternatives would lessen the impact of hoof action on the soil around unimproved springs and stream bank riparian areas which should lead to an improvement in stream bank stability and improved riparian habitat conditions. There would also be a reduction in hoof action on upland habitat area and reduced competition for available water sources.

Impacts to vegetation with implementation of the proposed action or alternatives could include disturbance of native vegetation immediately in and around temporary trap sites, and holding and processing facilities. Impacts are created by vehicle traffic, and hoof action of penned horses, and can be locally severe in the immediate vicinity of the corrals or holding facilities. Generally, these activity sites would be small (less than one half acre) in size. Since most trap sites and holding facilities are re-used during recurring wild horse gather operations, any impacts would remain site specific and isolated in nature. In addition, most trap sites or holding facilities are selected to enable easy access by transportation vehicles and logistical support equipment and would therefore generally be adjacent to or on roads, pullouts, water haul sites, or other flat spots which were previously disturbed.

Wildlife and Livestock

The proposed action or alternatives would result in reduced competition with livestock and wildlife which would increase the quantity and quality of available forage. There would be less disturbance associated with wild horses along stream bank riparian habitat and adjacent upland habitat. This should result in improved habitat conditions on existing and potential re-introduction LCT streams. Impacts to wildlife and livestock would be potential disturbance from the helicopter and increased traffic. These disturbances would be during the capture period only.

Wilderness

Wilderness values would be positively affected by implementation of the proposed action or alternatives as it would result in an improved ecological condition of the plant communities that are aesthetically more appealing to the public than the existing situation.

Noxious Weeds and Invasive Non-Native Species

Noxious weed and invasive non-native species introduction and proliferation is a growing concern among local and regional interests. Noxious weed surveys including invasive and non-native species in the WSA's of the Calico Complex have been completed. These surveys indicate that the following state listed noxious weeds occur:

Scientific Name	Common Name	Plant Symbol
Cirsium vulgare	Bull Thistle	CIVU
Cardaria draba	Whitetop	CADR
Tamarix ramosissima	Salt Ceder	TARA
Centaurea repens	Russian Knapweed	CERE3

These weeds occur in a variety of habitats including road side areas, rights-of-way, wetland meadows, as well as undisturbed upland rangelands. Noxious weed impacts associated with the proposed action or alternatives include potential importation or transportation of new species of weeds to the Calico Complex area, spread of existing noxious weed seeds and plant parts to new areas in the complex, and increases in the size of existing weed infestation sites. These impacts would potentially be accomplished by contractor vehicles and livestock entering the complex area and through feeding of contaminated hay to captured horses which are released before seeds pass through their system.

Cultural, and Historic Resources

The proposed action or alternatives could impact cultural and historic resources through improper trap and holding facility placement and by herding of wild horses through sensitive historic sites. These impacts would not be expected under most situations given standard procedures which identify that archeological surveys would be conducted prior to construction of trap sites, and holding facilities. Sensitive historic sites are well documented, and avoidance of these areas is standard procedure. In addition, most trap sites and holding facilities are re-used during the various gathers, reducing the chances of impacts on new undiscovered sites.

Wild Horses and Burros

Impacts to wild horses and burros under the proposed action or alternatives may occur to either the individual animals or the population as a whole. These impacts include: handling stress associated with the round up, capture, processing, and transportation of animals and isolated injection site effects following administration of fertility control vaccines. The intensity of these impacts vary by individual, and are indicated by behaviors ranging from nervous agitation to physical distress. Mortality of individuals from this impact is infrequent but does occur in one half to one percent of horses gathered in a given round-up. Injection site injury associated with fertility control treatments is rare in treated mares.

Impacts which can occur to horses after the initial stress event may include spontaneous abortions in mares, and increased social displacement and conflict in studs. These impacts are known to occur intermittently during wild horse gather operations. Traumatic injuries do not occur in most cases, however, they do occur. These injuries typically involve bite and/or kicking bruises which don't break the skin. The frequency of occurrence of these impacts among a population varies with the individual. Spontaneous abortion events among mares following capture is very rare.

Population wide impacts can occur during or immediately following implementation of the proposed action. They include the displacement of bands during capture and the associated re-dispersal, modification of herd demographics (age and sex ratios), temporary separation of members of individual bands of horses, reestablishment of bands following releases, and the removal of animals from the population. With exception of changes to herd demographics, direct population wide impacts have proven , over the last 20 years, to be temporary in nature with most if not all impacts disappearing within hours to several days of release. No observable effects associated with these impacts would be expected within one month of release except a heightened shyness toward human contact.

Observations of animals following release have shown horses relocate themselves back to their home ranges within 12 to 24 hours of release and sometimes much faster.

The effect of removal of horses or burros from the population would not be expected to have a significant impact on herd dynamics or population variables, as long as the selection criteria for the removal ensured a "typical" population structure was maintained. Obvious potential impacts on horse herds and populations from exercising poor selection criteria not based on herd dynamics includes modification of age or sex ratios to favor a paritcular class of animal.

For mares, the greatest biological stress is during pregnancy and lactation. In wild horse populations, this occurs in late winter or early spring when forage availability is at its lowest level, and body condition is at its lowest. For studs, biological stress is at its peak during the breeding season. This peak biological demand is in the late spring and early summer and is more suited to a rapid recovery and a lower energy deficit than for mares.

The proposed action would mitigate the potential adverse impacts on wild horse and burros populations by establishing a procedure for determining what selective removal criteria is warranted for the herd. This flexible procedure (Appendix I SOP's) would allow for correction of any existing discrepancies in herd demographics which could predispose a population to increased chances for catastrophic impacts. The proposed action would also establish a standard for selection which would minimize the possibility for developing negative age or sex based selection effects to the population in the future.

Population wide indirect impacts would not appear immediately as a tangible effect and are more difficult to quantify. Population wide indirect impacts are associated primarily with the use of fertility control drugs and involve reductions in short term fecundity of initially a large percentage of mares in a population, increasing herd health as AMLs are achieved, and potential genetic issues regarding the control of contributions of mares to the gene pool, especially in small populations. Again, with implementation of the proposed action, these impacts would be expected to be mitigated by an overall lessening of the need to impose fertility control treatments on a high proportion of the mare population, and all mares would be expected to sucessfully recruit some percentage of their offspring into the population.

Cumulative Impacts (Proposed Action & Alternatives)

Cumulative impacts are impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Implementation of the proposed action or alternatives would reduce the wild horse population to AML in the Calico Complex's HMA's which would help to promote a thriving natural ecological balance. This would result in an increase in vegetation density, vigor, reproduction, productivity, and forage availability.

Adverse impacts to vegetation with implementation of the proposed action or alternatives would include disturbance of native vegetation immediately in and around temporary trap sites, and holding and processing facilities. Impacts created by vehicle traffic, and hoof action of penned horses, can be locally severe in the immediate vicinity of the corrals or holding facilities. Generally, these activity sites would be small (less than one half acre) in size. Since most trap sites and holding facilities are re-used during recurring wild horse gather operations, any impacts would remain site specific and isolated in nature. In addition, most trap sites or holding facilities are selected to enable easy access by transportation vehicles and logistical support equipment and would therefore generally be adjacent to or on roads, pullouts, water haul sites, or other flat spots which were previously disturbed. These common practices would minimize the cumulative effects of these impacts.

Past, present, and reasonably foreseeable activities which would be expected to contribute to the cumulative impacts of implementing the proposed action include: Past wild horse selective removal gathers which may have altered the age structure and composition sex ratios of the wild Horse populations, continued livestock grazing in the allotments, and increasing recreational uses. These past, present, and reasonably foreseeable activities would be expected to generate cumulative impacts to the proposed action by influencing the habitat quality, abundance, and continuity for the Calico Complex wild horses.

These impacts would be expected to be marked by changes occurring slowly over time. WFO would continue to identify these impacts as they occur, and mitigate them as needed on a project specific basis to maintain habitat and herd quality. At the same time, horse herds would be expected to continue to adapt to these small changes to availability and distribution of critical habitat components (food, water, shelter, space). The proposed action would contribute to the cumulative impacts of future actions by maintaining the herd at AML, and establishing a process whereby biological and/or genetic issues associated with herd or habitat fragmentation would become apparent sooner and mitigating measures implemented quicker.

Consultation and Coordination

List of Preparers

Bryan Fuell	Wild Horse and Burro Specialist
Rodger Bryan	Supervisory Fish and Wildlife Biologist
Tom Seley	Wild Horse and Burro Specialist
Jeff Johnson	Environmental Coordinator
Dave Stockdale	Wild Horse and Burro Specialist/GIS
Nadine Francis	Wildlife Biologist (Wild Horse)
Peggy McGuckian	Cultural
Lynn Clemons	Wilderness

Persons, Groups, and Agencies Consulted

American Horse Protection Asso.	American Humane Asso.
American Mustang & Burro Asso.	American Mustang Asso.
American Protection Insitute	HERDS
Humane Society of the US	International Society for the Protection of - Mustangs & Burros
LIFE Foundation	National Wild Horse Asso.
National Mustang Asso.	NV Comm. for the Preservation of Wild Horses
Whole Horse Institute	Wild Horse Organized Assistance
Wild Horse Spirit	Craig Downer
American Horse Council	The Fund for Animals, Inc
US Fish and Wildlife Service	CO Wild Horse and Burro Coalition
Humbolt County Commissioners	Nevada State Clearing House
John Estill	Irv and Sandy Brown
Pershing County Commissioners	

Mitigation Measures

The proposed action incorporates proven standard operating procedures which have been developed over time. These SOPs (Appendix II) represent the "best methods" for reducing impacts associated with gathering, handling, transporting and collecting herd data. Additional mitigation measures are not warranted.

Appendix I

Population Modeling

Number of horses by year for each HMA

Proposed Action With use of fertility

Year	Calico Mtns	Warm Springs Canyon	Black Rock East & West
2000	1,148	749	854
2001	232	123	138
2002	238	127	147
2003	247	129	150
2004	290	155	176
2005	312	165	206

Proposed Action No fertility

Year	Calico Mtns	Warm Springs Canyon	Black Rock East & West
2000	1,148	749	854
2001	240	123	129
2002	276	145	148
2003	319	172	170
2004	367	189	182
2005	412	226	204

Alternative 1 With use of Fertility

Year	Calico Mtns	Warm Springs Canyon	Black Rock East & West
2000	1,148	749	854
2001	718	317	490
2002	717	314	484
2003	714	310	480
2004	840	367	556
2005	916	424	621

Alternative 1 No Fertility

Year	Calico Mtns	Warm Springs Canyon	Black Rock East & West
2000	1,148	749	854
2001	729	319	495
2002	868	381	594
2003	1,004	416	691
2004	1,089	458	764
2005	1,221	513	880

APPENDIX II

STANDARD OPERATING PROCEDURES

Gathers would be conducted by contractors or agency personnel. The same procedures for gathering and handling wild horses and burros apply whether a contractor or BLM personnel are used. The following stipulations and procedures will be followed to ensure the welfare, safety and humane treatment of the wild horses and burros (WH&B) in accordance with the provisions of 43 CFR 4700.

Gathers are normally conducted for one of the following reasons:

1. Regularly scheduled gathers to obtain or maintain the Appropriate Management Level (AML).

2. Drought conditions that could cause mortality to WH&B due to the absence of water or forage, and where continued grazing may result in a downward trend to the vegetative communities due to plant mortality and reduced vigor and productiveness.

3. Fires that remove forage to the extent that there is inadequate forage to sustain the population or to allow recovery of native vegetation.

4. Utilization levels that reach a point where a continued increase in utilization would cause a downward trend in the plant communities and impede meeting standards for rangeland health.

5. Monitoring indicates that WH&B use would begin to cause a downward trend in riparian function or not permit the recovery of riparian vegetation determined to be in undesirable condition.

A. CAPTURE METHODS USED IN THE PERFORMANCE OF A GATHER-Contract Operations

1. Helicopter - Drive Trapping

Capture attempts may be accomplished by utilizing a helicopter to drive animals into a temporary trap. If this method is selected the following applies:

a. A minimum of two saddle-horses shall be immediately available at the trap site to accomplish roping if necessary. Roping shall be done as

determined by the BLM. Under no circumstances shall animals be tied down for more than one hour.

b. The contractor shall assure that bands remain together, and that foals shall not be left behind.

c. A domestic saddle horse(s) may be used a pilot (or "Judas") horse to lead the wild horses into the trap site. Individual ground hazers may also be used to assist in the gather.

2. Helicopter - Roping

Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. If this method is selected the following applies:

a. Under not circumstances shall animals be tied down for more than one hour.

b. The contractor shall assure that bands remain together, and that foals shall not be left behind..

3. Bait Trapping

Capture attempts may be accomplished by utilizing bait (feed or water) to lure animals into a temporary trap. If this method is selected the following applies:

a. Finger gates shall not be constructed of materials such as "T" posts, sharpened willows, etc., that may be injurious to animals.

b. All trigger and/or trip gate devices must be approved by the BLM prior to capture of animals.

c. Traps shall be checked a minimum of once every 10 hours

B. BLM conducted Helicopter - Non-Contract Operations

1. Gather operations will be conducted in conformance with the Wild Horse and Burro Aviation Management Handbook (March 2000).

2. Two-way radio communication between the helicopter and the ground crew

will be maintained at all times during the operation

C. Safety and Communications

1. The Contractor shall have the means to communicate with the BLM and all contractor personnel engaged in the capture of wild horses and burros utilizing a VHF/FM Transceiver or VHF/FM portable Two-Way radio. If communications are ineffective the government will take steps necessary to protect the welfare of the animals.

    a. The proper operation, service and maintenance of all contractor furnished property is the responsibility of the Contractor. The BLM reserves the right to remove from service any contractor personnel or contractor furnished equipment which, in the opinion of the BLM violate contract rules, are unsafe or otherwise unsatisfactory. In this event, the Contractor will be notified in writing to furnish replacement personnel or equipment within 48 hours of notification. All such replacements must be approved in advance of operation by the BLM.

    b. The Contractor shall obtain the necessary FCC licenses for the radio system.

    c. All accidents occurring during the performance of any delivery order shall be immediately reported to the BLM.

2. Should the helicopter be employed, the following will apply:

    a. The Contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the Contractor shall comply with the Contractor's Federal Aviation Certificates, applicable regulations of the State in which the gather is located.

    b. Fueling operations shall not take place within 1,000 feet of the animals.

    c. At time of delivery order completion, the contractor shall provide the BLM with a completed copy of the Service Contract Flight Hour Report.

D. Trapping and Care

1. The primary concern of the contractor is the safe and humane handling of all animals captured. All capture attempts shall incorporate the following:

    a. All trap and holding facilities locations must be approved by the BLM prior to

construction. The Contractor may also be required to change or move trap locations as determined by the BLM. All traps and holding facilities not located on public land must have prior written approval of the landowner.

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

3. 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 for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and holding facilities shall be oval or round in design.

   b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered with plywood (without holes) or like material.

   c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for burros, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet above ground level for burros and 1 foot to 6 feet for horses. The location of the government furnished portable restraining chute to restrain, age, or provide additional care for animals shall be placed in the runway in a manner as instructed by or in concurrence with the BLM..

   d. All crowding pens including the gates leading to the runways shall be covered with a 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 for burros and 2 feet to 6 feet for horses. Eight linear feet of this material shall be capable of being removed or let down to provide a viewing window.

   e. All pens and runways used for the movement and handling of animals shall be connected with hinged self-locking gates.

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

5. When dust conditions occur within or adjacent to the trap or holding facility, the Contractor/BLM shall be required to wet down the ground with water.

6. Alternate pens, within the holding facility shall be furnished by the Contractor to separate mares or jennies with small foals, sick and injured animals, and estrays from the other animals. Animals shall be sorted as to age, number, size, temperament, sex, and condition when in the holding facility so as to minimize, to the extent possible, injury due to fighting and trampling. Under normal conditions, the government will require that animals be restrained for the purpose of determining an animal's age or other similar practices. In these instances, a portable restraining chute will be provided by the government. Alternate pens shall be furnished by the Contractor to hold animals if the specific gathering requires the animals be released back into the capture area(s). In areas requiring one or more satellite traps, and where a centralized holding facility is utilized, the Contractor may be required to provide additional holding pens to segregate animals transported from remote locations so they may be returned to their traditional ranges. Either segregation or temporary marking and later segregation will be at the discretion of the BLM.

7. The Contractor shall provide animals held in the traps and/or holding facilities with a continuous supply of fresh clean water at a minimum rate 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.

8. It is the responsibility of the Contractor/BLM to provide security to prevent loss, injury or death of captured animals until delivery to final destination.

9. The Contractor/BLM shall restrain sick or injured animals if treatment is necessary. A veterinarian may be called to make a diagnosis and final determination. Destruction shall be done by the most humane method available. Authority for humane destruction of wild horses (or burros) is provided by the Wild Free-Roaming Horse and Burro Act of 1971, Section 3(b)(2)(A), 43 CFR 4730.1, BLM Manual 4730 - Destruction of Wild Horses and Burros and Disposal of Remains, and is in accordance with BLM policy as expressed in Instructional Memorandum No. 98-141.

   Any captured horses that are found to have the following conditions may be humanely destroyed:

   a. The animal shows a hopeless prognosis for life.
   b. Suffers from a chronic disease.

c. Requires continuous care for acute pain and suffering.
d. Not capable of maintaining a body ratio of one.
e. The animal is a danger to itself or others.

10. Animals shall be transported to final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the BLM for unusual circumstances. Animals to be released back into the HMA following gather operations may be held up to 21 days or as directed by the BLM. Animals shall not be held in traps and/or temporary holding facilities on days when there is no work being conducted except as specified by the BLM. The Contractor shall schedule shipments of animals to arrive at final destination between 7:00 a.m. and 4:00 p.m. No shipments shall be scheduled to arrive at final destination on Sunday and Federal holidays, unless prior approval has been obtained by the BLM. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the BLM.

11. The BLM will issue a Notice of Intent to Impound Unauthorized Livestock prior to all gathers. Branded or privately owned animals whose owners are known will be impounded by BLM, and if not redeemed by payment of trespass and capture fees, will be sold at public auction. If owners are not known, the private animals will be turned over to the State for Processing under Nevada estray laws.

E. 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. The Contractor shall provide the BLM with a current safety inspection (less than one year old) for all motorized equipment and tractor-trailers used to transport animals to final destination.

2. All motorized equipment, tractor-trailers, and stock trailers shall be in good repair, of adequate rated capacity, and operated so as to ensure that captured animals are transported without undue risk or injury.

3. Only tractor-trailers or stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities, and from temporary holding facilities to final destination(s). Sides or stock racks of all trailers used for transporting animals shall be a minimum height of 6 feet 6 inches from the floor.

Single deck tractor-trailers 40 feet or longer shall have two (2) partition gates providing three (3) compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing two (2) compartments within the trailer to separate the animals. Compartments in all tractor-trailers shall be of equal size plus or minus 10 percent. 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 tractor-trailers is unacceptable and shall not be allowed.

4. All tractor-trailers used to transport animals to final destination(s) shall be equipped with at least one (1) door at the rear end of the trailer which is capable of sliding either horizontally or vertically. The rear door(s) of tractor-trailers and stock trailers must be capable of opening the full width of the trailer. Panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of all trailers must be strong enough so that the animals cannot push their hooves through the side. Final approval of tractor-trailers and stock trailers used to transport animals shall be held by the BLM.

5. Floors of tractors- trailers, stock trailers, and the loading chute shall be covered and maintained with wood shavings to prevent the animals from slipping.

6. Animals to be loaded and transported in any vehicle or trailer shall be as directed by the BLM and may include limitations on numbers according to age, size, sex, temperament, and animal condition. The following minimum square feet per animal shall be allowed in all trailers:

    11 sq. ft. per adult horse (1.4 linear ft. in an 8ft. wide trailer);
    8 sq. ft. per adult burro (1.0 linear ft. in an 8ft. wide trailer);
    6 sq. ft. per horse foal (.75 linear ft. in an 8ft. wide trailer);
    4 sq. ft. per burro foal (.50 linear ft. in an 8ft wide trailer);

7. Prior to any gathering operations, the BLM will provide for a pre-capture evaluation of existing conditions in the gather areas. The evaluation will include animal condition, prevailing temperatures, drought conditions, soil conditions, road conditions, and a topographic map with location of fences, other physical barriers, and acceptable trap locations in relation to animal distribution. The evaluation will determine the level of activity likely to cause undue stress to the animals, and whether such stress would necessitate a veterinarian be present. If it is determined that capture efforts necessitate the services of a veterinarian, one would be obtained before capture would proceed. The Contractor will be appraised of all the conditions and will be given directions regarding the capture and handling of animals to ensure their health and welfare is

protected.

8. If the BLM determines that dust conditions are such that animals could be endangered during transportation, the Contractor will be instructed to adjust speed.3

9. Trap sites will be located to cause as little injury and stress to the animals, and as little damage to the natural resources of the area, as possible. Sites will be located on or near existing roads. Additional trap sites may be required, as determined by the BLM, to relieve stress caused by specific conditions at the time of the gather (i.e. dust, rocky terrain, temperatures, etc.).

F. Animal Characteristics and Behavior

Releases of wild horses would be near available water. If the area is new to them, a short term adjustment period may be required while the wild horses become familiar with the new area.

G. Public Participation

It is BLM policy that the public will not be allowed to come into direct contact with WH&B being held in BLM facilities. Only BLM personnel, or contractors may enter the corrals or directly handle the animals. The general public may not enter the corrals or directly handle the animals at anytime or for any reason during BLM operations.

H. Responsibility and Lines of Communication

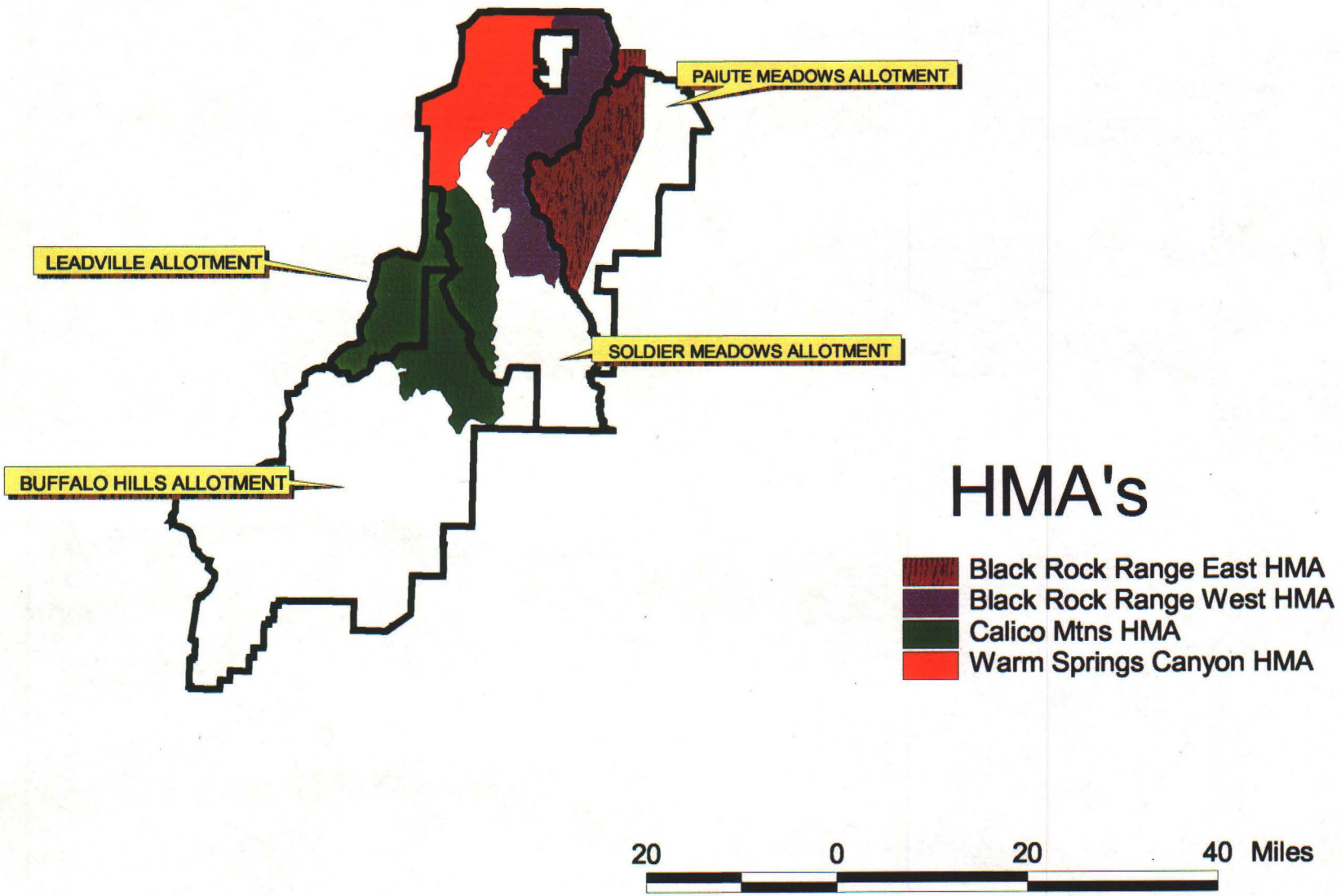
The Contracting Officer's Representative, Bryan Fuell, and Project Inspectors, Rodger Bryan, Tom Seley, Nadine Francis, and David Stockdale from Winnemucca Field Office, have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. The Assistant Field Manager for Renewable Resources and the Winnemucca Field Manager will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, State Office, National Program Office, and PVC Corral offices. All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

All publicity, formal public contact and inquiries will be handled through the Assistant Field Manager for Renewable Resources. This individual will be the primary contact and will coordinate the contract with the PVC Corrals to ensure animals are being transported from the capture site in a safe and humane manner and are arriving in good condition.

The contract specifications require humane treatment and care of the animals during removal operations. These specifications are designed to minimize the risk of injury and death during and after capture of the animals. The specifications will be vigorously enforced.

Should the Contractor show negligence and/or not perform according to contract stipulations, he will be issued written instructions, stop work orders, or defaulted.

MAP 1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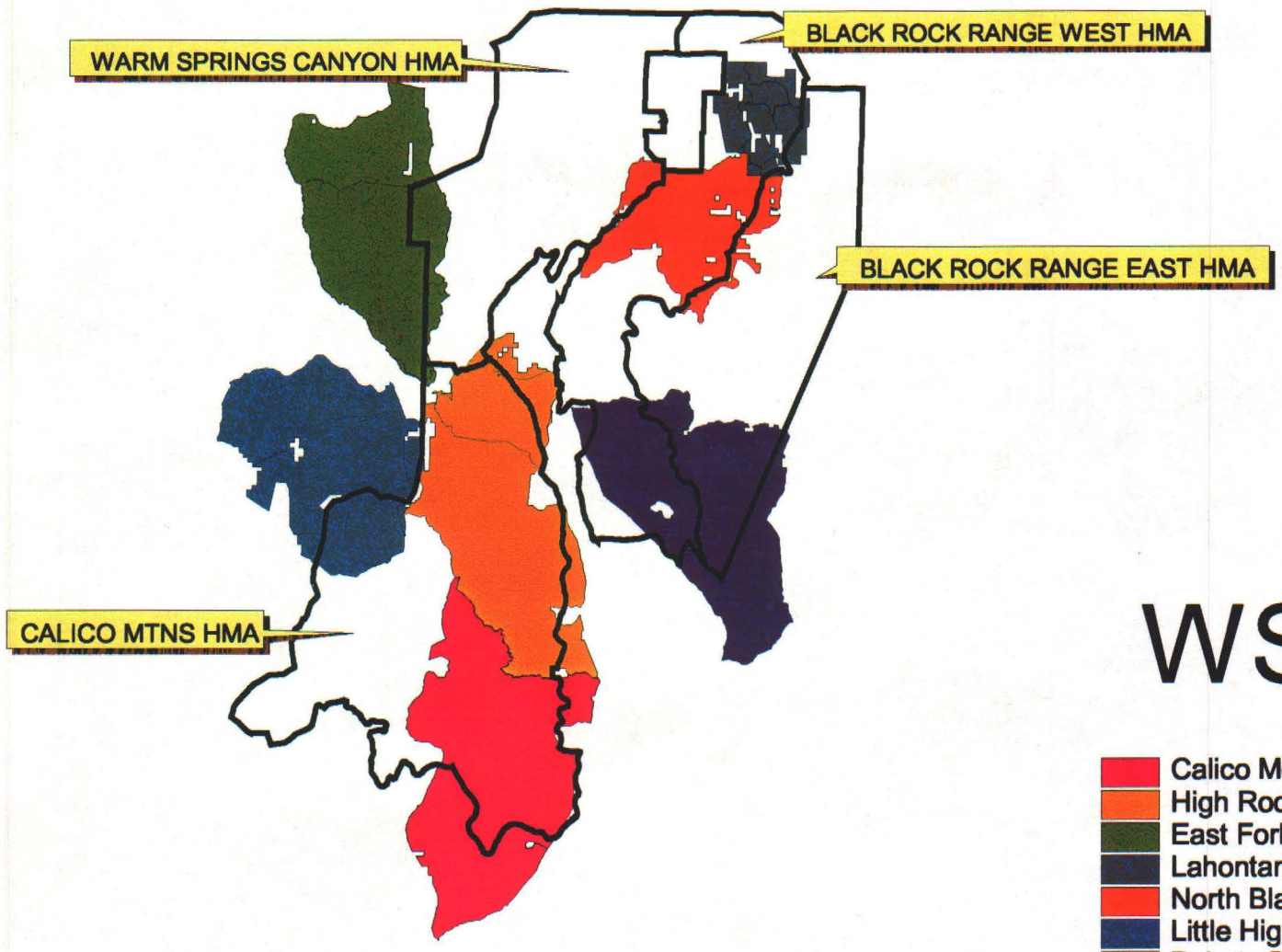
PAIUTE MEADOWS ALLOTMENT
LEADVILLE ALLOTMENT
SOLDIER MEADOWS ALLOTMENT
BUFFALO HILLS ALLOTMENT
HMA's
Black Rock Range East HMA
Black Rock Range West HMA
Calico Mtns HMA
Warm Springs Canyon HMA
20 0 20 40 Miles

MAP 2



N

WSA's

- Calico Mountains WSA
- High Rock Lake WSA
- East Fork High Rock Canyon WSA
- Lahontan Cutthroat Trout Isa WSA
- North Black Rock Range WSA
- Little High Rock Canyon WSA
- Pahute Peak WSA

10 0 10 20 Miles