

6 6-10-03



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Ely Field Office  
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Ely, NV 89301-9408  
<http://www.nv.blm.gov/Ely>

JUN 10 2003

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DEPARTMENT OF ADMINISTRATION  
OFFICE OF THE DIRECTOR  
BUDGET AND PLANNING DIVISION

In Reply Refer To:  
4710.4/4720.1  
(NV-042)

Dear Reader:

This letter is to inform you that the BLM, Ely Field Office is planning to conduct a wild horse gather in August 2003. The area to be gathered consists of the Dry Lake Wild Horse Herd Management Area (HMA). We are proposing to gather approximately 377 wild horses and remove 321 from the Dry Lake HMA. A gather plan/preliminary environmental assessment has been completed at this time.

Enclosed is the **Dry Lake Herd Management Area Wild Horse Gather Plan and Preliminary Environmental Assessment (No. NV-040-03-027)**. Prior to issuing the Record of Decision for the Dry Lake Herd Management Area Wild Horse Gather Plan and Preliminary Environmental Assessment, **we are asking any interested publics that have information, data, etc. they would like to provide regarding this gather to do so prior to July 7, 2003.** Send written comments to James Perkins, Assistant Field Manager, Renewable Resources, Ely Field Office, Bureau of Land Management, HC 33 Box 33500, Ely, Nevada 89301.

If you have any questions, please contact Jared Bybee or Jody Nartz, wild horse and burro specialists, Ely Field Office at (775)289-1800.

Sincerely,

James Perkins,  
Assistant Field Manager  
Renewable Resources

1) Enclosure

Dry Lake Herd Management Area Wild Horse Gather Plan and Preliminary Environmental Assessment

Dry Lake Herd Management Area Wild Horse Gather Plan and Preliminary  
Environmental Assessment (Consultation, Cooperation, and Coordination)

CC:	<u>Certified No. Returned Receipt Requested</u>
American Horse Protection Association	7002 0510 0001 2708 1073
American Mustang and Burro Association	7002 0510 0001 2708 1080
Animal Protection Institute of America	7002 0510 0001 2708 1097
Board of County Commissioners, Lincoln County	7002 0510 0001 2708 1103
Mr. Paul C. Clifford Jr.	7002 0510 0001 2708 1110
Comm. for the Preservation of Wild Horses	7002 0510 0001 2708 1127
Ms. Sharon Crook	7002 0510 0001 2708 1134
Mr. Craig C. Downer	7002 0510 0001 2708 1141
Colorado Wild Horse and Burro Coalition	7002 0510 0001 2708 1158
Mr. Steven Fulstone	7002 0510 0001 2708 1165
Intl. Society for the Protection of Mustangs and Burros	7002 0510 0001 2708 1172
Wild Horse Sanctuary	7002 0510 0001 2708 1189
The Fund for Animals, Inc.	7002 0510 0001 2708 1196
Donald A. Molde, M.D.	7002 0510 0001 2708 1202
National Mustang Association, Inc.	7002 0510 0001 2708 1219
National Wild Horse Association	7002 0510 0001 2708 1226
Nevada Cattlemen's Association	7002 0510 0001 2708 1233
Nevada Division of Wildlife, Las Vegas	7002 0510 0001 2708 1240
Nevada Division of Wildlife, Mike Scott	7002 0510 0001 2708 1257
Nevada Farm Bureau Federation	7002 0510 0001 2708 1264
Nevada Outdoor Recreation Association	7002 0510 0001 2708 1271
Nevada State Department of Agriculture	7002 0510 0001 2708 1288
Nevada Wool Growers Association	7002 0510 0001 2708 1295
Board of County Commissioners, Nye County	7002 0510 0001 2708 1301
Wild Horse Spirit	7002 0510 0001 2708 1318
Rutgers School of Law-Newark, Animal Rights Law Center	7002 0510 0001 2708 1325
Toiyabe Chapter of the Sierra Club	7002 0510 0001 2708 1332
U. S. Fish and Wildlife Service, Bob Hallock	7002 0510 0001 2708 1349
The Humane Society of the United States	7002 0510 0001 2708 1356
Nevada State Clearinghouse, Wild Horse Commission	7002 0510 0001 2708 1363
Wild Horse Organized Assistance	7002 0510 0001 2708 1370
Tribal Manager, Duckwater Tribal Council	7002 0510 0001 2708 1387
Roberta Moore	7002 0510 0001 2708 1394
Ms. Tina Nappe	7002 0510 0001 2708 1400
Save the Mustangs	7002 0510 0001 2708 1417
Eastern Nevada Landscape Coalition	7002 0510 0001 2708 1424
Nevada Division of Wildlife, Teri Slatauski	7002 0510 0001 2708 1431
8-Mile Ranch	7002 0510 0001 2708 1448
Blue Diamond Oil Corporation	7002 0510 0001 2708 1455
Bulloch Brothers	7002 0510 0001 2708 1462
Frank & Rose Delmue	7002 0510 0001 2708 1479
El Tejon Cattle Co.	7002 0510 0001 2708 1486
Carlisle Hulet	7002 0510 0001 2708 1509
Bruce & Pamela Jensen	7002 0510 0001 2708 1516
Lake Valley Cattle LLC	7002 0510 0001 2708 1523

CC:  
Paul C. Lewis  
Gordon Lytle  
Ken & Donna Lytle  
Linda J. Lytle  
Pearson Brothers  
Department of Agriculture  
George I. Andrus  
Carter Cattle Company  
Committee for the High Desert  
Steve Foree  
Melvin Gardner  
Shelley Hartmann  
Dan Heinz  
Lincoln County Commission  
John McLain, Principal  
Jon Marvel  
USFWS, Southern Nevada Field Office  
Julie Wadsworth

Certified Mail/Returned Receipt No.

7002 0510 0001 2708 1530  
7002 0510 0001 2708 1493  
7002 0510 0001 2708 1547  
7002 0510 0001 2708 1554  
7002 0510 0001 2708 1561  
7002 0510 0001 2708 1578  
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7002 0510 0001 2708 1653  
7002 0510 0001 2708 1660  
7002 0510 0001 2708 1677  
7002 0510 0001 2708 1684  
7002 0510 0001 2708 1691

**U.S. Department of the Interior**

**Bureau of Land Management**

**Ely Field Office**

**Dry Lake Herd Management Area**

**Wild Horse Gather Plan and**

**Preliminary Environmental Assessment**

**NV-040-03-027**

**Jody Nartz**

**May 2003**

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## **I. Background Information**

With passage of the Wild and Free-Roaming Horse and Burro Act of 1971 (Public Law 92-195), Congress found that: “*Wild horses are living symbols of the pioneer spirit of the West*”. In addition, the Secretary of the Interior 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), Ely Field Office has endeavored to meet the requirements of this portion of the Act. The procedures and policies implemented to accomplish this mandate have constantly evolved over the years.

Throughout this period BLM experience has grown, and the 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 18 to 25% increases in numbers annually (Joel Berger, *Wild Horses of the Great Basin - Social Competition and Population Size*, University of Chicago Press, 1986). 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 and burro program has shifted.

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

The National Wild Horse and Burro Strategy involves establishing and achieving AML on all Herd Management Areas (HMAs) managed by the BLM, and to achieve and maintain AML on all HMAs following a four-year gather cycle. The numbers of animals projected to be removed, based on this four year rotation, was estimated based on the use of the wild horse population model developed by Dr. Steve Jenkins of the University of Nevada, Reno. Those numbers, by state and year, were first proposed through the President’s 2001 budget request as *A Strategy to Achieve Healthy Lands and Viable Herds, The Restoration of Threatened Watersheds Initiative*, and later approved by Congress.

This document has been prepared to assess the environmental impacts of adjusting the numbers of wild horses within the Dry Lake HMA located in the Ely District (Figure 1), as well as removing wild horses that have moved outside the HMA boundaries.

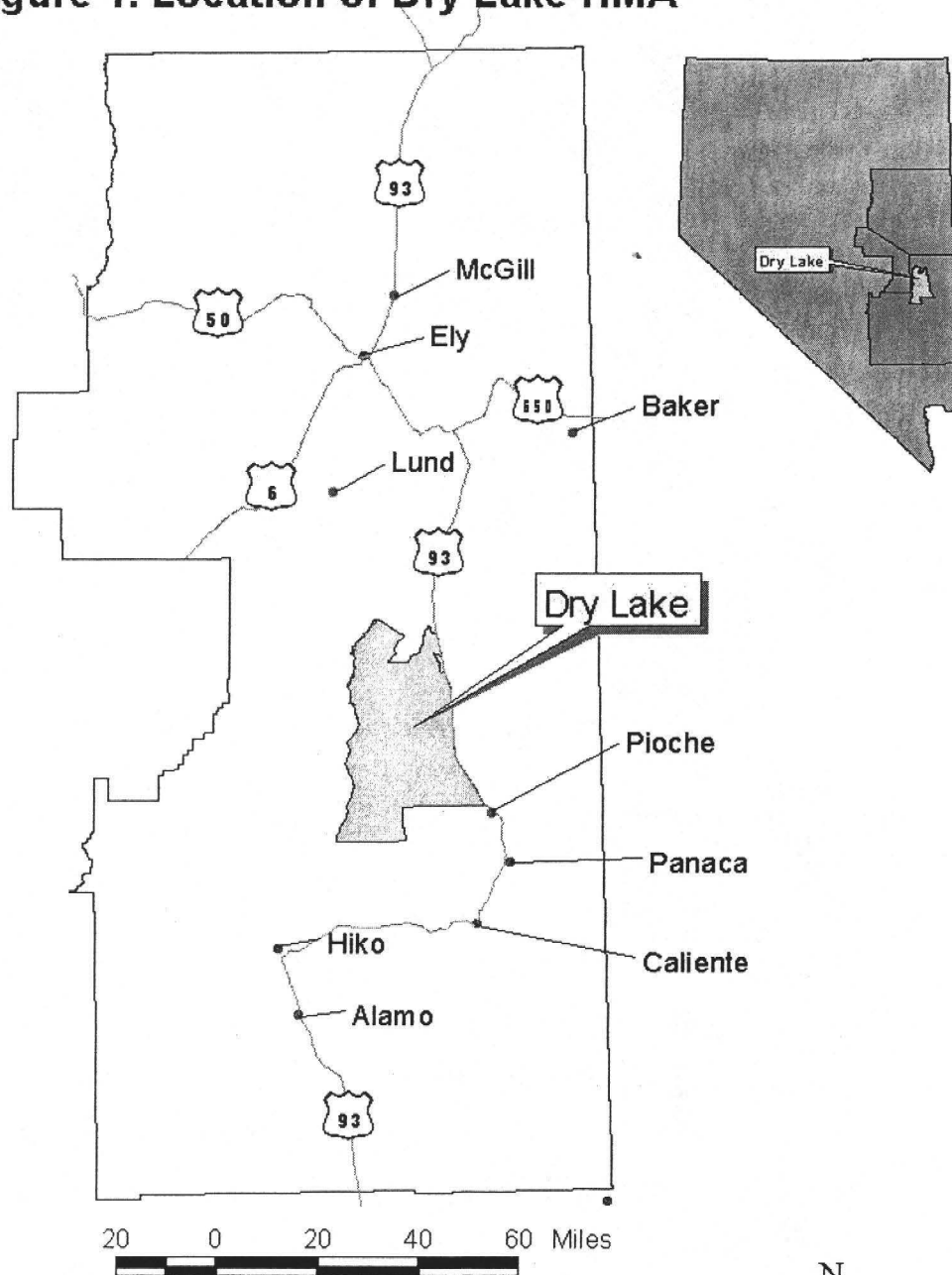
AML for this HMA has been established through the Land Use Planning/Multiple Use Decision process based on monitoring data and following a thorough public review. Documents containing this information are available for public review at the Ely Field Office.

### **Need for Proposal**

The Ely Field Office is proposing to implement the capture and removal of wild horses in the Dry Lake HMA. The emphasis of this management action would be to maintain a “*thriving natural ecological balance*”, maintain healthy wild horses, improve watershed/riparian health, and make significant progress towards achievement of Mojave-Southern Great Basin Resource Advisory Council (RAC) Standards. These determinations would be assessed through the collection of data including herd characteristics, sex ratios, age class information,



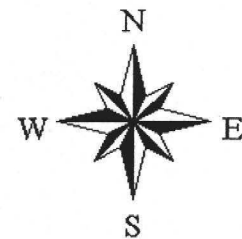
### Figure 1. Location of Dry Lake HMA



#### Legend

- Highways
- Cities
- HMA Boundary
- Ely District Boundary

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genetic sampling, and overall animal and herd health. This would be accomplished through the removal of wild horses in excess of 56 animals. Information would be collected on herd characteristics, genetics, and herd health.

Objectives include:

1. *Reduce reproductive rates to levels which would accommodate a minimum 4 year gather schedule allowing for a maintenance of AML.*
2. *Ensure the health and viability of the Dry Lake HMA wild horse population.*
3. *Re-establish the preselective removal gather sex distribution toward a more "natural" distribution (50/50).*
4. *Prevent unavoidable pain and suffering through deterioration of the health, and subsequent death of wild horses, due to shortages of forage and water as a result of drought conditions and overpopulation of the herd in excess of the capability of the habitat to support it.*
5. *Restore and maintain a thriving natural ecological balance to the range and protect the range from the deterioration associated with overpopulation.*
6. *Re-establish or maintain herd characteristics, which were typical of the herd at the time of the passage of the Act.*
7. *Maintain the genetic diversity of the Dry Lake HMA herd.*

A gather of the Dry Lake HMA needs to be conducted to accomplish the above listed objectives. This document analyzes five alternatives including the Proposed Action.

## **B. Relationship to Planning**

The proposed action is in conformance with the Schell Management Framework Plan (MFP), Schell Grazing Environmental Impact Statement (EIS), and subsequent Record of Decision (ROD) dated 1983. The proposed action is consistent with the Lincoln County Policy Plan for Public Lands as adopted by the Board of County Commissioners of Lincoln County, May 1, 1985, and amended June 12, 1985. This plan states in part "...wild horse herds should be managed at reasonable levels to be determined with public involvement and managed with the consideration of the needs of other wildlife species and livestock..." The proposed action is also consistent with the Strategic Plan for Management of Wild Horses and Burros on Public Lands, dated June 1992, and the "Lincoln County Elk Management Plan" dated July 1999. It is consistent with federal, state, and local laws, regulations, and plans to the maximum extent possible.

AML for the Dry Lake HMA was established through the allotment evaluation/Final Multiple Use Decision (FMUD) process including Geyser Ranch Allotment Evaluation/FMUD(1990),



Wilson Creek Allotment Evaluation/FMUD (1992), and the Wild Horse Herd Management Areas FMUD (2001) which established AML for the Dry Lake HMA portions of the Sunnyside and Fox Mountain Allotments.

An environmental analysis of wild horse removal was conducted in 1993. This analysis covered the impacts of various removal methods on wild horses in order to achieve AML, and other critical elements of the human environment. Two removal decisions occurred from that analysis, a regularly scheduled gather in 1993, and a partial emergency gather in 1996. This analysis is documented in:

- 1) 1993 Dry Lake/Wilson Creek HMA/Patterson Seeding Wild Horse Removal Environmental Assessment (EA) NV-040-02-22
- 2) 1996 Partial emergency gather in the Dry Lake Use Area of the Wilson Creek Allotment, Implementation of analysis from EA NV-040-02-22.

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

### **C. Issues**

Proper management of wild horses is the only identified issue. New issues may be identified and will be addressed during this EA process.

## **II. Description of Proposed Action and Alternatives**

The proposed action and alternatives represent a reasonable range of alternatives based on the issue and goals identified through previous public scoping efforts.

### **A. Proposed Action: Removal to 56 wild horses without Fertility Control**

The proposed action for the Dry Lake Gather would be to capture approximately 100% of the estimated 2003 population, or 377 wild horses, and remove all animals in excess of 56 animals from the Dry Lake HMA. This level of animals was determined to ensure a "*thriving natural ecological balance*" with a four-year gather schedule. The gather would utilize the current selective removal strategy as developed by the National Wild Horse and Burro Program Office. The Selective Removal Strategy policy was issued February 2002. This strategy would allow the removal of all age classes in the following priority order:

1. Age class 5 years old and under
2. Age class 10 years old and over
3. Age classes 6 through 9 years old

The first animals to be removed would be five years and younger, the second class of animals to be removed would be 10 years and older. Animals aged six to nine would be returned to the range unless they need to be removed to achieve management objectives. All nursing mares

would be removed regardless of age to prevent orphaned foal death. Previous releases of nursing mares with young foals have shown that the foals will not keep up when released, and will subsequently become orphaned and die. Selective removal objectives will target removal efforts for excess animals while retaining specific horses that exhibit historic conformation and color characteristics, as availability of space in Bureau processing and long-term holding facilities allows.

The removal of excess wild horses to achieve and maintain AML is tentatively scheduled to commence in August 2003 and last approximately 9 days. It is anticipated that the entire population would need to be captured and 321 horses would be removed (see Table I).

The past selective removal in 1993 was been age-based. The 1996 removal was a gate cut. However, selective removal under this alternative 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 the proposed action would be structured to reduce effects of specific population issues. Issues that 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 BLM would also engage in the following: collect data such as animal sex, age, and color; acquire blood samples; assess herd health (pregnancy, parasite loading, physical condition, etc.); sort individuals as to age, sex, temperament and/or physical condition; and return selected animals to the range that represent the historical herd. Excess horses would be transported to BLM holding facilities. Determination of which horses to be returned to the range would be based on an analysis of existing and historical population characteristics from previous gathers, as well as age class, sex ratio, and matching historical phenotypes. Returning animals would entail releasing the horses at or near their original gather site.

Table one shows the May 2001 wild horse census data. Current wild horse population levels are estimated by adding an average 20 percent annual rate of increase to the censused population for each year following the census. Due to drought conditions, the average annual rate of increase for 2003 was estimated to be 15 percent. This data was used to determine estimated removal and release numbers.

**Table I. Population Data**

HMA	Census May 2001	Appropriate Management Level not to Exceed	Estimated Population 2003	Estimated Number's to Remove	Estimated Number's to Release
Dry Lake	240	94	377	321	56

Multiple capture sites would be used to capture wild horses from the HMA. Whenever possible, capture sites would be located in previously disturbed areas. All capture and handling activities (including capture site selections) would 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.

### **B. Alternative I: Removal to 56 wild horses with Fertility Control**

Alternative I is to capture approximately 377 wild horses within the Dry Lake HMA, removing approximately 321 wild horses utilizing the current selective removal strategy as developed by the National Wild Horse and Burro Program Office as described in the proposed action, returning approximately 56 wild horses to the HMA, and treating released mares with fertility control. All of the mares to be released back into the HMA would be treated with a revised immunocontraceptive vaccine, Porcine zona pellucidae (PZP). Mares would receive a one-year reprieve from foaling. Inoculated mares would foal normally in 2004, but would not have foals in 2005 because of the vaccine. Near normal foaling rates would resume in 2006.

The inoculation of mares would consist of a liquid dose of PZP vaccine and a time released portion of the drug in the form of pellets. The approach under study incorporates the PZP into a non-toxic, biodegradable material that can be formed into small pellets. The pellets are injected with the liquid and are designed to release PZP at several points in time during the first three months after injection much the way time-release cold pills work. This formulation would be delivered to the mares as an intra-muscular injection using a jab-stick syringe or dart. The syringe would use a 12-gauge needle and the dart a 1.5" barbless needle. Zero point five cubic centimeters (cc) of the PZP vaccine would be emulsified with 0.5 cc of adjuvant (a compound that stimulates antibody production) and loaded into the delivery system. The pellets would be placed in the barrel of the syringe or dart needle and would be injected with the liquid. Only trained personnel would mix and administer the vaccine. Upon impact the liquid in the chamber would be propelled into the muscle along with the pellets. The injection would be done in the working chutes before the mares are released. This delivery method has been used previously to deliver immunocontraception vaccine with acceptable results. Such a vaccine would permit a single injection to cause up to two years of contraception at approximately 90% effectiveness, if administered during the winter. Wild horses generally foal March through June, and because equines are seasonal spring breeders, they breed soon after foaling. Administering the injection during summer when the Dry Lake gather would occur would most likely result in one year of fertility control with the two-year vaccine. The vaccine is effective for 18 to 22 months. If administered in August (when the gather is scheduled to occur), the vaccine would only prevent contraception through January of 2005, effectively preventing breeding during 2004 only.

The Humane Society of the United States (HSUS) has made the PZP vaccine available to the BLM under the Investigational New Animal Drug exemption (INAD #8857) filed with the federal Food and Drug Administration (FDA). As a condition of using the PZP vaccine, the HSUS expects the BLM to follow the Draft Criteria for Immunocontraceptive Use in Wild Horse Herds recommended by the Wild Horse and Burro National Advisory Board in August 1999. The Ely District is in full compliance with all pertaining criteria. The proposed action would also adhere to all guidance and research protocol set by the BLM National Wild Horse Fertility Control Field Trial program. All treated mares would be identified and freezemarked with a Nevada State approved identification (such as a letter or a number) on the left hip to enable

positive identification for future tracking and data collection. The effectiveness of treatments would be determined by counting foals produced in each of the next two years. Observations would be made from the ground utilizing binoculars and spotting scopes and/or by helicopter. Vehicular travel would be limited to existing roads.

### **C. Alternative II: Removal to 94 wild horses without Fertility Control**

Alternative II is to capture approximately 377 wild horses within the Dry Lake HMA. This would include removing approximately 283 wild horses utilizing the current selective removal strategy as developed by the National Wild Horse and Burro Program Office as described in the proposed action. Approximately 94 wild horses, which is the maximum AML established through monitoring data, would be returned to the HMA.

### **D. Alternative III: Remove to 56 by means of a "gate cut"**

Alternative III is to remove all animals in excess of 56 animals from the Dry Lake HMA. The first 321 animals captured would be removed. Under this Alternative, horses would not be sorted for release. The horses captured would be removed regardless of age, sex ratio, or phenotypic characteristics, until the removal target had been met. Horses not captured (approximately 56 animals) would remain on the range. Captured animals would be sorted by sex for ease in shipping. The current selective removal strategy as developed by the National Wild Horse and Burro Program Office as stated in the proposed action would not be implemented, nor would fertility control, since all mares captured would be shipped.

### **E. Alternative IV: No Action Alternative**

Under this alternative a wild horse gather would not take place in the Dry Lake HMA. There would be no active management to control the size of the population at this time. Under this alternative, the current population of 377 wild horses would continue to increase at a rate of 18-25% annually and would be allowed to regulate their numbers naturally through predation, disease, and forage, water and space availability. Predators do not substantially regulate wild horses in the Dry Lake HMA. In addition, wild horses are a long-lived species with documented survival rates exceeding 92% for all age classes. The no action alternative would result in a steady increase in numbers, which would exceed the carrying capacity of the range.

The population of wild horses would compete for the available water and forage resources. The mares and colts would be affected most severely. The areas closest to the water would experience severe utilization and degradation. Over the course of time, the animals would deteriorate in condition as a result of declining forage availability and the increasing distance traveled to forage. Many horses would likely die through the winter if average snowfall levels are received, especially foals and mares. The health of the wild horse herd population would be reduced, the condition of the range would deteriorate, and other range users would be impacted. Further, heavy forage use would degrade rangeland resources. Rangeland in poor condition provides less forage, and is susceptible to invasion by non-native weeds. Soil health and future productivity of the rangeland would decline.

This alternative is not acceptable to the Bureau nor most members of the public. The Bureau realizes that some members of the public advocate "letting nature take its course", however allowing wild horses to die of dehydration and starvation would be inhumane treatment and would clearly indicate overpopulation of wild horses exists in the HMA. The Wild Free-Roaming Horse and Burro Act of 1971 mandates the Bureau to "prevent the range from deterioration associated with overpopulation", and "remove excess horses in order to preserve and maintain a thriving natural ecological balance and multiple use relationships in that area". Additionally, Promulgated Federal Regulations at Title 43 CFR 4700.0-6 (a) state "Wild horses shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat (emphasis added)."

The No Action alternative would not comply with the Mojave-Southern Great Basin RAC Standards and Guidelines for Rangeland Health and Healthy Wild Horse and Burro Populations, which require that "Wild horses and burros exhibit characteristics of a healthy, productive, and diverse population. Age structure and sex ratios are appropriate to maintain the long-term viability of the population as a distinct group. Herd management areas are able to provide suitable feed, water, cover and living space for wild horses and burros and maintain historic patterns of habitat use".

The No Action Alternative would violate the Wild Free Roaming Horse and Burro Act, Federal Regulations, BLM Policy and Resource Advisory Council Standards and Guidelines.

## F. Summary of Compared Alternatives

Table Two shows a summary of the proposed action and alternatives.

**Table II. Comparison of Alternatives**

Alternative	Capture Wild Horses	Remove Wild Horses	Release Wild Horses	Data Collection	Fertility Control	Fertility Control Mares Treated
<b>Proposed Action</b>	377	321	56	Yes	No	0
<b>Alternative I</b>	377	321	56	Yes	Yes	28
<b>Alternative II</b>	377	283	94	Yes	No	0
<b>Alternative III</b>	321	321	0	Yes	No	0
<b>No Action Alternative</b>	0	0	0	No	No	0

## III. Description of The Affected Environment

### A. Dry Lake Herd Management Area

The Dry Lake HMA is located in northern Lincoln County, approximately 10 miles northwest of Pioche, Nevada. The HMA is approximately 494,000 acres in size, and contains portions of the

Bristol, Fairview, and Schell Creek Ranges. Valleys include Muleshoe Valley, Dry Lake Valley, and a portion of Cave Valley. Elevations range from 5,200 feet to 8,900 feet. The dominant vegetation communities within the HMA are typical of the Great Basin and include Wyoming big sagebrush/grass, black sagebrush/grass, salt desert shrub (winterfat/shadscale), cliffrose/mountain brush, and pinyon/juniper, and a limited amount of fir. These communities have perennial grass species such as bottlebrush squirreltail, Indian ricegrass, bluegrasses, galleta grass, and three-awn in the understory. Permanent water sources primarily consist of springs, which are located in the foothills away from the valley bottoms, and reservoirs in the valley bottoms. The HMA area provides yearlong habitat for pronghorns, mule deer and Rocky Mountain elk. Mule deer and elk that reside in habitats to the north of the HMA also migrate into the area to winter. The north one-quarter of the HMA provides yearlong habitat for the sage grouse, a state of Nevada and BLM sensitive species. The United States Fish and Wildlife Service (USFWS) has received seven petitions to list the sage grouse as a threatened or endangered species across its range in North America. Localized populations of chukar partridge and gambel's quail are present attendant to perennial water sources. The pygmy rabbit possibly resides within the HMA boundaries. No surveys have been conducted to determine their status in the area. The pygmy rabbit was petitioned to the USFWS in the spring of 2003 to list the species range wide as a threatened or endangered across its range in North America because of dramatic declines in population in portions of its range. Passerine birds, amphibians, reptiles and small mammals common to the Great Basin environments can also be found in the area. There are no known threatened or endangered plant or animal species, or their habitats within the project area.

Dry Lake HMA includes portions of the Wilson Creek, Geyser Ranch, Sunnyside, and Fox Mountain livestock grazing allotments (Figure 2). The portion of the Wilson Creek Allotment that lies within the HMA has mainly cattle and sheep winter permitted use. Exceptions to winter use include permitted sheep spring use in the Muleshoe use area, and a sheep fall and spring trail permit through the allotment. The Geyser Ranch Allotment portion within the HMA has permitted winter cattle use and a spring sheep trail permit. The Fox Mountain Allotment portion within the HMA has permitted winter sheep use. The portion of the Sunnyside Allotment that is within the HMA has summer and fall permitted cattle use.

A small portion of the Far South Egans Wilderness Study Area (WSA) lies within the extreme northern tip of the HMA. The southwestern HMA boundary is adjacent to the Weepah Spring WSA, but separated by State Route 318. There are three WSAs (i.e., Fortification Range, Parsnip Peak, and Table Mountain) to the east of the HMA. These WSAs are separated from the HMA by U.S. Highway 93 (Figure 3).

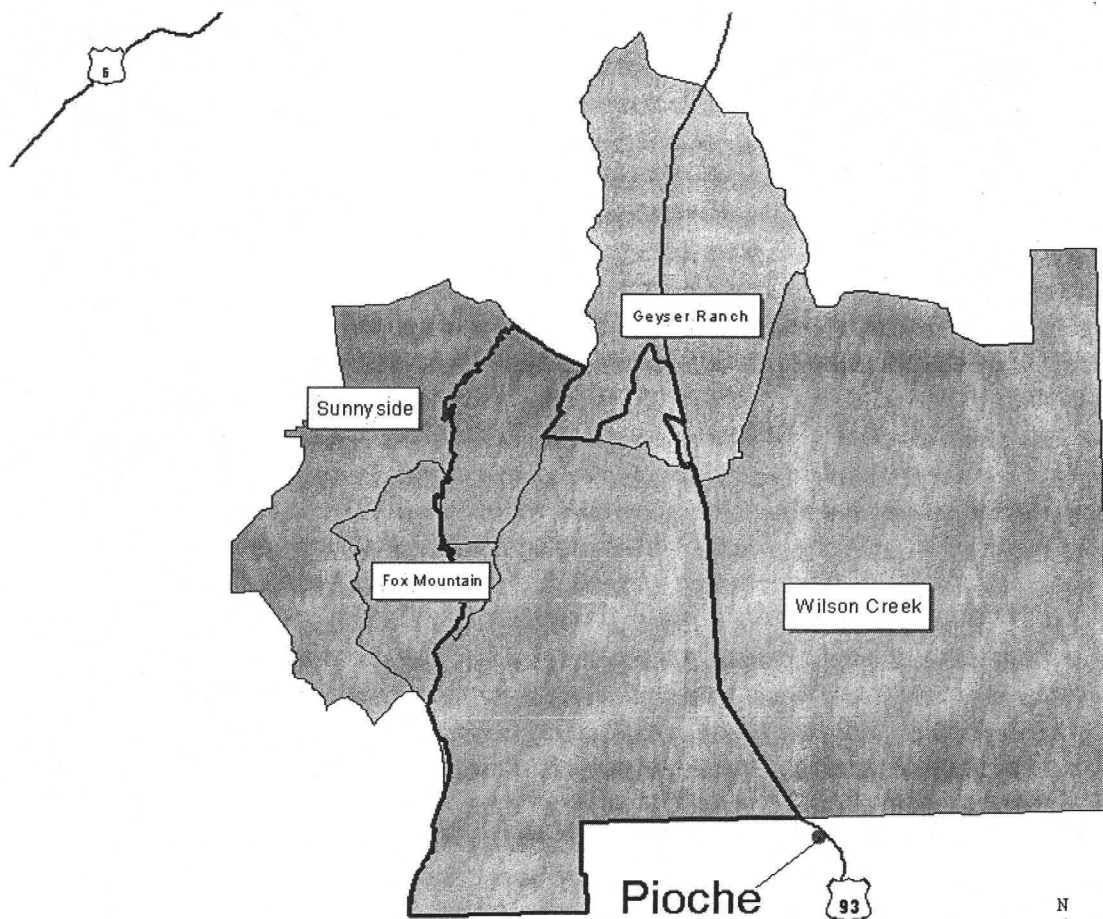
## **B. Wild Horses**

Currently the estimated wild horse population in the HMA is 377 animals. The Appropriate Management Level (AML) is 94 horses or less.

The Dry Lake HMA has undergone two removals since passage of the Wild and Free Roaming Horse and Burro Act. The 1993 removal incorporated several of the removal strategies identified



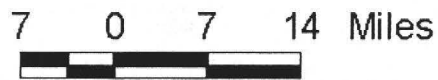
### Figure 2. Allotments within Dry Lake HMA



### Legend

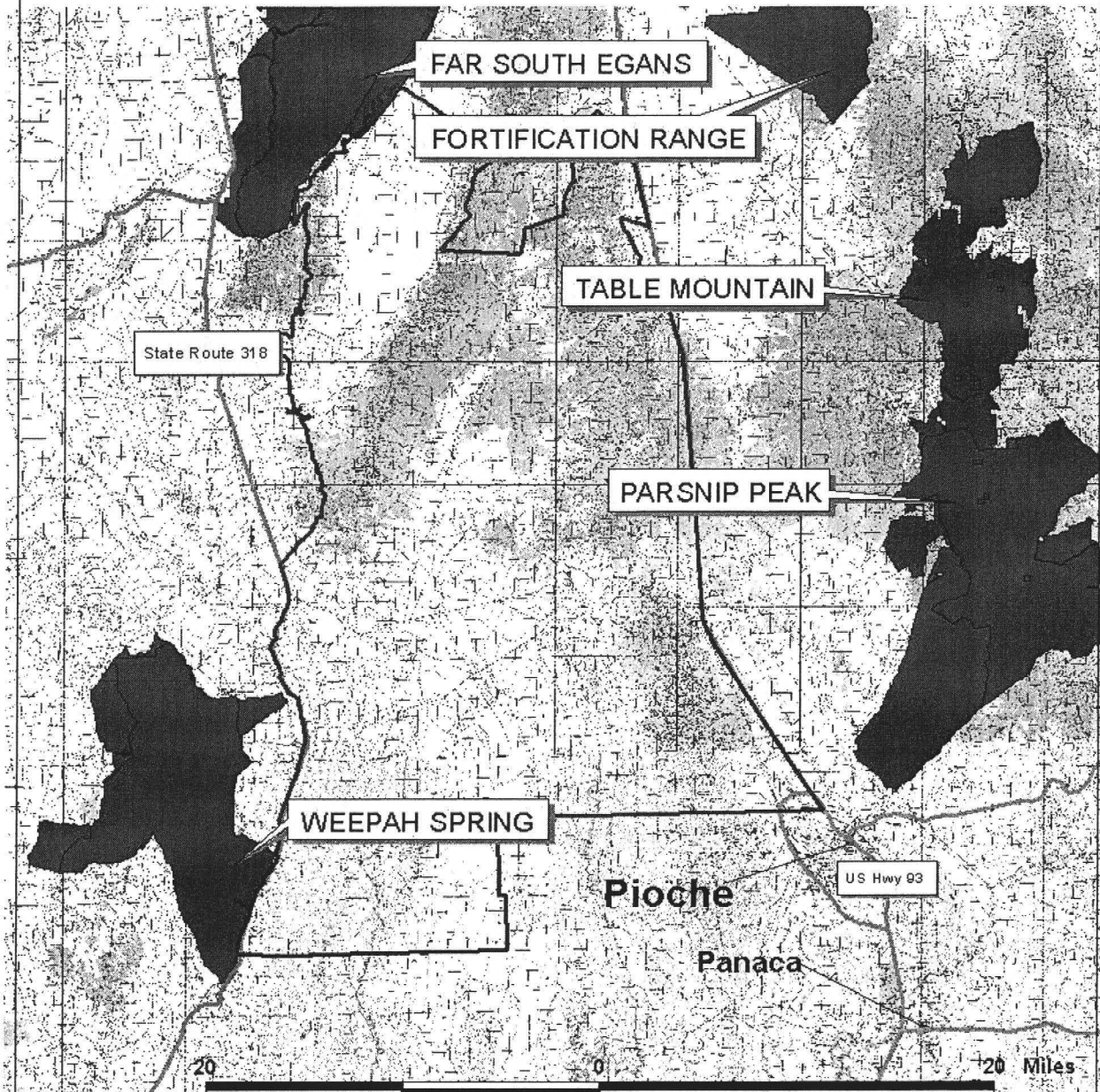
- Dry Lake HMA Boundary
- Highways
- Wilson Creek Allotment
- Sunnyside Ranch Allotment
- Fox Mountain Allotment
- Geysers Ranch Allotment
- Cities

Pioche  
Panaca



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# Figure 3. Wilderness Study Areas near Dry Lake HMA



**Legend**

- Cities
- Dry Lake HMA
- ▬ Roads
- Wilderness Study Areas

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in the proposed action and alternatives. The 1996 gather was a partial emergency removal because of drought closure in the Dry Lake Use Area (Table III).

**Table III. Previous Gathers**

Date of Gather	Number of horses removed
August, 1993	232
Sept., 1996	220

Sex ratios for wild horses within the Dry Lake HMA are representative of other HMAs in the Ely District 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 studs.

Past capture data was used to determine animal colors and approximate percentage of frequency within the herd. The majority of horses exhibit bay (24%), sorrel (20%), black (18%), brown (14%), gray (7%), blue roan (4%), red roan (4%), palomino (3%), buckskin (2%), grulla (1%), and dun (1%).

#### **IV. Environmental Consequences (Proposed Action & Alternatives)**

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, environmental justice, prime or unique farmland, floodplains, Native American religious concerns, migratory birds, water quality, hazardous and solid wastes, wetland areas, or wild and scenic rivers.

#### **Wild Horses**

**Proposed Action** - Impacts to wild horses under the Proposed Action may occur to either the individual animals or the population as a whole. These impacts include: handling stress associated with the gather, capture, processing, and transportation of animals. The intensity of these impacts varies by individual and is indicated by behaviors ranging from nervous agitation to physical distress. Mortality to individuals from this impact is infrequent but does occur in one half to one percent of horses gathered in a given gather.

Impacts, which can occur to horses after the initial stress event, may include spontaneous abortions in mares, increased social displacement, and increased 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 biting and/or kicking bruises, which don't break the skin. The frequency of occurrence of these impacts among a population varies with the individual. The occurrence of 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 displacement of horse 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, re-establishment of bands following releases, and the removal of animals from the population. With the 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. 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. No observable effects associated with the gather impacts would be expected within one month of release except a heightened shyness toward human contact.

The effect of removal of horses 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. Potential impacts to the horse population from exercising poor selection criteria that is not based on herd dynamics include modification of age and/or sex ratios to favor a particular class of animal.

The proposed action would mitigate the potential adverse impacts on wild horse populations by establishing a procedure for determining what selective removal criteria is warranted for the herd. This flexible procedure (Appendix I SOPs) 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. Impacts involve increasing herd health as the AML is achieved, and potential genetic issues regarding controlling contributions of mares to the gene pool, especially in small populations.

Population modeling was completed for the proposed action running 100 trials in order to determine future herd demographics and population growth. Modeling indicates that the average (median) growth rate of the herd should be 15% over four years (or until the next gather). The modeling indicated that the wild horse herd average population would number 105 wild horses. The lowest average population was 76 wild horses and the highest average population was 121 wild horses. Refer to Appendix II for population modeling summary graphs.

Under the Proposed Action, the wild horse population in the Dry Lake HMA would be reduced to 56 animals. The implementation of the Proposed Action would prevent the population from increasing beyond AML during the next three years. The next gather, which would be scheduled in approximately four years, would reduce horse numbers the year that they exceed the maximum AML. This would ensure a healthy, vigorous, and viable breeding population, reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Free

Roaming Horse and Burro Act, Resource Advisory Council Standards and Guidelines, and land use plan management objectives. The above impacts are likely to occur, but to fewer animals in the long term because less horses would need to be gathered, and less frequently. Removing wild horses to 56 head would result in the HMA maintaining a "natural thriving ecological balance" for a period of four years. Risks to the health of the rangelands by exceeding the carrying capacity of the range, and risks to the health of the horse herds would be minimized. Horses would not be at risk of death by starvation and lack of water due to unpredictable weather patterns. Fighting among stud horses would decrease as they less frequently protect their position at scarce water sources, as well as injuries and death to all age classes of animals. As populations are allowed to increase to the capacity of the habitat, bands of horses would be less likely to leave the boundaries of the HMA seeking forage and water, which in turn may put them at risk in new and unfamiliar country.

**Alternative I** - Alternative I would have the same impacts as the proposed action at the time of the gather, as well as reducing the short-term fecundity of initially a large percentage of mares in a population.

Each mare to be released would receive a single-dose of the two-year PZP contraceptive vaccine. When injected, PZP (antigen) causes the mare's immune system to produce antibodies and these antibodies bind to the mare's own eggs, and effectively block sperm binding and fertilization (ZooMontana, 2000). PZP is relatively inexpensive, meets BLM requirements for safety to mares and the environment, and can easily be administered in the field. Also, among mares, PZP contraception appears to be completely reversible, and to have no ill effects on ovarian function if the mare is not contracepted for more than 3 consecutive years.

This one-shot application, applied at the capture site, will not affect normal development of the unborn fetus, hormone health of the mare or behavioral responses to stallions, should the mare already be pregnant when vaccinated (Kirkpatrick, 1995). The vaccine was also proven to have no apparent effects on pregnancies in progress, the health of offspring, or the behavior of treated mares (Turner, 1997). The PZP two-year vaccine has proven 90% effectiveness for 18 to 22 months. If mares are inoculated during the winter months, the vaccine would prevent two years of conception and foaling. In the case of the Dry Lake HMA, only one year of effectiveness is expected because the mares would be inoculated during summer months, rendering the drug nearly ineffective the second year (2005). According to current research of the drug, up to 90% of the mares treated would not foal in the year 2005. The potential one-year reprieve from foaling would greatly increase overall health and fitness of the mares, as well as the health of the foals born in 2006 and thereafter. The increased health and condition of the mares would lead to more mares than usual being bred in 2005, and a greater foaling rate in 2006. This is evidenced in the population modeling by the average population at the end of four years being greater with fertility control than without it (Appendix 2).

Mares receiving the inoculation would experience slightly increased stress levels from increased handling while being inoculated and freeze branded. There would be additional impacts to animals at the isolated injection site following the administration of the fertility control vaccine. Injection site injury associated with fertility control treatments is extremely rare in treated mares,

and may be related to experience of the administrator. The injection would be controlled, handled and administered by a trained BLM employee, researcher or veterinarian. Any direct impacts associated with fertility control are expected to be minor in nature and of short duration. The mares would quickly recover once released back to the HMA.

The use of fertility control under Alternative I is not expected to have any long-term significant direct, or indirect impacts to the Dry Lake HMA genetic health, long-term viability or future reproductive success of mares within the herd. Implementation of fertility control is expected to improve the health of the mares within the HMA, and improving the health of the foals born to those mares in the future. Improved condition of the mares and foals would aid in the long-term health and viability of the Dry Lake HMA wild horse population. Reduced growth rates that would occur with the implementation of fertility control would influence herd size at any one point in time, reducing competition for resources and utilization levels of those resources. Reduced growth rates would increase the interval between gathers, having overall beneficial impacts to the entire wild horse population, while contributing to the achievement and maintenance of a thriving natural ecological balance.

Modeling indicates that the average (median) growth rate of the herd should be 12% over four years (or until the next gather). The modeling indicated that the wild horse herd average population would number 116 wild horses. The lowest average population was 72 wild horses and the highest average population was 167 wild horses (Appendix II).

The range of average growth rates and average population sizes are reasonable and do not indicate that implementation of fertility control under Alternative I would result in growth rates or minimum population size that are so low as to put the population at risk of catastrophic loss or "crash".

**Alternative II** - Under this alternative, only enough horses would be removed in order to achieve the established AML for the Dry Lake HMA. This would result in the HMA being over AML by the first foaling season, which would be in the spring of 2004. The wild horse population would increase annually, in excess of the upper limit of AML until the next gather, which would be scheduled in approximately four years. Consequences of exceeding the established AML would be to surpass the carrying capacity of the range, risk the health of the rangelands, and risk the health of the horse herds. Horses would be at risk of death by starvation and lack of water. Fighting among stud horses would increase as they protect their position at scarce water sources, as well as injuries and death to all age classes of animals. As populations increase beyond the capacity of the habitat, bands of horses may leave the boundaries of the HMA seeking forage and water, which in turn may put them at risk in new and unfamiliar country. Population modeling has indicated that under this alternative the average growth rate of the herd in the next four years would be nearly 16% annually, the average population size would be 153 wild horses. Further, the lowest average population size would be 117 wild horses annually. This indicates that AML and a "thriving natural ecological balance" would be achieved only at the time of the gather (Appendix II).

**Alternative III** - Alternative III would have the same impacts as the Proposed Action in the short-term and long-term, except that the remaining population of horses may be different than that under the Proposed Action. The horse population remaining after the gather may have a different age class and/or sex ratio because captured horses would not be sorted, and the Selective Removal Criteria would not be implemented.

Population Modeling of this alternative indicated that the average (median) population would be 108 wild horses with a average growth rate of 16%. Modeling indicates that under this alternative AML would not be exceeded within the next three years and a “thriving natural ecological balance” would be attained.

**No Action Alternative** - Under this alternative, wild horses would not be removed from the Dry Lake HMA. The horses would not be subject to any individual direct or indirect impacts described in the Proposed Action as a result of a gather operation. However, allowing horse numbers to increase unchecked would have several negative consequences to the animals, including starvation, dehydration, and social stress. Population modeling indicates if the current horse population continues to grow without a removal the average population size would be 531 wild horses and possibly as high as 772 wild horses. The extreme lowest population after one hundred trials was 358 wild horses. Modeling indicates the average growth rate is expected to be a 13% annual increase.

### **Vegetation, Soil, and Water**

**Proposed Action** – Implementation of the Proposed Action would reduce the wild horse population. It would prevent the population from increasing beyond AML during the next three years. The next gather, which would be scheduled in approximately four years, would occur as soon as horse numbers exceeded AML. This would ensure a vigorous and healthy breeding wild horse population, reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Free Roaming Horse and Burro Act, Resource Advisory Council Standards and Guidelines, and land use plan management objectives. Foaling rates would not be altered through fertility control. The wild horse population would increase annually until the next gather, which would be scheduled in approximately four years. Vegetative resources, including riparian areas, would recover with the reduced population.

The Proposed Action would lessen the impact of hoof action on the soil around unimproved springs and stream banks, which should lead to increased 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 could include disturbance of native vegetation immediately in and around temporary trap sites, and holding and processing facilities. Impacts could be by vehicle traffic, and hoof action of penned horses, and could 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 would be 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 that were previously disturbed. By adhering to the SOPs, adverse impacts to soils would be minimized.

**Alternative I** - Impacts to resources at the time of the gather would be the same as in the Proposed Action. Implementation of this alternative would reduce the wild horse population, which would help to promote and maintain a thriving natural ecological balance for a period of approximately four years. Treating mares with fertility control could slow the median population growth rate. However, population modeling indicates that the potential for higher wild horse population recruitment with fertility control does exist. Vegetative recovery is expected to occur under this alternative, but there is the potential for greater impacts prior to the next gather cycle due to the possibility of higher wild horse populations.

**Alternative II** - Impacts to resources at the time of the gather would be the same as in the Proposed Action. Implementation of this alternative would reduce the wild horse population to AML. However, horse numbers would again exceed AML by the first foaling season, which would be in the spring of 2004. All mares would continue to foal at normal rates. The wild horse population would increase annually in excess of the AML until the next gather, which would be scheduled in approximately four years. Any recovery of vegetative resources, including riparian areas, would be negligible as the horse population could be twice the AML within four years.

**Alternative III** - Impacts to resources at the time of the gather, and in the years following the gather, would be the same as in the proposed action. Alternative III would reduce the wild horse population, 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.

**No Action Alternative** - The severe localized trampling associated with trap sites would not occur, however, as wild horse populations continue to grow, soil erosion would increase. Increased horse use throughout the HMA would adversely impact soils and vegetation health, especially around the water locations. As native plant health deteriorates and plants are lost, soil erosion would increase. The shallow soils typical of this region cannot tolerate much loss without losing productivity and thus the ability to be re-vegetated with native plants. Invasive, non-native plant species would increase and invade new areas following increased soil disturbance and reduced native plant vigor and abundance. This would lead to both a shift in plant composition towards weedy species and an irreplaceable loss of topsoil and productivity from erosion.

## **Wildlife**

**Proposed Action** - The implementation of the Proposed Action would result in reduced competition with wildlife as soon as the gather is completed. Temporary impacts during the gather could be displacement of big game and non-game mammals, but they would return

eventually. This displacement would be due to the noise of the helicopter and increased traffic. These disturbances could occur during the capture period. The Proposed Action would reduce horse numbers to promote and maintain a thriving ecological balance for a period of four years. This would result in an increase in forage availability and quality, improved habitat conditions, and reduced competition for available forage and water resources. There would be reduced disturbance associated with wild horses along stream bank riparian habitat and adjacent upland habitat.

**Alternative I-** This alternative would have the same impacts as the proposed action. Alternative I would implement the use of immunocontraception in the Dry Lake HMA, which would help to promote and maintain a thriving natural ecological balance for a period of approximately four years.

**Alternative II -** Impacts to wildlife at the time of the gather would be the same as in the proposed action. Alternative II would reduce the wild horse population to AML. Wild horses would exceed the established AML by the first foaling season, which would be in the spring of 2004. Any recovery to vegetative resources and wildlife habitat would be negligible as the horse population could be twice the identified AML within four years. AMLs are established based on the carrying capacity of the range to sustain herbivory by multiple species of animals. If the AML is exceeded, the range would be overstocked, and a "natural thriving ecological balance" would not be attained.

**Alternative III -** This alternative would have the same impacts as the proposed action during the time of the gather, and in overall response by wildlife and their habitat.

**No Action Alternative -** Wildlife would not be displaced or disturbed under the no action alternative, however, there would be continued competition with wild horses for water and forage resources. Wild horses are aggressive around water sources, and some wildlife species may not be able to compete. The continued competition for resources may lead to increased stress and possible dislocation or death of native wildlife species.

## **Livestock**

**Proposed Action-** Impacts to livestock operations within the project area due to normal gather activities could have localized effects in certain areas. Minimal effects to livestock due to gather operations would occur because livestock would not be in a majority of the HMA during the gather. The only area where livestock would probably be actively grazing during the time of the gather is in the Cave Valley area of the Sunnyside Allotment. All other portions of the HMA have winter livestock use. Livestock located near gather activities would be disturbed by the helicopter and the increased vehicle traffic during the gather operation. This displacement would be temporary; and the livestock would move back into the area once gather operations moved. A reduction to 56 wild horses would result in an increase in forage availability and quality, improved habitat condition, and reduced competition between livestock and wild horses for available forage and water resources within the next four years.

**Alternative I-** This alternative would have the same impacts as the Proposed Action.

**Alternative II-** Alternative II would have the same impacts as the Proposed Action at the time of the gather. Most of the impacts would be associated with disturbance caused by helicopter activities and increased vehicle activity within the gather area. With reducing only to 94 wild horses, wild horses would exceed the established AML by the first foaling season, which would be in the spring of 2004. Any recovery to vegetative resources would be negligible as the horse population could be twice the identified AML within four years. AML has been established based on the carrying capacity of the range to sustain grazing by multiple species of animals. If AML is exceeded, the range would be overstocked by fall 2004 and a "natural thriving ecological balance" would not be attained.

**Alternative III-** Alternative III would have the same impacts as the Proposed Action during and after the gather.

**No Action Alternative -** Livestock would not be displaced or disturbed under the No Action Alternative, however, there would be continued competition with wild horses for water and forage resources. Livestock operations may be impacted as wild horse numbers continue to climb and the range becomes unable to support both wild horses and livestock.

## **Wilderness**

**Proposed Action-** No impacts to wilderness values are anticipated to occur during the gather since all trap sites and holding facilities would be placed outside Wilderness Study Areas. Wilderness values after the gather would be positively affected by a reduction in wild horse numbers as a result of an improved ecological condition of the plant communities and other natural resources. Under the Proposed Action, wilderness values would be positively affected for four years by a reduction in wild horse numbers, as a result of an improved ecological condition of the plant communities and other natural resources.

**Alternative I-** Alternative I would have the same impacts as the Proposed Action.

**Alternative II-** Wilderness values would be positively affected by implementation of this alternative 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. However, the effects of the horse reduction would last only until the next foaling season. At this time a "natural thriving ecological balance" would not be attained.

**Alternative III-** This alternative would have the same impacts as the Proposed Action during the time of the gather, and similar results in overall response by plant communities and related wilderness values.

**No Action Alternative -** No impacts to wilderness due to gather operations would occur. Impacts to wilderness values would continue to occur through the continued degradation of



vegetative and soil resources by high numbers of wild horses. To some, the sight of heavy horse trails, trampled vegetation and areas of high erosion detract from the wilderness experience.

### **Noxious Weeds and Invasive Non-Native Species**

**Proposed Action** - The proposed gather may spread existing noxious weed species. This could occur if vehicles drive through infestations and spread seed into previously weed-free areas. The contractor together with the contracting officer's representative or project inspector (COR/PI) would examine proposed trap sites and holding corrals prior to construction. If noxious weeds were found, the location of the facilities would be moved. However, with the reduction in horse numbers, and the subsequent recovery of the native vegetation, fewer disturbed sites would be available for non-native plant species to invade.

**Alternative I-** Impacts would be the same as the Proposed Action.

**Alternative II-** Impacts would be the same as the Proposed Action at the time of the gather. Horse numbers would exceed AML by the first foaling season, and recovery of vegetative resources would be negligible. Greater horse numbers could lead to increased soil disturbance, allowing for noxious weeds and invasive non-native species to spread.

**Alternative III-** Impacts would be the same as the Proposed Action.

**No Action Alternative** - Under this alternative, the wild horse gather would not take place. The likelihood of noxious weeds being spread by gather operations would not exist. However, overgrazing of the present plant communities could lead to an expansion of noxious weeds and invasive non-native species.

### **Cultural Resources**

**Proposed Action** - No impacts to cultural resources are anticipated to occur since all trap sites and holding facilities would be inventoried for cultural resources prior to construction. An archaeologist or a District Archeological Technician (DAT) would review all proposed and previously used trap sites and facility locations to determine if these sites have had a cultural resources inventory, and/or if a new inventory is required. If cultural resources are encountered at proposed trap site(s) or holding facility location(s), those location(s) would not be utilized unless it could be modified to avoid impacts to cultural resources.

**Alternative I-** The impacts would be the same as the Proposed Action.

**Alternative II-** Impacts at the time of the gather would be the same as in the Proposed Action. However, with horses exceeding AML within a year, high numbers of wild horses could cause damage to cultural resources due to trampling, especially around water sources, where the occurrence of cultural resources is often high.

**Alternative III-** Impacts would be the same as the Proposed Action.

**No Action Alternative** - Under this alternative, the wild horse gather would not take place and therefore, no trap sites or holding facilities would be constructed. There would be no possibility that cultural resources would be damaged as a result of horse gather operations, however, high numbers of wild horses could cause damage to cultural resources due to trampling, especially around water sources, where the occurrence of cultural resources is often high.

### **Cumulative Impacts**

Cumulative impacts are impacts on the environment that 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 would reduce the wild horse population in the Dry Lake HMA. This would help to achieve a thriving natural ecological balance. An increase in vegetation density, vigor, reproduction, productivity, and forage availability would result, and be maintained until the next gather. Adverse impacts to vegetation with implementation of the proposed action 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 previously disturbed areas. 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 Dry Lake HMA.

These impacts would be expected to be marked by changes occurring slowly over time. The Ely Field Office 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, etc.). 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.

### **Mitigation Measures**

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

### **Suggested Monitoring**

Weed detection would be incorporated into normal monitoring activities. Horses released back into the Dry Lake HMA after being captured will be monitored to ensure they return to normal use patterns, as well as detection of horses living outside HMA boundaries.

### **Consultation and Coordination**

#### **Intensity of Public Interest and Record of Contacts**

There are many individuals and groups who are interested in the management of wild horses on public lands, including wild horse gathers. This Preliminary EA will be mailed to the following list of people:

American Horse Protection Association  
American Mustang and Burro Association  
Animal Protection Institute of America  
Board of County Commissioners, Lincoln County  
Mr. Paul C. Clifford Jr.  
Comm. for the Preservation of Wild Horses  
Ms. Sharon Crook  
Mr. Craig C. Downer  
Colorado Wild Horse and Burro Coalition  
Mr. Steven Fulstone  
Intl. Society for the Protection of Mustangs and Burros  
Wild Horse Sanctuary  
The Fund for Animals, Inc.  
Donald A. Molde, M.D.  
National Mustang Association, Inc.  
National Wild Horse Association  
Nevada Cattlemen's Association  
Nevada Division of Wildlife, Las Vegas  
Nevada Division of Wildlife, Mike Scott  
Nevada Farm Bureau Federation  
Nevada Outdoor Recreation Association

Nevada State Department of Agriculture  
Nevada Wool Growers Association  
Board of County Commissioners, Nye County  
Wild Horse Spirit  
Rutgers School of Law-Newark, Animal Rights Law Center  
Toiyabe Chapter of the Sierra Club  
U. S. Fish and Wildlife Service, Bob Hallock  
The Humane Society of the United States  
Nevada State Clearinghouse, Wild Horse Commission  
Wild Horse Organized Assistance  
Tribal Manager, Duckwater Tribal Council  
Roberta Moore  
Ms. Tina Nappe  
Save the Mustangs  
Eastern Nevada Landscape Coalition  
Nevada Division of Wildlife, Teri Slatauski  
8-Mile Ranch  
Blue Diamond Oil Corporation  
Bulloch Brothers  
Frank & Rose Delmue  
El Tejon Cattle Co.  
Carlisle Hulet  
Bruce & Pamela Jensen  
Lake Valley Cattle LLC  
Paul C. Lewis  
Gordon Lytle  
Ken & Donna Lytle  
Linda J. Lytle  
Pearson Brothers  
Department of Agriculture  
George I. Andrus  
Carter Cattle Company  
Committee for the High Desert  
Steve Foree  
Melvin Gardner  
Shelley Hartmann  
Dan Heinz  
Lincoln County Commission  
John McLain, Principal  
Jon Marvel  
USFWS, Southern Nevada Field Office  
Jule Wadsworth

**Internal District Review**

Jody Nartz

Jared Bybee

Karen Prentice

Jack Tribble

Carolyn Sherve-Bybee

Mike Perkins

Chris Hanefeld

Jake Rajala

Elvis Wall

Wild Horses/Author

Wild Horses

Invasive, Non-Native Species

Wilderness Values

Archeological/Historic/Paleontological

Migratory Birds, Special Status Species

Public Affairs

Environmental Coordination

Native American Religious Concerns/Tribal Coordination

## **APPENDIX I**

### **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 as prada (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.

**B. BLM Conducted Gather - 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.
  - b. A cultural resources investigation by an archaeologist or an archaeological technician would be conducted prior to trap or holding facility construction. If cultural values are found, an alternative site would be selected.
  - c. Prior to facility (temporary traps and holding corrals) construction, the proposed locations would be examined for the presence of noxious weeds. If it is determined that noxious weeds are present, the contractor would be instructed to locate the facilities elsewhere. The contractor and his personnel would also be instructed to avoid camping in or driving through noxious weed infestations.
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.
  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 score 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 tractor-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);  
6 sq. ft. per horse foal (.75 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 informed 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.
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 wild horses or burros 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**

**Ely District**

**Contracting Officer's Representatives**

Jared Bybee

**Project Inspectors**

Mike Perkins

Jody Nartz

Jared Redington

The Contracting Officer's Representatives (CORs) and the project inspectors (PIs) have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. The Ely Assistant Field Manager for Renewable Resources and the Ely 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.

**APPENDIX II  
POPULATION MODELING**

Population modeling was completed for the proposed action and the alternatives. One hundred trials were ran, simulating population growth and herd demographics to determine the projected herd structure for the next four years, or prior to the next gather. The computer program used simulates the population dynamics of wild horses. It was written by Dr. Stephen H. Jenkins, Department of Biology, University of Nevada, Reno, under a contract from the National Wild Horse and Burro Program of the Bureau of Land Management and is designed for use in comparing various management strategies for wild horses.

**Comparison of Population Modeling For the Alternatives**

This table compares the projected population growth for the proposed action and the alternatives at the end of the four-year simulation.

<b>Modeling Statistic</b>	<b>Proposed Action</b>	<b>Alt. I</b>	<b>Alt. II</b>	<b>Alt. III</b>	<b>Alt. IV</b>
<b>Median Growth Rate</b>	15%	12%	16%	16%	13%
<b>Average Population</b>	105	116	153	108	531
<b>Lowest Average Population</b>	76	72	117	89	358
<b>Highest Average Population</b>	121	167	191	126	772

**Full Modeling Summaries:**

**Proposed Action: Removal to 56 without Fertility Control**

The parameters for the population modeling were:

1. gather when population exceeds 94 animals
2. foals are not included in AML
3. percent to gather 100
4. four years between gathers
5. number of trials 100
6. number of years 4
7. initial calendar year 2003
8. initial population size 377
9. population size after gather 56
10. implement selective removal criteria
11. no fertility control

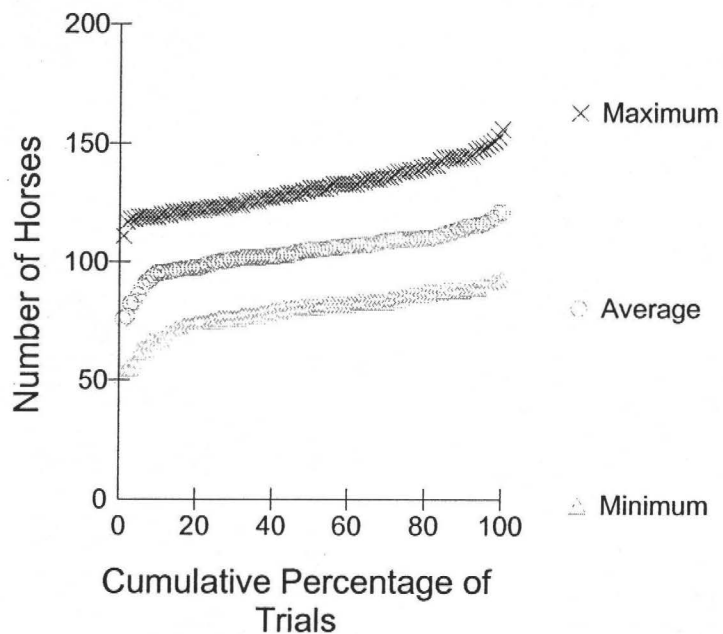
**Population Size Modeling**

	<b>Population Sizes in 5 Years*</b>		
	<b>Minimum</b>	<b>Average</b>	<b>Maximum</b>
<b>Lowest Trial</b>	52	76	111
<b>10th Percentile</b>	67	95	120
<b>25th Percentile</b>	76	100	123

Median Trial	81	105	131
75th Percentile	86	110	138
90th Percentile	88	115	145
Highest Trial	93	121	156

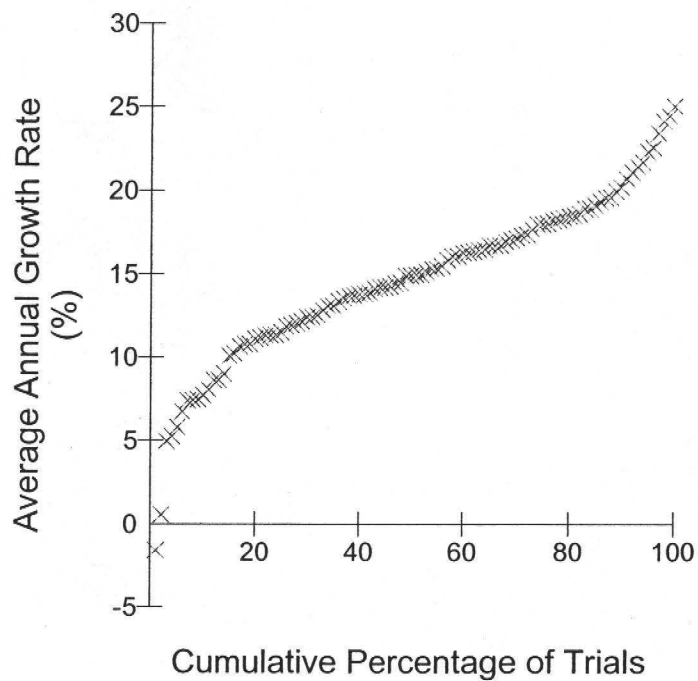
\* 0 to 20+ year-old horses

### 0 to 20+ year-old horses



### Growth Rate Modeling

Average Growth Rate in 4 Years	
Lowest Trial	-1.6
10th Percentile	7.9
25th Percentile	11.7
Median Trial	14.9
75th Percentile	18.0
90th Percentile	20.5
Highest Trial	25.0



**Alternative I: Removal to 56 With Fertility Control**

The parameters for the population modeling were:

- 1-10. same as proposed action
- 11. treat all mares released with fertility control

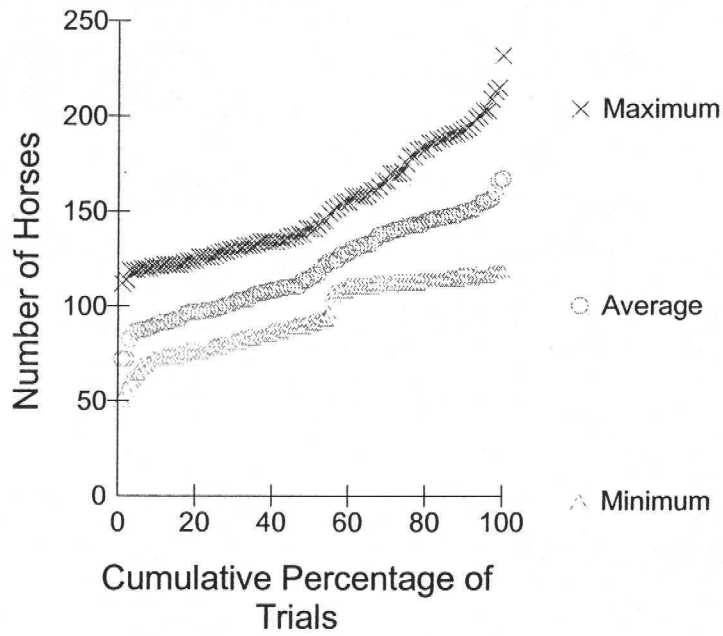
Population Size Modeling

	Population Sizes in 5 Years*		
	Minimum	Average	Maximum
Lowest Trial	51	72	112
10th Percentile	73	91	121
25th Percentile	79	99	128
Median Trial	92	116	141
75th Percentile	113	143	177
90th Percentile	116	150	194
Highest Trial	118	167	232

\* 0 to 20+ year-old horses

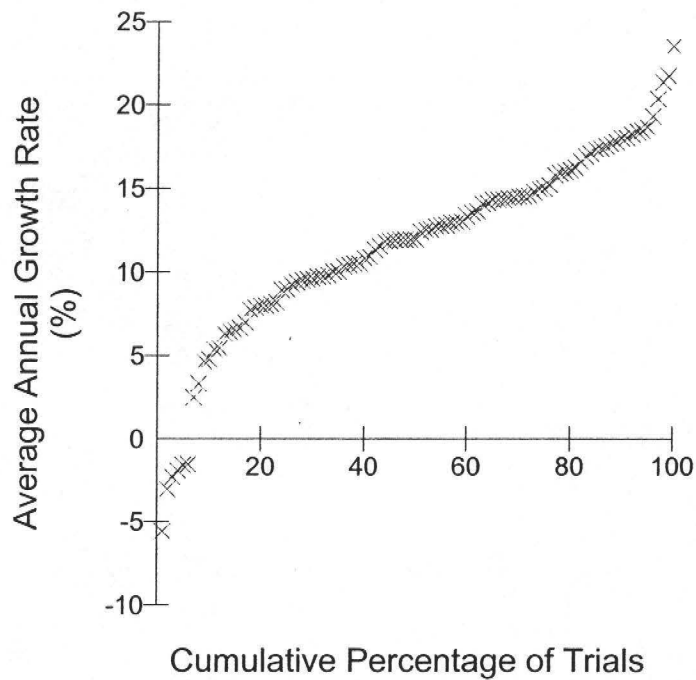


## 0 to 20+ year-old horses



### Growth Rate Modeling

Average Growth Rate in 4 Years	
Lowest Trial	-5.6
10th Percentile	5.1
25th Percentile	9.1
Median Trial	12.2
75th Percentile	15.1
90th Percentile	18.0
Highest Trial	23.5



**Alternative II: Removal to 94 Without Fertility Control**

The parameters for the population modeling were:

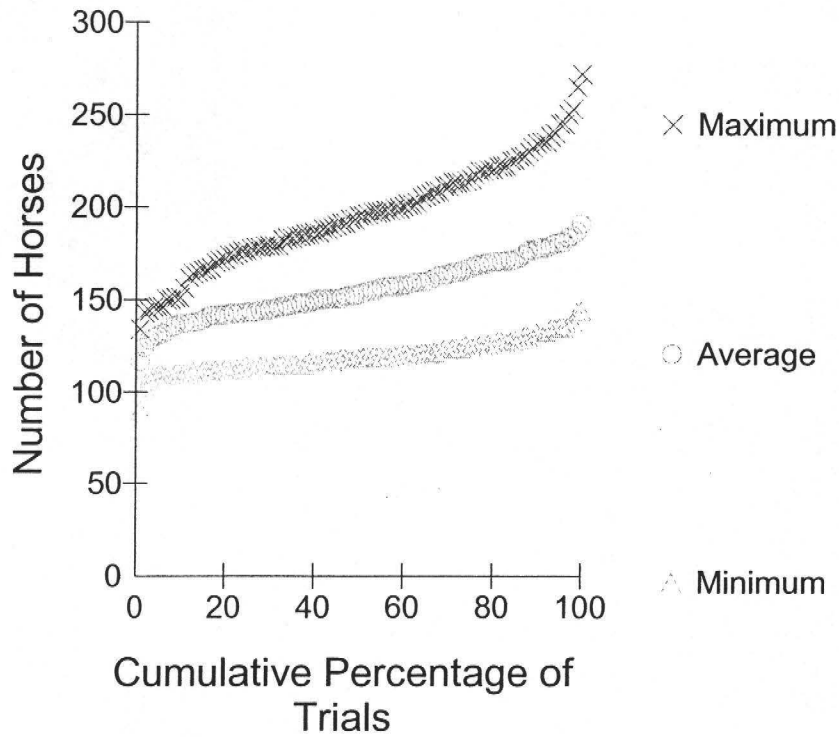
- 1-8. same as in Proposed Action
- 9. population size after gather 94
- 10-11. same as in Proposed Action

Population Size Modeling

	Population Sizes in 5 Years*		
	Minimum	Average	Maximum
Lowest Trial	90	117	134
10th Percentile	110	137	154
25th Percentile	114	143	176
Median Trial	118	153	195
75th Percentile	125	168	216
90th Percentile	132	178	234
Highest Trial	144	191	272

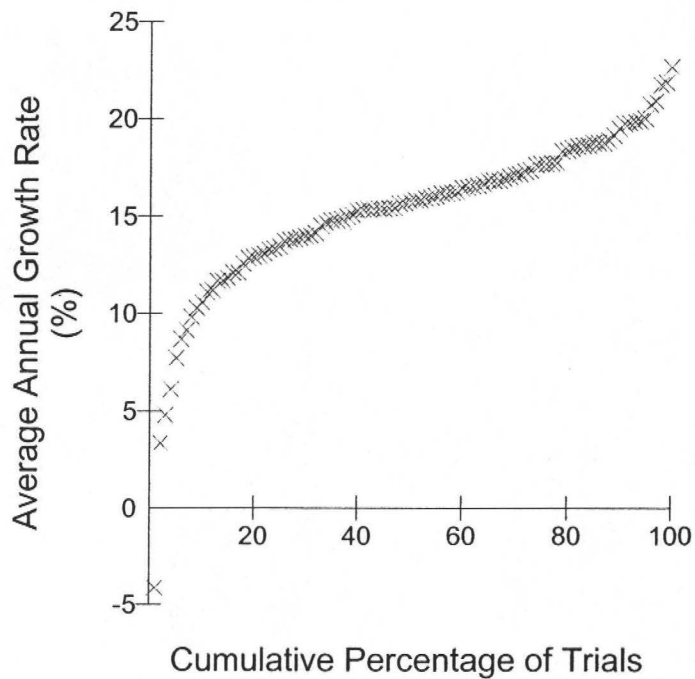
\* 0 to 20+ year-old horses

## 0 to 20+ year-old horses



### Growth Rate Modeling

Average Growth Rate in 4 Years	
Lowest Trial	-4.1
10th Percentile	10.8
25th Percentile	13.6
Median Trial	15.8
75th Percentile	17.7
90th Percentile	19.7
Highest Trial	22.7



**Alternative III: Remove the First 321 Caught**

The parameters for the population modeling were:

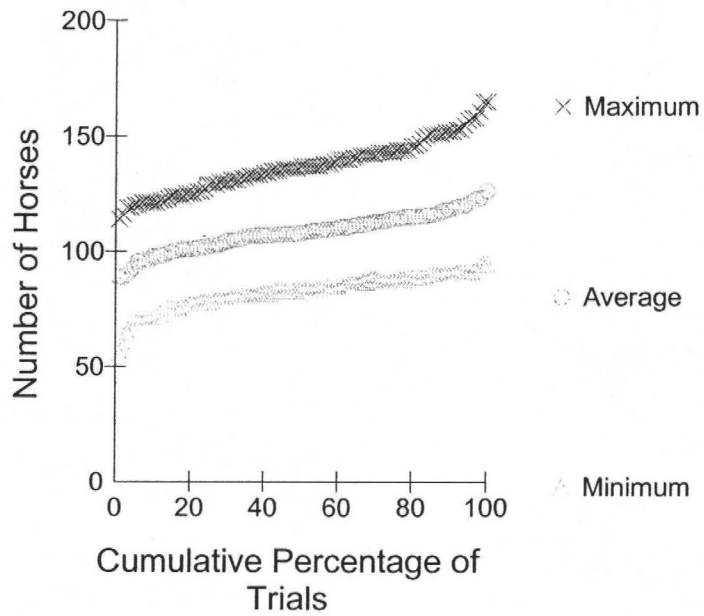
- 1-2. same as in Proposed Action
- 3. percent to gather 85
- 4-9. same as in Proposed Action
- 10. do not implement selective removal criteria
- 11. no fertility control

Population Size Modeling

	Population Sizes in 5 Years*		
	Minimum	Average	Maximum
Lowest Trial	56	89	114
10th Percentile	72	98	121
25th Percentile	78	102	129
Median Trial	84	108	137
75th Percentile	88	114	144
90th Percentile	90	119	152
Highest Trial	95	126	165

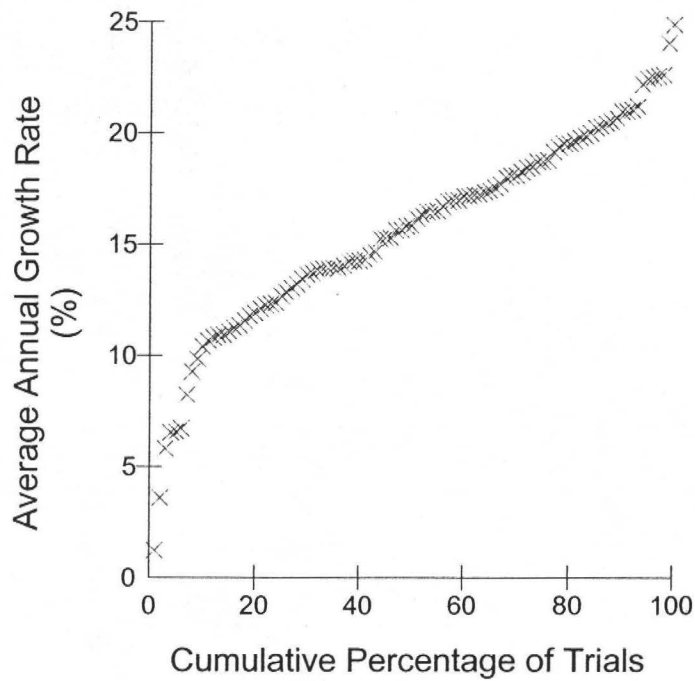
\* 0 to 20+ year-old horses

## 0 to 20+ year-old horses



### Growth Rate Modeling

Average Growth Rate in 4 Years	
Lowest Trial	1.3
10th Percentile	10.5
25th Percentile	12.8
Median Trial	16.0
75th Percentile	18.7
90th Percentile	21.0
Highest Trial	24.9



**Alternative IV: No Action Alternative**

The parameters for the population modeling were:

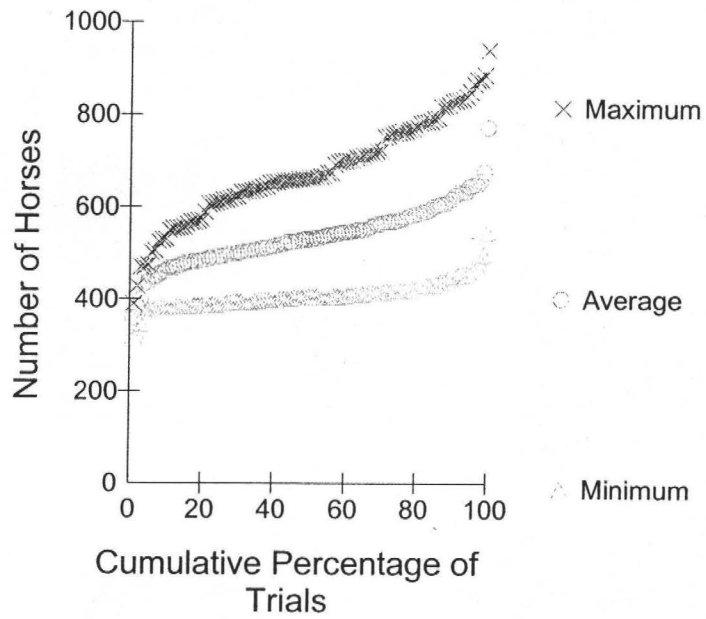
1. do not gather
2. foals are not included in AML
3. percent to gather 0
- 4-8. same as in Proposed Action
9. no fertility control

Population Size Modeling

	Population Sizes in 5 Years*		
	Minimum	Average	Maximum
Lowest Trial	320	358	390
10th Percentile	384	464	540
25th Percentile	390	493	613
Median Trial	405	531	662
75th Percentile	420	572	762
90th Percentile	446	620	830
Highest Trial	547	772	940

\* 0 to 20+ year-old horses

## 0 to 20+ year-old horses



### Growth Rate Modeling

Average Growth Rate in 4 Years	
Lowest Trial	-1.5
10th Percentile	6.3
25th Percentile	10.5
Median Trial	12.6
75th Percentile	16.1
90th Percentile	18.4
Highest Trial	20.7

