1792 (ORB050) P

Dear Interested Party:

On August 18, 2010, the Bureau of Land Management (BLM), Burns District Office, distributed and provided a 30-day public comment period for Environmental Assessment (EA) DOI-BLM-OR-050-2010-0040-EA, dated August 18, 2010, analyzing a No Action Alternative and two action alternatives for the Warm Springs Herd Management Area Wild Horse Gather. The EA analyzes the potential impacts of gathering up to 361 horses and removing 265 of these excess wild horses in the Warm Springs Herd Management Area south of Burns, Oregon. The herd is currently three times larger than the lower end of the Appropriate Management Level of 111 to 202 head.

The BLM has subsequently added a fourth alternative to the EA analyzing the application of a 2-year Porcine Zona Pellucida (PZP-22), or similar, vaccine to approximately 43 horse mares. At this time, the BLM is soliciting comments on the additional alternative of injecting mares with PZP-22. If you have already submitted comments, there is no need to resubmit them; only provide comments on Alternative 4 (Fertility Control on Returned Mares). The EA dated September 15, 2010, unsigned Finding of No Significant Impact (FONSI), and EA maps are available for your review at http://www.blm.gov/or/districts/burns/plans/index.php. If you would like a hard copy, please contact our office at (541) 573-4400.

If you have comments on the EA or FONSI, submit them postmarked by September 27, 2010, to William Andersen, Burns District Office at the address above. You may only send comments regarding Alternative 4 during this comment period. E-mail comments should be sent to william_andersen@blm.gov. These must be received by close of business September 27, 2010. After consideration of your substantive[1] comments, a Decision outlining the action to be taken within the scope of the EA will be developed and issued. If you submit written comments to this EA or FONSI, you will receive a copy of the Decision. If you do not have comments but wish to receive a copy of the Decision, please submit a written request, otherwise you will not receive a copy. The Decision will also be posted to http://www.blm.gov/or/districts/burns/plans/index.php.

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[1] Comments are considered substantive if they question the accuracy of information; question the adequacy, methodology or assumptions used; present new information relevant for analysis; present reasonable alternatives other than those analyzed; or cause changes or revisions in one or more of the alternatives. Comments are not considered substantive if the comments are in favor of or against the Proposed Action or alternative without reasoning that meet the substantive criteria listed above; agree or disagree with BLM policy or resource decisions without justification or supporting data that meet the substantive criteria listed above; do not pertain to the Project Area; or comments that form vague, open-ended questions.

Comments, including the names and addresses of respondents, will be available for public review at the Burns District Office during regular business hours 7:45 a.m. to 4:30 p.m., Monday through Friday, except holidays, and may be published as part of the Decision. Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so. Anonymous comments will not be considered. All submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be available for public inspection in their entirety.

If you need further information or to receive additional copies, please contact Bill Andersen of the Burns District Office, at (541) 573-4430 or visit the Burns District Web site listed above.

Sincerely,

/signature on file/

Richard Roy
Three Rivers Resource Area Field Manager

Warm Springs Herd Management Area Wild Horse Gather

ENVIRONMENTAL ASSESSMENT
DOI-BLM-OR-B050-2010-0040-EA

Bureau of Land Management
Burns District Office
28910 Hwy 20 West
Hines, Oregon 97738

September 15, 2010

TABLE OF CONTENTS

Chapter I: Introduction: Purpose of and Need for Action....1
A. Introduction....1
B. Purpose and Need for Action....2
C. Decision Framework....3
D. Decision Factors....3
E. Decision to be Made....3
F. Issues Considered but not Analyzed Further....3
G. Conformance with Land Use Plans, Laws, Regulations, and Policy....4

Chapter II: Alternatives Including the Proposed Action....4
A. Alternative 1: No Action....5
B. Management Actions Common to Alternatives 2, 3, and 4....5
C. Alternative 2: Proposed Action....6
D. Alternative 3: Removal Only....7
E. Alternative 4: Fertility Control on Returned Mares....7
F. Alternatives Considered but Eliminated from Detailed Analysis....8

Chapter III: Affected Environment....10
A. General Description of the Affected Environment....10
B. Grazing Management....12
C. Wild Horses and Burros....14
D. Rangeland/Weeds....27
E. Special Status Species (Terrestrial)....30
F. Migratory Birds....31
G. Wildlife....32
H. Soils and Biological Soil Crusts....33

Chapter IV: Cumulative Effects for All Alternatives....36
Chapter V: Monitoring and Mitigation Measures....37
Chapter VI: List of Preparers....37
Chapter VII: Consultation and Coordination....37
Chapter VIII: List of References....38

Chapter IX: Appendixes....38

Appendix A - Standard Operating Procedures (Gather Operation)....39
Appendix B - IM WO 2006-023 Euthanasia of Wild Horses and Burros....47
Appendix C - General Vicinity Map....49
Appendix D - HMA Map with Fence and Inventory Information....50
Appendix E - Win Equus Population Modeling Results....51
Appendix F - Standard Operating Procedures for Population-level Fertility Control Treatments....53

WARM SPRINGS HERD MANAGEMENT AREA WILD HORSE GATHER

DOI-BLM-OR-B050-2010-0040-EA

CHAPTER I: INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

A. Introduction

The Bureau of Land Management (BLM) is proposing to gather approximately 361 and remove approximately 265 excess wild horses from within and outside the Warm Springs Herd Management Area (HMA) beginning about November 2010. Of the animals released post-gather, about 43 head would be mares, 43 would be studs, and 10 would be geldings. The released animals would be selected to slightly adjust sex ratios in favor of males in order to slow population growth and to maintain a diverse age structure, with Appaloosa color characteristics and good saddle-type horse conformation (body type).

This Environmental Assessment (EA) is a site-specific analysis of the potential effects that could result with the implementation of the Proposed Action or alternatives to the Proposed Action. Preparation of an EA assists the BLM Authorized Officer to determine whether to prepare an Environmental Impact Statement if significant affects could result, or a Finding of No Significant Impact if no significant impacts are expected.

With passage of the Wild Free-Roaming Horse and Burro Act (WFRHBA) of 1971, Congress found that "Wild horses are living symbols of the pioneer spirit of the West." In addition, the Secretary was ordered to "manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands." From the passage of the WFRHBA, through present day, the BLM Burns District has endeavored to meet the requirements of the WFRHBA. The procedures and policies implemented to accomplish this mandate have been constantly evolving 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 percent increases in numbers annually. This can result in a doubling of the wild horse population about every 4 years. At the same time, nationwide awareness and attention have grown. As these factors have come together, the emphasis of the wild horse and burro program has shifted.

Program goals have expanded beyond simply establishing "thriving natural ecological balance" (setting Appropriate Management Level (AML) for individual herds) to include achieving and maintaining viable, vigorous, and stable populations. The AML for Warm Springs HMA was previously established, following a thorough public review, as a range from 111 to 202 wild horses and burros and was maintained in Three Rivers Resource Management Plan/Record of Decision (RMP/ROD) (September 1992). From the Three Rivers RMP Page 2-45, burro numbers are to be managed for 15 head within the AML.

This makes the AML for horses between 96 and 187 head. This EA will analyze the gather and removal of horses.

Warm Springs HMA was last gathered in 2006. The April 2010 inventory determined Warm Springs HMA wild horse numbers to be 341 head (includes 40 current year foals) and burros at 14 head. Wild horses at the time of the inventory were 154 head over the high end of AML and 245 head over low AML.

B. Purpose of and Need for Action

The purpose of the action is to return the wild horse population to within the established AML within Warm Springs HMA, protect rangeland resources from deterioration associated with the current overpopulation, maintain a thriving natural ecological balance and multiple-use relationship on public lands in the area consistent with the provisions of 1333(b)(2)(iv) of the WFRHBA and to maintain Rangeland Health Standards.

The need for action derives from excess wild horses within Warm Springs HMA. According to the April 2010 inventory and assuming a 20 percent foal crop for 2010, there would be 265 excess wild horses within the HMA by the time a gather operation could occur. Based on utilization monitoring, excess wild horses are contributing to the utilization target of 50 percent being exceeded on herbaceous forage species around perennial water sources within the HMA. The West Warm Springs Allotment Evaluation 2000 also identified year-round grazing by wild horses around perennial water sources as a causal factor for failing to conform to Grazing Management Guidelines of providing periodic growing season rest to herbaceous forage species.

RMP Objectives and Management Actions include:

1. WHB 1: Maintain healthy populations of wild horses and burros in the Warm Springs HMA.
2. WHB 2.3: Select for high quality horses when gathered horses are returned to the range.
3. WHB 3: Enhance and perpetuate the special or rare and unique characteristics that distinguish the respective herds.
4. WHB 3.1: Limit any releases of wild horses or burros into an HMA to individuals which exhibit the characteristics designated.
5. WHB 3.2: Manage burros for a maximum of 24 head in the west side of Warm Springs HMA.

Additional objectives include:

1. Reduce reproductive rates to levels that would accommodate a target 4-year gather schedule allowing for the maintenance of AML.
2. Maintain herd characteristics which were typical of Warm Springs HMA at the time of passage of the WFRHBA, which were primarily Appaloosa and saddle-type horses.

3. Maintain herd viability, genetic diversity, and the genetic and physical characteristics that distinguish individual herds.

C. Decision Framework

The Three Rivers Resource Area Field Manager is the responsible official who will decide which alternative analyzed in this document best meets the purpose and need for action. The choice of an alternative or combination of alternatives will be based on the interdisciplinary analysis presented in this EA.

D. Decision Factors

Decision factors are additional questions or statements used by the decision maker to choose between alternatives that best meet project goals and resource objectives. These factors generally do not include satisfying legal mandates, such as requirements under the National Environmental Policy Act (NEPA), which must occur under all alternatives. Rather, decision factors assess, for example, the comparative cost, applicability, or adaptability of the alternatives considered. The following decision factors will be relied upon by the Authorized Officer in selecting a course of action from the range of alternatives fully analyzed that best achieves the goals and objectives of the project:

Would the alternative:

- Cause the least amount of disturbance to wild horses?
- Promote the basic wild horse habitat needs (water, forage, cover, space)?

E. Decision to be Made

The BLM will determine whether or not to gather excess wild horses, administer fertility control, and determine number and sex ratio of wild horses to be returned to the HMA.

F. Issues Considered but not Analyzed Further

1. Wilderness Characteristics

An intensive inventory evaluating the presence of wilderness characteristics on BLM-administered lands in the Project Area was completed in 1979-80. The final decision found that the Project Area did not have wilderness characteristics present (Wilderness Review Intensive Inventory in Oregon and Washington, March 1980). In August 2008, current conditions were reviewed and documented and three units in West Warm Springs were found to have wilderness characteristics. The proposed gather would have no effect on wilderness characteristics; therefore, this issue will not be analyzed further in this EA.

G. Conformance with Land Use Plans, Laws, Regulations, and Policy

The Proposed Action and alternatives are in conformance with the Three Rivers RMP/ROD (September 1992) because they are clearly consistent with the RMP decisions outlined above under the Purpose and Need for Action.

The Proposed Action has been designed to conform to the following documents, which direct and provide the framework and official guidance for management of BLM lands within the Burns District:

- The WFRHBA (Public Law 92-195 as amended) and Title 43 Code of Federal Regulations (CFR) Part 4700.
- NEPA (42 U.S.C. 4321-4347)1970.
- Federal Land Policy and Management Act (FLPMA) (43 U.S.C. 1701, 1976), Section 302(b) of FLPMA, states "all public lands are to be managed so as to prevent unnecessary or undue degradation of the lands."
- Public Rangelands Improvement Act (43 U.S.C. 1901. 1978).
- Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the BLM in the States of Oregon and Washington (1997).
- Greater Sage-grouse and Sagebrush-steppe Ecosystems Management Guidelines (BLM - 2000).
- BLM National Sage-grouse Habitat Conservation Strategy (2004).
- Local Integrated Noxious Weed Control Plan (1998).
- Greater Sage-grouse Conservation Assessment and Strategy for Oregon (Hagen 2005).
- East Warm Springs Allotment Management Plan (AMP).
- The following are excerpts from the 43 CFR:

  1) 4720.1 – "Upon examination of current information and a determination by the authorized officer that an excess of wild horses or burros exists, the authorized officer shall remove the excess animals immediately."
  2) 4710.3-1 – "Herd Management Areas shall be established for maintenance of wild horse and burro herds."
  3) 4180.2(b) – "Standards and guidelines must provide for conformance with the fundamentals of 4180.1."

CHAPTER II: ALTERNATIVES INCLUDING THE PROPOSED ACTION

The Proposed Action and alternatives represent a reasonable range to cover the full spectrum of alternatives to permit a reasoned choice. This section of the EA describes the Proposed Action, alternatives to the Proposed Action, No Action Alternative, and alternatives considered but eliminated from detailed analysis. Four alternatives are considered in detail:

- Alternative 1: No Action - Defer gather and removal.
- Alternative 2: Proposed Action – Gather wild horses in order to remove 265 excess animals, and establish a breeding population with a 50 percent male/female sex ratio of horses exhibiting a predominance of the Appaloosa color phase.
- Alternative 3: Removal only to low AML with no sex ratio adjustment.
- Alternative 4: Fertility Control on Returned Mares

The Action Alternatives (2, 3, and 4) were developed to respond to the identified resource issues and the Purpose and Need to differing degrees. Alternative 1 (No Action Alternative) would not achieve the identified Purpose and Need. However, it is analyzed in this EA to provide a basis for comparison with the other Action Alternatives, and to assess the effects of not conducting a gather at this time.

A. Alternative 1: No Action

Under the No Action Alternative, no gather would occur and no additional management actions would be undertaken to control the size or sex ratio of the wild horse population at this time.

B. Management Actions Common to Alternatives 2, 3, and 4

- ❑ The gather would begin about November 2010 and take about 14 days to complete. Several factors such as animal condition, herd health, weather conditions, or other considerations could result in adjustments in the schedule.
- ❑ Gather operations would be conducted in accordance with the Standard Operating Procedures (SOPs) described in the National Wild Horse and Burro Gather Contract (Appendix A). The primary gather (capture) methods would be the helicopter drive method with occasional roping from horseback.
- ❑ Trap sites and temporary holding facilities would be located in previously used sites or other disturbed areas whenever possible. These areas would be seeded with crested wheatgrass if bare soil exceeds more than 10 square yards per location. Undisturbed areas identified as potential trap sites or holding facilities would be inventoried, prior to being used, for cultural resources. If cultural resources are encountered, these locations would not be utilized unless they could be modified to avoid affects to cultural resources.
- ❑ An Animal and Plant Inspection Service or veterinarian may be onsite during the gather, as needed, to examine animals and make recommendations to BLM for care and treatment of the wild horses.
- ❑ Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy (Washington Office (WO) Instruction Memorandum (IM) 2009-041). Current policy reference: http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-041.html
- ❑ Data including sex and age distribution, condition class information (using the Henneke rating system), color, size, and other information may also be recorded, along with the disposition of that animal (removed or released).

- ❑ Excess animals would be transported to the Burns BLM corral facility via semi truck and trailer where they would be prepared (freezemarked, vaccinated and dewormed) for adoption, sale (with limitations) or long-term pasture.
- ❑ Hair samples would be collected to assess genetic diversity of the herd, as outlined in WO IM 2009-062 (Wild Horse and Burro Genetic Baseline Sampling). Approximately 28 hair samples will be collected from horses returned to the range (equates to 25 percent of post gather population of 96 and horses and 15 burros).

The SOPs for gathers identified in Appendix A would be followed. The euthanasia policy described in Appendix B would be followed if euthanasia becomes necessary.

Project Design Features:

All vehicles and equipment used during gather operations would be cleaned before and following implementation to guard against spreading of noxious weeds.

Efforts would be made to keep trap and holding locations away from areas with noxious weed infestations.

Gather sites would be noted and reported to range and weed personnel for monitoring and/or treatment of new and existing infestations.

C. Alternative 2: Proposed Action

The Proposed Action would gather about 361 and remove approximately 265 excess wild horses from within and outside the Warm Springs HMA beginning about November 2010. Trap sites would be selected within the pastures and areas where horses are located to the greatest extent possible. Animals would be removed using a selective removal strategy. Selective removal criteria for the HMA include: (1) First Priority: Age Class – Four Years and Younger; (2) Second Priority: Age Class – Eleven to Nineteen Years (3) Third Priority: Age Class Five to Ten Years; 4) Fourth Priority: Age Class Twenty Years and Older should not be removed from the HMA unless specific exceptions prevent them from being turned back to the range. Irrespective of their age class, all animals residing outside the HMA boundary would be removed.

Captured wild horses would be released back into the HMA under the following criteria:

- ❒ 43 head of the entire herd would be mares and selected to maintain a diverse age structure, with Appaloosa color characteristics and good saddle-type horse conformation (body type).
- ❒ 43 head would be studs and 10 would be geldings selected for release to maintain a diverse age structure, Appaloosa color characteristics and good saddle-type horse conformation.

- Stallions selected for gelding would meet the following requirements:
- Limit to stallions between 5 and 15 years of age.
- Limit to stallions that have a body condition score of 4 or above.
- Surgery would be performed at a temporary holding facility, at a BLM-managed holding center, or in the field by a licensed veterinarian in good standing, using appropriate anesthetic agents and surgical techniques.
- When gelding is done in the field, geldings would be released near a water source approximately 24 to 48 hours following surgery. When the gelding is performed at a BLM-managed facility, selected stallions would be shipped to the facility, gelded, held in a separate pen to minimize risk for disease, and returned to the range near water within 30 to 60 days following recovery (recovery is indicated by animals moving freely to/from forage and water).
- Gelded animals would be monitored for approximately 7 to 10 days post-surgery.
- Gelded animals would be branded with a "G" high on their hip to minimize the potential for future recapture and to facilitate post-treatment monitoring.

❒ Post-gather, every effort would be made to return released horses to the same general area from which they were gathered.

❒ AML would be restored within 4 months of the gathering.

❒ To ensure genetic viability, two to three horses with similar traits from another HMA would be returned to the West Warm Springs HMA.

D. Alternative 3: Removal Only

Alternative 3 would gather and remove about 265 excess wild horses from within and outside the Warm Springs HMA beginning about November 2010. Fertility control would not be applied and no changes to the herd's existing sex ratio would be made. No horses would be returned to the HMA.

E. Alternative 4: Fertility Control on Returned Mares

Alternative 4 consists of gathering about 361 horses and removing approximately 265 wild horses from Warm Springs HMA. Fertility control treatments would be applied to all mares returned to the HMA.

This action would include applying a 2-year Porcine Zona Pellucida (PZP-22), or similar, vaccine to approximately 43 horse mares, and releasing them back to the range in order to decrease annual population growth. For the fertility control of mares to be effective, the gather operation would need to result in the capture of at least 81 to 90 percent of the entire current wild horse population in the HMA (BLM Washington Office IM 2009-090). If the gather efficiency reaches at least 81 percent, then all mares selected for release would be treated with the vaccine and released back to the range.

Immuno-contraceptive treatments would be conducted in accordance with the approved standard operating procedures and with BLM Washington Office IM 2009-074 (see *Fertility Control Standard Operating Procedures*, Appendix F).

The actual number of mares returned and treated with immuno-contraceptive to the HMA would be based on pre- and post-gather population inventories. All treated mares would be freezemarked on the left shoulder to identify animals for data collection. Post-gather monitoring would include helicopter flights to locate treated mares to determine efficacy of the treatment. Longer term monitoring would determine when mares have returned to fertility.

F. Alternatives Considered but Eliminated from Detailed Analysis

1. One alternative considered for wild horse management was using fertility control measures only to regulate wild horse populations. This alternative would not meet the immediate purpose of achieving the AML for wild horse numbers within Warm Springs HMA. The need for action derives from excess wild horses, specifically the 265 wild horses in excess over the low end of the AML. Furthermore, the RMP (Page 2-43) states to, "Maintain healthy populations of wild horses and burros in the Warm Springs HMA under the Wild and Free-Roaming Horse and Burro Act of 1971….. in a manner that is designed to achieve a thriving natural ecological balance on public lands."

2. Closure of the area to livestock use or a reduction of permitted use was eliminated as it would not meet the Purpose and Need to achieve and sustain the AML for wild horse numbers within Warm Springs HMA, specifically the 265 wild horses in excess over the low end of the AML of horses, and RMP direction to, "Maintain healthy populations of wild horses and burros in the Warm Springs HMA under the Wild and Free-Roaming Horse and Burro Act of 1971….. in a manner that is designed to achieve a thriving natural ecological balance on public lands. Enhance and perpetuate the special or rare and unique characteristics that distinguish the respective herds." Horse numbers without gathering, would at some point still exceed the capacity of the range to support the forage needs of wildlife and horses.

   In addition, the WFRHBA does not require these areas of public lands be managed only for wild horses but states under Section 2a (Act) that even in case of ranges that are devoted principally for wild horse management, it is not necessary to devote these lands exclusively to their welfare in keeping with multiple-use management concept for public lands, but rather that these determinations be made through land use plans. A new land use plan is scheduled to begin for this area in the next 2 to 3 years.

3. Complete removal of horses within the Project Area was eliminated from detailed analysis for the following reasons: 1) Elimination of wild horses and closure of HMAs can only be conducted during the land use planning process or within an RMP revision or amendment and this action is not in conformance with current Land Use Plan as described on Page 2-44. Section WHB 1.3 states that permanent adjustments would not be lower than the established minimum numbers in order to maintain viability. This action is not a land use plan allocation; therefore, elimination of wild horses is outside the scope of this analysis. Furthermore: 2) Removing all horses would not meet the purpose and need for action for achieving and sustaining the AML and removing only excess wild horses over the AML; 3) The WFRHBA requires the BLM to protect and manage wild horses in areas they were found at the time the Act was passed and in a manner designed to achieve and maintain a thriving ecological balance in keeping with the public land, multiple-use concept.

4. An alternative which was eliminated from detailed consideration was to water/bait trap wild horses within the HMAs. Though water/bait trapping is an effective tool for specific management purposes, this alternative was dismissed from detailed study for the following reasons: (1) The size of the gather area is too large to make this a feasible method; (2) The presence of water sources on both private and public lands inside and outside the HMA's boundaries would make it almost impossible to restrict wild horse access to only selected water trap sites, which would extend the time required to remove the excess horses or make it impossible to capture all excess horses; and (3) Access for vehicles necessary to safely transport gathered wild horses is limited. The large geographic area involved, the amount of time necessary for implementing this alternative, and the difficulty of ensuring horse use of only water trap areas would make it difficult (if not impossible) to gather excess horses within a manageable gather timeframe or without an increase in gather costs. In summary, bait/water trapping would not be effective and would be much more costly and time-consuming making this alternative infeasible.

5. Wild horse numbers controlled by natural means was eliminated from further consideration because it is contrary to the WFRHBA which requires the BLM to prevent the range from deterioration associated with an overpopulation of wild horses. It is also inconsistent with the 1992 Three Rivers RMP which directs that Burns District BLM conduct gathers as necessary to achieve and maintain AML. The alternative of using natural controls to achieve a desirable AML has not been shown to be feasible in the past. Since the last gather in 2006, wild horses within Warm Springs HMA have increased to over 361 (which includes 2010 foals) or more than three times the low end of the AML range. Wild horses in Warm Springs HMA are not substantially regulated by predators. In addition, wild horses are a long-lived species with documented foal survival rates exceeding 95 percent. This alternative would result in a steady increase in numbers which would continually exceed the carrying capacity of the range until severe and unusual conditions that occur periodically-- such as blizzards or extreme drought-- cause mortality of wild horses below AML.

CHAPTER III: AFFECTED ENVIRONMENT

A. General Description of the Affected Environment

Warm Springs HMA lies south of Burns 30 miles and is bordered by Highway 395 on the west and Highway 205 on the east (Appendixes C and D). Topography varies from slightly rolling hills to prominent buttes, with two distinct drainages running through the area. Elevation varies from approximately 4,000 to 7,400 feet. Precipitation ranges upward of 8 inches annually and comes mainly in the form of snow. Temperatures vary from -30 °F in winter to 95 °F in summer. Major vegetation types are low sagebrush/Thurber's needlegrass, big sagebrush/squirreltail, and big sagebrush/bluebunch wheatgrass.

An Interdisciplinary Team (IDT) has reviewed and identified issues and resources affected by the alternatives. The following table summarizes the results of that review. Affected resources are in bold.

Issues/Resources	**Present**	**Affected**	**If Not Affected, why?** **If Affected, Reference Applicable EA Chapter**
Air Quality (Clean Air Act)	Yes	No	The Project Area is located outside a non-attainment area. The implementation of the Proposed Action would result in dust in the area for 1 to 2 hours after horses enter the trap and en-route to the trap.
American Indian Traditional Practices	No		
Areas of Critical Environmental Concern (ACECs)	Yes	Not Affected	There are two ACECs excluded from wild horses and livestock. No impacts would occur.
Cultural Resources	Yes	No	All known areas of cultural resources would be avoided during removal operations.
Environmental Justice (Executive Order 12898)	No	Not Affected	The Proposed Action is not expected to have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations as such populations do not exist in the Project Area.
Flood Plains (Executive Order 13112)	No		
Grazing Management	**Yes**	**Affected**	**Discussed Below**
Hazardous or Solid Waste	No		
Migratory Birds (EO 13186)	**Yes**	**Affected**	**Discussed Below**
Noxious Weeds (Executive Order 13112)	**Yes**	**Affected**	**Discussed Below**
Paleontological Resources	No		
Recreation	Yes	Not Affected	The horse gather would take place in November after hunting season so no affect to hunters. There are no rock hounding areas or other recreation sites in the proposed horse gather area.

Issues/Resources		Present	Affected	If Not Affected, why? If Affected, Reference Applicable EA Chapter
Social and Economic Values		Yes	Not Affected	Fewer horses would be on the landscape potentially affecting a person's social values; allotted livestock Animal Unit Months (AUMs) would be available (see Grazing Management); and a contractor would remove excess horses with potential to add revenue to local communities, however, economic effects would not be measurable.
Soils and Biological Crusts		**Yes**	**Affected**	**Discussed Below**
Upland Vegetation		**Yes**	**Affected**	**Discussed Below**
Visual Resources		Yes	Not Affected	Approximately 90 percent of the Warm Springs HMA is in Visual Resource Management (VRM) Class IV. The remaining areas around Jack Mountain and Weed Lake are in VRM III. The gathering will only take approximately 14 days with no permanent affects to VRM.
Wildlife/ Threatened and Endangered (T&E) Species or Habitat	Fish	No		There are no T&E species or their Critical Habitat that would be affected by the proposed gather.
	Wildlife	No	No	There are no T&E species or designated Critical Habitat present or affected by the proposed gather.
	Plants	Yes	Not Affected	Malheur wirelettuce occurs within the Project Area, but this species is excluded from any proposed activity areas. No impacts would occur to the species or associated Critical Habitat.
Wildlife/BLM Special Status Species (SSS) and Habitat	Fish	No		There are no SSS or their habitat that would be affected by the proposed gather.
	Wildlife	**Yes**	**Affected**	**Discussed Below**
	Plants	No		There are no SSS or their habitat that would be affected by the proposed gather.
Water Quality (Surface and Ground)		Yes	Not Affected	There are no affects expected to water quality from the proposed gather.
Wetlands/Riparian Zones (Executive Order 11990)		Yes	Not Affected	There are no affects expected to wetlands/riparian zones from the proposed gather.
Wild and Scenic Rivers (WSRs)		No		
Wild Horses and Burros		**Yes**	**Affected**	**Discussed Below**
Wilderness/Wilderness Study Areas/Wilderness Characteristics		Yes	No	The proposed gather would have no effect on wilderness characteristics because of the temporary nature of the Proposed Action and absence of permanent ground disturbance.
Wildlife		**Yes**	**Affected**	**Discussed Below**

B. Grazing Management

Affected Environment

The East Warm Springs and West Warm Springs Allotments are within the HMA. There are a total of nine livestock operators who are currently authorized to graze livestock in these allotments annually. The operators are authorized to use 19,231 AUMs of forage each year. An AUM is the amount of forage needed to sustain one cow, five sheep, one horse, or five goats for a month. There are a total of 15 pastures within the two allotments. Grazing management consists of different strategies within the pastures. Pastures are managed in generally a graze/deferment rotation; season-long rest is implemented when monitoring data shows a need to maintain or improve plant health. The season of use may vary by 1 to 2 weeks annually based upon forage availability, drought conditions, and other management criteria. The BLM allocated forage for livestock use through the Three Rivers RMP, 1992. These allocations were based on the analysis of monitoring data that included actual use, utilization, climate data, long-term trend studies and professional observations**.**

Table 1 summarizes the livestock use information for the allotments in the HMAs.

Table 1: Livestock Use Information

Allotment	Total Allotment Acres	% of Allotment in HMA	Permittee	Livestock	Authorized Season of Use	Authorized Livestock AUMs (Preference)	Average Actual Livestock Use (Past 4-5 years)
East Warm Springs	176,442	95	1	224c	04/11-08/31	8,225	5,802
			2	220c	04/11-05/15		
				350c	05/16-08/15		
				42c	08/16-08/31		
			3	355c	04/11-08/15		
				124c	08/16-08/31		
			4	361c	04/20-05/31		
				626c	06/01-08/31		
			5	206c	04/11-05/31		
				305c	06/01-08/31		
West Warm Springs	303,653	100	1	1,005c	04/01-09/15	11,006	6,069
			2	154c	04/01-09/15		
			3	492c	04/01-09/15		
			4	454c	04/01-09/15		

Permittees within East Warm Springs and West Warm Springs Allotments have only been able to utilize the following portions of their preference since the last gather: 70 percent and 55 percent, respectively. The nonuse within West Warm Springs Allotment can be attributed to lack of perennial water sources to support livestock grazing for the entire season of use. Warm Springs HMA has experienced drought 5 of the last 6 years which has left many waterholes/reservoirs dry. This has concentrated livestock and wild horse utilization around four waterholes that have maintained water and five wells on private and BLM-managed land across the entire West Warm Springs portion of the HMA. As a result, livestock grazing permittees have been required to take nonuse to prevent heavy to severe herbaceous utilization within the service areas around these water sources.

Environmental Consequences

<u>Affects Common to All Alternatives</u>

Through previous decisions, the BLM has allocated the available forage to livestock, wildlife, and wild horses and burros. Other decisions have resulted in adjustments to livestock numbers and seasons of use and for implementation of grazing systems and associated range improvements to promote rangeland health. The current level of permitted livestock grazing use is approximately 100 percent of that permitted in 1971 when the WFRHBA passed.

While the present livestock grazing systems and efforts to manage the wild horse population within AML has reduced past historic impacts, the current overpopulation of wild horses is continuing to contribute to areas of heavy vegetation utilization, trailing and trampling damage and is preventing the BLM from managing for rangeland health and a thriving natural ecological balance and multiple-use relationships on the public lands in the area.

Livestock grazing is expected to be reduced by 20 percent in the next 2 years as the West Warm Springs AMP is implemented to maintain rangeland health through reduced use on native vegetation during the active plant growth period. Solar well systems have been implemented at three wells and two more locations are planned for installation to reduce the need to gather horses under emergency situations of periodic drought.

Alternative 1 (No Action)

Utilization of native perennial forage species by authorized livestock has been directly affected due to the current excess of wild horses, both within and outside the HMA.

Livestock operators have been forced to take voluntary nonuse due to the effects of the wild horse population on range vegetation/forage conditions. The current wild horse population is four times above their forage allocation. Heavy to severe utilization is occurring in areas used by livestock, wild horses, and burros and wildlife. The effects of No Action (Defer Gather and Removal) would be continued damage to the range, continuing competition between livestock, wild horses and burros, and wildlife for the available forage and water, reduced quantity and quality of forage and water, and undue hardship on the livestock operators who would continue to be unable to fully use the forage they are authorized to use.

Affects Common to Alternatives (2, 3, and 4)

Reduced competition between livestock and wild horses for the available forage and water would also result. Indirect effects would include an increase in the quality and quantity of the available forage for the remainder of the grazing year. Over the next 4 to 5 years, improved vegetation resources would lead to a thriving natural ecological condition.

C. Wild Horses and Burros

Affected Environment

The HMA was designated an HMA in 1978 and formally through the Riley Management Framework Plan, 1982. The AML was originally set at 100 to 200 horses. It was adjusted upward to 111 to 202 horses and burros through a Land Use Plan Amendment in 1986 as the result of a land exchange with the State of Oregon. The BLM acquired land within the HMA and allocated this additional forage to horses and burros. The AML was reaffirmed as a population range of 111 to 202 horses and burros in the Three Rivers RMP, 1992. The AML was established through public participation and indepth analysis of resource monitoring studies.

Typical conformation, size and color phases of horses in the HMA.

The last removal of excess wild horses from Warm Springs HMA was completed in September 2006 when 249 horses were gathered and 231 excess horses were removed. Following the gather, 18 horses were returned. Released mares were not given a fertility control vaccine PZP or PZP-22 prior to their release.

The estimated population of wild horses and burros in the HMA in April 2010 was 341 horses and 14 to 30 burros based on a direct-count, aerial population survey (Appendix D). Analysis of these data indicates an average annual growth rate of 20 percent since the last gather. The estimated population size of the wild horses, including the entire 2010 foal crop would be approximately 361 head by the time of the scheduled gather.

Between the two allotments within the HMA there are a total of 2,424 AUMS of forage allocated to wild horses. During the last 4 years, based on population estimates, wild horses have used approximately the following amounts of forage.

2006	1,500 AUMS	2008	3,014 AUMS
2007	2,411 AUMS	2009	3,768 AUMS

During the inventory flight of 2010, horses were observed to be in good to excellent condition. The foal ratio early in the foaling season was 14 percent and the horses were generally well dispersed across the HMA.

The makeup of the 1978 Warm Springs wild horse herd included horses abandoned by homesteaders, escaped horses from ranches in the area, and offspring of licensed and trespass horses that have used the area in the past. The first selective gather based on the Warm Springs Herd Management Plan acknowledged the wide genetic pool "from Shetland to Clydesdale and everything in between" (Warm Springs Wild Horse Management Plan 1978). Horses returned to the HMA from this gather in 1978 emphasized sound horses of good confirmation, Appaloosa horses were favored, and horses were of average size. Horses removed included studs of less than 700 pounds or more than 1,200 pounds, Appaloosa and paint studs, and horses over 15 years old. The herd was returned to a 50 percent male, 50 percent mare mix with an even age spread below 15 years old.

Color phases.

The Warm Springs wild horse population has been gathered 11 times since 1978, most recently in 2006. From 1978 to the present, 16 wild horse inventories of the HMA have been completed. Data from these inventories and wild horse gathers have helped define the needs of current and future horse population management.

Table 2: Warm Springs Inventory and Gather/Return History

Date	Activity	# of Horses	# of Burros	Comments
1972	Inventory	24(E) 40(W)	0 1	
1973	Inventory	41(E) 19(W)	1 12	
1974	Inventory	59(E) 81(W)	3 17	
1975	Inventory	63(E) 89(W)	3 9	
1976	Inventory	93(E) 106(W)	1 10	
03/18/78	Gather	53(E)		19 were Shetlands
1978	Returned	10(E)		
09/19/79	Inventory	102(E) 190(W)	2 7	
12/12/80	Gather	234(W)		
12/80	Returned	4(W)		
01/03/82	Gather	55(E)		
01/14/82	Returned	3		
10/27/82	Inventory	130(E)		
01/04/83	Returned	1		
12/26/84	Inventory	65(W)	5	
06/23/86	Inventory	313(E) 99(W)		
01/11/87	Gather	233		
02/18/87	Returned	7		
01/30/88	Gather	51		
02/06/89	Gather	56		
07/28/89	Returned	8		
11/09/90	Inventory	102(E) 108(W)	8	
12/06/90	Gather	133		
12/20/90	Returned	21(E) 9(W)		
02/01/91	Gather	59		
06/21/91	Returned	19(E)		
09/04/91	Returned	12(W)		
12/19/91	Returned	7(E) 4(W)		
05/13/92	Gather	5		
08/03/92	Inventory	82(W)		

Date	Activity	# of Horses	# of Burros	Comments
12/18/92 10/13/92	Returned	5(E) 2(W)		
07/27/93	Inventory	49(E) 179(W)	6	
01/08/94	Gather	118		
01/27/94	Returned	44(W)		
01/27/94	Inventory	50(E) 60(W)	6	
06/16/95	Returned	3(E)		
09/13/96	Inventory	97 (E) 182(W)	6	
11/01/96	Gather	163		
11/29/96	Returned	42		
06/17/97		4		Geldings
10/07/98			4	
08/22/01	Gathered	319		
09/14/01	Returned	28(E) 17(W)		
09/01/04	Inventory	128(E)		
09/07/06	Gather	249		2 were mules + 4 private horses
10/27/06	Returned	18		
04/13/10	Inventory	174(E) 168(W)	14	16 Burros not counted in the Angie Canyon area.

E=East Warm Springs W=West Warm Springs

Environmental Consequences

Results of Win Equus Population Modeling

Population modeling using Version 3.2 of the Win Equus population model (Jenkins 2000) was completed to analyze possible differences that could occur to the wild horse populations between the No Action Alternative and Alternatives 2, 3, and 4. The purpose of the modeling was to analyze and compare effects of Action Alternatives on population size, average population growth rate, and average removal number. This program was only used to model wild horse populations; therefore, the 15 burros were removed from AML during modeling. Table 3 summarizes the results. See Appendix E for additional detail.

Table 3: Average Population Size, Growth Rates, Next Projected Gather Year

Alternative	Avg. Pop. Size (11 years)	Avg. Growth Rate Next 10 Years (%)	Next Projected Gather (Year)	Est'd No. to Remove (Next 11 years)
Alternative 1 - No Action	1,024	21	2011	N/A
Alternative 2 - Proposed Action	184	19	2014	471
Alternative 3 - Gather to Low AML (No fertility control or sex ratio adjustment)	224	21	2014	482
Alternative 4 - Fertility Control on Released Mares*	193	15	2015	424

*For the purpose of this analysis it was assumed that fertility control would be 80 percent effective the first year following application (after 2011 foal crop), and 65 percent and 50 percent effective the second and third years. It was further assumed that 90 percent of the breeding population could be gathered every 4 years.

This modeling was used to identify if any of the alternatives would eliminate the population or cause numbers or growth rates to reach a point where there was no new recruitment to the population. Modeling data indicate sustainable population levels and growth rates would be expected to be within reasonable levels and adverse affects to the population would be unlikely. Additionally, these data indicate that over the next 11 years, the estimated number of horses to be removed would be reduced by 3 percent and 13 percent for the Proposed Action and Alternative 4, respectively, when compared to Alternative 3.

Alternative 1 (No Action)

Under the No Action Alternative, there would be no active management to control the population size within the established AML at this time. In the absence of a gather, wild horse populations would continue to grow at an average rate of 20 percent per year. Without a gather and removal now, the population would grow to 748 in 4 years' time based on the average annual growth rate.

Use by wild horses would continue to exceed the amount of forage allocated for their use. Competition between wildlife, livestock, and wild horses for limited forage and water resources would continue until the supply could no longer satisfy the demand. Damage to rangeland resources would continue or increase at an accelerated rate. Over time, the potential risks to the health of individual horses would increase, and the need for emergency removals to prevent their death from starvation or thirst would also increase. The health and sustainability of the wild horse population is dependent upon achieving a thriving natural ecological balance and sustaining healthy rangelands.

Affects Common to Action Alternatives (2, 3, and 4)

Over the past 35 years, various affects to wild horses as a result of gather activities have been observed. Under the Action Alternatives effects to wild horses would be both direct and indirect, occurring to both individual horses and the population as a whole.

The BLM has been conducting wild horse gathers since the mid-1970s. During this time, methods and procedures have been identified and refined to minimize stress and effects to wild horses during gather operations. The SOPs in Appendix A would be implemented to ensure a safe and humane gather occurs which would minimize potential stress and injury to wild horses.

In any given gather, gather-related mortality averages only about one half of one percent (0.5 percent), which is considered very low when handling wild animals. Approximately another six-tenths of one percent (0.6 percent) of the captured animals could be humanely euthanized due to pre-existing conditions and in accordance with BLM policy (GAO-09-77). These data affirm use of helicopters and motorized vehicles has proven to be a safe, humane, effective, and a practical means for the gather and removal of excess wild horses (and burros) from public lands. The BLM generally avoids gathering wild horses by helicopter during the 6 weeks prior to and following the peak foaling season (i.e., March 1 through June 30).

Individual, direct affects to wild horses include the handling of stress associated with the roundup, capture, sorting, handling, and transportation of the animals. The intensity of these affects varies by individual, and is indicated by behaviors ranging from nervous agitation to physical distress. When being herded to trap site corrals by the helicopter, injuries sustained by wild horses may include bruises, scrapes, or cuts to feet, legs, face, or body from rocks and brush. Rarely, wild horses encounter barbed wire fences and receive wire cuts because of their experience with the location of fences in the HMA. These injuries are treated onsite until a veterinarian can examine the animal and determine if additional treatment is indicated.

Other injuries may occur after a horse has been captured and is either within the trap-site corral, the temporary holding corral, during transport between facilities, or during sorting and handling.

Occasionally, horses may sustain a spinal injury or a fractured limb but based on prior gather statistics, serious injuries requiring humane euthanasia occur in less than one horse per every 100 captured. Similar injuries could be sustained if wild horses were captured through bait and/or water trapping, as the animals still need to be sorted, aged, transported, and otherwise handled following their capture. These injuries result from kicks and bites, or from collisions with corral panels or gates.

To minimize potential for injuries from fighting, animals are transported from the trap site to the temporary (or short-term) holding facility where they are sorted as quickly and safely as possible, then moved into large holding pens where they are provided with hay and water. On many gathers, no wild horses are injured or die. On some gathers, due to the temperament of the horses, they are not as calm and injures are more frequent.

Indirect individual affects are those which occur to individual wild horses after the initial event. These may include miscarriages in mares, increased social displacement, and conflict between dominate studs. These effects, like direct individual affects, are known to occur intermittently during wild horse gather operations. An example of an indirect individual impact would be the brief 1 to 2 minute skirmish between older studs which ends when one stud retreats. Injuries typically involve a bite or kick with bruises which do not break the skin. Like direct individual affects, the frequency of these effects varies with the population and the individual. Observations following capture indicate the rate of miscarriage varies, but can occur in about 1 to 5 percent of the captured mares, particularly if the mares are in very poor body condition or health.

A few foals may be orphaned during a gather. This can occur if the mare rejects the foal, the foal becomes separated from its mother and cannot be matched up following sorting, the mare dies or must be humanely euthanized during the gather, the foal is ill or weak and needs immediate care that requires removal from the mother, or the mother does not produce enough milk to support the foal. On occasion, foals are gathered that were previously orphaned on the range (prior to the gather) because the mother rejected it or died. These foals are usually in poor, unthrifty condition. Every effort is made to provide appropriate care to orphan foals.

Veterinarians may administer electrolyte solutions or orphan foals may be fed milk replacer as needed to support their nutritional needs. Orphan foals may be placed in a foster home in order to receive additional care. Despite these efforts, some orphan foals may die or be humanely euthanized as an act of mercy if the prognosis for survival is very poor.

During a summer gather, foals are smaller than during gathers conducted during the winter months. Water requirements are greater than in the winter due to the heat. If forage or water is limiting, animals may be traveling long distances between water and forage, and may become more easily dehydrated. To minimize potential for distress during summer gathers, capture operations are often limited to early morning hours when temperatures are cooler. The distance animals must travel to the trap is also shortened to minimize potential from stress. The BLM and gather contractor also make sure there is plenty of clean water for the animals to drink once captured. A supply of electrolytes is also kept on hand to apply to the drinking water if necessary. Electrolytes help to replace the body fluids that may be lost during capture and handling.

Through the capture and sorting process, wild horses are examined for health and presence of injury and other defects. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy. BLM Euthanasia Policy IM-2009-041 is used as a guide to determine if animals meet the criteria and should be euthanized (refer to SOPs, Appendix A). Animals that are euthanized for non-gather related reasons include those with old injuries (broken or deformed limbs) that cause lameness or prevent the animal from being able to maintain an acceptable body condition (greater than or equal to Body Condition Score (BCS) 3); old animals with serious dental abnormalities or severely worn teeth and are not expected to maintain an acceptable body condition; and wild horses with serious physical defects such as club feet, severe limb deformities, or sway back. Some of these conditions have a causal genetic component and animals should not be returned to the range to prevent passing this genetic to offspring.

Wild horses not captured may be temporarily disturbed and moved into another area during the gather operation. With the exception of changes to herd demographics from removals, direct population affects have proven to be temporary in nature with most, if not all, affects disappearing within hours to several days of release. No observable effects would be expected within 1-month of release, except for a heightened awareness of human presence.

By maintaining wild horse population size within the AML, there would be a lower density of wild horses across the HMA, reducing competition for resources and allowing wild horses to utilize their preferred habitat. Maintaining population size within the established AML would be expected to improve forage quantity and quality and promote healthy, self-sustaining populations of wild horses in a thriving natural ecological balance and multiple-use relationship on the public lands in the area. Deterioration of the range associated with wild horse overpopulation would be avoided. Managing wild horse populations in balance with available habitat and other multiple uses would lessen potential for individual animals or the herd to be affected by drought, and would avoid or minimize the need for emergency gathers, which would reduce stress to animals and increase success of the herd over the long term.

Over the next 4 years, implementation of the Action Alternatives would result in fewer excess wild horses which would require removal from the range. For every excess horse not placed in adoption, sale or long-term holding pastures, a savings to the American taxpayer of up to $12,000 per animal over 20 years would accrue.

Transport, Short-Term Holding, and Adoption (or Sale) Preparation

Animals would be transported from the capture/temporary holding corrals to the designated BLM short-term holding corral facility(s). From there, they would be made available for adoption or sale to qualified individuals or to long-term holding (grassland) pastures.

Wild horses selected for removal from the range are transported to the receiving short-term holding facility in straight deck semi-trailers or gooseneck stock trailers. Vehicles are inspected by the BLM Contracting Officer's Representative (COR) or Project Inspector (PI) prior to use to ensure wild horses can be safely transported and the interior of the vehicle is in a sanitary condition. Wild horses are segregated by age and sex and loaded into separate compartments.

A small number of mares may be shipped with foals. Transportation of recently captured wild horses is limited to a maximum of 8 hours. During transport, potential effects to individual horses can include stress, as well as slipping, falling, kicking, biting, or being stepped on by another animal. Unless wild horses are in extremely poor condition, it is rare for an animal to be seriously injured or die during transport.

Upon arrival at the short-term holding facility, recently captured wild horses are off-loaded by compartment and placed in holding pens where they are fed good-quality hay and water. Most wild horses begin to eat and drink immediately and adjust rapidly to their new situation. At the short-term holding facility, a veterinarian examines each load of horses and provides recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club feet, and other severe congenital abnormalities) would be humanely euthanized using methods acceptable to the American Veterinary Medical Association under the guidelines in Appendix B. Wild horses in underweight condition or animals with injuries are sorted and placed in hospital pens, fed separately and/or treated for their injuries as indicated. Recently captured wild horses, generally mares, in underweight condition may have difficulty transitioning to feed. Some of these animals are in such poor condition it is unlikely they would have survived if left on the range. Similarly, some mares may lose their fetus. Every effort is taken to help the mare make a quiet, low-stress transition to captivity and domestic feed to minimize the risk of miscarriage or death.

After recently captured wild horses have transitioned to their new environment, they are prepared for adoption or sale. Preparation involves freezemarking the animals with a unique identification number, drawing a blood sample to test for equine infections, anemia, vaccination against common diseases, castration (of male horses) as necessary, and deworming. During the preparation process, potential effects to wild horses are similar to those that can occur during handling and transportation. Serious injuries and deaths from injuries during the preparation process can occur.

At short-term corral facilities, a minimum of 700 square feet is provided per animal. Mortality at short-term holding facilities averages approximately 5 percent per year (GAO-09-77, Page 51), and includes animals euthanized due to a pre-existing condition; animals in extremely poor condition; animals injured and would not recover; animals which are unable to transition to feed; and animals seriously injured or accidentally die during sorting, handling, or preparation.

Adoption or Sale with Limitations, and Long-Term Pasture

Adoption applicants are required to have at least a 400 square foot corral with panels at least 6 feet tall for horses over 18 months of age. Applicants are required to provide adequate shelter, feed, and water. The BLM retains title to the horse for 1-year and the horse and facilities are inspected to ensure the adopter is complying with the BLM's requirements. After 1-year, the adopter may take title to the horse, at which point the horse becomes the property of the adopter. Adoptions are conducted in accordance with 43 CFR 5750.

Potential buyers must fill out an application and be pre-approved before they may buy a wild horse. A sale-eligible wild horse is any animal more than 10 years old; or has been offered unsuccessfully for adoption three times. The application also specifies all buyers are not to resell the animal to slaughter buyers or anyone who would sell the animal to a commercial processing plant. Sales of wild horses are conducted in accordance with Bureau policy.

Between 2007 and 2009, nearly 62 percent of excess wild horses or burros were adopted and about 8 percent were sold with limitation to qualified individuals who have appropriate facilities to care for the animals. Unadoptable animals 5 years of age and older are generally transported to long-term grassland pastures, where they remain available for adoption. These pastures are generally located in the Midwest.

Potential effects to wild horses from transport to adoption, sale or long-term holding are similar to those previously described. One difference is when shipping wild horses for adoption, sale or long-term holding, animals may be transported for a maximum of 24 hours. Immediately prior to transportation, and after every 18 to 24 hours of transportation, animals are offloaded and provided a minimum of 8 hours on-the-ground rest. During the rest period, each animal is provided access to unlimited amounts of clean water and 25 pounds of good-quality hay per horse with adequate bunk space to allow all animals to eat at one time. Most animals are not shipped more than 18 hours before they are rested. The rest period may be waived in situations where the travel time exceeds the 24-hour limit by just a few hours and stress of offloading and reloading is likely to be greater than the stress involved in the additional period of uninterrupted travel.

Long-term pastures are designed to provide excess wild horses with humane, life-long care in a natural setting off public rangelands. Wild horses are maintained in grassland pastures large enough to allow free-roaming behavior and with forage, water, and shelter necessary to sustain them in good condition. About 22,700 wild horses, in excess of the existing adoption or sale demand (because of age or other factors), are currently located on private land pastures in Iowa, Kansas, Oklahoma, and South Dakota. Located in mid or tall grass prairie regions of the United States, these long-term holding pastures are highly productive grasslands as compared to more arid western rangelands. These pastures comprise about 256,000 acres (an average of about 8 to 10 acres per animal). These animals are generally more than 10 years in age.

Mares and castrated stallions (geldings) are segregated into separate pastures except one facility where geldings and mares coexist. Although the animals are placed in long-term holding, they remain available for adoption or sale to qualified individuals. No reproduction occurs in the long-term grassland pastures, but foals born to pregnant mares are gathered and weaned when they reach about 8 to 10 months of age and are then shipped to short-term facilities where they are made available for adoption.

Handling by humans is minimized to the extent possible although regular on-the-ground observation and weekly counts of wild horses to ascertain their numbers, well-being, and safety are conducted. A very small percentage of the animals may be humanely euthanized if they are in underweight condition and are not expected to improve to a BCS of 3 or greater due to age or other factors. Natural mortality of wild horses in long-term holding pastures averages approximately 8 percent per year, but can be higher or lower depending on the average age of the horses pastured (GAO-09-77, Page 52). The savings to the American taxpayer which results from contracting for long-term holding pastures averages about $4.45 per horse per day as compared with maintaining the animals in short-term holding facilities.

Euthanasia and Sale without Limitation

While humane euthanasia and sale without limitation of healthy horses for which there is no adoption demand is authorized under the WFRHBA, Congress prohibited the use of appropriated funds between 1987 and 2004 and again in 2010 for this purpose.

Cumulative Effects

Cumulative effects which would be expected when incrementally adding either of the Action Alternatives would include continued improvement of upland vegetation conditions, which would in turn benefit permitted livestock, native wildlife, and the wild horse and burro population as forage (habitat) quality and quantity is improved over the current level. Benefits from a reduced wild horse and burro population would include fewer animals competing for limited forage and water resources. Cumulatively, there should be more stable wild horse populations, healthier rangelands, healthier wild horses and burros, and fewer multiple-use conflicts in the area over the next 1 to 5 years. Over the next 15 to 20 years, continuing to manage wild horses within the established AML range would achieve a thriving natural ecological balance and multiple-use relationship on public lands in the area.

Reasonably Foreseeable Future Actions (RFFAs) include gathers every 4 years to remove excess wild horses and burros in order to manage population size within the established AML range. Excess animals removed would be transported to short-term corral facilities where they would be prepared for adoption, sale (with limitations), or long-term pastures.

Actions which have influenced today's wild horse population are primarily wild horse gathers, resulting in the capture of some 1,723 wild horses, removal of 1,459 excess horses, and release of 264 horses back into the HMA (Table 3 above).

Alternative 2 (Proposed Action)

Alternative 2 (Proposed Action) would gather up to 361 horses, of which 265 excess horses would be removed to return wild horse population size to within AML. The post-gather wild horse population target would include 43 mares, 43 studs, and 10 geldings. This would establish a 50/50 stud:mare sex ratio on the breeding population of horses. Releasing 10 geldings would reduce the post-gather breeding population of the herd by nearly 10 percent.

Mares and studs would be selected for release to maintain a diverse age structure, herd characteristics, and conformation (body type). Gelding of males would be conducted under standard procedures.

Alternative 3

Implementation of Alternative 3 would result in capturing fewer wild horses than would be captured in Alternative 2. A gate cut removal would be implemented rather than a selective removal (i.e., the gather would end when the number of excess wild horses has been captured). The post-gather sex ratio would be about 50:50 mares to studs, or would slightly favor mares. This would be expected to result in fewer and smaller bachelor bands, increased reproduction on a proportional basis within the herd, larger band sizes, and individual mares would likely begin actively reproducing at a slightly older age. Under this alternative, the post-gather breeding population would be slightly larger compared to the Proposed Action, as no geldings would be released back to the HMA.

Alternative 4: Fertility Control on Returned Mares

Applying fertility control measures would slow reproduction rates of mares returned to the HMA following the gather. The intent is to slow the regrowth of the population to allow rangeland and riparian resources time to recover from grazing and trampling impacts. It would also decrease the frequency of additional gathers, which would reduce any potential disturbances to individual animals or to the herds. Reducing the number of gathers would also decrease the costs of BLM wild horse operations.

Under this alternative each released mare would receive a single-dose of the 2-year PZP contraceptive vaccine. When injected, PZP (antigen) causes the mare's immune system to produce antibodies that bind to the mare's eggs, and effectively block sperm binding and fertilization (Zoo Montana 2000). PZP is relatively inexpensive, meets BLM requirements for safety to mares and environment, and can easily be administered in the field. In addition, among mares, PZP contraception appears to be completely reversible.

Mares vaccinated in the late fall of 2010 would foal normally in 2011. The efficacy for the late fall application of the 2-year PZP vaccine is as follows:

Year 1 0%
Year 2 80%
Year 3 65%
Year 4 50%

This one-time application would not affect normal development of the fetus, hormone health of the mare or behavioral responses to stallions, should the mare already be pregnant when vaccinated (Kirkpatrick 1995). The vaccine has also proven to have no apparent effects on pregnancies in progress, the health of offspring, or the behavior of treated mares (Turner 1997). Mares would foal normally in 2011 (year 1).

Mares receiving the inoculation would experience slightly increased stress levels from increased handling while being inoculated and freezemarked. Injection site injury associated with fertility control treatments is rare in treated mares, and may be related to experience of the administrator. Any direct impacts associated with fertility control would be at the injection site and would last 1 to 2 days. The mares would quickly recover once released back to the HMA.

D. Rangelands/Weeds

Affected Environment

Plant communities in the HMA consist primarily of Wyoming big sagebrush, bunchgrass, and low sagebrush-bunchgrass with associated grasses and forbs changing with elevation. At lower elevations associated grasses include Sandberg's bluegrass, Thurber's needlegrass, and bluebunch wheatgrass. A large alkaline, playa lakebed is located on the northern end of West Warm Springs Allotment.

Idaho fescue is a less common species found in locations of higher elevation and increased precipitation. Crested wheatgrass seedings within the HMA occur primarily in the northeast corner of East Warm Springs Allotment with some private seedings in West Warm Springs Allotment. Silver sagebrush-Nevada bluegrass communities occur to a lesser extent on sites with seasonal high-water tables.

There are approximately 97 acres of noxious weeds in Warm Springs HMA. East Warm Springs Allotment consists of approximately 5 acres of whitetop (*Cardaria draba*), 65 acres of Canada thistle (*Cirsium arvense*), and a half acre each of perennial pepperweed and Scotch thistle. All of the recorded infestations are located along the roadways which are surveyed and treated on an annual basis. West Warm Springs Allotment consists of approximately 8 acres of bull thistle (*Cirsium vulgare*), 10 acres of Russian Olive (*Elaeagnus angustifolia),* 8 acres of perennial pepperweed, and 0.006-acre of Dalmatian toadflax (*Linaria dalmatica*). Ninety-nine percent of these infestations are located around springs in the allotment which are surveyed and treated on an annual basis.

While not classified as a noxious weed, cheatgrass (*Bromus tectorum*), is becoming an issue on the west side of West Warm Springs Allotment. Post-fire and disturbance rehabilitation efforts have been unsuccessful allowing the spread of cheatgrass throughout the area, resulting in approximately 70,000 acres of cheatgrass within the HMA.

Selecting trap, temporary holding sites and transportation routes that avoid these infestations would lower the risk for spread of noxious weeds. Following the project design features would lower the risk for introduction of new noxious weed species into the area. Monitoring should take place for noxious weeds for a minimum of 2 years at sites where vegetation was trampled, gather sites, temporary holding facilities and transportation routes. If noxious weeds are found, they would be treated using the best available methods.

In general wild horses have two affects on noxious and invasive weeds. They damage the ground cover provided by vegetation exposing these spots and areas to noxious weed invasion. This occurs in three ways. Horses walk to and from drinking water sources creating trails. Horses have social interactions and displays that include pawing. Horses mill around drinking water sources. All of these can result in bare ground where noxious weeds can establish. Horses transport noxious and invasive weed propagules. Mud in their hooves can include seeds. Noxious weed seeds and propagules can attach to their hooves, fetlocks, lower legs, and hides.

There are many impacts to the public lands that cause soil disturbances or are vectors for noxious and invasive weeds. Vehicles, hunting, fires, livestock, and wildlife are other factors. Some of the factors produce similar effects. For example vehicles, livestock, and wild horses and burros all create trails which are susceptible to weed establishment and all three distribute weeds. Even if all horses were removed (which is not proposed), there would still be ample sources of disturbance and weed vectors for noxious and invasive weeds to be a concern in the HMA.

Environmental Consequences

Alternative 1 (No Action)

Areas which are presently overutilized within the HMA, such as areas adjacent to water sources, would continue to be used excessively. The area of overutilization would continue to increase in both size and degree. The composition of vegetation would change to a higher percentage of undesirable plants, soil cover would be reduced, and erosion would increase.

As horse and burro numbers continue increasing above the AML, areas of horse and burro concentrations, trampling, and vegetation impacts increase providing niches for noxious weeds to establish and spread. Common areas for higher horse concentrations and use generally are riparian areas along creeks and springs and reservoirs. These areas already tend to have noxious weed infestations. Horse use can contribute to larger infestations. As horses trail away from water they will transport weed propagules to new locations.

Larger numbers of horses would result in more areas with social interactions that include pawing and trampling.

Cumulative impacts would result in foregoing the opportunity to improve rangeland health and to properly manage wild horses in balance with the available forage and water and other multiple uses.

Attainment of site-specific vegetation management objectives and Standards for Rangeland Health would not be achieved.

Alternative 2 (Proposed Action)

Disturbance to vegetation would be apparent for 1-year in and around the loading chutes, trap sites, and/or corrals due to trampling (by horses and personnel) and vehicle usage. The disturbance would be kept to as small an area as possible. Reducing the number of wild horses grazing yearlong would subsequently reduce effects to those portions of uplands currently with heavy utilization or grazed during critical growth stages each year, which affects plant health. This would improve forage species vigor, cover, and allow the plant communities to provide for maximum plant density to site capability. This would allow progress toward meeting upland objectives.

Areas of high horse concentration lead to heavy grazing which opens up more niches for noxious weed establishment and spread. By maintaining horse numbers at or below AML, the chance of noxious weed spread would be reduced. Limiting vehicle travel to existing roads and ways, combined with avoidance of noxious weed infestations when selecting trap sites, would limit the potential of noxious weed spread during gathering operations. Gather sites would be noted and reported to Range staff and District Weed personnel for monitoring and/or treatment of new and existing infestations. A pre-survey of these areas prior to any activities associated with the gather would give District weed personnel the opportunity to monitor for noxious weeds and treat any infestations prior to new disturbances using the best available method if noxious weeds are found.

Cumulative effects of reduced noxious weed presence, which would be expected when incrementally adding either of the Action Alternatives include continued improvement of upland vegetation conditions, benefitting permitted livestock, native wildlife, and wild horse population as forage (habitat) quality and quantity is improved over the current level. Benefits from a reduced wild horse population would include fewer animals competing for limited forage and water resources. Cumulatively, there should be more stable wild horse populations, healthier rangelands, healthier wild horses, and fewer multiple-use conflicts in the area over the short and long term. Over the next 15 to 20 years, continuing to manage wild horses and burros within the established AML range would achieve a thriving natural ecological balance and multiple-use relationship on public lands in the area.

Alternatives 3 and 4

Same as the Proposed Action.

E. Special Status Fauna (Terrestrial)

Affected Environment

There are no known Federally listed Threatened or Endangered wildlife species found within the Warm Springs HMA. Two BLM SSS are known to exist in the HMA, greater sage-grouse (*Centrocercus urophasianus*) and pygmy rabbit (*Brachylagus idahoensis*). Greater sage-grouse are permanent residents and there are 12 active lek sites within the HMA. Suitable sage-grouse habitat is present on 80 percent of the HMA, with 32 percent of the HMA considered yearlong habitat.

Pygmy rabbits are known to occur in the Warm Springs HMA, but distribution across the HMA is not well documented (Bartels 2003). These rabbits tend to be found in areas with friable soils for burrowing and tall, dense sagebrush vegetation, which are present throughout the HMA, especially in the southeastern portions.

Environmental Consequences

The cumulative effects analysis area for SSS extends a couple of miles beyond the allotment boundary to incorporate most movements of birds regularly using the allotment. Potential effects to SSS would decrease as the distance from the allotment increases. Wildfires may occur in the future, but predicting the effects of potential wildfires would be speculative and analysis of post fire rehabilitation plans would address SSS. All alternatives and other ongoing and reasonably foreseeable future projects would not lead to cumulative effects to SSS, because impacts from the alternatives would be localized and combined effects with the other projects would not be measurable due to distance to other projects or lack of direct and indirect effects to species or habitat.

No Action Alternative

Areas in the HMA which are presently overutilized, such as areas adjacent to water sources, would continue to be used excessively. The composition of vegetation would change to a higher percentage of undesirable plants, soil cover would be reduced, and erosion would increase. Attainment of site-specific vegetation management objectives and Standards for Rangeland Health would not be achieved.

Loss of quality habitat would occur by allowing excess numbers of horses within the HMA, and would impact SSS found within the gather area. Heavy grazing in some areas may reduce available vegetative cover and may lead to higher levels of predation on eggs, young, and adults. The limited riparian habitat would also deteriorate with increased numbers of horses, and this would reduce the quality of sage-grouse brood-rearing habitat. Pygmy rabbit habitat that is overgrazed may lead to abandonment of occupied sites, and a loss of suitable habitat for recolonization or expansion of populations. Although it would still be a low risk and would not impact population trends, the risk of trampling nests and young by horses would increase.

The increase in horse numbers above the AML would cause an impact to the vegetation due to overgrazing and trampling in some areas and provide more niches for noxious weeds to establish and spread, thereby reducing the composition of native plant species necessary to native animal species.

Alternatives 2, 3, and 4

Direct impacts to sage-grouse or pygmy rabbits are not expected. Pygmy rabbits would likely seek refuge in dense sagebrush within their home range or hide in their burrow systems. At the time of the gather, the young sage-grouse would be fully capable of flying and able to easily move away from running horses and avoid the trap area. Impacts to daily activities would occur in some areas, but would likely be of short duration and have no noticeable affect to sage-grouse or pygmy rabbits other than temporary displacement. Trap sites would be located at least 200 feet away from known sage-grouse lek sites.

Reducing the density of horses in the HMA would likely improve habitat condition for both these SSS. The winter diet of pygmy rabbits and sage-grouse consists almost entirely of sagebrush, with forbs and some grasses consumed at other times of the year. There is limited overlap in the diet of horses and pygmy rabbits or sage-grouse, and presence of horses would not directly affect foraging habitat. However, reducing horse grazing pressure may enhance foraging areas by retaining taller screening cover and decreasing the vulnerability of these species to predators. Maintaining quality habitat would improve the quality of an area for recolonization or expansion of pygmy rabbit to suitable sites. Trampling of nests and young may still occur, but there would be even less risk under this alternative as the number of horses is reduced.

F. Migratory Birds

Affected Environment

The area within Warms Springs HMA provides habitat for several migratory birds such as mourning dove (*Zenaida macroura*), mountain bluebird (*Sialia currucoides*), sage sparrow (*Amphispiza belli*), loggerhead shrike (*Lanius ludovicianus*), and other neo-tropical species of migratory birds. Many birds use the area for nesting and brood rearing. The area is also used by birds that migrate through the area for resting and foraging. Several pairs of ducks use Buzzard Creek, Foster Flat, and Jackman Creek but this use may be limited from year to year based on available water.

Environmental Consequences

No Action Alternative

The impacts to migratory birds with selection of the No Action Alternative would be similar to those identified for SSS. Heavy grazing would lead to a loss of cover and suitable habitat for many species, including those that frequently use riparian areas.

Loss of cover would likely lead to higher levels of predation or cause birds to leave the area in search of more suitable habitat.

Alternatives 2, 3, and 4

Impacts to migratory birds are much the same as noted in SSS. Habitat conditions (foraging, nesting, and hiding cover) would be expected to improve by reducing the number of horses. Distribution and quantity of available cover would improve under this alternative with fewer horses. Available cover is important in protecting adults, eggs, and fledglings from predation and screening nests, especially ground nests, from exposure to the elements. And as noted for sage-grouse, there would be less potential of direct impacts from horses by trampling ground nests and fledglings.

G. Wildlife

Affected Environment

The Warm Springs HMA provides suitable year-round habitat for antelope *(Antilocapra americana*). Some mule deer (*Odocoileus hemionus*) may live in the HMA all year long but most use by deer is likely on a seasonal basis with animals moving into the HMA in the fall and then migrating out of the area the following spring. Elk (*Cervus elaphus*) may also use the area occasionally when transitioning between summer and winter areas. The habitat in the HMA supports a wide array of raptor species such as prairie falcons (*Falco mexicanus*), red-tailed hawks (*Buteo jamaicensis*), American kestrels (*Falco sparverius*), golden eagles (*Aquila chrysaetos*), and short-eared owls (*Asio flammeus*). Mammal species present are those commonly found in high desert ecosystems and range from several species of rodent, such as kangaroo rats (*Dipodomys* sp.), mice, and ground squirrels to jackrabbits, badgers, coyotes, and mountain lions. The area likely also supports several species of bats. Quail and chukar also inhabit the HMA.

Environmental Consequences

No Action Alternative

As horse numbers increase, there would be greater competition for limited resources (foraging and hiding cover for animals and their prey). Wildlife habitat may suffer long-term downward trends from overgrazing and trampling, and most wildlife species would be impacted through loss of forage or increased risk of predation. Small animals, such as some rodents and lizards, may be at higher risk of predation as available hiding cover is reduced.

As smaller prey species become less available in an area, the larger predators would have to expand their territory or may be forced to move to another area in search of food. Excessive competition would lead to stress of both wildlife and plants in the HMA. Species that frequent riparian areas would be impacted mostly due to the limited amount of riparian area in the HMA and the concentrated use it receives.

Alternatives 2, 3, and 4

Impacts to wildlife species are not expected other than a short disruption of daily activities. Disruption of wildlife activities during the gather by both the presence of humans and a low-flying helicopter would be of temporary duration. Most animals would simply seek refuge by flying or running out of the area until the disturbance is gone. Small rodents and reptiles would retreat underground. Approximately 2 acres of land used as a trap site would be impacted by concentrated trampling as horses are herded together.

All ungulates and mammal species would have already raised their young to a point there would be little chance of life threatening impacts, such as trampling, from the gather. There would be no impacts to habitat except localized areas around the trap site. This may temporarily displace some small animals until the area revegetates and once again provides foraging and hiding cover.

Competition for forage and water resources between wildlife and horses would be reduced for a time until the horse numbers increased. Riparian areas, which are important to many species of wildlife, would improve as noted above.

H. Soils and Biological Soil Crusts

Affected Environment

Biological Soil Crusts (BSCs) such as mosses, lichens, micro fungi, cyanobacteria, and algae play a role in a functioning ecosystem, and are one of at least 12 potential indicators used in evaluating watershed function for uplands. In addition to providing biological diversity, BSCs contribute to soil stability through increased resistance to erosion and nutrient cycling (BLM Technical Reference 1730-2).

Preliminary work by a BSC specialist noted that BSCs in Burns District are distributed along soil chemistry gradients similar to those seen in others parts of southeast Oregon. Research in the District has demonstrated the same correlation between soil chemistry gradients and BSC presence or absence. Nitrogen fixing lichens occur, but their contribution of Nitrogen is in a volatile form and likely has only a localized effect on overall Nitrogen in the system. Legumes are ubiquitous in their distribution and likely serve a more fundamental role in Nitrogen fixation.

Historically, erosion and loss of BSC cover occurred on upland soils as a result of uncontrolled land use, prolonged drought, and catastrophic storms. Some geologic and localized erosion as well as loss of BSC cover still occurs, caused by concentrated uses. Introduced annual and perennial plants currently occupy portions of these disturbed sites. Current soil productivity and BSC cover reflects site-specific natural conditions, historic disturbances (wildfires, brushbeating, prescribed fires, etc.) as well as other past management practices and public uses.

Many wildfires have occurred in the HMA since 1980. Incidents include, but are not limited to, those listed in the following table:

Table 4: Major Wildfires within the West Warm Springs HMA

Fire Name	Year	Total Acres Burned
Big Stick	2001	9,781
Buzzard	1996	7,799
Iron Mountain	1995	1,955
Flybee	1987	1,652
Saddle Butte	1986	5,110
Harney Lake	1985	54,362
Sebree*	1985	8,000
Jackass	1985	6,932
Antelope	1983	8,527
Eagles Nest	1983	5,964
Total Acres		**110,082**
*8,000 (under 50 percent of the acres fall within the HMA).		

Additional wildfires occurred within the HMA during the 1980-2009 timeframe. Most of these incidents were smaller (under 1,500 acres) and were within the older (1985) Harney Lake fire perimeter. In 2005 the Buzzard and Basque Well prescribed burns were completed in the westernmost and northeast portions of the HMA, respectively.

Current management practices have reduced erosion and have likely reduced loss of BSC cover. These practices include proper stocking rates for livestock, rotation of grazing and rehabilitation of disturbed areas. The future condition of soil and BSC resources would be dependent on the condition of other resources, primarily upland and riparian vegetation. Management actions that affect the condition of these resources would also affect soils and BSCs.

Dominant soils are a Raz-Brace-Anawalt on cold plateaus and uplands with Wyoming big sagebrush, low sagebrush, needlegrass, and bluebunch wheatgrass with light erosion potential. Raz-Brace-Anawalt soils are loamy in a 10 to 12-inch precipitation zone on tablelands from 4,100 to 6,000 feet of elevation and mostly gravelly loams that are shallow to moderate in depth on 2 to 40 percent west slopes with west drainage and a 6e capability class. The secondary soil is a Reallis-Vergas-Lawen on cold plateaus and uplands with Wyoming big sagebrush, needlegrass and bluebunch wheatgrass with light erosion potential. Reallis-Vergas-Lawen soils are loamy in a 10 to 12-inch precipitation zone on fan terraces and depressions from 4,200 to 6,000 feet in elevation and mostly very deep gravelly loams on 0 to 5 percent west slopes with a 6s capability class which is land suitable for pasture, range, woodland or wildlife habitat and the soil is shallow, droughty, or stony.

These soils are shallow to moderately deep, generally well drained, and have a low potential for wind erosion and low to moderate potential for water erosion.

Portions of the allotment contain Felcher-Skedaddle soil complexes visible as very steep rock (20 to 60 percent slopes) outcrops within West and East Warm Springs Allotments. Other soil complexes (Alvodest-Droval-Playas and Poujade-Ausmus-Swalesilver) are represented in the HMA and are associated with saline-sodic lake basins (terraces in the case of Poujade-Ausmus-Swalesilver) and playa dune systems. The aforementioned soil types support plants typical of saline-sodic soils such as greasewood, shadscale, saltgrass, spiny hopsage, and basin wildrye. Alvodest-Droval-Playa soils (sodic lake basins) also occur to a limited degree.

Environmental Consequences

No Action Alternative

When herd size increases, the impacts to soils and BSCs increase in areas of concentrated use. Impacts include increased soil compaction, loss of BSC cover and soil displacement by wind and water. Without a gather there would be an expected increase in herd size that would amplify impacts to soils and BSCs in areas of increased use or congregation.

The No Action Alternative would not promote a normal thriving ecological balance and would increase soil and BSC compaction, erosion and loss of biotic cover (site-specific disturbances) within the West Warm Springs HMA.

Alternatives 2, 3, and 4

Implementation of the Proposed Action or Action Alternatives would meet the BLM's objective to achieve and maintain a wild horse AML that reflects the normal thriving ecological balance that would prevent BSC and other resource deterioration within the West Warm Springs HMA.

The Action Alternatives considered all have the ability to reduce populations of wild horses and would have the same general effects with regard to soils and BSCs. Site-specific soil compaction, erosion and loss of BSC cover would be reduced in areas receiving less concentrated use by fewer wild horses. The Action Alternatives differ only in the method and effectiveness of reducing the population. Gather activities are designed to be minimally intrusive and would have no permanent surface disturbance or impact on soils and BSCs.

CHAPTER IV: CUMULATIVE EFFECTS FOR ALL ALTERNATIVES

As the Council on Environmental Quality (CEQ), in guidance issued on June 24, 2005, points out, the "environmental analysis required under NEPA is forward-looking," and review of past actions is required only "to the extent that this review informs agency decision-making regarding the Proposed Action." Use of information on the effects on consideration of the Proposed Action's cumulative effects, and secondly as a basis for past action may be useful in two ways according to the CEQ guidance. One is for identifying the Proposed Action's effects.

The CEQ stated in this guidance that "[g]enerally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions." This is because a description of the current state of the environment inherently includes the effects of past actions. The CEQ guidance specifies that the "CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions." Our information on the current environmental condition is more comprehensive and more accurate for establishing a useful starting point for a cumulative effects analysis, than attempting to establish such a starting point by adding up the described effects of individual past actions to some environmental baseline condition in the past that, unlike current conditions, can no longer be verified by direct examination.

The second area in which the CEQ guidance states that information on past actions may be useful is in "illuminating or predicting the direct and indirect effects of a Proposed Action." The usefulness of such information is limited by the fact that it is anecdotal only, and extrapolation of data from such singular experiences is not generally accepted as a reliable predictor of effects.

However, "experience with and information about past direct and indirect effects of individual past actions" have been found useful in "illuminating or predicting the direct and indirect effects" of the Proposed Action in the following instances: the basis for predicting the effects of the Proposed Action and its alternatives is based on the general accumulated experience of the resource professionals in the agency with similar actions.

The environmental consequences discussion described all expected effects including direct, indirect and cumulative on resources from enacting the proposed alternatives. A distinction between direct and indirect effects is not made and in many cases cumulative effects are only described as effects. All effects are considered direct and cumulative; therefore, use of these words may not appear. In addition, the Introduction Section of this EA, specifically the Purpose of and Need for Action, identifies past actions creating the current situation.

RFFAs include those Federal and non-Federal activities not yet undertaken, but sufficiently likely to occur, that a Responsible Official of ordinary prudence would take such activities into account in reaching a decision. These Federal and non-Federal activities that must be taken into account in the analysis of cumulative impact include, but are not limited to, activities for which there are existing decisions, funding, or proposals identified by the bureau.

RFFAs do not include those actions that are highly speculative or indefinite. RFFAs within the Project Area include future horse gathers, implementation of a 20 percent reduction in grazing use by livestock, installation of two more solar well water systems and removal of two to three fire rehabilitation fences to improve horse and livestock movements..Cumulative effects were thoroughly addressed throughout Chapter III by resource if applicable.

CHAPTER V: MONITORING AND MITIGATION MEASURES

The BLM COR and PIs assigned to the gather would be responsible for ensuring contract personnel abide by the contract specifications and the SOPs (Appendix A). Ongoing monitoring of forage condition and utilization, water availability, aerial population surveys, and animal health would continue.

Monitoring the herd's social behavior would be incorporated into routine monitoring. The objective of this additional monitoring would be to determine if additional studs (or geldings) form bachelor bands or are more aggressive with breeding bands for the forage and water present. Individual behavior of geldings would be observed during the first breeding season following treatment (i.e., June to October). Monitoring would be designed to determine if they interfere with breeding harems (i.e., demonstrate stallion-like behavior) or form bachelor bands. Periodic population census, together with gather data from future gathers, will be used to determine whether managing a portion of the herd as geldings is effective in slowing the average annual population growth.

CHAPTER VI: LIST OF PREPARERS

The following list identifies the IDT member's area of responsibility:

Bill Andersen, Lead Preparer
Jason Brewer, Wildlife Biologist
Lindsay Davies, Fisheries Specialist
Lisa Grant, Riparian Specialist
Rhonda Karges, Planning and Environmental Coordinator
Doug Linn, Botanist
Gary McFadden, Wild Horse and Burro Specialist
Rob Sharp, Rangeland Management Specialist
Willie Street, Rangeland Management Specialist

CHAPTER VII: CONSULTATION AND COORDINATION

A public hearing was held at the Burns District Office on April 21, 2010, regarding the use of helicopters and motorized vehicles to capture wild horses (or burros) at a Statewide level. During the hearing, the public was given the opportunity to present new information and to voice any concerns or opinions regarding the use of these methods to capture wild horses (or burros). There were no comments received during this meeting. There may be an additional hearing scheduled.

CHAPTER VIII: LIST OF REFERENCES

Department of Environmental Quality Web site, www.deq.gov.

CHAPTER IX: APPENDIXES

Appendix A - Standard Operating Procedures (Gather Operation)
Appendix B - IM WO 2006-023 Euthanasia of Wild Horses and Burros
Appendix C - General Vicinity Map
Appendix D - HMA Map with Fence and Inventory Information
Appendix E - Win Equus Population Modeling Results
Appendix F - Standard Operating Procedures for Population-level Fertility Control Treatments

APPENDIX A

Standard Operating Procedures (Gather Operation)

Gathers would be conducted by utilizing Contractors from the Wild Horse and Burro Gathers-Western States Contract, or BLM personnel. The following procedures for gathering and handling wild horses and burros would apply whether a Contractor or BLM personnel conduct a gather. For helicopter gathers conducted by BLM personnel, gather operations will be conducted in conformance with the *Wild Horse and Burro Aviation Management Handbook* (March 2000).

Prior to any gathering operation, the BLM will provide for a pre-capture evaluation of existing conditions in the gather area(s). The evaluation will include animal conditions, prevailing temperatures, drought conditions, soil conditions, road conditions, and a topographic map with wilderness boundaries, the location of fences, other physical barriers, and acceptable trap locations in relation to animal distribution. The evaluation will determine whether the proposed activities will necessitate the presence of a veterinarian during operations. If it is determined that capture operations necessitate the services of a veterinarian, one would be obtained before the capture would proceed. The Contractor will be apprised of all conditions and will be given instructions regarding the capture and handling of animals to ensure their health and welfare is protected.

Trap sites and temporary holding sites will be located to reduce the likelihood of undue injury and stress to the animals, and to minimize potential damage to the natural resources of the area. These sites would be located on or near existing roads.

The primary capture methods used in the performance of gather operations include:

1. Helicopter Drive Trapping. This capture method involves utilizing a helicopter to herd wild horses and burros into a temporary trap.

2. Helicopter Assisted Roping. This capture method involves utilizing a helicopter to herd wild horses or burros to ropers.

The following procedures and stipulations will be followed to ensure the welfare, safety and humane treatment of wild horses and burros in accordance with the provisions of 43 CFR 4700.

A. CAPTURE METHODS USED IN THE PERFORMANCE OF GATHER CONTRACT OPERATIONS

1. The primary concern of the Contractor is the safe and humane handling of all animals captured. All capture attempts shall incorporate the following:
   All trap and holding facilities locations must be approved by the Contracting Officer's Representative (COR) and/or the Project Inspector (PI) prior to construction.

The Contractor may also be required to change or move trap locations as determined by the COR/PI.

All traps and holding facilities not located on public land must have prior written approval of the landowner.

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

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, plywood, metal without holes.
   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 fly chute to restrain, age, or provide additional care for the animals shall be placed in the runway in a manner as instructed by or in concurrence with the COR/PI.
   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, plastic snow fence, 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.

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

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

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

7. 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, sex, or other necessary procedures. In these instances, a portable restraining chute may be necessary and will be provided by the government. Alternate pens shall be furnished by the Contractor to hold animals if the specific gathering requires that 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 COR.

8. 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 2 pounds of hay per 100 pounds of estimated body weight per day. An animal that is held at a temporary holding facility after 5:00 p.m. and on through the night, is defined as a horse/burro feed day. An animal that is held for only a portion of a day and is shipped or released does not constitute a feed day.

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

10. The Contractor shall restrain sick or injured animals if treatment is necessary. The COR/PI will determine if injured animals must be destroyed and provide for destruction of such animals. The Contractor may be required to humanely euthanize animals in the field and to dispose of the carcasses as directed by the COR/PI.

11. Animals shall be transported to final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the COR/PI for unusual circumstances. Animals to be released back into the HMA following gather operations may be held up to 21 days or as directed by the COR/PI. 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 COR/PI.

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 COR. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than 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 COR.

B. CAPTURE METHODS THAT MAY BE USED IN THE PERFORMANCE OF A GATHER

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

    a. Finger gates shall not be constructed of materials such as "T" posts, sharpened willows, etc., that may be injurious to animals.
    b. All trigger and/or trip gate devices must be approved by the COR/PI prior to capture of animals.
    c. Traps shall be checked a minimum of once every 10 hours.

2. Capture attempts may be accomplished by utilizing a helicopter to drive animals into a temporary trap. If the Contractor selects this method 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 COR/PI. Under no circumstances shall animals be tied down for more than 1-hour.
    b. The Contractor shall assure that foals shall not be left behind, and orphaned.

3. Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. If the Contractor with the approval of the COR/PI selects this method the following applies:

    a. Under no circumstances shall animals be tied down for more than 1-hour.
    b. The Contractor shall assure that foals shall not be left behind, or orphaned.
    c. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who will consider terrain, physical barriers, weather, condition of the animals and other factors.

C. USE OF MOTORIZED EQUIPMENT

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The Contractor shall provide the COR/PI with a current safety inspection (less than 1-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 partition gates providing three compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing two 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 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 COR/PI.

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

6. Animals to be loaded and transported in any trailer shall be as directed by the COR/PI 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:

o 11 square feet per adult horse (1.4 linear feet in an 8-foot wide trailer);
o 8 square feet per adult burro (1.0 linear foot in an 8-foot wide trailer);
o 6 square feet per horse foal (.75 linear foot in an 8-foot wide trailer);
o 4 square feet per burro foal (.50 linear foot in an 8-foot wide trailer).

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

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

D. SAFETY AND COMMUNICATIONS

1. The Contractor shall have the means to communicate with the COR/PI 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 Contracting Officer or COR/PI 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 Contracting Officer or his/her representative.
   b. The Contractor shall obtain the necessary FCC licenses for the radio system.
   c. All accidents occurring during the performance of any task order shall be immediately reported to the COR/PI.

2. Should the Contractor choose to utilize a helicopter 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 animals.

E. SITE CLEARANCES

Personnel working at gather sites will be advised of the illegality of collecting artifacts. Prior to setting up a trap or temporary holding facility, BLM will conduct all necessary clearances (archaeological, T&E, etc). All proposed site(s) must be inspected by a government representative. Once archaeological clearance has been obtained, the trap or temporary holding facility may be set up. Said clearance shall be arranged for by the COR, PI, or other BLM employees.

Gather sites and temporary holding facilities would not be constructed on wetlands or riparian zones.

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

Opportunities for public viewing (i.e., media, interested public) of gather operations will be made available to the extent possible, however, the primary consideration will be to protect the health and welfare of the animals being gathered. The public must adhere to guidance from the onsite BLM representative. 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 authorized 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

Field Office - Contracting Officer's Representative/Project Inspector

The CORs and the PIs have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. The Wild Horse Specialist, Three Rivers Resource Area Field Manager and Supervisory Natural Resource Specialist 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 Burns Corral offices. All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

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. Contract 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 B

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

October 20, 2005

In Reply Refer To:
4730/4700 (WO-260) P

EMS TRANSMISSION 11/03/2005
Instruction Memorandum No. 2006-023
Expires: 09/30/2007

To: All Field Officials (except Alaska)

From: Assistant Director, Renewable Resources and Planning

Subject: Euthanasia of Wild Horses and Burros

Program Area: Wild Horses and Burros

Purpose: This policy identifies requirements for euthanasia of wild horses and burros.

Policy/Action: A Bureau of Land Management (BLM) authorized officer may authorize the euthanasia of a wild horse or burro in field situations (includes free-roaming horses and burros encountered during gather operations) as well as short- and long-term wild horse and burro holding facilities with any of the following conditions:

(1) Displays a hopeless prognosis for life;
(2) suffers from a chronic or incurable disease, injury or serious physical defect; (includes severe tooth loss or wear, severe club feet, and other severe acquired or congenital abnormalities)
(3) would require continuous treatment for the relief of pain and suffering in a domestic setting;
(4) is incapable of maintaining a Henneke body condition score greater than two, in its present environment;
(5) has an acute or chronic injury, physical defect or lameness that would not allow the animal to live and interact with other horses, keep up with its peers or exhibit behaviors which may be considered essential for an acceptable quality of life constantly or for the foreseeable future;
(6) suffers from an acute or chronic infectious disease where State or Federal animal health officials order the humane destruction of the animal as a disease control measure.

Euthanasia in field situations (includes on-the-range and during gathers):

There are three circumstances where the authority for euthanasia would be applied in a field situation:

(A) If an animal suffers from a condition as described in 1-6 above that causes acute pain or suffering and immediate euthanasia would be an act of mercy, the authorized officer has the authority and the obligation to promptly euthanize the animal. If the animal is euthanized during a gather operation, the authorized officer will describe the animal's condition and report the action using the gather report in the comment section that summarizes gather operations (See attachment 1). If the euthanasia is performed during routine monitoring, the Field Manager will be notified of the incident as soon as practical after returning from the field.

(B) Older wild horses and burros encountered during gather operations should be released if, in the opinion of the authorized officer, the criteria described in 1-6 above for euthanasia do not apply, but the animals would not tolerate the stress of transportation, adoption preparation, or holding and may survive if returned to the range. This may include older animals with significant tooth wear or tooth loss that have a Henneke body condition score greater than two. However, if the authorized officer has inspected the animal's teeth and feels the animal's quality of life will suffer and include health problems due to dental abnormalities, significant tooth wear or tooth loss; the animal should be euthanized as an act of mercy.

(C) If an animal suffers from any of the conditions listed in 1-6 above, but is not in acute pain, the authorized officer has the authority to euthanize the animal in a humane manner. The authorized officer will prepare a written statement documenting the action taken and notify the Field Manager and State Office Wild Horse and Burro (WH&B) Program Lead. If available, consultation and advice from a veterinarian is recommended, especially where significant numbers of wild horses or burros are involved.

If, for humane or other reasons, the need for euthanasia of an unusually large number of animals during a gather operation is anticipated, the euthanasia procedures should be identified in the pre-gather planning process. When pre-gather planning identifies an increased likelihood that animals may need to be euthanized, plans should be made for an APHIS veterinarian to visit the gather site and consult with the authorized officer on euthanasia decisions.

In all cases, the final responsibility and decision regarding euthanasia of a wild horse or burro rests solely with the authorized officer (43 CFR 4730). Euthanasia will be carried out following the procedures described in the 4730 manual.

Euthanasia at short-term holding facilities:

Under ideal circumstances horses would not arrive at preparation or other facilities that hold horses for any length of time with conditions that require euthanasia. However, problems can develop during or be exacerbated by handling, transportation or captivity. In these situations the authority for euthanasia would be applied:

(A) If an animal suffers from a traumatic injury or other condition as described in 1-6 above that causes acute pain or suffering and immediate euthanasia would be an act of mercy, the authorized officer has the authority and the obligation to promptly euthanize the animal. A veterinarian should be consulted if possible.

(B) If in the opinion of the authorized officer and a veterinarian, older wild horses and burros in short-term holding facilities cannot tolerate the stress of transportation, adoption preparation, or long-term holding they should be euthanized. However, if the authorized officer has inspected the animal and feels the animal's quality of life will not suffer, and the animal could live a healthy life in long-term holding, the animal should be shipped to a long-term holding facility.

(C) It is recommended that consultation with a veterinarian is obtained prior to euthanasia. If an animal suffers from any of the conditions listed in 1-6 above, but is not in acute pain, the authorized officer has the authority to euthanize the animal in a humane manner. Situations where acute suffering of the animal is not involved could include a physical defect or deformity that would adversely impact the quality of life of the animal if placed in the adoption program or on long-term holding. The authorized officer will ensure that there is a report from a veterinarian describing the condition of the animal that was euthanized. These records will be maintained by the holding facility.

If, for humane reasons, the need for the euthanasia of a large number of animals is anticipated, the euthanasia procedures should be identified to the WH&B State Lead or the National Program Office (NPO) when appropriate. A report that summarizes the condition, circumstances and number of animals involved

must be obtained from a veterinarian who has examined the animals and sent to the WH&B State Lead and the NPO.

In all cases, final decisions regarding euthanasia of a wild horse or burro rest solely with the authorized officer (43 CFR 4730). Euthanasia will be carried out following the procedures described in the 4750-1 Handbook.

Euthanasia at long-term holding facilities:

This portion of the policy covers additional euthanasia conditions that are related to long-term holding facilities and includes existing facilities and any that may be added in the future.

At long-term holding facilities the authority for euthanasia would be applied:

(A) If an animal suffers from a traumatic injury or other condition as described in 1-6 above that causes acute pain or suffering and immediate euthanasia would be an act of mercy, the authorized officer has the authority and the obligation to promptly euthanize the animal.

(B) If an animal suffers from any of the conditions listed in 1-6 above, but is not in acute pain, the authorized officer has the authority and obligation to euthanize the animal in a humane and timely manner. In situations where acute suffering of the animal is not involved, it is recommended that a consultation with a veterinarian is obtained prior to euthanasia. The authorized officer will ensure that there is a report from a veterinarian describing the condition of the animal that was euthanized. These records will be maintained by the authorized officer.

The following action plan will be followed for animals at long-term holding facilities:

The WH&B Specialist who is the Project Inspector and the contractor will evaluate all horses and their body condition throughout the year. Once a year a formal evaluation as well as a formal count of all horses at long-term holding facilities will be conducted. The action plan for the formal evaluation is as follows:

1. All animals will be inspected by field observation to evaluate body condition and identify animals that may need to be euthanized to prevent a slow death due to deterioration of condition as a result of aging. This evaluation will be based on the Henneke body condition scoring system. The evaluation team will consist of a BLM WH&B Specialist and a veterinarian not involved with regular clinical work or contract work at the long-term holding facilities. The evaluations will be conducted in the fall (September through November) to identify horses with body condition scores of 3 or less. Each member of the team will complete an individual rating sheet for animals that rate a category 3 or less. In the event that there is not agreement between the ratings, an average of the 2 scores will be used and final decisions will be up to the BLM authorized officer.

2. Animals that are rated less than a body condition score of 3 will be euthanized in the field soon after the evaluation by the authorized officer or their designated representative. The horses that rate a score 3 will remain in the field and should be re-evaluated by the contractor and WH&B Specialist that is the Project Inspector, for that contract, in 60 days to see if their condition is improving, staying the same or declining. Those that are declining in condition should be euthanized soon after the second evaluation.

3. The euthanasia process that will be used is a firearm. The authorized officer or their designated representative will carry out the process. Field euthanasia does not require the gathering of the animals which would result in increased stress and may cause unnecessary injury to other horses on the facility.

4. Documentation for each animal euthanized will include sex, color, and freeze/hip brand (if readable). Copies of all documentation will be given to the contractor and retained by BLM.

5. Arrangements for carcass disposal for euthanized animal(s) will be in accordance with applicable state and county regulations.

In all cases, the final decisions regarding euthanasia of a wild horse or burro for humane reasons rests solely with the authorized officer (43 CFR 4730). Euthanasia will be carried out following the procedures described in the 4750-1 Handbook.

Timeframe: This action is effective from the date of approval through September 30, 2007.

Budget Impact: Implementation of these actions would not result in additional expenditures over present policies.

Manual/Handbook Sections Affected: No manual or handbook sections are affected.

Background: The authority for euthanasia of wild horses or burros is provided by the Wild Free-Roaming Horse and Burro Act of 1971, Section3(b)(2)(A) 43 CFR4730.l and BLM Manual 4730-Destruction of Wild Horses and Burros and Disposal of their Remains.

Decisions to euthanize require an evaluation of individual horses that suffer due to injury, physical defect, chronic or incurable disease, severe tooth loss or old age. The animal's ability to survive the stress of removal and/or their probability of surviving on the range if released, transportation to a BLM facility and to adoption or long-term holding should be determined. The long term care of these animals requires periodic evaluation of their condition to prevent long term suffering. These evaluations will, at times, result in decisions that will require the euthanasia of horses or burros if this is the most humane course of action.

Coordination: This document was coordinated with the Wild Horse and Burro Specialists in each affected state, the National Program Office and Wild Horse and Burro Advisory Board.

Contact: Questions regarding this memorandum should be directed to Lili Thomas, Wild Horse and Burro Specialist, Wild Horse and Burro National Program Office, at (775) 861-6457.

Signed by:
Thomas H. Dyer
Deputy Assistant Director
Renewable Resources and Planning

Authenticated by:
Robert M. Williams
Policy and Records Group, WO-560

1 Attachment
1 – Name of HMA Gather and Removal Report (2 pp)

Last updated: 12-27-2007

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APPENDIX C

APPENDIX D

APPENDIX E

2010 Warm Springs HMA Gather
Win Equus Population Modeling
July 16, 2010

These population models were ran based on the April 2010 horse inventory which documented 301 adult horses within the HMA (on-the-ground foals were not included in population estimates). The AML of 15 burros was removed from analysis as the program is not designed to model burro populations. As a result, the gather parameters used in the model included an AML range of 96 to 187 horses.

No Action:

Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	296	776	1561
10th Percentile	310	875	1759
25th Percentile	314	936	1932
Median Trial	326	1024	2220
75th Percentile	342	1124	2456
90th Percentile	360	1211	2612
Highest Trial	492	1333	2964

Average Growth Rate in 10 Years

Lowest Trial	17.0
10th Percentile	17.9
25th Percentile	19.3
Median Trial	21.0
75th Percentile	22.0
90th Percentile	22.8
Highest Trial	24.0

Proposed Action:

Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	102	192	302
10th Percentile	116	204	311
25th Percentile	126	212	332
Median Trial	134	184	375
75th Percentile	140	246	453
90th Percentile	146	267	523
Highest Trial	155	299	638

Average Growth Rate in 10 Years

Lowest Trial	13.7
10th Percentile	16.3

25th Percentile	17.7
Median Trial	18.7
75th Percentile	20.4
90th Percentile	21.5
Highest Trial	24.0

	Totals in 11 Years*	
	Gathered	Removed
Lowest Trial	209	191
10th Percentile	376	344
25th Percentile	464	428
Median Trial	514	471
75th Percentile	557	513
90th Percentile	599	554
Highest Trial	799	749

Alternative 3:

	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	91	193	315
10th Percentile	114	206	332
25th Percentile	124	222	364
Median Trial	130	224	430
75th Percentile	136	254	475
90th Percentile	142	267	516
Highest Trial	150	305	681

Average Growth Rate in 10 Years	
Lowest Trial	15.1
10th Percentile	17.9
25th Percentile	19.5
Median Trial	21.1
75th Percentile	22.3
90th Percentile	23.7
Highest Trial	26.0

	Totals in 11 Years*	
	Gathered	Removed
Lowest Trial	288	282
10th Percentile	366	352
25th Percentile	452	432
Median Trial	502	482
75th Percentile	546	524
90th Percentile	596	571
Highest Trial	704	680

APPENDIX F

Standard Operating Procedures for Population-level Fertility Control Treatments

One-year Liquid Vaccine: The following implementation and monitoring requirements are part of the Proposed Action:

1. PZP vaccine would be administered through darting by trained BLM personnel or collaborating research partners only. For any darting operation, the designated personnel must have successfully completed a Nationally recognized wildlife darting course and who have documented and successful experience darting wildlife under field conditions.
2. Mares that have never been treated would receive 0.5 cc of PZP vaccine emulsified with 0.5 cc of Freund's Modified Adjuvant (FMA) and loaded into darts at the time a decision has been made to dart a specific mare. Mares identified for retreatment receive 0.5 cc of the PZP vaccine emulsified with 0.5 cc of Freund's Incomplete Adjuvant.
3. The liquid dose of PZP vaccine is administered using 1.0 cc Pneu-Darts with 1.5-inch barbless needles fired from either Dan Inject® or Pneu-Dart® capture gun.
4. Only designated darters would mix the vaccine/adjuvant and prepare the emulsion. Vaccine-adjuvant emulsion would be loaded into darts at the darting site and delivered by means of a capture gun.
5. Delivery of the vaccine would be by intramuscular injection into the left or right hip/gluteal muscles while the mare is standing still.
6. Safety for both humans and the horse is the foremost consideration in deciding to dart a mare. The Dan Inject® gun would not be used at ranges in excess of 30 m while the Pneu-Dart® capture gun would not be used over 50 m, and no attempt would be taken when other persons are within a 30-m radius of the target animal.
7. No attempts would be taken in high wind or when the horse is standing at an angle where the dart could miss the hip/gluteal region and hit the rib cage. The ideal is when the dart would strike the skin of the horse at a perfect 90° angle.
8. If a loaded dart is not used within 2 hours of the time of loading, the contents would be transferred to a new dart before attempting another horse. If the dart is not used before the end of the day, it would be stored under refrigeration and the contents transferred to another dart the next day. Refrigerated darts would not be used in the field.
9. No more than two people should be present at the time of a darting. The second person is responsible for locating fired darts. The second person should also be responsible for identifying the horse and keeping onlookers at a safe distance.
10. To the extent possible, all darting would be carried out in a discrete manner. However, if darting is to be done within view of non-participants or members of the public, an explanation of the nature of the project would be carried out either immediately before or after the darting.

11. Attempts will be made to recover all darts. To the extent possible, all darts which are discharged and drop from the horse at the darting site would be recovered before another darting occurs. In exceptional situations, the site of a lost dart may be noted and marked, and recovery efforts made at a later time. All discharged darts would be examined after recovery in order to determine if the charge fired and the plunger fully expelled the vaccine.
12. All mares targeted for treatment will be clearly identifiable through photographs to enable researchers and HMA managers to positively identify the animals during the research project and at the time of removal during subsequent gathers.
13. Personnel conducting darting operations should be equipped with a two-way radio or cell phone to provide a communications link with the Project Veterinarian for advice and/or assistance. In the event of a veterinary emergency, darting personnel would immediately contact the Project Veterinarian, providing all available information concerning the nature and location of the incident.
14. In the event that a dart strikes a bone or imbeds in soft tissue and does not dislodge, the darter would follow the affected horse until the dart falls out or the horse can no longer be found. The darter would be responsible for daily observation of the horse until the situation is resolved.

22-month Time-release Pelleted Vaccine: The following implementation and monitoring requirements are part of the Proposed Action:

1. PZP vaccine would be administered only by trained BLM personnel or collaborating research partners.
2. The fertility control drug is administered with two separate injections: (1) a liquid dose of PZP is administered using an 18-gauge needle primarily by hand injection; (2) the pellets are preloaded into a 14-gauge needle. These are delivered using a modified syringe and jabstick to inject the pellets into the gluteal muscles of the mares being returned to the range. The pellets are designed to release PZP over time similar to a time-release cold capsule.
3. Delivery of the vaccine would be by intramuscular injection into the gluteal muscles while the mare is restrained in a working chute. The primer would consist of 0.5 cc of liquid PZP emulsified with 0.5 cc of FMA. The pellets would be loaded into the jabstick for the second injection. With each injection, the liquid or pellets would be injected into the left hind quarters of the mare, above the imaginary line that connects the point of the hip (hook bone) and the point of the buttocks (pin bone).
4. In the future, the vaccine may be administered remotely using an approved long-range darting protocol and delivery system if or when that technology is developed.
5. All treated mares will be freezemarked on the hip or neck HMA managers to positively identify the animals during the research project and at the time of removal during subsequent gathers.

Monitoring and Tracking of Treatments:

1. At a minimum, estimation of population growth rates using helicopter or fixed-wing surveys will be conducted before any subsequent gather. During these surveys it is not necessary to identify which foals were born to which mares; only an estimate of population growth is needed (i.e., # of foals to # of adults).
2. Population growth rates of herds selected for intensive monitoring will be estimated every year post-treatment using helicopter or fixed-wing surveys. During these surveys it is not necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e., # of foals to # of adults). If, during routine HMA field monitoring (on-the-ground), data describing mare to foal ratios can be collected, these data should also be shared with the NPO for possible analysis by the USGS.
3. A PZP Application Data sheet will be used by field applicators to record all pertinent data relating to identification of the mare (including photographs if mares are not freezemarked) and date of treatment. Each applicator will submit a PZP Application Report and accompanying narrative and data sheets will be forwarded to the NPO (Reno, Nevada). A copy of the form and data sheets and any photos taken will be maintained at the field office.
4. A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, disposition of any unused PZP, the number of treated mares by HMA, field office, and State along with the freezemark(s) applied by HMA and date.