UNITED STATES
DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District Office
Andrews Resource Area
Finding of No Significant Impact

Environmental Assessment
DOI-BLM-OR-B060-2010-0005-EA

INTRODUCTION

Andrews Resource Area, Burns District of the Bureau of Land Management (BLM), has prepared an Environmental Assessment (EA) to analyze effects of achieving and sustaining the Appropriate Management Level (AML) for wild horses including gathering of excess horses within the boundaries of South Steens Herd Management Area (HMA) and any wild horses outside or adjacent to the HMA. The current population of wild horses within the gather area is estimated to be 584 animals. The AML for the herd is 159 to 304 wild horses. The AML for South Steens HMA has been previously established based on monitoring data and following thorough public review. Documents containing this information are available for public review at the Burns District Office.

SUMMARY OF THE PROPOSED ACTION

The Proposed Action is to capture wild horses (90 percent of the population) in the HMA and all excess horses outside South Steens HMA. Eighty mares and 79 stallions would remain either ungathered or be returned to the HMA at completion of the gather, leaving a post-gather population of 159 horses. Approximately 30 to 40 mares would be treated with the Porcine Zona Pellucidae (PZP) vaccine (an immunocontraceptive) prior to being released back to the range. The Proposed Action would include determining sex, age and color, assessing herd health (pregnancy/parasite loading/physical condition/etc.), monitoring results as appropriate, sorting individuals as to age, size, sex, temperament and/or physical condition, and returning selected animals, primarily in the 6 to 10-year age group.

The Proposed Action would ensure a vigorous and viable breeding population, reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Free-Roaming Horse and Burro Act of 1971 and the Steens Mountain Cooperative Management and Protection Area Resource Management Plan and Record of Decision (CMPA RMP/ROD)(August 2005).

FINDING OF NO SIGNIFICANT IMPACT

Consideration of the Council on Environmental Quality (CEQ) criteria for significance (40 CFR 1508.27), both with regard to context and intensity of impacts, is described below:

Context

The affected region is limited to portions of Harney County 70 miles south of Burns, Oregon, within the Steens Mountain Area.

The Proposed Action would occur in South Steens HMA and would have local impacts on affected interests, lands, and resources similar to and within the scope of those described and considered in the Andrews Management Unit (AMU)/CMPA Proposed RMP/Final Environmental Impact Statement (FEIS). There would be no substantial broad societal or regional impacts not previously considered in the AMU/CMPA PRMP/FEIS. The actions described represent anticipated program adjustments complying with the CMPA RMP/ROD and implementing wild horse management programs within the scope and context of this document.

Intensity

The CEQ's ten considerations for evaluating intensity (severity of effect):

1. *Impacts that may be both beneficial and adverse*. The EA considered potential beneficial and adverse effects. Standard Operating Procedures (SOPs) were incorporated into the Proposed Action and action alternatives to reduce impacts. None of the effects are beyond the range of effects analyzed in the AMU/CMPA PRMP/FEIS, to which the EA is tiered. The Proposed Action is expected to meet BLM's resource objective for wild horse management of maintaining a thriving natural ecological balance consistent with other multiple uses. Effects of implementing the Proposed Action are summarized below:

   Noxious Weeds: By maintaining horse numbers at or below AML, chance of noxious weed spread would be reduced.

   Special Status Species (SSS): There would be no effect on bald eagles or Columbia spotted frogs. Habitat conditions for greater sage-grouse would be improved. No direct effects on SSS wildlife and fish habitat would be expected. Special Status fish would not be affected by gather activities.

   Migratory Birds: Gathering horses and reducing the herd population would improve the quality of sagebrush and woodland habitat due to decreased horse numbers. There would be no effects to migratory birds from gather activities since most bird species would have migrated out of the area.

   Water Quality/Riparian Areas: Riparian areas would make progress toward achieving Rangeland Health Standards.

   Wild and Scenic Rivers: Returning the horse herd population to AML would ensure overall ORVs for recreational, fisheries, wildlife, and vegetation are maintained.

Wilderness/Wilderness Study Areas (WSAs): Naturalness, solitude and primitive and unconfined recreation opportunities would temporarily be diminished by the presence of the helicopter, riders on horseback, horse traps and use of motorized vehicles. Once the wild horse gather is completed, naturalness, solitude and opportunities for primitive and unconfined recreation would return. No special features would be affected.

Wild Horses: This action would ensure protection of the horses' environment by removing excess animals causing overutilization of the herbaceous plant species. Introduction of PZP would control herd reproduction resulting in more time between needed gathers reducing stress to all animals associated with the HMA.

Sex, age and color, acquiring blood samples, assessing herd health (pregnancy/parasite loading/physical condition/etc.), monitoring results as appropriate, sorting individuals as to age, size, sex, temperament and/or physical condition, and returning selected animals, primarily in the 6 to 10-year age group would ensure a vigorous and viable breeding population.

Grazing Management: Competition for forage and water between livestock, wild horses and wildlife would be minimized helping to maintain a healthy plant population by allowing some partial rest. This rest would help maintain Rangeland Health Standards currently achieved, make progress toward those Standards currently not achieved, and continuance to conform to Guidelines for Livestock Management.

Fish and Wildlife: Reduction of wild horse numbers would reduce utilization of forage and water resources and allow for improvement of habitat conditions for wildlife species. Use of Donner und Blitzen River system streambanks by wild horses would be reduced decreasing sediment inputs thereby improving fish habitat.

Vegetation: Some vegetative disturbance would occur; however, reducing wild horse numbers would decrease impacts to uplands and riparian communities. Forage species vigor and cover would improve and allow plant communities to provide for maximum plant density to site capability making progress toward meeting riparian and upland objectives.

Soils and Biological Soil Crusts: Lower populations of horses would result in less hoof traffic, thereby decreasing impacts to soils and biological soil crusts.

Recreation: Vehicle access to some areas may be temporarily blocked displacing recreationists, and some recreationists may be bothered by a low-flying helicopter. Conversely, gather activities may attract additional people. Hunting and wildlife viewing opportunities may be reduced from implementation activities.

Visual Resource Management (VRM): The VRM Class I, II and III objectives would be met.

2. *The degree to which the Proposed Action affects public health or safety.* The Proposed Action and action alternatives would affect the safety of horseback riders. Less frequent gathers and use of a helicopter would diminish some of these safety risks.

3. *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.* Unique characteristics for the HMA include Steens Wilderness, Donner und Blitzen, Home Creek, and Blitzen River WSAs, and Donner und Blitzen WSR. A summary of effects to these resources is described under 1. *Impacts that may be both beneficial and adverse* above.

   There would be no affect to Cultural Resources. Prior to installing a trap or temporary holding facility, BLM would conduct cultural clearances (Appendix A, SOP, G. Site Clearances). Traps/holding facilities would be relocated if cultural artifacts are found.

4. *The degree to which effects on the quality of the human environment are likely to be highly controversial.* Controversy in this context means disagreement about the nature of the effects, not expressions of opposition to the Proposed Action or preference among the alternatives. No unique or appreciable scientific controversy has been identified regarding the effects of the Proposed Action or alternatives.

5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.* The analysis has not shown there would be any unique or unknown risks to the human environment nor were any identified in the AMU/CMPA PRMP/FEIS to which this proposal is tiered. In addition, the Proposed Action and alternatives include measures for monitoring effectiveness on herd population dynamics and meeting multiple use objectives for rangeland health throughout the HMA.

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.* The actions would not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration. Horse gathers within established HMAs are routine and generally occur on a 4 to 5-year cycle. No long-term commitment of resources causing significant impacts was noted in the EA or RMP.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.* The EA includes an analysis of cumulative effects which considers past, present and reasonably foreseeable future actions in South Steens HMA. In addition, the environmental analysis did not reveal any cumulative effects beyond those already analyzed in the AMU/CMPA PRMP/FEIS which encompasses South Steens HMA.

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.* There are no features within the project area listed or eligible for listing in the National Register of Historic Places. However, as part of the SOP identified in the attached EA Appendices, trap site/holding facility locations would be inventoried for cultural resources prior to placement. Sites eligible for listing to the National Register of Historic Places within the area of effect of traps sites would be avoided.

9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of*1973. There are no known threatened or endangered species or their habitat affected by the Proposed Action or alternatives.

10. *Whether the action threatens a violation of Federal, State, local or tribal law or requirements imposed for the protection of the environment.* The Proposed Action and alternatives do not threaten to violate any law. The Proposed Action is in compliance with the CMPA RMP/ROD, which provides direction for the protection of the environment on public lands.

On the basis of the information contained in the EA and all other information available to me, it is my determination that: 1) The implementation of the Proposed Action or alternatives will not have significant environmental impacts beyond those already addressed in the AMU/CMPA PRMP/FEIS (*August 2004*); 2) The Proposed Action and alternatives are in conformance with the CMPA RMP/ROD; 3) There would be no adverse societal or regional impacts and no adverse impacts to affected interests; and 4) The environmental effects, together with the SOPs against the tests of significance found at 40 CFR 1508.27 do not constitute a major Federal action having a significant effect on the human environment. Therefore, an EIS is not necessary and will not be prepared.

/signature on file/ November 10, 2009
Joan M. Suther Date
Andrews Resource Area Field Manager

SOUTH STEENS GATHER PLAN FOR THE SOUTH STEENS HERD MANAGEMENT AREA

ENVIRONMENTAL ASSESSMENT
DOI-BLM-OR-B060-2010-0005-EA

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

November 10, 2009

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
1. Wilderness Characteristics....3
G. Conformance with Land Use Plans, Laws, Regulations, and Policy....4

Chapter II: Alternatives Including the Proposed Action....4

A. Alternative 1: Proposed Action – Remove Excess Wild Horses and Administer Fertility Control....5
B. Alternative 2: Remove Excess Wild Horses – No Fertility Treatment....6
C. Alternative 3: Remove Excess Wild Horses – Adjust Sex Ratio in Favor of Males....6
D. Alternative 4: No Action....6
E. Alternatives Considered but Eliminated from Detailed Analysis....7

Chapter III: Affected Environment....8

A. Noxious Weeds....10
B. Special Status Species....10
C. Migratory Birds....11
D. Water Quality/Riparian Areas....11
E. Wild and Scenic Rivers....12
F. Wilderness....12
G. Wilderness Study Areas....13
H. Wild Horses....15
I. Grazing Management....16
J. Fish and Wildlife....16
K. Vegetation....17
L. Soils and Biological Soil Crusts....18
M. Recreation....19
N. Visual Resources....19

Chapter IV: Environmental Consequences 20

A. Alternative 1: Proposed Action – Remove Excess Wild Horses and Administer Fertility Control 20

1. Noxious Weeds 20
2. Special Status Species 20
3. Migratory Birds 20
4. Water Quality/Riparian Areas 21
5. Wild and Scenic Rivers 21
6. Wilderness 22
7. Wilderness Study Areas 23
8. Wild Horses 24
9. Grazing Management 27
10. Fish and Wildlife 27
11. Vegetation 28
12. Soils and Biological Soil Crusts 28
13. Recreation 28
14. Visual Resources 28

B. Alternative 2: Remove Excess Wild Horses – No Fertility Treatment 29

1. Noxious Weeds 29
2. Special Status Species 29
3. Migratory Birds 29
4. Water Quality/Riparian Areas 29
5. Wild and Scenic Rivers 29
6 Wilderness 30
7. Wilderness Study Areas 30
8. Wild Horses 30
9. Grazing Management 30
10. Fish and Wildlife 30
11. Vegetation 30
12. Soils and Biological Soil Crusts 31
13. Recreation 31
14. Visual Resources 31

C. Alternative 3: Remove Excess Wild Horses – Adjust Sex Ratio in Favor of Males 31

1. Noxious Weeds 31
2. Special Status Species 31
3. Migratory Birds 31
4. Water Quality/Riparian Areas 32
5. Wild and Scenic Rivers 32
6 Wilderness 32

7. Wilderness Study Areas 32
8. Wild Horses 32
9. Grazing Management 33
10. Fish and Wildlife 33
11. Vegetation 33
12. Soils and Biological Soil Crusts 33
13. Recreation 33
14. Visual Resources 33

D. Alternative 4: No Action 33

1. Noxious Weeds 33
2. Special Status Species 33
3. Migratory Birds 34
4. Water Quality/Riparian Areas 34
5. Wild and Scenic Rivers 34
6 Wilderness 35
7. Wilderness Study Areas 35
8. Wild Horses 36
9. Grazing Management 37
10. Fish and Wildlife 37
11. Vegetation 38
12. Soils and Biological Soil Crusts 38
13. Recreation 38
14. Visual Resources 38

Chapter V: Cumulative Impacts 38

A. Alternative 1: Proposed Action – Remove Excess Wild Horses and Administer Fertility Control 40
B. Alternative 2: Remove Excess Wild Horses – No Fertility Treatment 41
C. Alternative 3: Remove Excess Wild Horses – Adjust Sex Ratio in Favor of Males 41
D. Alternative 4 (No Action) 42

Chapter VI: Consultation and Coordination 43

Chapter VII: Persons, Groups, and Agencies Contacted 43

Appendix A 44
Appendix B 51
Appendix C 52
Appendix D 54
Appendix E 58

Maps

SOUTH STEENS GATHER PLAN
FOR THE
SOUTH STEENS HERD MANAGEMENT AREA
ENVIRONMENTAL ASSESSMENT

DOI-BLM-OR-B060-2010-0005-EA

CHAPTER I: INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

A. Introduction

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

Throughout this period, BLM experience has grown, and the knowledge of the effects of current and past management on wild horses 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 South Steens Herd Management Area (HMA) was previously established, based on monitoring data and following a thorough public review, as a range from 159 to 304 wild horses and was maintained in Steens Mountain Cooperative Management and Protection Area Resource Management Plan/Record of Decision (CMPA RMP/ROD) (August 2005).

South Steens HMA lies south of Burns 75 miles and adjacent to Catlow Valley on the west and Steens Mountain on the east. Topography varies from slightly rolling hills to steep mountainous country. Elevation varies from approximately 4,000 to 7,400 feet. Precipitation ranges upwards of 20 inches annually and comes mainly in the form of snow. Temperatures vary from -40 °F in winter to 95 °F in summer. Major vegetation types are low sagebrush/Idaho fescue, big sagebrush/Idaho fescue, and big sagebrush/bluebunch wheatgrass, all of which have portions of their sites encroached by western juniper.

South Steens HMA was last gathered in 2004. The August 2009 census determined South Steens HMA wild horse numbers to be 584 head. Wild horses are 280 head over the high end of AML.

B. Purpose and Need for Action

The purpose of the action is to achieve and sustain the AML for wild horse numbers within South Steens HMA, to achieve or maintain a thriving natural ecological balance for wild horse habitat, and make significant progress toward achieving Rangeland Health Standards. The need for action derives from excess wild horses within South Steens HMA, specifically the 280 wild horses in excess over the high end of the AML. The CMPA RMP (Page RMP-50) states, as the goal for Wild Horses and Burros to, "[m]anage and maintain healthy wild horse herds in established HMAs at AMLs to maintain a thriving natural ecological balance between wild horse populations, wildlife, livestock, vegetation resources, and other resource values. Enhance and perpetuate the special or rare and unique characteristics that distinguish the respective herds." Another need is Rangeland Health Standards are not being achieved for Watershed Function – Riparian/Wetland Areas and Water Quality with wild horses listed as one of the causal factors (livestock and juniper encroachment were also listed as causal factors).

Land Use Plan Objectives and Management Actions (CMPA RMP Pages RMP 50 and 51) include:

1. Maintain herd viability, genetic diversity, and the genetic and physical characteristics that distinguish individual herds.
2. Wild horse numbers are managed through gathering, removal and other approved methods of population control.
3. Wild horse numbers are normally reduced to the low end of the AML range when gatherings are conducted.
4. Wild horses that stray outside the HMA will be removed or returned to the HMA.
5. A diverse age structure and sex ratios ranging from 40 to 50 percent female and 50 to 60 percent male will be maintained.
6. Wild horses returned to the HMA after a gather will possess representative characteristics of the herd's conformation, size, color and unique markings.

Additional Objectives:

1. Reduce reproductive rates to levels that would accommodate a minimum 4-year gather schedule allowing for the maintenance of AML.
2. Maintain herd characteristics which are typical of South Steens HMA at the time of passage of the Act.

C. Decision Framework

The Andrews/Steens 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 based on the interdisciplinary analysis presented in this Environmental Assessment (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:

- Promote cost effectiveness?
- Cause the least amount of disturbance to wild horses?

E. Decision to be Made

The BLM will determine whether or not to gather excess wild horses, whether or not to 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. The final decision found that Project Area did not have wilderness characteristics present (Wilderness Review Intensive Inventory in Oregon and Washington, March 1980). In August 2003 current conditions were reviewed and documented and no changes were identified that would modify the findings of the 1980 inventory, therefore, wilderness characteristics have been determined not to be present and this issue will not be analyzed further in this EA.

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

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:

- Steens Mountain CMPA RMP (August 2005), Pages 50-51.
- The Wild Free-Roaming Horse and Burro Act of 1971 (Public Law (PL) 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).
- Steens Mountain Travel Management Plan (2007)
- 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."
- Final Oregon Wilderness Environmental Impact Statement (EIS) (1991).
- Wilderness Act, BLM Wilderness Management Manuals 8560 and 8560-1.

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.

Management Actions Common to Alternatives

Population numbers are approximate and actions would attempt to be as close to the projected numbers as feasible. The population of wild horses within the HMA as of August 2009 is 584 head.

Management Actions Common to all Action Alternatives 1-3

Excess horses not returned to the HMA would be placed in adoption, sale or long-term pasture programs. One hundred and fifty-nine head will remain within the HMA after implementation of the Proposed Action or action alternatives.

The Standard Operating Procedures (SOPs) for gathers identified in Appendix A would be followed. The euthanasia policy described in Appendix C 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.
- All efforts would be made to keep trap locations 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.
- Off-road vehicle use (turnaround locations) would be minimized in wilderness and Wilderness Study Areas (WSAs).
- Appropriate rehabilitation in wilderness and WSAs, such as raking and seeding with native species, would be conducted after gathering operations are completed.
- All efforts would be made to keep horse traps and motorized vehicles out of Steens Mountain Wilderness.
- Helicopter landing in Steens Mountain Wilderness would only happen in emergency situations.

A. <u>Alternative 1: Proposed Action - Remove Excess Wild Horses and Administer Fertility Control</u>

The Proposed Action is to capture wild horses (90 percent of the population) in the HMA and all excess horses outside South Steens HMA (see Location Map A and HMA Map B). Eighty mares and 79 stallions would remain either ungathered or be returned to the HMA at completion of the gather, leaving a post-gather population of 159 horses. Approximately 30 to 40 mares would be treated with the Porcine Zona Pellucidae (PZP) vaccine (an immunocontraceptive) following SOPs described in Appendix B prior to being released back to the range. This alternative would include determining sex, age and color, assessing herd health (pregnancy/parasite loading/physical condition/etc.), monitoring results as appropriate, sorting individuals as to age, size, sex, temperament and/or physical condition, and returning selected animals, primarily in the 6 to 10-year age group (see Appendix D). This would ensure a vigorous and viable breeding population, reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Free-Roaming Horse and Burro Act of 1971 and land use plan.

It is anticipated one to three capture sites (traps) would be used to capture wild horses from the HMA. Some capture sites would be placed inside WSAs, using existing roads and previously disturbed sites. Traps would be approximately 800 square feet and constructed with steel, portable panels. Trap wing configuration using "T" posts and jute rope netting will vary, depending on terrain and materials. A holding facility of approximately 2,000 square feet would be constructed on private lands to keep horses until they can be returned to the HMA or transported to adoption, sale or long-term holding facilities. Trap sites would be selected during gather operations. All methods of gathering would be considered and the most efficient, but least impacting to horses, would be used. Gather operations would use a helicopter to drive horses to a trap. All capture and handling activities/techniques, including capture site selections, would be conducted in accordance with SOPs described in Appendix A. Selection of capture techniques would be based on several factors such as herd health and environmental considerations.

Horses are typically herded across country into traps utilizing a helicopter, which reduces herding time, and thereby reduces stress and potential injury for wild horses. A decoy horse is often placed at the trap's entrance to lure wild horses into the trap mouth. Mounted wranglers are utilized to retrieve abandoned foals and occasionally herd stragglers into the trap. Once captured, wild horses are loaded into gooseneck stock trailers and transported to a holding facility, where horses are sorted and selected for herd retention or transported for preparation for adoption. Determination of horses to be returned to the range is based on existing population characteristics.

B. Alternative 2: Remove Excess Wild Horses – No Fertility Treatment

Alternative 2 would be the same as Alternative 1: Proposed Action except mares returned to the HMA would not be treated with PZP.

C. Alternative 3: Remove Excess Wild Horses – Adjust Sex Ratio in Favor of Males

This alternative would be the same as Alternative 2 except ratio of stallions to mares would be adjusted to 60/40 or 95 males and 64 mares. Under this alternative a surplus of stallions would exist within the HMA. Gelding of up to 50 percent of stallions would occur prior to their release back to the HMA.

D. Alternative 4: No Action

Excess wild horses would not be removed from South Steens HMA. The existing population would continue to increase at approximately 20 percent per year, until the 2019 population is approximately 5,158 horses.

E. 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 South Steens HMA. The need for action derives from excess wild horses, specifically the 280 wild horses in excess over the high end of the AML. Furthermore, the CMPA RMP (Page RMP-50) states to, "[m]anage and maintain healthy wild horse herds in established HMAs at AMLs…."

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 South Steens HMA, specifically the 280 wild horses in excess over the high end of the AML, and CMPA RMP direction to, "[m]anage and maintain healthy wild horse herds in established HMAs at AMLs to maintain a thriving natural ecological balance between wild horse populations, wildlife, livestock, vegetation resources, and other resource values. Enhance and perpetuate the special or rare and unique characteristics that distinguish the respective herds."

   In addition, the Wild Free-Roaming Horse and Burro Act of 1971 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.

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. This action is not a land use plan allocation; therefore, elimination of wild horses is outside the scope of this analysis. Furthermore: 2) Removing 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 Wild Horse and Burro Act 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) Current holding facilities for gathered wild horses are full and the likelihood of additional facilities being made available is unlikely; 5) The current market for horses has declined in recent years making adoption of gathered horses less desirable; 6) Moving wild horses to other HMAs would jeopardize herd viability, genetic diversity and the genetic and physical characteristics that distinguish individual herds; 7) Current funding for wild horse gathers is scarce; 8) the CMPA RMP provides for viable wild horse populations in the South Steens HMA; and 9) South Steens wild horse herd is currently healthy and viable.

4. Other alternatives to make significant progress toward achieving rangeland health standards were also eliminated from detailed analysis as the South Steens Allotment Management Plan (AMP)/EA (OR-06-027-060) analyzed four action alternatives to make significant progress toward achieving the Rangeland Health Standards for Watershed Function – Riparian/Wetland Areas and Water Quality. In addition, the purpose to achieve and sustain the AML for wild horse numbers within South Steens HMA and the need to address excess wild horses, specifically the 280 wild horses in excess over the high end of the AML, would not be met.

5. Horseback riders were considered to gather wild horses in Steens Mountain Wilderness by using roundup methods of riding, hazing, and roping. Traditional methods of gathering would be used rather than use of a helicopter. However, this alternative was not analyzed in detail as gathering wild horses in this manner poses a safety risk to both riders and their horses. Possibilities of injury to riders and horses are greatly increased due to rough terrain in pursuit (running) of wild horses. In addition, this traditional method of gathering would require more riders and longer exposure (6 weeks) to high risk levels during gather operations. Gathering wild horses using horseback riders would also be ineffective as it could take up to 6 weeks and chances of success in gathering excess horses in rough terrain are reduced. The increased time would not result in the expected number of horses to be gathered, and the degree of success could affect ecological benefits anticipated by reducing horse numbers to the low end of AML.

CHAPTER III: AFFECTED ENVIRONMENT

The Interdisciplinary Team reviewed the elements of the human environment, as required by law, regulation, Executive Order and policy, to determine if they would be affected by the Proposed Action or any of the alternatives. The following table summarizes the results of that review. Affected elements are in bold.

Elements of the Human Environment		Status	If Not Affected, why? If Affected, Reference Applicable EA Chapter
Air Quality (Clean Air Act)		Not Affected	Fugitive dust would result from horse movement and vehicle travel. An SOP is in place to help mitigate fugitive dust (Appendix A, A.6).
American Indian Traditional Practices		Not Present	
Areas of Critical Environmental Concern (ACECs)		Not Present	Steens Mountain ACEC was eliminated through the RMP planning process. No RNAs or ACECs are present in the HMA.
Cultural Resources		Not Affected	Prior to installing a trap or temporary holding facility, BLM would conduct cultural clearances (Appendix A, SOP, G. Site Clearances). Traps/holding facilities would be relocated if cultural artifacts are found.
Environmental Justice (Executive Order 12898)		Not Affected	Implementation would not result in a disproportionately adverse effect on minority or economically disadvantaged populations as such populations do not occur in or near the Project Area.
Flood Plains (Executive Order 13112)		Not Present	
Grazing Management		**Affected**	See Chapters III and IV.
Hazardous or Solid Waste		Not Present	
Migratory Birds (Executive Order 13186)		**Affected**	See Chapters III and IV.
Noxious Weeds (Executive Order 13112)		**Affected**	See Chapters III and IV.
Paleontological Resources		Not Present	
Prime or Unique Farmlands		Not Present	
Recreation		**Affected**	See Chapters III and IV.
Social and Economic Values		Not Affected	Fewer horses would be on the landscape potentially affecting a person's social values (see Wilderness and WSA Sections); 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		**Affected**	See Chapters III and IV.
Upland Vegetation		**Affected**	See Chapters III and IV.
Visual Resources		**Affected**	See Chapters III and IV.
Wildlife/ Threatened and Endangered (T&E) Species or Habitat	Fish	Not Present	There are no known Federally listed Threatened, Endangered, or Candidate fish species known in the area of South Steens HMA.
	Wildlife	Not Present	There are no known Federally listed Threatened, Endangered, or Candidate species or habitat known in the area of South Steens HMA.
	Plants	Not Present	No T&E species of flora or associated Critical Habitat are present in the Project Area.

Elements of the Human Environment		Status	If Not Affected, why? If Affected, Reference Applicable EA Chapter
Wildlife/BLM Special Status Species (SSS) and Habitat	Fish	**Affected**	See Chapters III and IV.
	Wildlife	**Affected**	See Chapters III and IV.
	Plants	Not Affected	*Potamogeton diversifolius* occurs in one site in the HMA. This species inhabits ponds and reservoirs and would not be affected by the proposal.
Water Quality (Surface and Ground)		**Affected**	See Chapters III and IV.
Wetlands/Riparian Zones (Executive Order 11990)		**Affected**	See Chapters III and IV.
Wild and Scenic Rivers (WSRs)		**Affected**	See Chapters III and IV.
Wild Horses		**Affected**	See Chapters III and IV.
Wilderness/WSAs/Wilderness Characteristics		**Affected**	See Chapters III and IV.
Wildlife		**Affected**	See Chapters III and IV.

This EA is tiered to the Andrews Management Unit/Steens Mountain Cooperative Management and Protection Area Proposed Resource Management Plan/Final Environmental Impact Statement (AMU/CMPA PRMP/FEIS) (August 2004).

A. Noxious Weeds

Current discussion and analysis of potential effects to noxious weeds are tiered to the AMU/CMPA PRMP/FEIS (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.5.5 and 4.5.6.

Noxious weeds have been documented on several sites within the HMA, especially in the vicinity of reservoirs, springs, creeks, roads, and trails. The largest infestations consist of whitetop, scotch thistle, and Canada thistle. Other noxious weed species present in smaller infestations include spotted knapweed, Russian and diffuse knapweed, morning glory, bull thistle, medusahead rye and Mediterranean sage.

B. Special Status Species

Current discussion and analysis of potential effects to SSS are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.7 and 4.7.

There are no known Federally listed Threatened or Endangered species within South Steens HMA. Greater sage-grouse, sage sparrow, bald eagle and some species of bats are BLM SSS and present within the HMA. One Special Status fish species, redband trout, inhabits streams within the HMA. The Columbia spotted frog, a candidate species for listing, has been identified on Donner und Blitzen River near Page Springs Campground.

All known populations of spotted frogs are located outside South Steens HMA. The bald eagle is a wintertime resident with possible roosts along Donner und Blitzen River. There are no known populations of pygmy rabbits in South Steens HMA.

The HMA contains yearlong habitat for sage-grouse with winter areas in lower portions of the HMA. There are currently eight active leks in the HMA with nesting and early brood rearing occurring at all elevations within the HMA. Late brood-rearing areas are usually found in mid to high elevations within the HMA but may also occur where wet meadows provide essential food sources at lower elevations.

Redband trout are found in Donner und Blitzen River and its tributaries which run through South Steens HMA.

C. Migratory Birds

Current discussion and analysis of potential effects to migratory birds are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.6 and 4.6.

Approximately 70 species of migratory birds are known to inhabit the HMA. These species include Brewer's sparrow, song sparrow, western kingbird, gray flycatcher, American robin, house finch, Townsend's solitaire, kestrel, red-tailed hawk, turkey vulture, golden eagle, Canada goose, common merganser, great blue heron, mourning dove, and many other species. Some of these species are habitat specific while others are generalists. Most of these species arrive in the area starting in April, breed, nest, and fledge their young and leave the area by late September. Robins and Townsend's solitaire may be found in the area in the winter time.

D. Water Quality/Riparian Areas

Current discussion and analysis of potential effects to water quality/riparian areas/flood plains are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.3, 3.5.1, 4.3 and 4.5.2.

There are 44.2 miles of perennial streams within the HMA, including most of South Fork Donner und Blitzen River, Home Creek, and Threemile Creek. South Fork Donner und Blitzen River, its major tributaries, and Home Creek are on the Clean Water Act Section 303(d) list of water quality limited waters because of failure to meet the Oregon water temperature standard. Other impacted water quality parameters include increased streambank erosion, increased turbidity, loss of instream habitat and reduced aesthetics (algal production).

Three of the four pastures in South Steens Allotment are achieving all Rangeland Health Standards. Only Steens Pasture (consisting of 41,699 acres, CMPA RMP, Appendix J) is not achieving Watershed Function-Riparian Standard 2 (causal factors being livestock, wild horses and juniper encroachment) and Water Quality Standard 4 (causal factors being livestock and wild horses). Affected areas consist of two springs and a wet meadow (approximately 15 to 18 acres or 0.00043 percent of Steens Pasture).

E. Wild and Scenic Rivers

Current discussion and analysis of potential effects to WSRs are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.24 and 4.24.

Donner und Blitzen WSR and South Fork of Donner und Blitzen WSR both have a wild classification and the Outstandingly Remarkable Values (ORVs) identified include scenery, geological, recreational, fish, wildlife, and vegetation. The portion of the HMA within the WSR corridors is relatively remote and does not have established trails along the river, but likely receives some recreational use primarily associated with hiking/backpacking, fishing, and camping.

F. Wilderness

Current discussion and analysis of potential effects to wilderness are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.22 and 4.22.

A portion of South Steens HMA lies within Steens Mountain Wilderness. The wilderness consists of 170,167 acres located in two parcels (Home Creek Unit and Steens Mountain Unit) which are divided by South Fork Blitzen WSA. The 43,116 acres of South Steens HMA that lies within wilderness include Home Creek Unit and Mud and Ankle Creek area of the Steens Mountain Unit.

Some of the most unique attributes of Steens Mountain Wilderness are the scenic vistas and spectacular geology. Visitors can experience a diversity of habitats where above the trees, severe climate and thin soils result in a belt of grasses, low-growing plants, and stunted, wind-formed shrubs. At the base of the mountain where water is scarce, sagebrush is common. Stands of quaking aspen are seen along streams. Mountain mahogany occupies the dryer ridgetops. Observant visitors may catch glimpses of large raptors such as golden eagles and mammals such as pronghorn antelope and South Steens wild horse herd.

Steens Mountain Wilderness characteristics include naturalness, outstanding opportunities for solitude, primitive and unconfined recreation, and the presence of special features.

Naturalness: Steens Mountain Wilderness is in a relatively natural condition. The wilderness contains a diversity of habitats from sagebrush grasslands at the lower elevations, to alpine habitats at the upper elevations of Steens Mountain.

These habitats contain a wide variety of plant and animal species. Unnatural features occur throughout the wilderness. These features include fences and corrals, spring developments, reservoirs and waterholes, and abandoned cabins. In addition, a number of open roads bisect the wilderness at various locations.

Solitude: The wilderness has outstanding opportunities for solitude. The area contains topographic and vegetative screening and large expanses of open undeveloped landscape.

Primitive and Unconfined Recreation: Steens Mountain Wilderness provides outstanding opportunities for primitive forms of recreation. These activities include day hiking, backpacking, cross-country skiing, camping, horseback riding, hunting, fishing, wildlife viewing, nature study, sightseeing, and photography.

Special Features: Special features in Steens Mountain Wilderness include those of ecological, geological, scientific, educational, scenic, and historical value. All these features are available in the wilderness.

G. Wilderness Study Areas

Current discussion and analysis of potential effects to WSAs are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.23.1 and 4.23.

Blitzen River (2-86E), South Fork Donner und Blitzen River (2-85G), and Home Creek (2-85H) WSAs are located within South Steens HMA. Wilderness characteristics include naturalness, outstanding opportunities for solitude or primitive and unconfined recreation, and the presence of special features. The following definitions are from BLM Manual Handbook H-8550-1 – Interim Management Policy for Lands under Wilderness Review. *Naturalness* - refers to an area which "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable." *Solitude* - is defined as "the state of being alone or remote from habitations; isolation. A lonely, unfrequented, or secluded place." *Primitive and Unconfined Recreation* - is defined as nonmotorized and undeveloped types of outdoor recreation activities. *Supplemental Values* - are listed in the Wilderness Act as "ecological, geological, or other features of scientific, educational, scenic, or historical value." Where possible, the following wilderness characteristic descriptions have been amended to reflect the designation of portions of these WSAs as Steens Mountain Wilderness.

Blitzen River WSA was reduced to 31,737 acres from 55,880 with the designation of Steens Mountain Wilderness. Wilderness characteristics of Blitzen River WSA are summarized from Volume I of the Oregon BLM Wilderness Study Report (1991).

Naturalness: Blitzen River WSA is in a relatively natural condition. The WSA contains a variety of wildlife habitats with a diversity of animals. There are 84 unnatural features which influence approximately 7 percent of the WSA: 52 reservoirs, 1 developed spring, a 2-mile irrigation ditch, 12 fences totaling 33 miles, and 18 ways totaling 58 miles.

(The number of unnatural features has not been adjusted to reflect new structures in the WSA or changes resulting from the designation of wilderness.) Many of the developments and ways are visible from higher elevations around them. Fences are generally screened by topography or vegetation. Outside influences include several small reservoirs along the west boundary, Page Springs Campground, and a power line along the northwest boundary.

Solitude: Blitzen River WSA has outstanding opportunities for solitude. The area contains a substantial amount of topographic and vegetative screening. There are small portions of the WSA, mostly near the western border, where finding seclusion would be difficult because the area's lack of topographic or vegetative screening.

Primitive and Unconfined Recreation: Blitzen WSA provides outstanding opportunities for primitive forms of recreation. These activities include day hiking, backpacking, camping, horseback riding, hunting, wildlife viewing, sightseeing, and photography. Game species in the WSA include mule deer, pronghorn antelope, elk, and chukars.

Special Features: Special features of Blitzen River WSA are scenic quality and wildlife. Topography of the WSA offers spectacular scenery of ridges covered by juniper and sagebrush, intermixed with outcroppings of dark basalt rock. Special wildlife features include a greater sage-grouse strutting ground and mule deer winter range. Greater sage-grouse, a BLM SSS, is proposed for listing under the Endangered Species Act.

<u>South Fork Donner und Blitzen River WSA</u> was reduced to 27,969 acres from 37,555 with designation of Steens Mountain Wilderness. Wilderness characteristics of South Fork Donner und Blitzen River WSA are summarized from Volume I of the Oregon BLM Wilderness Study Report (1991).

Naturalness: South Fork Donner und Blitzen River WSA is in a relatively natural condition. Juniper and low sagebrush are the dominant vegetation. The WSA provides habitat for a variety of big game, upland game birds, and other wildlife species. The WSA contains 30 unnatural features that influence about 2 percent of the WSA: 15 reservoirs, 11 ways totaling 28 miles, a corral, 2 fences totaling 2 miles, and an old abandoned habitation.

Solitude: Opportunities for solitude are outstanding. The WSA's size, numerous shallow drainages, deeper river tributaries, and juniper trees enhance opportunities for a visitor to find seclusion.

Primitive and Unconfined Recreation: South Fork Donner und Blitzen River WSA has outstanding opportunities for primitive recreation. Day hiking, backpacking, camping, and horseback riding opportunities are available. Water and camping spots are available throughout the WSA. Game species in the WSA include mule deer, pronghorn antelope, elk, and upland game birds.

Special Features: A greater sage-grouse strutting area is located in the WSA. Greater sage-grouse, a BLM SSS, is proposed for listing under the Endangered Species Act.

Home Creek WSA was reduced to 1,165 acres from 26,590 with designation of Steens Mountain Wilderness. Wilderness characteristics of the Home Creek WSA are summarized from Volume I of the Oregon BLM Wilderness Study Report (1991).

Naturalness: Home Creek WSA is in a natural condition. The WSA has good populations of pronghorn antelope and chukar and provides habitat for a variety of nongame species. There are no unnatural features in the 1,165-acre WSA.

Solitude: Opportunities for solitude are outstanding. These opportunities are enhanced by vegetative screening and the remoteness of Home Creek WSA.

Primitive and Unconfined Recreation: Home Creek WSA offers outstanding opportunities for hunting, wildlife viewing, camping, and horseback riding. Game species in the WSA include mule deer, pronghorn antelope, and chukars.

Special Features: The identified special features of wildlife, geology, and scenery for Home Creek WSA are now in Steens Mountain Wilderness.

H. Wild Horses

Current discussion and analysis of potential effects to wild horses are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.14 and 4.14.

South Steens HMA has been periodically gathered since 1976. Numbers of excess wild horses captured and removed for each successive gather are documented in Burns District Office. The last gather was completed in 2004, in which 168 excess wild horses were removed, leaving 159 wild horses.

The last census in the complex was completed in August 2009. The population was 584 in South Steens HMA. Of these 584 wild horses, 125 were foals under 1-year of age, which indicates a 22 percent population increase.

Adult wild horses in the HMA weigh an average of 950 to 1,050 pounds and stand between 14.2 and 15.2 hands, with some stallions being slightly larger. The herd is managed for horses with pinto color markings. Other common colors within the herd include sorrel, bay, palomino, gray, brown, black, and roans. Most have saddle horse type confirmation with some draft horse influence.

Peak foaling period for these herds is from March through May. Peak breeding period is from April through June. Currently, the existing sex ratio within the complex is approximately 50/50.

A few reservoirs, springs, and some small perennial streams are the only natural late-season water sources within South Steens HMA. There is pressure on these water sources late in the grazing season, making impacts higher on all resources involved. With the addition of new fencing surrounding the No Livestock Grazing Area, the HMA has been divided with small bands of horses separated from the main portion of the Herd Area.

Forage is allocated for 159 to 304 wild horses in South Steens HMA or 3,648 AUMs. Inventory data show horses have concentrated in the few areas with perennial water sources. Please refer to the Vegetation Section below for a discussion regarding utilization levels.

I. Grazing Management

Current discussion and analysis of potential effects to grazing are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.15 and 4.15.

Forage allocations for livestock in South Steens HMA are currently 9,577 AUMs of active preference. There is only one permittee who grazes livestock in South Steens Allotment.

Water for livestock and wild horses is mainly available from springs, creeks, and reservoirs during early spring through late fall. Throughout the summer, spring flow and reservoir storage diminish. By the late part of the grazing season most water resources become dry, causing some excessive use around permanent watering areas, especially during periods of drought.

Please refer to the Vegetation Section below for a discussion regarding utilization.

J. Fish and Wildlife

Current discussion and analysis of potential effects to fish and wildlife are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.6 and 4.6.

Pronghorn antelope, mule deer, and Rocky Mountain elk use the HMA for summer and winter ranges. Other mammals utilizing the area include, but are not limited to, mountain lion, bobcat, coyotes, badger, black-tailed jackrabbit, cottontail, ground squirrels, chipmunks, bats, pocket gophers and woodrats. Some common birds include golden eagle, chukar, California quail, magpies, red-tailed hawk, kestrel, and the great-horned owl.

Forage allocation is 500 AUMs for deer, 22 AUMs for antelope, and 60 AUMs for elk (wildlife AUMs are at the pre-Steens land exchange levels). Although California bighorn sheep utilize the portion of the HMA near East Rim of Steens Mountain, there has been no forage allocated for them.

Fish species found in Donner und Blitzen River include Malheur mottled sculpin, dace, bullhead and suckers.

K. Vegetation

Current discussion and analysis of potential effects to vegetation are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.5 and 4.5.

For descriptive purposes, South Steens HMA can be broken into higher elevation (above 5,500 feet), lower elevation (below 5,500 feet) and riparian plant communities. The most common vegetative communities at lower elevations include mountain big sagebrush/Thurber's needlegrass, western juniper/mountain big sagebrush, Idaho fescue, and low sagebrush/Sandberg's bluegrass. In higher elevations, the common vegetative types include mountain big sagebrush/Idaho fescue and mountain brome. Riparian vegetation includes willow, alder, red osier dogwood, chokecherry, bluegrass, sedges, and rushes.

Mountain sagebrush, aspen, and to a lesser extent, low sagebrush communities are fire-dependent ecosystems. These communities have been impacted by increasing western juniper density and/or increase in juniper size and canopy cover. South Steens AMP (1995) and the North Steens FEIS (2007) directed the reintroduction of fire into this HMA. This reintroduction of fire has created a mosaic of vegetation seral stages and increased species diversity, as well as improved structural diversity, which results in habitat improvements for most wildlife species, livestock, and wild horses.

Recent rangeland monitoring (2009) within South Steens Allotment indicates heavy utilization by horses (62 to 64 percent utilization of key bunchgrass species) in most of Hollywood Pasture, especially on ridges and east slopes. This pasture was rested from livestock in 2009 and all noted utilization was by herbivores other than livestock (primarily wild horses).

Tombstone Pasture showed moderate utilization of key bunchgrass species in 2009, ranging from 54 to 59 percent. Although this use is still considered moderate (a 41 to 60 percent utilization average), it is on the high end of the moderate scale. Given cattle had not yet been turned out in Tombstone Pasture when the yearly utilization studies were conducted gives a good view of the pressures sustained by plant communities from increased wild horse herd numbers (well over AML).

Overall, monitoring studies indicate a stable to upward trend in condition of upland plant communities. Because of repeated defoliation by, and timing of, wild horse grazing on these sites, forage plant species are not able to complete their life cycle which results in reduced plant vigor and eventual death if this level and timing of annual utilization is continued. This is impeding management objectives for uplands as outlined in the South Steens AMP (1995).

L. Soils and Biological Soil Crusts

Current discussion and analysis of potential effects to Soils and Biological Soil Crusts are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.4 and 4.4.

Soils in the HMA are shallow, rocky, and fine-textured in low sagebrush areas, and are deeper and loam- to clay-loam textured in the mountain sagebrush communities, juniper, and aspen types. In most of the HMA, soils on the uplands are well-drained and stable. Some streambank erosion occurs along the Catlow basin streams and South Fork Donner und Blitzen River.

Rangeland monitoring indicates streambank stability impacts on some segments of streams within the HMA, due to wild horse grazing, which site specifically increases streambank erosion.

Biological crusts also occur in the HMA. "Biological soil crusts are also known as cryptogamic, microbiotic, cryptobiotic, and microphytic crusts, leading to some confusion. The names are all meant to indicate common features of the organisms that compose the crusts. The most inclusive term is probably biological soil crust**,** as this distinguishes them from physical crusts while not limiting crust components to plants. Whatever name used, there remains an important distinction between these formations and physical or chemical crusts" (Belnap, http://www.soilcrust.org/crust101.htm).

Using a classification scheme proposed by Eldridge and Greene in 1994 we can divide microbiota such as biological soil crusts into three groups based on their physical location in relation to the soil: hypermorphic (above ground), perimorphic (at ground) and cryptomorphic (below ground).

Preliminary field observations in 2008 and 2009 indicate the HMA contains primarily perimorphic and secondarily hypermorphic biological soil crusts. Hypermorphic biological soil crusts are found primarily on more stable soils and are generally the most susceptible to disturbance; perimorphic biological soil crusts, the dominant form in the planning area, occur both above and below the soil surface and are intermediate in their tolerance of disturbance; cryptomorphic biological soil crusts are the most difficult to observe and occur to an lesser known extent within the planning area, this group of microbiota is also the most tolerant to disturbance (Evans and Johansen 1999).

M. Recreation

Current discussion and analysis of potential effects to recreation are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.20 and 3.21.

South Steens HMA is primarily located in Steens Mountain CMPA. The Steens Mountain area is a destination for many summer and fall visitors. Much of the HMA is not accessible by motorized vehicles during winter and spring because of locked gates, a seasonal road closure, and poor route conditions. South Steens Loop Road, part of the Steens Mountain Back Country Byway, traverses the HMA and is a major access route. Steens Loop Road, a graded gravel road, is maintained, while most of the side roads are rough and rocky. Approximately 22,000 people per year travel South Steens Loop Road.

Recreational opportunities in the HMA include hunting, four-wheel driving, backpacking, wildlife viewing, hiking, camping, fishing, sightseeing, and wild horse viewing.

N. Visual Resources

Current discussion and analysis of potential effects to visual resources are tiered to the AMU/CMPA PRMP/FEIS) (August 2004), and relevant information contained in the following sections is incorporated by reference: Sections 3.11 and 4.11.

South Steens HMA is located within Visual Resource Management (VRM) Class I, II, and III areas. The WSAs are VRM Class I, while the non-WSA portions are VRM Classes II and III. The VRM Class I objective is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention. The VRM Class II objective is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. The VRM Class III objective is to partially retain the existing character of the landscape.

The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the landscape.

CHAPTER IV: ENVIRONMENTAL CONSEQUENCES

A. Alternative 1: Proposed Action - Remove Excess Wild Horses and Administer Fertility Control

1. Noxious Weeds

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, 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.

2. Special Status Species

There would be no effect from implementation of the Proposed Action on bald eagles or Columbia spotted frogs. Habitat conditions for greater sage-grouse would be improved. By returning the wild horse herd to AML, the number of horses grazing and watering along perennial streams, waterholes and springs would be reduced thereby helping to improve water quality and allowing vegetation to reestablish in portions of affected riparian areas. This would improve water quality and habitats for Special Status fish species as well. This action would contribute toward meeting the objectives contained in the South Steens AMP. No direct effects on SSS wildlife and fish habitat from the gathering procedures would be expected. This alternative would allow for a longer period of time, possibly 1 to 2 more years, before wild horses would exceed the AML and would need to be gathered. This would allow for improved habitat conditions for SSS for a longer period of time.

Affects to Special Status wildlife from gather activities would include short-term disturbance during the gather and placement of traps. No long-term effects would occur from the gather activities. Special Status fish would not be affected by gather activities.

3. Migratory Birds

Gathering horses and reducing the herd population to AML would improve the quality of sagebrush and woodland habitat for migratory birds associated with those habitats due to the decreased number of horses. Reproductive capabilities of migratory birds could be improved as a result of increased food sources.

Cover for most ground-nesting species would be increased. Migratory bird species abundance could be increased within the HMA. This alternative would allow for a longer period of time, possibly 1 to 2 more years, before wild horses would exceed the AML and would need to be gathered. This would allow for improved habitat conditions for migratory bird species for a longer period of time.

There would be no effects to migratory birds from the gather activities since most bird species would have migrated out of the area before gather activities occurred. No long-term effects would occur from gather activities.

4. Water Quality/Riparian Areas

Regulating the number of wild horses in the HMA would reduce use near water sources and riparian areas by minimizing degradation to these resources. Improved shading, bank stability, and flood plain development of these portions of stream by deciduous woody and desired herbaceous species would help to improve water temperatures and overall water quality. Achieving AML for wild horses would also accelerate improvements of upland plant communities and increase capture and infiltration capability. Trap sites would not be located adjacent to any surface water sources or riparian areas (SOP, Appendix A); therefore, there would be no anticipated direct affect from gather operations.

The Proposed Action would reduce the number of horses in and near riparian areas within South Steens Allotment. As a result riparian areas would make progress toward achieving Rangeland Health Standards. Further, this alternative would allow for a longer period of time, possibly 1 to 2 more years, before wild horses would exceed the AML and would need to be gathered. This would allow for increased recovery time following the annual grazing period and overall improved riparian habitat conditions over a longer period of time.

5. Wild and Scenic Rivers

There would be effects on scenic and recreational ORVs, due to helicopter overflights and increased traffic on adjacent roads while wild horses are being gathered. Once the wild horse gather has been completed, effects to WSRs would cease.

Gathering operations would have no effect on the geologic or cultural resources ORVs. Returning the horse herd population to AML would ensure overall ORVs for recreational, fisheries, wildlife, and vegetation are maintained.

6. Wilderness

Elements of South Steens gather affecting wilderness include the possible construction of traps, use of motorized vehicles to transport trapping personnel and wild horses, and use of helicopters. BLM personnel would participate in field checks of potential trap sites. Use of all vehicles off roads and ways would be minimized. Appropriate rehabilitation, such as raking and seeding with native species, is to be conducted after gathering operations are completed.

A potential horse trap site would be along the Lauserica Road which borders the eastern edge (Home Creek Unit) of Steens Wilderness. Lauserica Road has a 30-foot from centerline buffer. It is also possible vehicles may need to drive off road into Steens Mountain Wilderness near trap sites to turn around and/or transport wild horses to a holding pen on private lands. All efforts would be made to keep horse traps and motorized vehicles out of Steens Mountain Wilderness.

Helicopter use would be used to haze wild horses to the horse traps. Helicopter landing in Steens Mountain Wilderness would only happen in emergency situations.

Naturalness: Naturalness in the wilderness would temporarily be diminished by the presence of the helicopter, riders on horseback, horse traps and use of motorized vehicles. Naturalness would be affected for a longer period of time at trap sites and may include crushing of vegetation and some soil disturbance if the use of riders on horseback and motor vehicles occur off Lauserica Road. The imprints of human's work could be more noticeable and the primeval character of the wilderness could be affected.

Solitude: During gather operations solitude in wilderness would be decreased by sight and sound of the helicopter, riders on horseback, and motorized vehicles. These impacts would be limited to those areas of Steens Mountain Wilderness where the gathering is taking place lasting approximately 2 weeks. Once the wild horse gather is completed, solitude would no longer be affected. Visitors would still drive on Lauserica Road.

Primitive and Unconfined Recreation: During all gather operations, primitive and unconfined recreation opportunities would be constrained by the presence of the helicopter, riders on horseback, horse traps and motorized vehicles. These effects would only occur within the vicinity of gathering operations. During the hunting season, hunters would especially be constrained by low-level helicopter overflights and potential, temporary, route closures. Once the gather is completed, opportunities for primitive and unconfined recreation would return. Visitors would still drive on Lauserica Road.

Special Features: No special features in wilderness would be affected, because of the location of gather operations on or adjacent to existing roads and the planned gather time (fall).

7. Wilderness Study Areas

Elements of South Steens gather that could or would affect Home Creek, South Fork Donner und Blitzen, and Blitzen River WSAs include construction of traps, use of motorized vehicles to transport trapping personnel and wild horses, and use of a helicopter. Wilderness/WSA personnel would participate in field checks of potential trap sites.

Naturalness: Naturalness in the three WSAs would temporarily be diminished by the presence of traps, vehicles, people, and a helicopter. Naturalness would be affected for a longer period of time at trap sites due to concentrated hoof action. More than 2,400 square feet of soil and vegetation could be disturbed in and around these areas. The imprints of human's work could be more noticeable and the primeval character of the WSAs could be affected.

Solitude: During all gather operations, solitude in the WSAs would be decreased by sights and sounds of people, vehicles, and a helicopter for about 2 weeks. Once the gather is completed, opportunities for solitude would return. Visitors would still drive on roads and ways.

Primitive and Unconfined Recreation: During all gather operations, primitive and unconfined recreation opportunities would be constrained by the presence of people, vehicles, traps and wings, holding facilities, and a helicopter for about 2 weeks. Possible intermittent closure of access routes may also occur during the 2-week period. During the fall big-game seasons, hunters would especially be constrained by low-level helicopter overflights and possible, temporary route closures. Once the gather is completed, opportunities for primitive and unconfined recreation would return. Visitors would still drive along roads and ways.

Special Features: No special features in the WSAs would be affected, because of location of gather operations on or adjacent to existing roads and the planned gather time (fall).

The Proposed Action would be in conformance with the Interim Management Policy for Lands under Wilderness Review for the following reasons:

The preservation of Wilderness values is the "overriding consideration" of WSA management. The Proposed Action could affect the wilderness value of naturalness. Previously disturbed areas are preferred for trap sites and reseeding small areas with native seed would restore naturalness.

The Proposed Action would meet the "nonimpairment criteria" because no permanent structures would be required, traps are temporary and trapping activities would not degrade wilderness values. Any surface disturbance associated with trap sites and activities may require reclamation such as raking and reseeding with native seed.

The Proposed Action would not impair the WSA's suitability for preservation as wilderness. There would be no long-term effects to the wilderness values of roadlessness, naturalness, and opportunities for solitude or primitive and unconfined recreation. During all gather operations, solitude in the WSAs would be decreased by sights and sounds of people, vehicles, and helicopters for about 2 weeks. Once the gather is completed, opportunities for solitude would return.

The Proposed Actions would be substantially unnoticeable in the long term. Trap sites, when they are in use, would be recognizable as human-made. Once traps are removed, there would be few signs of human activities.

8. Wild Horses

Initially wild horses may be difficult to gather with the recent gather history and frequency of gathers. Many horses may be trap wise and resistant to being driven by a helicopter. As the time between gather cycles increases the number of trap wise horses would also increase.

Under the Proposed Action effects to wild horses would take the form of direct and indirect effects and may occur on either the individual or the population as a whole. Direct individual effects are those effects which occur to individual horses and are immediately associated with implementation of the Proposed Action. These effects include stress associated with the roundup, capture, sorting, animal handling, and transportation of the animals. The intensity of these effects varies by individual, and is indicated by behaviors ranging from nervous agitation to physical distress. Mortality of individuals from this effect is infrequent, but does occur in 0.5 to 1 percent of horses gathered in any given roundup (Nevada BLM statistics). Implementation of SOPs in Appendix A would help minimize direct impacts to animals.

Indirect individual effects are those effects which occur to individual horses after the initial stress event. Indirect individual effects may include spontaneous abortions in mares, and increased social displacement and conflict in stallions.

These effects, like direct individual effects, are known to occur intermittently during wild horse gather operations. An example of an indirect individual effect would be the brief skirmish which occurs with older stallions following sorting and release into the stallion pen which lasts less than 2 minutes and ends when one stallion retreats. Traumatic injuries do not occur in most cases, however, they do occur. These injuries typically involve a bite and/or kicking with bruises which do not break the skin. Like direct individual effects, frequency of occurrence of these effects among a population varies with the individual. Spontaneous abortion events are very rare among mares following captures.

Population-wide direct effects are immediate effects which would occur during or immediately following implementation of the Proposed Action They include displacement of bands during capture and associated redispersal which occurs following release, modification of herd demographics (age and sex ratios), temporary separation of members of individual bands of horses, reestablishment of bands following releases, and removal of animals from the population.

With exception of changes to herd demographics, direct population-wide effects have proven, over the last 20 years, to be temporary in nature with most, if not all, effects 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. The effect of band displacement on a population as a result of gather operations has been observed in several HMAs following releases.

Observations have been made of individual and population-wide horse response following releases from both the trap site, where particular animals were captured, and from the central holding facility where all captured animals were held. Horses relocate themselves from the release site back to their home ranges within 12 to 24 hours and, at times, much faster. This redistribution occurred following a brief "reorientation swing" involving horses ranging out from the release site in a curving arc until their bearings were apparently restored. Following this initial random travel, most horses lined out and headed off in a particular direction often without deviating from that line until they disappeared from sight. Assertions that horses are simply taking the most direct route away from humans are not accurate, as instances where horses reverse their original direction crossing back in front of the release trailer or holding area are fairly common following the reorientation swing.

Specialists have also observed horse behavior, following releases, as it relates to bands which are separated at capture. While the affinity of individual animals to their band would be expected to vary, it was a common observation for mares to break away from the groups they were released with, an unexpected behavior for a social animal exercising the flight response. Mares tended to reconnect with mares from their old band. Following this activity, the pair or trio of horses continue the reorientation swing and then lined out together in a common direction. In some cases, individual groups were observed later together in a new area presumed to be the site of their original home range. Some specialists have noted individual mares re-associated with specific stallions or mare groups following capture.

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

Direct impacts to the wild horse herd's social structure as a result of the proposed gather, handling and removal operation include the temporary separation of foals from their mothers, and mixing and separation of individual bands. These impacts would be short term (from a few hours to a few weeks) and would disappear within a few weeks following the gather as bands reform.

The indirect effect of removing excess wild horses before range conditions deteriorate further would be decreased competition among the remaining animals for the available water and forage. This should result in improved wild horse health and body conditions.

For stallions, reproductive stress is based on dominance in the herd and by definition is confined to a fairly narrow period in their lifespan when they are capable of defending a mare group. For mares, recurrent reproductive stress starts as early as age 2 and continues until as late as age 15 or 16, and sometimes as late as 20. Biological stress in wild horses tends to indicate a selection against mares. Biological stress is based on the degree, duration, and timing of biologically demanding activities during the annual reproductive cycle.

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

The susceptibility of the older herd to extreme climatic events would depend on the age of the dominant class in the group. Generally, survival rates of horses are very high (exceeding 98 percent) for mature animals (5 to 15 years) and lower for very young and very old. This survivability declines again at some older age. Similarly, reproductive success also declines at some age. The threshold age has not been established at which susceptibility to extreme events and reproductive senescence occurs. It is reasonable to conclude older the population, the more prone it would be to a catastrophic die-off as a result of reduced resistance to disease, lowered body condition, and/or reduced reproductive capacity.

The Proposed Action would implement the Selective Removal Policy (Appendix D) minimizing the possibility for developing negative age or sex-based selection effects in the population in the future.

The proposed use of immunocontraception in Alternative 1, Proposed Action, provides a statistical reduction in population growth of 18.6 percent. Appendix E provides the comparison of alternatives resulting from the WinEquus Population Model. Additional handling required to administer the immunocontraception would increase the handling stress experienced by mares during gathering operation.

Alternative 1 has the greatest positive potential impacts to breeding mares in the population that are treated with PZP. After foaling normally the first year the mares should be infertile for at least the next year. Mares would be expected to have reduced pregnancy induced stress levels during the infertile year. This would result in improved health of individual mares for that year.

9. Grazing Management

The Proposed Action would minimize competition for forage and water between livestock, wild horses, and wildlife. Removing competition would help to maintain a healthy plant population by allowing some plant communities partial rest from year-round horse utilization. This rest would help maintain Rangeland Health Standards currently achieved, make progress toward those Standards currently not achieved in Steens Pasture, and continuance to conform to Guidelines for Livestock Management.

10. Fish and Wildlife

Some wildlife could be temporarily disturbed or displaced by the helicopter or by placement of traps. Impacts would be short term (2 weeks) and many species of wildlife would return to regular use of the areas after the disturbance has passed. Reduction of wild horse numbers to AML would reduce utilization of forage and water resources by horses and allow for improvement of habitat conditions for wildlife species.

Use of Donner und Blitzen River system streambanks by wild horses would be reduced which would decrease sediment inputs thereby improving fish habitat. This alternative would allow for a longer period of time, possibly 1 to 2 more years, before wild horses would exceed the AML and would need to be gathered. This would allow for improved habitat conditions for fish and wildlife species for a longer period of time.

11. Vegetation

Some short-term disturbance to the vegetation would occur in and around the trap sites due to trampling and vehicle use. The disturbance would be kept to as small an area as possible. Reducing the number of wild horses would subsequently reduce impacts to those portions of uplands and riparian communities 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 plant communities to provide for maximum plant density to site capability. This would allow progress toward meeting riparian and upland objectives outlined in the South Steens AMP.

12. Soils and Biological Soil Crusts

Soil and biological soil crust cover loss and compaction would be expected to decrease in those areas near water sources where horses are forced to concentrate. Lower populations of horses would result in less hoof traffic, thereby decreasing impacts to soils and biological soil crusts.

13. Recreation

For a period of 2 weeks, vehicle access to some areas may be temporarily blocked by gather activities and facilities, displacing recreationists to other, nearby areas. People recreating in the HMA may be bothered by low-flying helicopters. Conversely, gather activities may attract additional people to the area. Wildlife would be disturbed by helicopter overflights, reducing opportunities for hunting and wildlife viewing. Public notification regarding gathering activities would be distributed prior to commencement of gather operations. Effects to recreation in the WSAs are described in the WSA Section.

14. Visual Resources

Traps and holding facilities would temporarily add complex rectangular and circular forms which would contrast with the surrounding landscape. These forms would be composed primarily of short vertical and long horizontal lines. A longer lasting color contrast would be caused by vegetation trampling and soil exposure. Reseeding in WSAs, and eventual revegetation, of the trap sites and holding facilities would reduce the contrast.

Use of pickups and All-Terrain Vehicles for trap wing construction and removal outside the WSAs could create sinuous linear features through the crushing of vegetation and exposure of soil. Line and color contrasts could be created. Trap wings themselves are made from jute and T-posts. Only temporary, minor color contrasts would result from the trap wings.

The VRM Class II and III objectives would be met for the non-WSA portion of the HMA. VRM Class I objectives would also be met; however, short-term (2 weeks) gathering operations would be noticeable with some residual loss of vegetation. There would be one to three trap sites each less than 0.5-acre.

B. Alternative 2: Remove Excess Wild Horses – No Fertility Treatment

1. Noxious Weeds

Effects would be the same as Alternative 1: Proposed Action.

2. Special Status Species

Affects to SSS would be similar to the Proposed Action except wild horse numbers would exceed AML in 3 to 4 years instead of 5 to 6 years as in the Proposed Action. Habitat conditions for Special Status fish and wildlife would have a shorter time to recover from current overuse by wild horses. Depending on climatic conditions during this timeframe, habitat conditions might improve little over the 3 to 4-year timeframe. This could affect abundance of SSS in the HMA.

3. Migratory Birds

Affects to migratory bird species would be similar to the Proposed Action except wild horse numbers would exceed AML in 3 to 4 years instead of 5 to 6 years as in the Proposed Action. Habitat conditions for migratory birds would have a shorter time to recover from current overuse by wild horses. Depending on climatic conditions during this timeframe, habitat conditions might improve little over the 3 to 4-year timeframe. This could affect abundance of migratory birds in the HMA.

4. Water Quality/Riparian Areas

This alternative would be similar to the Proposed Action except the benefits to riparian areas would be reduced as the herd size increases faster than the Proposed Action.

5. Wild and Scenic Rivers

Effects would be the same as Alternative 1: Proposed Action.

6. Wilderness

Effects would be the same as Alternative 1: Proposed Action.

7. Wilderness Study Areas

Effects would be the same as Alternative 1: Proposed Action.

8. Wild Horses

Effects from gathering would be the same as Alternative 1: Proposed Action. Population modeling found this alternative results in an average population of 292 head which is 3 percent more than Alternative 1 (284 head). The average growth rate for Alternative 1 was 18.6 percent versus 21.4 percent for this alternative. Implementation of either Alternative 1 or Alternative 2 would prevent the wild horse population from increasing beyond the upper level of the AML (304 head) until 4 years following implementation of the gather.

Appendix E provides the comparison of alternatives resulting from the WinEquus Population Model.

9. Grazing Management

Effects of gathering excess wild horses would be the same as Alterative 1: Proposed Action. See Vegetation Section below for a discussion on utilization.

10. Fish and Wildlife

Affects to fish and wildlife would be similar to the Proposed Action except wild horse numbers would exceed AML in 3 to 4 years instead of 5 to 6 years as in the Proposed Action. Habitat conditions for fish and wildlife species would have a shorter time to recover from current overuse by wild horses. Depending on climatic conditions during this timeframe, habitat conditions might improve little over the 3 to 4-year timeframe. This could affect abundance of fish and wildlife species in the HMA.

11. Vegetation

Lacking the use of immunocontraception, wild horse populations in the HMA would increase more rapidly than in the Proposed Action. Potential effects to vegetation resources would be expected to be similar, but less beneficial to vegetation than the Proposed Action. Reducing the number of wild horses more slowly than in the Proposed Action would subsequently slow the reduction of impacts to those portions of uplands and riparian communities currently with heavy utilization or grazed during critical growth stages (2009), which affects plant health.

This scenario would still improve forage species vigor, cover, and eventually allow plant communities to provide for maximum plant density and site capability. This would allow progress toward meeting riparian and upland objectives outlined in South Steens AMP.

12. Soils and Biological Soil Crusts

Lacking the use of immunocontraception, wild horse populations in the HMA would increase more rapidly than in the Proposed Action. Potential effects to soil and biological soil crust resources would be expected to be less beneficial, but similar to the Proposed Action with the following explanation. Reducing wild horse numbers more slowly than in the Proposed Action would subsequently slow the reduction of impacts to soil and biological soil crusts. Soil and biological soil crust cover loss and compaction would still be expected to decrease in those areas near water sources where horses are forced to concentrate. Lower populations of horses would result in less hoof traffic, thereby decreasing impacts to soils and biological soil crusts.

13. Recreation

Effects from gathering excess horses would be the same as Alternative 1: Proposed Action.

14. Visual Resources

Effects from gathering excess horses would be the same as Alternative 1: Proposed Action.

C. Alternative 3: Remove Excess Wild Horses – Adjust Sex Ratio in Favor of Males

1. Noxious Weeds

Effects would be the same as Alternative 1: Proposed Action.

2. Special Status Species

Since the rate of return for wild horses to exceed AML is about the same timeframe as in the Proposed Action, effects to SSS would be the same as described for the Proposed Action.

3. Migratory Birds

Since the rate of return for wild horses to exceed AML is about the same timeframe as in the Proposed Action, effects to migratory birds would be the same as described for the Proposed Action.

4. Water Quality/Riparian Areas

Under this alternative effects and duration would be similar to those of the Proposed Action. However, while numbers of horses and reproductive capacity would be reduced, it could be expected gelding bands may create a situation in which more localized impacts may be seen in riparian areas. Geldings tend to congregate in larger numbers than stallion/mare bands.

5. Wild and Scenic Rivers

Effects would be the same as Alternative 1: Proposed Action.

6. Wilderness

Effects would be the same as Alternative 1: Proposed Action.

7. Wilderness Study Areas

Effects would be the same as Alternative 1: Proposed Action.

8. Wild Horses

Effects of gathering would be the same as described under Alternative 1: Proposed Action.

If selection criteria leave more stallions than mares, band size would be expected to decrease, competition for mares would be expected to increase, recruitment age for reproduction among mares would be expected to decline, and size and number of bachelor bands would be expected to increase.

Skewing the sex ratio of stallions v. mares would result in a destabilization of the band (stallion, mare and foal) structure moving it from five to six animals to three animals. Social band structure will be lost resulting in combative turmoil as surplus stallions attack a band stallion trying to capture his mare. This could result in the foal being either killed or lost. The mare and foal will not be allowed to feed or water naturally as the stallion tries to keep them away from the bachelor bands of stallions, resulting in stress to the mare during her lactation condition.

The gelding aspect of Alternative 3 is the only irreversible action considered. A study of gelding dominant stallions in the Beatys Butte HMA (Lakeview District) found no reduction in population growth. Potentially gelding could reduce population growth rates; however, it is unknown what percentage would be necessary to accomplish this reduction. Gelding would change the individual behavior of each male horse, and many would be expected to form bachelor bands. Breeding age mares would be expected to breed with available stallions regardless of the presence of geldings in the HMA.

9. Grazing Management

Effects would be the same as Alternative 1: Proposed Action. See Vegetation Section for a discussion regarding utilization and effects.

10. Fish and Wildlife

Since the rate of return for wild horses to exceed AML is about the same timeframe as in the Proposed Action, effects to fish and wildlife species would be the same as described for the Proposed Action.

11. Vegetation

Since the rate of return for wild horses to exceed AML is about the same timeframe as in the Proposed Action, effects to vegetation would be the same as described for the Proposed Action.

12. Soils and Biological Soil Crusts

Since the rate of return for wild horses to exceed AML is about the same timeframe as in the Proposed Action, effects to soils and biological soil crusts would be the same as described for the Proposed Action.

13. Recreation

Effects would be the same as Alternative 1: Proposed Action.

14. Visual Resources

Effects would be the same as Alternative 1: Proposed Action.

D. Alternative 4: No Action

1. Noxious Weeds

The increase in horse numbers above the AML could lead to areas of higher horse concentrations causing a 50 to 90 percent increase in bare ground due to overgrazing and providing more niches for noxious weeds to establish and spread. Areas of high horse concentration include riparian areas, springs, and reservoirs.

2. Special Status Species

Heavy grazing use along perennial streams would cause water quality and riparian condition to deteriorate, directly affecting redband trout habitat.

Objectives outlined in South Steens AMP would not be met. Nesting and brood-rearing habitat for sage-grouse would continue to be degraded as wild horse numbers increased and riparian/wetland conditions deteriorated. Loss of cover in nesting areas would allow for more predation of nests while loss of forb species important to sage-grouse for nutrition during nesting and brood rearing would decrease the general health and reproductive status for hens. Loss of cover around important water sources leaves hens and broods susceptible to predation as well.

3. Migratory Birds

While sagebrush and woodland habitat would still be available for migratory birds associated with these habitats, quality of habitat would be reduced due to the increased number of wild horses. Grassland habitat and wetland/riparian habitat would also be reduced due to increased wild horse use. Reproductive capabilities of migratory birds would be affected as a result of decreased food sources. Cover for most ground-nesting species would be reduced. Migratory bird species abundance would be reduced within the HMA.

4. Water Quality/Riparian Areas

Increasing numbers of wild horses in the HMA would result in greater use and degradation of riparian areas. This would result in an unacceptable decline in water quality through increased sedimentation and water temperatures. Riparian area vegetation would be degraded as additional horse use would decrease vegetation recruitment, reproduction, and survivability. In addition, riparian vegetation community types and distribution would be changed, root density lessened, and canopy cover reduced. This would lead to reduced stream channel and spring/seep dynamics and further deterioration of these systems.

Wild horse presence has been identified as a contributing factor in failure to achieve Rangeland Health Standards in Steens Pasture. Under this alternative, Rangeland Health Standards 2 and 4 would likely continue to not be achieved.

5. Wild and Scenic Rivers

Increased horse population, concentration and utilization of riparian areas associated with the WSR segments would affect scenic, recreational, fisheries, wildlife, and vegetation ORVs. There would be no affect on geologic ORVs. Increased horse numbers could potentially affect cultural resources ORVs within the WSR corridors.

6. Wilderness

Under the No Action Alternative wild horses would not be gathered. The wild horse numbers could expand again another 18 to 25 percent from next spring's foal crop. Increased horse use would impair wilderness values. Degradation of vegetation and soils would primarily affect naturalness as a result of increased population, concentration, and utilization by wild horses within wilderness. Additional effects of not removing excess horses include degradation of wildlife habitat and loss of the natural appearance of wilderness.

Naturalness: In the next 2 to 3 years naturalness would not be affected. However, within the next 5 years, naturalness in the wilderness would be affected by increasing numbers of wild horses. Overgrazing by wild horses would change the character of the landscape through loss of vegetation and an increase in soil erosion and invasion by annual grasses or noxious weeds. This would also have direct effects on wildlife habitat and populations.

Solitude: Opportunities for solitude in wilderness would not be affected by increased horse numbers as most wilderness visitors would consider horses to be native and natural. Visitors would still have to contend with use of Lauserica Road.

Primitive and Unconfined Recreation: Opportunities for primitive and unconfined recreation in wilderness would not be affected as wild horses would have no effect on wilderness recreation opportunities. Visitors would still have to contend with use on Lauserica Road.

Special Features: Special features in wilderness would be affected by increased horse use leading to increased resource damage and degradation.

7. Wilderness Study Areas

Under the No Action Alternative wild horses would not be gathered. The wild horse numbers could expand again another 18 to 25 percent from next spring's foal crop. Increased horse use would impair wilderness values. Degradation of vegetation and soils would primarily affect naturalness, as a result of increased population, concentration, and utilization by wild horses within the WSAs. Additional effects of not removing the horses include the degradation of wildlife habitat and loss of the natural appearance of wilderness.

Naturalness: In the 1 to 2 years naturalness in Blitzen River, South Fork Donner und Blitzen River, and Home Creek WSAs would not be affected.

However, in the next 3 to 5 years naturalness in the WSAs would be affected by increasing numbers of wild horses. Overgrazing by wild horses would change the character of the landscape through loss of vegetation and an increase in soil erosion and invasion by annual grasses or noxious weeds. This would also have direct effects on wildlife habitat and populations.

Solitude: Opportunities for solitude in Blitzen River, South Fork Donner und Blitzen River, and Home Creek WSAs would not be affected. Visitors would still have to contend with use of roads and ways.

Primitive and Unconfined Recreation: Opportunities for primitive and unconfined recreation in Blitzen River, South Fork Donner und Blitzen River, and Home Creek WSAs would not be affected. Visitors would still have to contend with use of roads and ways.

Special Features: Special features in Blitzen River, South Fork Donner und Blitzen River, and Home Creek WSAs would not be affected. Visitors would still have to contend with people use on roads and ways.

8. Wild Horses

Wild horses would continue to multiply and the population would increase at a rate of 20 to 22 percent per year until the habitat would no longer support the horse population and a natural die-off would occur. Until this happens horses would continue to overuse the available forage and water.

Horses would begin to show signs of malnutrition, and a decrease in the population rate can be expected. In concentrated, overabundant animal populations, individuals become much more susceptible to disease, which endangers the entire population. Domestic stock in the vicinity could also be threatened by disease.

If the number of wild horses is allowed to further expand beyond the AML, portions of uplands and riparian conditions would continue to deteriorate or not improve. As numbers of animals increase, uplands and riparian communities would deteriorate with impacts to watershed condition, habitats for other animals, and water quality disrupting the ecological balance within the HMA.

Population modeling found this alternative (No Action) resulted in the highest average population size in 10 years of 2,263 head versus 284 head for Alternative 1: Proposed Action. The average growth rate for this alternative (No Action) was 23.0 percent versus Alternative 1: Proposed Action at 18.6 percent.

Under this alternative, natural controls such as predation, disease, forage, water and space availability would not regulate wild horse numbers until their habitat is lost from overuse. In addition, wild horses are a long-lived species with documented foal survival rates exceeding 65 percent. This alternative would result in a steady increase in numbers that would exceed the carrying capacity of the range. The Wild Free-Roaming Horse and Burro Act of 1971 mandates the Bureau to "prevent the range from deterioration associated with overpopulation" and "preserve and maintain a thriving natural ecological balance and multiple use relationships in that area."

9. Grazing Management

Excess wild horse numbers would exceed the carrying capacity of the HMA as the horse population continued to increase over time. Weight gains of livestock would decrease as the quality and quantity of available water and forage decreases because of direct competition with excess wild horses. Designed benefits to vegetation with current livestock grazing schedules provide deferment or rest to at least one pasture per year would not be realized. The BLM may be forced to suspend or reduce permitted use of livestock in the area to compensate for the excess number of horses. This, in turn, would affect the financial income of these operations.

Livestock and increased numbers of wild horses would be in direct competition for forage and water as the population increases. Livestock management on public land would require shorter periods of use and increased rest cycle. However, negative impacts would still occur from yearlong grazing by horses (i.e., repeated defoliation of plants, grazing at critical times for plants). Wild horses would also graze private land parcels with water within the HMA more intensively, providing incentive to the landowner to fence the private land from the HMA and not allow wild horse use.

10. Fish and Wildlife

Wildlife populations in the HMA would be forced to compete more for limited water and forage, which would most likely alter use patterns. Habitat degradation would decrease wildlife populations and wildlife use in the HMA. Less mobile species of wildlife such as ground squirrels, chipmunks, and pocket gophers could be extirpated from areas that receive the most use by increasing wild horse populations.

Fish habitat in the Donner und Blitzen system would be affected by increased wild horse use along streambanks that would increase sedimentation inputs into the waterway.

11. Vegetation

Areas which are presently overutilized, such as areas adjacent to water sources, would continue to be used excessively as indicated in yearly utilization monitoring studies. The areas of moderate to heavy utilization noted in the 2009 utilization (by wild horses and herbivores other than cattle) would continue to increase in both size and degree. Composition of vegetation would change to a higher percentage of undesirable plants, soil horizons and biological soil crust cover would be reduced, and erosion would increase.

12. Soils and Biological Soil Crusts

Soil and biological soil crusts cover loss and compaction would be expected to increase in those areas near water sources where horses are forced to concentrate. Increased wild horse numbers on uplands and riparian areas would impact soil surface features and would increase erosion in the HMA.

13. Recreation

Overall, recreation in the HMA would not be affected. Opportunities for viewing wild horses would be improved, because of the larger number of wild horses, until natural die-offs begin to occur.

14. Visual Resources

Visual resources would not be affected. All VRM class objectives would be met.

CHAPTER V: CUMULATIVE IMPACTS

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 past action may be useful in two ways according to the CEQ guidance. One is for consideration of the Proposed Action's cumulative effects, and secondly as a basis for identifying the Proposed Action's direct and indirect 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.

The environmental consequences discussion described all expected effects including direct, indirect and cumulative on resources from enacting the proposed alternatives. The EA described the current state of the environment (Affected Environment by resource, Chapter III) which included the effects of past actions. In addition, the Introduction Section of this EA, specifically the Purpose of and Need for Action, identifies past actions creating the current situation.

Reasonably Foreseeable Future Actions (RFFA) 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. The RFFA within the Project Area include South Steens AMP/EA; North Steens Ecosystem Restoration Project; Roaring Butte Mineral Material Site and Burnt Car Road Rehabilitation EA.

A final decision has not been made on the South Steens AMP; however, the Proposed Action proposes to construct 12 or 13 new reservoirs, decommission 9 reservoirs, rehabilitate 14 reservoirs, drill 3 wells, install 3 to 5 miles of pipeline and 11 troughs, create 1 exclosure around a riparian meadow complex and rehabilitate 1 spring and 2 dugouts. No changes to the permitted number of AUMs would occur.

The North Steens Ecosystem Restoration Project (North Steens Project) is a landscape-level project, the goal of which is to reduce juniper-related fuel loading and improve the ecological health of the area by encouraging a healthy functioning ecosystem through appropriate land treatments. Treatment techniques will include a combination of prescribed fire, juniper treatments, fencing, seeding and planting to reduce fuel loads, restore vegetative communities, improve habitat and increase forage. Project activities will primarily occur above 4,500 feet and below 7,200 feet, concentrating on the "juniper belt." The North Steens Project Area includes the entire South Steens Allotment.

Roaring Butte Mineral Material Site will provide approximately 500,000 cubic yards of crushed rock for maintenance of Steens Loop Road within an approximate 110-acre area. Actions will consist of blasting, crushing, stockpiling, and hauling aggregate.

The Burnt Car Road Rehabilitation EA will address resource and public concerns associated with recent road work activities within the Steens Mountain area, specifically Burnt Car, Burnt Car-Tombstone Connector, Tombstone Canyon, and Lauserica Roads. Road work activities changed the character of these roads creating a public concern over resource effects and uses. A fact-finding report prepared by the BLM concluded road work was in compliance with some, but not all applicable laws, regulations, policies, and planning documents. Maintenance of these roads

was considered in the CMPA RMP/ROD (August 2005), which included a Transportation Plan (Appendix M), and the subsequent Travel Management Plan. However, no NEPA analysis regarding this level of specific road work was completed. Where the road maintenance activity at the eastern end of Burnt Car Road intruded into Steens Mountain Wilderness, the BLM will need to rehabilitate the disturbed area. The EA, although a RFFA, is still in process and subject to change based on public comments in future NEPA analysis and subsequent administrative remedies. A decision is expected in 2010.

Resources not cumulatively affected are not discussed below.

Cumulative Effects Common to All Action Alternatives

Potential for cumulative effects for weeds is minimal. Projects such as North Steens Ecosystem Restoration Project and South Steens AMP could potentially create more disturbances across the landscape which could increase potential for new weed sources. However, by reducing horse populations, vegetation in areas of horse usage within the HMA would be less impacted allowing for more competitive vegetation and less opportunities for new weed infestations.

A. Alternative 1: Proposed Action - Remove Excess Wild Horses and Administer Fertility Control

The potential for cumulative impact on wild horses is minimal. There would be lessened competition for forage and limited water with fewer numbers of horses. By removing horses without the selective removal policy there would be a restoration of age structure and sex ratio within the bands to historical levels. In addition, a quality cross section of horses in all age groups can be released back into the HMA and less desirable or defective horses removed. Gathering the HMA to the lower level of the AML (159 head) may reduce the frequency of gathers that are needed to maintain a thriving, ecological balance, thereby, reducing the stress on the horses related to gather activities.

Cumulative effects of the Proposed Action would be some improvement of SSS, migratory bird and fish and wildlife habitat in the short term. Projects such as North Steens Ecosystem Restoration Project would have more beneficial long-term effects since reduction of juniper throughout most of the HMA would increase the amount of forage available for wildlife as well as improve nesting and brood-rearing habitat conditions for sage-grouse and grassland species of migratory birds. As sagebrush habitat increases in the treated areas, sagebrush dependent species of migratory birds would be benefited. Most species of wildlife would benefit from this project in the long term. Cumulative effects of South Steens AMP would be to add water sources spreading out livestock and wild horse use which could affect nesting habitat for sage-grouse and use on bitterbrush by livestock which could affect mule deer transitional range depending on the season of use during the grazing rotation. There should be no cumulative effects from the Roaring Butte Mineral Material Site on any of these groups of species.

Cumulative effects of the Proposed Action on vegetation, soils and biological soil crusts would be some improvement of soil stability, biological soil crust cover and plant

community (vascular and nonvascular) structure and function. As juniper treatments are implemented as part of the North Steens EIS, plant community contribution to ecosystem functionality would be expected to return to a more natural state where fire return intervals regulate juniper expansion into other plant communities. Soil stability would be expected to increase as understory vegetative ground cover returns.

Cumulative effects of the Proposed Action on WSAs would be expected to have some influence on naturalness. The proposed developments in the South Steens AMP are not expected to be substantially noticeable given they are dispersed within the WSAs, limited acres are affected, most acres would still have a generally natural appearance, and project design features would aid in a more natural appearance. Other projects affecting these WSAs include potential removal of juniper trees as described in the North Steens Project ROD. To the extent possible, nearby juniper trees that help screen the proposed developments or dispersed campsites would be left intact. Depending on the type of treatments implemented within the WSAs, there may be some short-term (years) disturbance to the appearance of naturalness in areas treated.

However, these treatments are expected to help restore the natural fire regime and protect ecological integrity in the WSAs and the CMPA as a whole over the long term (decades) as provided for under the Steens Act. There are no other known RFFAs that would contribute to effects to wilderness values in the WSAs.

B. Alternative 2: Remove Excess Wild Horses – No Fertility Treatment

The potential for cumulative impact on wild horses is minimal. There would be lessened competition for forage and limited water with fewer numbers of horses. By removing horses without the selective removal policy there would be a restoration of age structure and sex ratio within the bands to historical levels. In addition, a quality cross section of horses in all age groups can be released back into the HMA and less desirable or defective horses removed. Gathering the HMA to the lower level of the AML (159 head) would ensure the HMA remains on a 4-year gather schedule and numbers are controlled within the AML to maintain a thriving, ecological balance, thereby, reducing the stress on the horses related to gather activities.

Cumulative effects from this alternative would be the same as described for the Proposed Action for soils, biological soil crusts, vegetation, SSS, migratory birds and fish and wildlife with the slight difference that horses would need to be gathered sooner. Other projects as listed above would have the same cumulative effects as described for the Proposed Action.

Cumulative effects under this alternative would be the same as described for the Proposed Action for WSAs.

C. Alternative 3: Remove Excess Wild Horses – Adjust Sex Ratio in Favor of Males

Wild horse social structure would be destroyed resulting in foals being lost or killed from the stress of having a surplus of stallions in the HMA. Mare health is expected to decrease and herd recruitment would be reduced due to the foals being killed or lost. As mare health decreases over time the mare would death rate would increase which would further skew the sex ratio increasing turmoil and stress to the herd.

Cumulative effects from this alternative would be the same as described for the Proposed Action for soils, biological soil crusts, vegetation, SSS, migratory birds, fish and wildlife, and WSAs. Other projects as listed above would have the same cumulative effects as described for the Proposed Action.

D. Alternative 4 (No Action)

The horses would continue to over populate the HMA, if constrained within their HMA boundaries their numbers would reduce or be eliminated as a result of habitat destruction. Range condition would deteriorate, watershed cover would be reduced, water quality would be reduced, soil erosion increased, wildlife use patterns and numbers would be altered, and domestic livestock use would be eliminated. Lasting, long-term, adverse effects would occur across the entire landscape. A more likely scenario would be that the horses would expand beyond their HMA boundaries and eventually be in the same condition as listed above but on a much larger amount of acres.

Cumulative effects of the Proposed Action would be no improvement of SSS, migratory bird and fish and wildlife habitat in the short term or the long term since wild horse numbers would steadily increase. Projects such as North Steens Ecosystem Restoration Project would have little beneficial long-term effects since the reduction of juniper throughout most of the HMA would increase the amount of forage available for an increasing population of wild horses. Nesting and brood-rearing habitat conditions for sage-grouse and grassland species of migratory birds would deteriorate as wild horse numbers increased. Sagebrush habitat would increase in the treated areas, but understory grasses and forbs would be reduced which would affect sage-grouse, migratory bird and other wildlife species abundance in the long term. Cumulative effects of the South Steens AMP would be to add other water sources which would spread out wild horse use which could affect nesting and brood-rearing habitat for sage-grouse. There should be no cumulative effects from the Roaring Butte Mineral Material Site on any of these groups of species.

Potential for cumulative negative impacts from noxious weeds is likely. Projects such as North Steens Ecosystem Restoration Project and South Steens AMP would create more disturbances across the landscape which could increase the potential for new weed sources. These areas are adjacent to the HMA and with the potential increase of 50 to 90 percent bare ground in areas of high horse concentration within the HMA, new weed infestations could become established. Once established, treatments would need to be conducted regularly or the weeds would spread to adjacent areas.

Cumulative effects of the No Action Alternative on vegetation, soils and biological

soil crusts would be decreased of soil stability, biological soil crust cover and plant community (vascular and nonvascular) structure and function. As juniper treatments are implemented as part of the North Steens EIS, plant community contribution to ecosystem functionality would be expected to return to a more natural state where fire return intervals regulate juniper expansion into other plant communities. Soil stability would be expected to increase as understory vegetative ground cover returns.

These improvements in soils and vegetation would be negated to a degree as wild horse populations increased with proportional increases in resource damage.

Cumulative effects of the No Action Alternative to WSAs would affect naturalness. As the North Steens project is implemented and the plant community returns to a more natural state, where fire returns intervals regulate juniper expansion, wild horse populations would increase negating any positive effects to soils and vegetation from juniper removal.

CHAPTER VI: CONSULTATION AND COORDINATION

The Steens Mountain Advisory Council participated in development of recommendations for management of the Steens Mountain CMPA, including specific recommendations for wild horse management in the South Steens HMA.

A letter was mailed to 74 interested parties on September 30, 2009, to notify them of BLM's intent to manage wild horses within AML, specifically the need to address the excess horses above AML. In addition, this EA was mailed to the same individuals allowing a 15-day comment period.

CHAPTER VII: PERSONS, GROUPS, AND AGENCIES CONTACTED

Daryl Bingham, Natural Resource Specialist
Joe Glascock, Range Management Specialist
Eric Haakenson, Wilderness Specialist
Rhonda Karges, District Planning and Environmental Coordinator
Douglas Linn, Botanist
Gary McFadden, Wild Horse Specialist, Lead Preparer
Caryn Meinicke, Weed Specialist
Matt Obradovich, Wildlife Biologist
Lesley Richman, Weed Specialist
Scott Thomas, Archaeologist
Ranch Manager, Roaring Springs Ranch

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.
3. Bait Trapping. This capture method involves utilizing bait (water or feed) to lure wild horses and burros into a temporary trap.

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 selflocking 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 two 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 one 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 one 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, Andrews 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. The specifications will be vigorously enforced.

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

APPENDIX B

Standard Operating Procedures (Fertility Control Treatment)

The following management and monitoring requirements are part of the Proposed Action:
PZP vaccine would be administered by trained BLM personnel.
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 loaded on the end of a trocar (dry syringe with a metal rod) which is loaded into the jabstick which then pushes the pellets into the breeding mares being returned to the range. The pellets and liquid are designed to release the PZP over time similar to a time release cold capsule.
Delivery of the vaccine would be as an intramuscular injection while the mares are restrained in a working chute. 0.5 cubic centimeters (cc) of the PZP vaccine would be emulsified with 0.5 cc of adjuvant (a compound that stimulates antibody production) and loaded into the delivery system. The pellets would be loaded into the jabstick for the second injection. With each injection, the liquid and pellets would be propelled into the left hind quarters of the mare, just below the imaginary line that connects the point of the hip and the point of the buttocks.
All treated mares would be freeze-marked on the hip to enable researchers to positively identify the animals during the research project as part of the data collection phase.
At a minimum, monitoring of reproductive rates using helicopter flyovers will be conducted in years 2 through 4 by checking for presence/absence of foals. The flight scheduled for year 4 will also assist in determining the percentage of mares that have returned to fertility. In addition, field monitoring will be routinely conducted as part of other regular ground-based monitoring activities.
A field data sheet will be used by the field applicators to record all the pertinent data relating to identification of the mare (including a photograph when possible), date of treatment, type of treatment (1 or 2-year vaccine, adjuvant used) and HMA, etc. The original form with the data sheets will be forwarded to the authorized officer at NPO (Reno, Nevada). A copy of the form and data sheets and any photos taken will be maintained at the field office.
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 freeze-mark applied by HMA.
The field office will assure that treated mares do not enter the adoption market for 3 years following treatment. In the rare instance, due to unforeseen circumstance, treated mare(s) are removed from an HMA before 3 years has lapsed, they will be maintained in either a BLM facility or a BLM-contracted long-term holding facility until expiration of the 3-year holding period. In the event it is necessary to remove treated mares, their removal and disposition will be coordinated through NPO. After expiration of the 3-year holding period, the animal may be placed in the adoption program or sent to a long-term holding facility.

APPENDIX C

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 conditior 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 actiors 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

USA.GOV | No Fear Act | DOI | Disclaimer | About BLM | Notices | Get Adobe Reader®
Privacy Policy | FOIA | Kids Policy | Contact Us | Accessibility | Site Map | Home

APPENDIX D

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

August 10, 2005

In Reply Refer To:
4710 (WO 260) P
Ref: IM 2004-138
IM 2004-151

EMS TRANSMISSION 08/16/2005
Instruction Memorandum No. 2005-206
Expires: 09/30/2006

To: All Field Officials (except Alaska)

From: Assistant Director, Renewable Resources and Planning

Subject: Gather Policy & Selective Removal Criteria

Program Area: Wild Horse and Burro Program

Purpose: This Instruction Memorandum (IM) establishes gather policy and selective removal criteria for wild horses and burros.

A. Gather Requirements

1. Appropriate Management Level Achievement (AML)

   Periodic removals will be planned and conducted to achieve and maintain AML and be consistent with AML establishment and removal decisions. Removals below AML may be warranted when a gather is being conducted as an "emergency gather" as defined in I.M. 2004-151 or where significant rationale is presented to justify a reduction below AML

2. National Environmental Policy Act (NEPA) Analysis and Decision

   A current NEPA analysis and gather plan is required. This NEPA analysis and determination to remove excess animals must include and be supported by the following elements required by case law and the Public Rangelands Improvement Act (1978): vegetative utilization and trend, actual use, climatic data and current census. Along with standard components, the NEPA analysis must also contain the following:

   a. Results of population modeling that forecast impacts to the Herd Management Area's (HMA's) population resulting from removals and fertility control treatments.

   b. The desired post-gather on-the-range population number, age structure and sex ratio for the managed population.

   c. Fertility control will be considered in all Gather Plan/NEPA documents (IM No. 2004-138) and will be addressed in the population model analysis. A "do not apply" decision will be justified in the rationale.

   d. The collection of blood samples for development of genetic baseline data.

3. Where removals are necessary to achieve or maintain thriving natural ecological balance, all decisions shall be issued

full force and effect under the authority of 43 CFR § 4770.3(c).

4. All gathers that have been approved by Washington Office (WO) through the annual work plan process and that are listed on the National Gather Schedule may proceed without further approval. Changes to the gather schedule involving increased removal numbers for listed gathers, adding new gathers, or substituting gathers require approval by WO-260. Requests for such gathers will be submitted using Attachment 1 to WO-260, Reno National Program Office (NPO), for review and approval by the WO-260 Group Manager.

   No WO approval is required for the removal of up to 10 nuisance animals per instance unless a national contractor conducts the removal.

5. A gather and removal report (Attachment 2) is required for each wild horse and burro gather. Partial completion reports shall be filed periodically (every 2 to 5 days) during large lengthy gathers. A final report for all gathers will be submitted to the State WH&B Lead and WO-260, NPO, within ten days of gather completion.

B. Selective Removal Requirements

The selective removal criteria described below applies to all excess wild horses removed from the range. These criteria are not applicable to wild burros.

When gathers are conducted emphasis will be placed on the removal of younger more adoptable animals. However, the long term welfare of wild horse herds is critical and it is imperative that close attention be given to the post-gather on-the-range herd sex ratio and age structure to assure a healthy sustainable population.

Animals with conditions that may prevent adoption should be released to the range if herd health will not be compromised or harmed. Example conditions are disease, congenital or genetic defects, physical defect due to previous injury, and recent but not life threatening injury.

1. Age Criteria: Wild Horses will be removed in the following priority order:

   a). *Age Class -Five Years and Younger*

   Wild horses five years of age and younger should be the first priority for removal and placement into the national adoption program.

   b). *Age Class - Six to Fifteen Years Old*

   Wild horses six to fifteen years of age should be removed last and only if management goals and objectives for the herd can't be achieved through the removal of younger animals.

   Animals encountered during gather operations should be released if, in the opinion of the Authorized Officer, they may not tolerate the stress of transportation, preparation and holding but would survive if released. Older animals in acceptable body condition with significant tooth loss and/or excessive tooth wear should also be released. Some situations, such as removals from private land, total removals, or emergency situations require exceptions to this.

   c). *Age Class Sixteen Years and Older*

   Wild horses aged sixteen years and older should not be removed from the range unless specific exceptions prevent them from being turned back and left on the range.

C. Potential Exceptions to Selective Removal Requirements

1. Nuisance animals

2. Animals outside of an HMA

3. Land use plan or activity plan identifies certain characteristics that are to be selectively managed for in a particular HMA (Examples: Spanish characteristics, Bashkir "Curly" or others).

4. Total removals required by law or land use plan decisions

5. Court ordered gathers

6. Emergency gathers (see IM 2004-151)

7. Removal of wild horses treated with fertility control PZP. Specific instructions are outlined in IM 2004-138 in regards to removal of these animals.

Timeframe: The wild horse and burro gather and selective removal requirements identified in this IM are effective immediately and will expire on September 30, 2006.

Budget Impact: Once AML is attained, it will cost approximately $1.7 million in additional gather costs annually to implement the selective removal policy. This action, on an annual basis, will avoid removal of about 1,500 unadoptable animals (older than five years) that would cost about $10 million to maintain in captivity over their lifetime.

This policy will achieve significant cost savings by minimizing the numbers of less adoptable animals removed prior to the achievement of AML and making the removal of older animals negligible in future years.

Background: The 1992 Strategic plan for the WH&B program defined criteria for limiting the age classes of animals removed so that only the most adoptable animals were removed. The selective removal criteria from Fiscal Years 1992 through 1995 allowed the removal of animals five years of age and younger. In 1996, because of drought conditions in many western states, the selective removal policy was changed to allow for the removal of animals nine years of age and younger. In 2002, the removal policy was modified to allow for prioritized age specific removals: 1st priority remove five years of age and younger animals, 2nd priority 10 years and older and last priority animals aged six to nine years if AML could not be achieved.

This selective removal policy provides for the long term welfare of on the range populations, emphasizes the removal of the most adoptable younger animals to maintain and achieve AML and directs that older horses less able to stand the rigors of capture, preparation, and transportation stay on the range.

Manual/Handbook Sections Affected: The gather and selective removal requirements do not change or affect any section of any manual or handbook.

Coordination: Varying policies on selective removal have been in place and coordinated with field staffs since the early 1990's. The revised policy was developed by the WO, circulated to field offices for review and comment, and presented to the National Wild Horse and Burro Advisory Board. In addition, the concept of selective removal was part of the FY 2001 Strategy to Achieve Healthy Lands and Viable Herds; The Restoration of Threatened Watersheds Initiative that was widely communicated to Congress and the general public.

Contact: Questions concerning this policy should be directed to Dean Bolstad in the Wild Horse and Burro National Program Office, at (775) 861-6611.

Signed by:
Laura Ceperley
Acting Assistant Director

Authenticated by:
Barbara J. Brown
Policy & Records Group, WO-560

Renewable Resources and Planning

2 Attachments

1 - Request to Gather Memo (1 p)
2 - Gather and Removal Report (1 p)

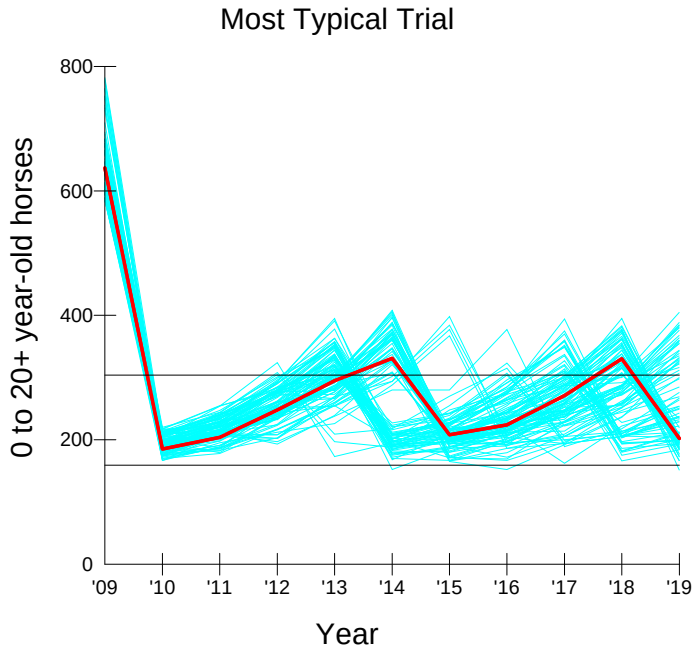
APPENDIX E: POPULATION MODEL POPULATION SIZES IN 11 YEARS

Alternatives	Population sizes in 11 years			Gather Rates			Average Growth Rate (10 yr)
	Min	Ave	Max	Gathered	Removed	Treated	
Alternative 1 - Gather with Fertility Control							
Alternative 1 - Median Trial	183	284	632	1,153	784^	102	18.6
Alternative 2 - Gather Only							
Alternative 2 - Median Trial	182	292	640	885	854	0	21.4
Alternative 3 - Adjust Ratio Males/Females							
Alternative 3 - Median Trial	177	282	632	860	784	0	19.3
Alternative 4 - No Action							
Alternative 4 - Median Trial	630	2,263	5,158	0	0	0	23.0

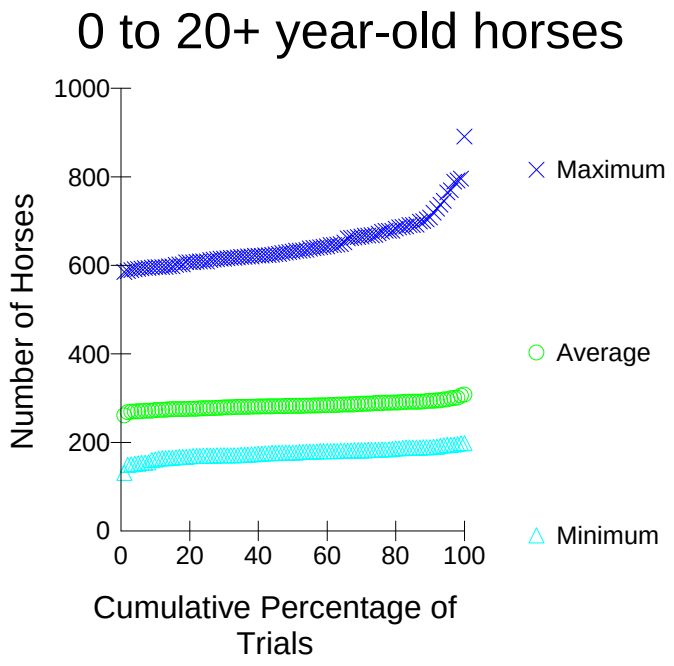
Model results No significant difference in population size between the action alternatives.

South Steens Population Modeling Runs
Gather with Fertility Control

Most Typical Trial



Population Size



Population Sizes in 11 Years*

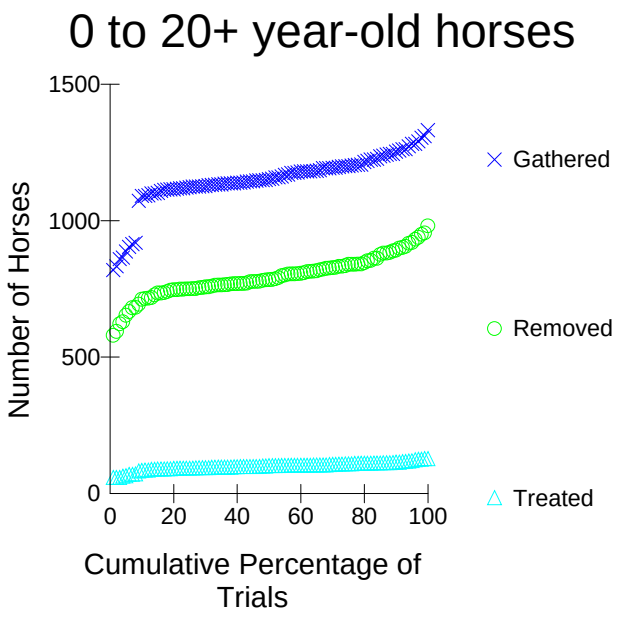
	Minimum	Average	Maximum
Lowest Trial	151	259	585
10th Percentile	167	274	598
25th Percentile	173	278	610
Median Trial	183	284	632
75th Percentile	191	294	670
90th Percentile	196	298	732
Highest Trial	207	309	782

* 0 to 20+ year-old horses

Explanation

In 11 years and 100 trials, the lowest number of 0 to 20 year old horses ever obtained was 151 and the highest was 782. In half the trials, the minimum population size in 11 years was less than 183 and the maximum was less than 632. The average population across 11 years ranged from 259 to 309.

Gathers

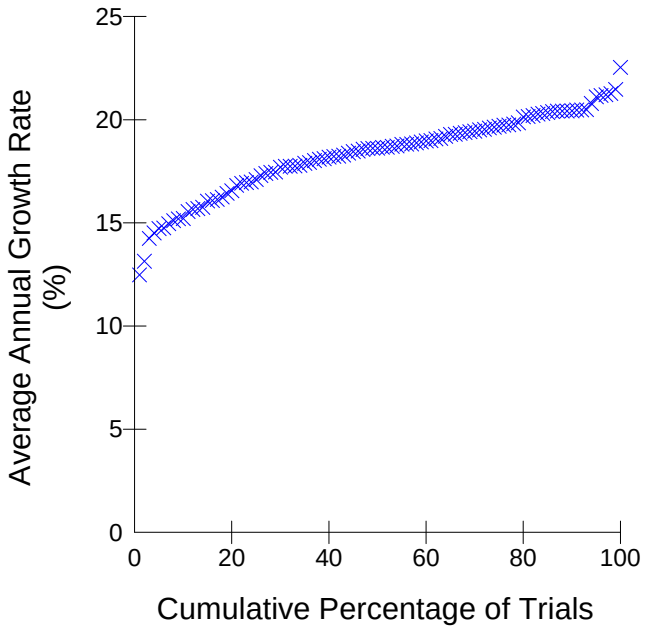


Totals in 11 Years*

	Gathered	Removed	Treated
Lowest Trial	819	580	59
10th Percentile	1091	714	86
25th Percentile	1124	750	93
Median Trial	1153	784	102
75th Percentile	1201	840	109
90th Percentile	1255	896	115
Highest Trial	1332	981	128

* 0 to 20+ year-old horses

Growth Rate

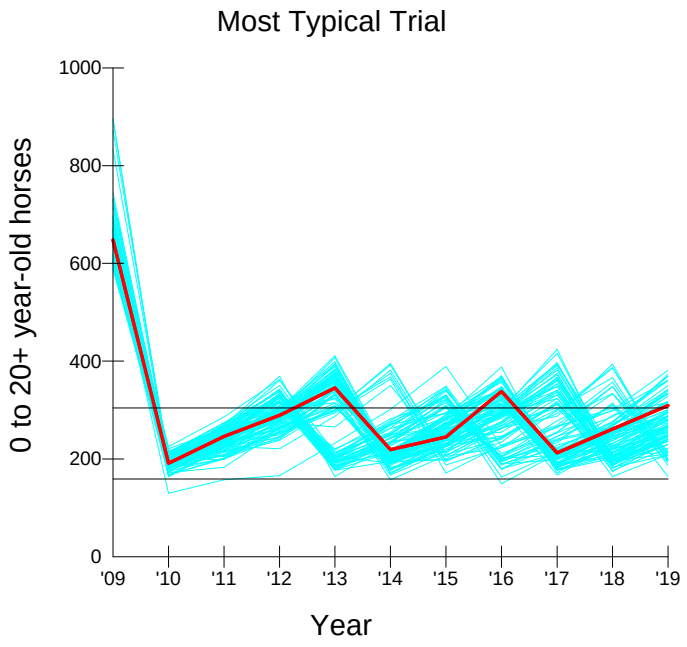


Average Growth Rate in 10 Years

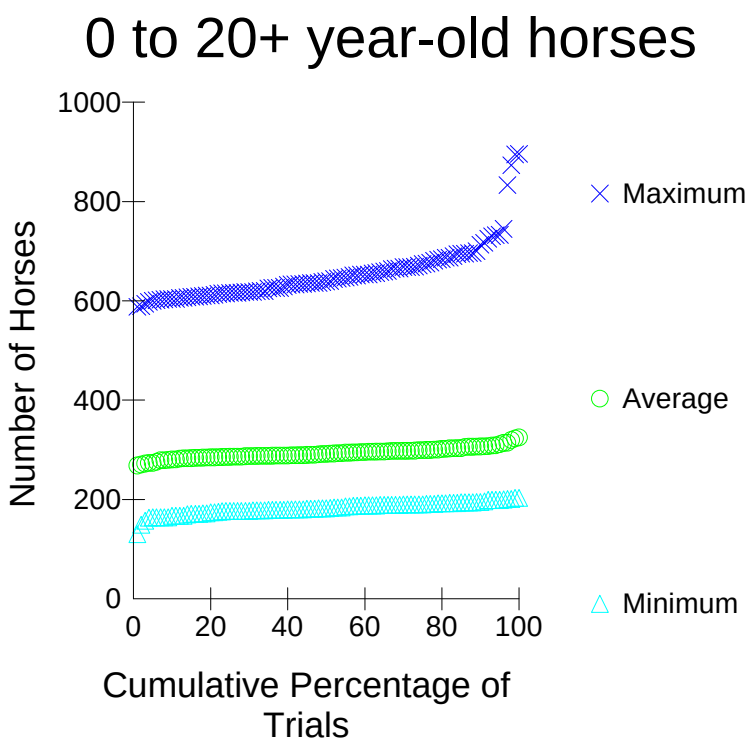
Lowest Trial	12.5
10th Percentile	15.4
25th Percentile	17.2
Median Trial	18.6
75th Percentile	19.7
90th Percentile	20.5
Highest Trial	22.5

South Steens Population Modeling Runs
Gather Without Fertility Control

Most Typical Trial



Population Size



Population Sizes in 11 Years*

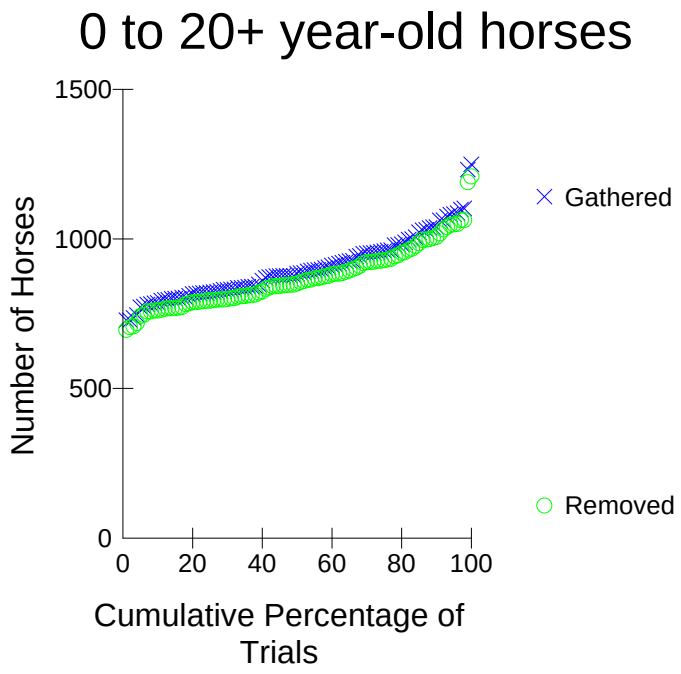
	Minimum	Average	Maximum
Lowest Trial	130	268	588
10th Percentile	167	280	604
25th Percentile	177	286	616
Median Trial	182	292	640
75th Percentile	190	299	674
90th Percentile	196	307	715
Highest Trial	203	325	896

* 0 to 20+ year-old horses

Explanation

In 11 years and 100 trials, the lowest number of 0 to 20 year old horses ever obtained was 130 and the highest was 896. In half the trials, the minimum population size in 11 years was less than 182 and the maximum was less than 640. The average population across 11 years ranged from 268 to 325.

Gathers

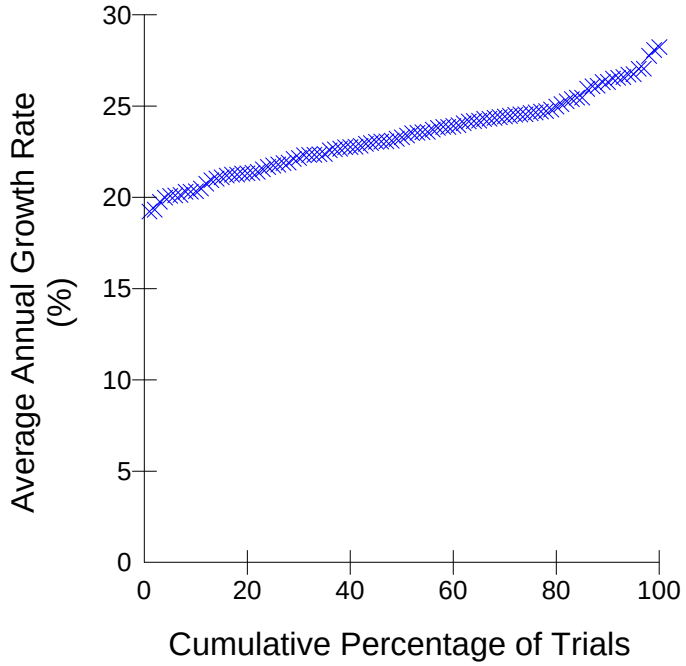


Totals in 11 Years*

	Gathered	Removed
Lowest Trial	729	696
10th Percentile	790	762
25th Percentile	822	795
Median Trial	885	854
75th Percentile	961	930
90th Percentile	1051	1013
Highest Trial	1250	1209

* 0 to 20+ year-old horses

Growth Rate

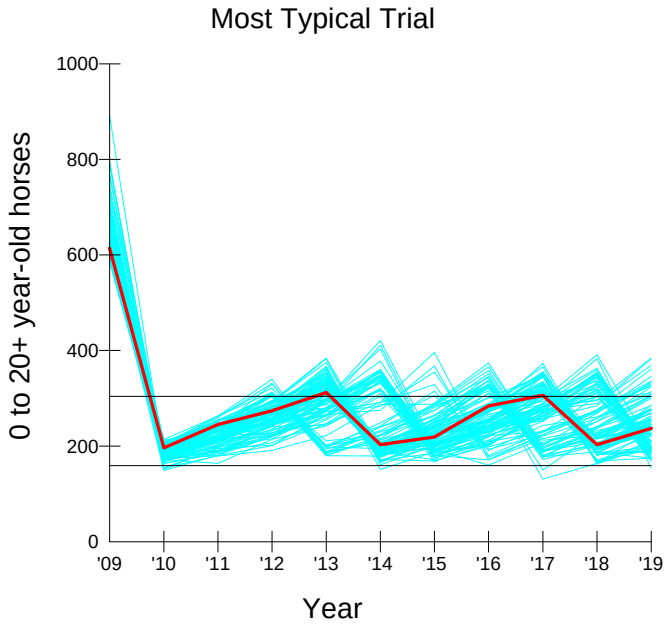


Average Growth Rate in 10 Years

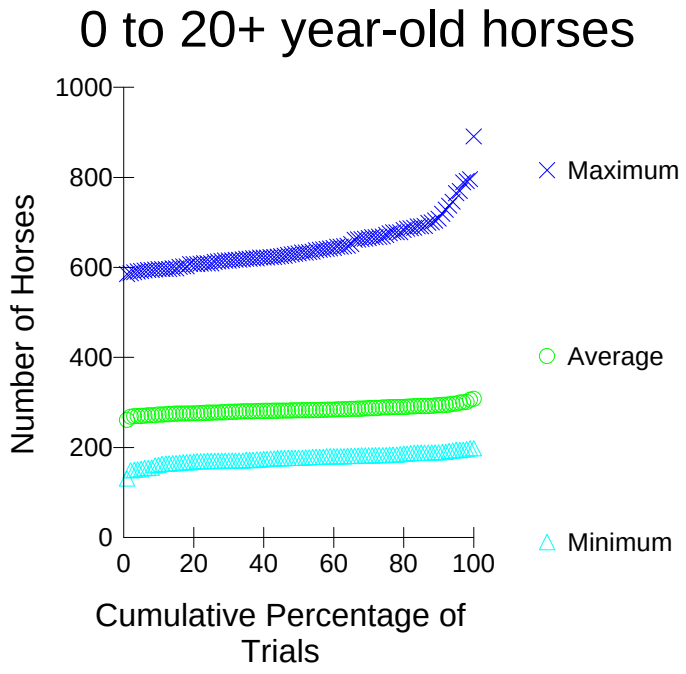
Lowest Trial	12.5
10th Percentile	16.7
25th Percentile	18.5
Median Trial	21.4
75th Percentile	23.5
90th Percentile	25.9
Highest Trial	33.5

South Steens Population Modeling Runs
Gather to a 60/40 Sex Ratio without Fertility Control

Most Typical Trial



Population Size



Population Sizes in 11 Years*

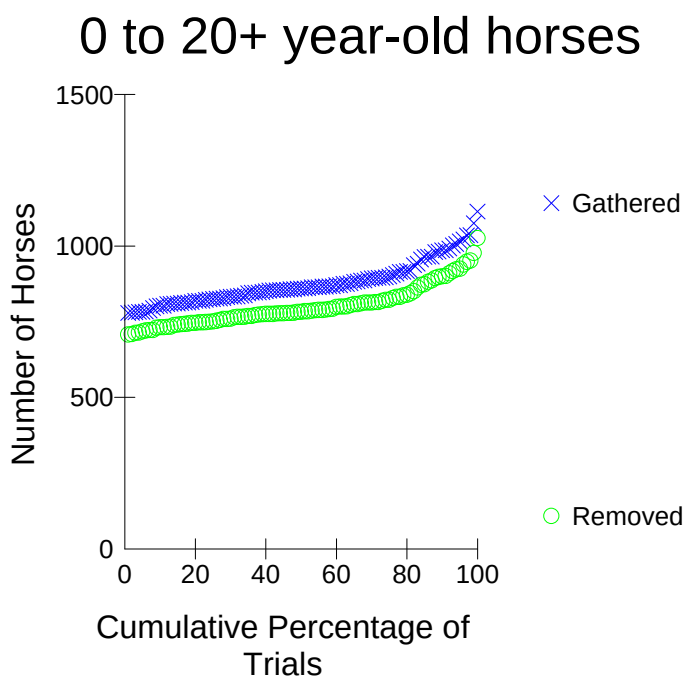
	Minimum	Average	Maximum
Lowest Trial	131	261	585
10th Percentile	162	273	596
25th Percentile	170	277	610
Median Trial	177	282	632
75th Percentile	184	289	674
90th Percentile	190	294	714
Highest Trial	198	308	891

* 0 to 20+ year-old horses

Explanation

In 11 years and 100 trials, the lowest number of 0 to 20 year old horses ever obtained was 131 and the highest was 891. In half the trials, the minimum population size in 11 years was less than 177 and the maximum was less than 632. The average population across 11 years ranged from 261 to 308.

Gathers

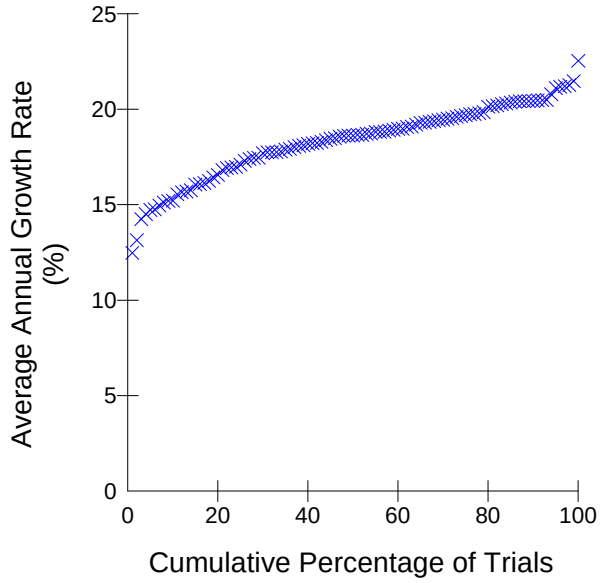


Totals in 11 Years*

	Gathered	Removed
Lowest Trial	779	708
10th Percentile	803	732
25th Percentile	826	752
Median Trial	860	784
75th Percentile	902	825
90th Percentile	986	900
Highest Trial	1114	1026

* 0 to 20+ year-old horses

Growth Rate

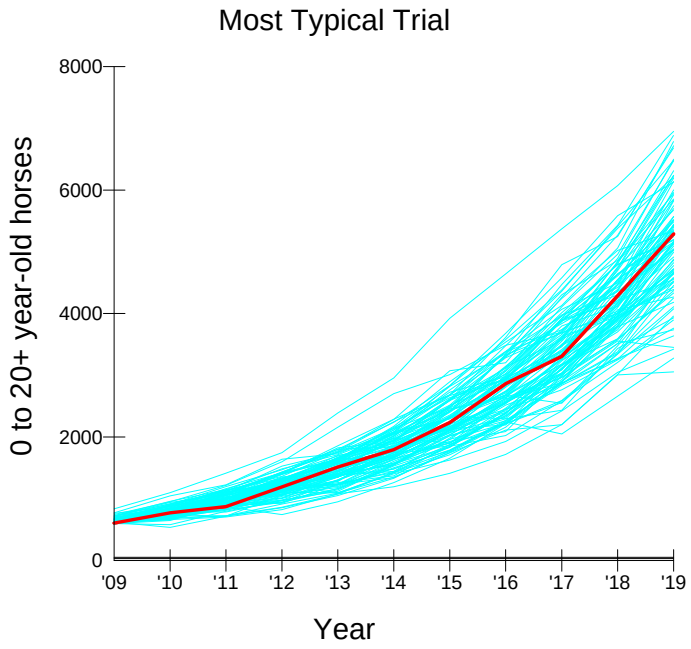


Average Growth Rate in 10 Years

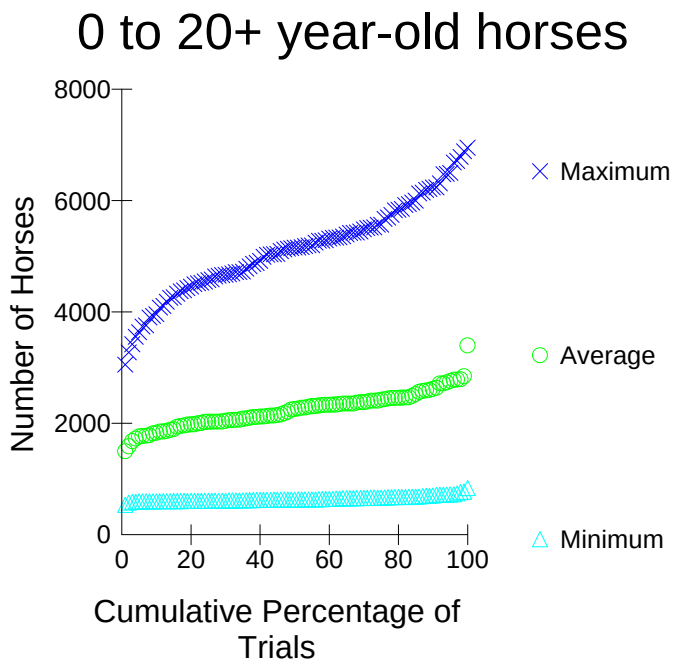
Lowest Trial	14.1
10th Percentile	16.9
25th Percentile	18.0
Median Trial	19.3
75th Percentile	21.1
90th Percentile	22.6
Highest Trial	24.7

South Steens Population Modeling Runs
No Action

Most Typical Trial



Population Size



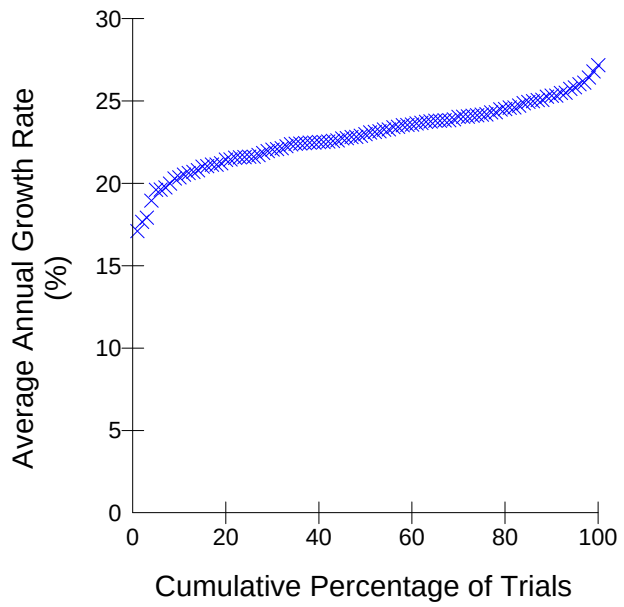
	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	536	1499	3055
10th Percentile	600	1839	4020
25th Percentile	610	2029	4579
Median Trial	630	2263	5158
75th Percentile	664	2428	5622
90th Percentile	709	2628	6238
Highest Trial	837	3400	6951

* 0 to 20+ year-old horses

Explanation

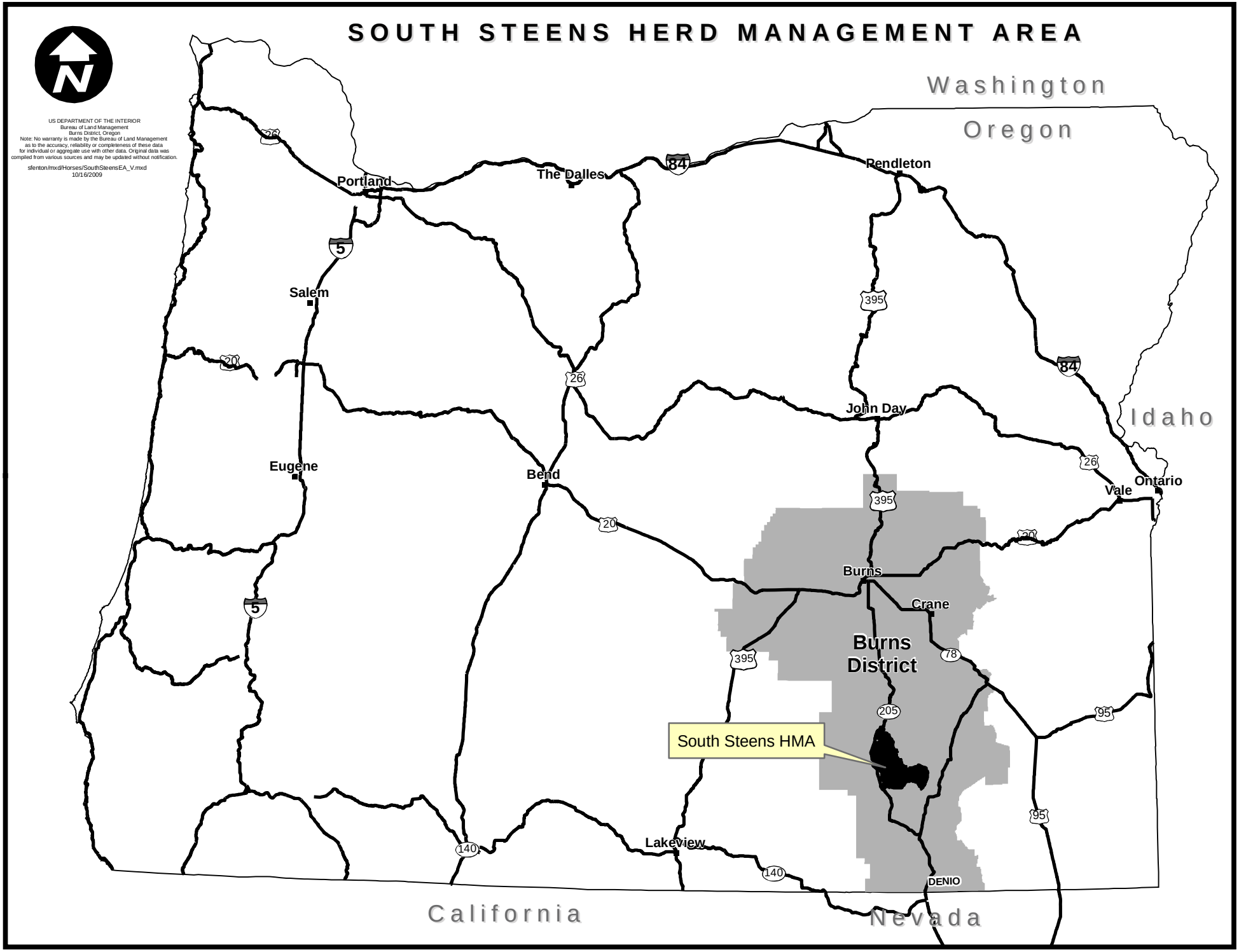
In 11 years and 100 trials, the lowest number of 0 to 20 year old horses ever obtained was 536 and the highest was 6,951. In half the trials, the minimum population size in 11 years was less than 630 and the maximum was less than 5,158. The average population across 11 years ranged from 1,499 to 3,400.

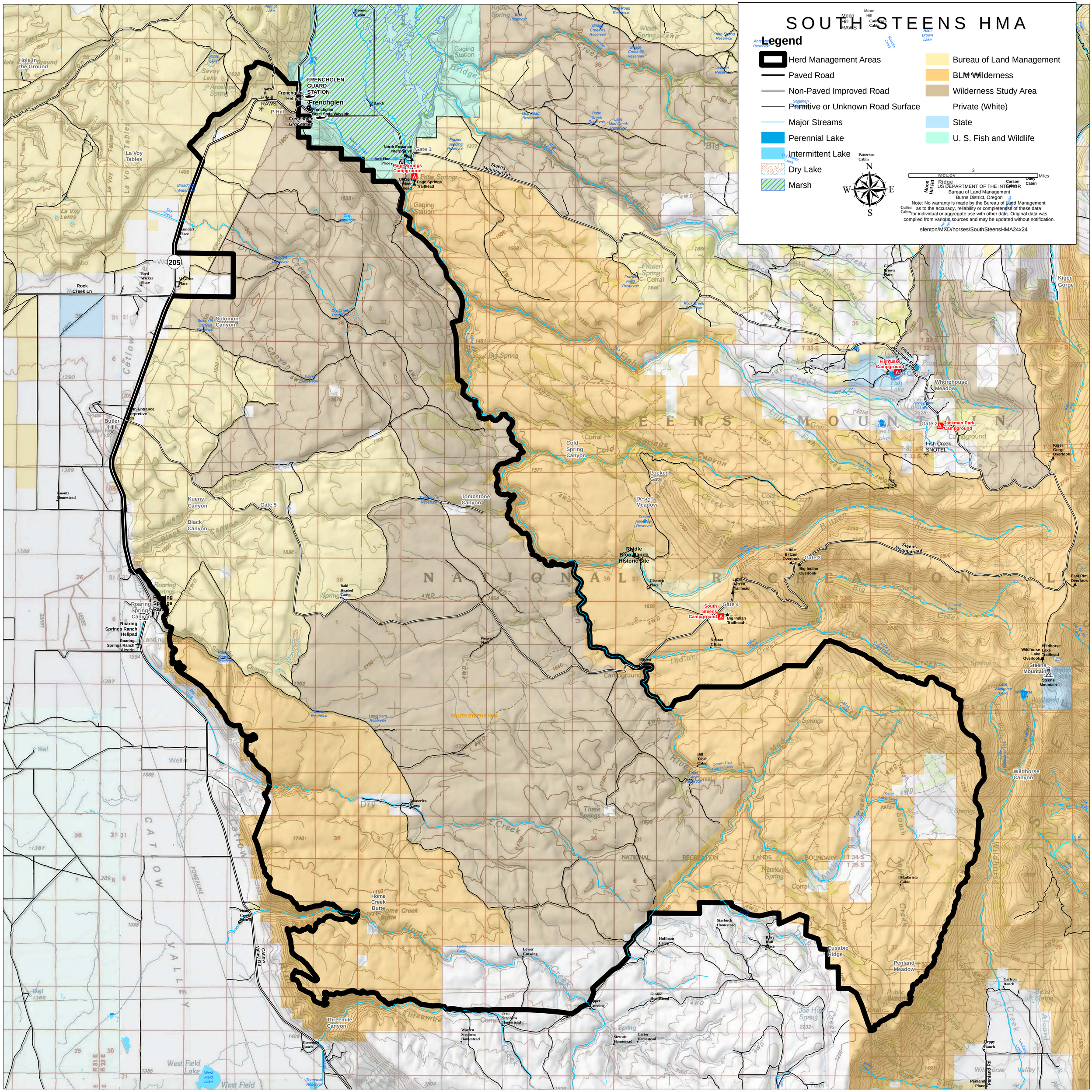
Gathers – N/A
Growth Rate

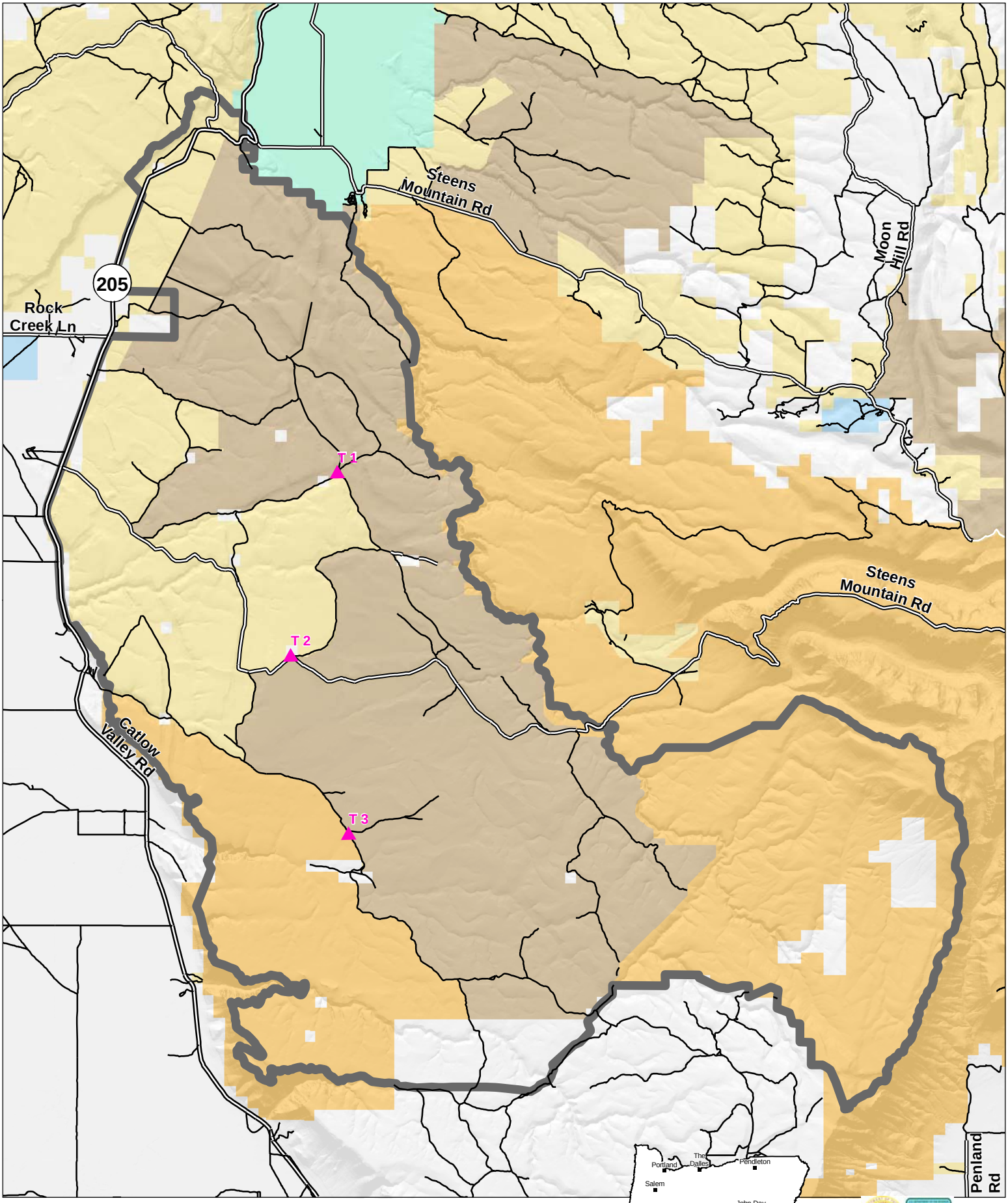


Average Growth Rate in 10 Years	
Lowest Trial	17.1
10th Percentile	20.5
25th Percentile	21.6
Median Trial	23.0
75th Percentile	24.2
90th Percentile	25.3
Highest Trial	27.2

SOUTH STEENS HERD MANAGEMENT AREA



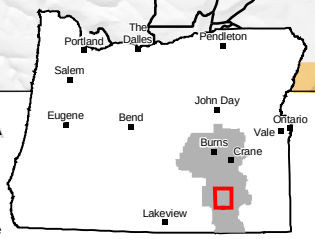

SOUTH STEENS HMA
Legend
Herd Management Areas
Paved Road
Non-Paved Improved Road
Primitive or Unknown Road Surface
Major Streams
Perennial Lake
Intermittent Lake
Dry Lake
Marsh
Bureau of Land Management
BLM Wilderness
Wilderness Study Area
Private (White)
State
U. S. Fish and Wildlife
N
S
E
W
3
Miles
US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District, Oregon
Note: No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources and may be updated without notification.
sfenton/MXD/horses/SouthSteensHMA24x24
FRENCHGLEN GUARD STATION
Frenchglen
Frenchglen Hotel State Wayside
Frenchglen Grd Station
Frenchglen Helipad
P Hill RAWS
Page Springs Campground
Page Springs Trailhead
Fish Lake Campground
Jackman Park Campground
South Steens Campground
Steens Mountain Rd
Gate 1
Gate 2
Gate 3
Gate 4
Gate 5
Whorehouse Meadow
Fish Creek SNOTEL
Kiger Gorge
Kiger Gorge Overlook
East Rim Overlook
Steens Mountain
Wildhorse Canyon
Wildhorse Lake Overlook
Wildhorse Lake Trailhead
Little Blitzen Overlook
Big Indian Overlook
Big Indian Trailhead
Riddle Bros Ranch Historic Site
Locked Gate
Desert Meadow
Cold Spring Canyon
Tombstone Canyon
Kueny Canyon
Black Canyon
Solomon Canyon
Butler Hill
Eusabio Ridge
Penland Meadow
Home Creek Butte
Threemile Canyon
Roaring Springs Ranch
Roaring Springs Ranch Helipad
Roaring Springs Ranch Airstrip
Catlow Valley Rd
Rock Creek Ln
La Voy Tables
Hole in the Ground
Kiger Gorge
Wildhorse Canyon
Madarieta Cabin
Bill Taber Cabin
Newton Cabin
Starbuck Homestead
Huffman Camp
Riley Huff Place
Lower Crossing
Upper Crossing
Girand Homestead
Carlson Ranch
Deppy Ranch
Penland Place
Penland Rd
Clemens Place
Bald Headed Camp
Weaver Place
Warren Stephens Homestead
Iven Stephens Homestead
Stewart Homestead
Carter Homestead
Threemile Ranch
Koontz Homestead
Fred Wicker Place
McCann Place
Lundert Place
Jack Fine Place
Brenton Cabin
Patterson Cabin
Cullen Cabin
Ottey Cabin
Carson Cabin
Moon Hill RAWS
Moon Hill Rd
Glen Brown Place
Cold Spring Corral
Frazier Spring Corral
Big Spring
Gaging Station
Big Bridge
Steens Mountain Rd
Catlow Valley
Roaring Springs Canyon
Roaring Springs Ranch
Long Dam Reservoir
Home Creek
Three Springs
Newton Spring
Joe Hill Spring
West Field Lake
Threemile Reservoir
Wildhorse Lake
Little Wildhorse Lake
Wildhorse Creek
Indian Creek
Big Indian Creek
Mud Creek
Blitzen River
Donner Und Blitzen River
South Alkali Creek
Alkali Creek
Cold Spring
Frazier Spring Reservoir
Frazier Field Reservoir
Rock Creek Reservoir
Dry Creek Reservoir
Solomon Canyon Reservoir
Island Reservoir
Tombstone Reservoir
Desert Meadow Reservoir
Roaring Springs Reservoir
Long Dam Reservoir
Bridge Creek #1 Reservoir
Bridge Creek #2 Reservoir
Knob Spring Reservoir
Butte Creek Reservoir
Little Mud Creek Reservoir
Gatebead Reservoir
Savoy Lake
Antelope Spring
Peanut Lake
Broadway Waterhole
Dry Creek
Coff Waterhole
Knox Spring
Witzel Spring
Sagehen Reservoir
Kiamtho Creek
Ham Brown Lake
Antelope Reservoir
Fish Creek
Little Fish Creek
Little Mud Creek
Cold Spring
Big Bridge Creek
Little Blitzen River
Little Blitzen Trailhead
Cold Spring Canyon
Cold Spring Corral
Big Spring
Three Springs
Newton Spring
Joe Hill Spring
Madarieta Cabin
Carlson Ranch
Deppy Ranch
Penland Place
Penland Rd
Wildhorse Valley
Wildhorse Creek
Alkali Creek
Catlow Valley
Catlow Valley Rd
Powerline
Levee
Public Watering
Well
West Field Lake
West Field
Radio Facility
Steens Mountain
Steens Mountain Overlook
Wildhorse Lake Overlook
Wildhorse Lake Trailhead
Big Indian Overlook
Little Blitzen Overlook
Gate 3
Gate 4
Gate 5
Gate 2
Gate 1
Steens Mountain Rd
Fish Lake Campground
Jackman Park Campground
South Steens Campground
Page Springs Campground
Page Springs Trailhead
Whorehouse Meadow
Fish Creek SNOTEL
Kiger Gorge
Kiger Gorge Overlook
East Rim Overlook
Wildhorse Canyon
Madarieta Cabin
Bill Taber Cabin
Newton Cabin
Starbuck Homestead
Huffman Camp
Riley Huff Place
Eusabio Ridge
Penland Meadow
Carlson Ranch
Deppy Ranch
Penland Place
Penland Rd
Girand Homestead
Upper Crossing
Lower Crossing
Iven Stephens Homestead
Warren Stephens Homestead
Stewart Homestead
Carter Homestead
Threemile Ranch
Threemile Canyon
Home Creek Butte
Roaring Springs Ranch
Roaring Springs Ranch Helipad
Roaring Springs Ranch Airstrip
Catlow Valley Rd
Rock Creek Ln
Hole in the Ground
Kiger Gorge



SOUTH STEENS HERD MANAGEMENT AREA

Legend

- Potential Trap Sites
- Herd Management Area Boundary
- 2 Miles
- Paved Road
- Non-Paved Improved Road
- Primitive or Unknown Road Surface
- Bureau of Land Management
- BLM Wilderness
- Wilderness Study Area
- Private (White)
- State
- U. S. Fish and Wildlife



US DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Burns District, Oregon
Note: No warranty is made by the Bureau of Land Management as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data was compiled from various sources and may be updated without notification.

projects/SouthSteensGatherEA/SouthSteensEA.mxd
11/9/2009

ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

MINIMUM REQUIREMENTS DECISION GUIDE

WORKSHEETS

". . . except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..."

– the Wilderness Act, 1964

Please refer to the accompanying MRDG *Instructions* for filling out this guide.
The spaces in the worksheets will expand as necessary as you enter your response.

Step 1: Determine if any administrative action is <u>necessary</u>.

Description: Briefly describe the situation that may prompt action.

The purpose of the action is to achieve and sustain the AML for wild horses in the South Steens Herd Management Area (HMA). The South Steens HMA is within the Steens Mountain Cooperative Management Area (CMPA) and portions of the HMA are within the Steens Mountain Wilderness. Although wild horses are not addressed in the Steens Act of 2000 or the Wilderness Act of 1964, BLM Burns District is directed by the Wild Horse and Burro Act of 1971 and Steens CMPA RMP/ROD to manage wild horses at an appropriate level. This appropriate level of wild horse numbers is spelled out in the Andrews/Steens Resource Management Plan RMP\ROD pg 51.

The most appropriate way to manage wild horses on the range is by periodic gathering of the horses. This issue addressed here is the most effective manner in which to gather horses, including wild horse populations in the Steens Mountain Wilderness.

To determine if administrative action is necessary, answer the questions listed in A - F on the following pages.

A. Describe Options Outside of Wilderness

Is action necessary within wilderness?

Yes: X No:

Explain: A portion of South Steens Herd Management Area is within Steens Mountain Wilderness. Horses were observed within the wilderness during the August 2009 census.

B. Describe Valid Existing Rights or Special Provisions of Wilderness Legislation

Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that allows consideration of the Section 4(c) prohibited uses? Cite law and section.

Yes: ☐ **No:** **Not Applicable: X**

Explain:

C. Describe Requirements of Other Legislation

Is action necessary to meet the requirements of other laws?

Yes: X No: Not Applicable: ☐

Explain: Through the Wild Horse and Burro Act of 1971, Congress found that "Wild horses are living symbols of the pioneer spirit of the West." In addition, the Secretary was ordered to "manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands."

D. Describe Other Guidance

Is action necessary to conform to direction contained in agency policy, unit and wilderness management plans, species recovery plans, or agreements with tribal, state and local governments or other federal agencies?

Yes: X No: ☐ **Not Applicable:** ☐

Explain: Steens RMP/ROD, Resources Wild Horse and Burros, Goal "Manage and maintain healthy wild horse herds in established HMAs at AMLs to maintain a thriving natural ecological balance between wild horse populations, wildlife, livestock, vegetation resources, and other resource values. Enhance and perpetuate the special or rare and unique characteristics that distinguish the respective herds.

Objective 3. Maintain/adjust AMLs and yearlong forage allocations for each HMA.

Objective 4. Maintain a thriving natural ecological balance within HMA.
Objective 5. Maintain/improve year-round water sources to sustain wild horse herds.

South Steens Wild Horse Herd Management Area Plan Update

Objective – Manage wild horse populations at an appropriate management level of between 159 and 304 animals to maintain a thriving natural ecological balance within the HMA. Provide adequate quality forage for 3,648 AUMs of wild horse use. Wild horses will be managed in a manner which maintains satisfactory riparian condition and improves riparian conditions where less than satisfactory conditions exist.

E. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character including: untrammeled, undeveloped, natural, outstanding opportunities for solitude or a primitive and unconfined type of recreation, or unique components that reflect the character of this wilderness area?

Untrammeled: **Yes:** **No:** X **Not Applicable:** ☐

Explain: This action is not necessary to preserve untrammeled wilderness character.

Undeveloped: **Yes:** **No:** X **Not Applicable:** ☐

Explain: This action is not necessary to preserve undeveloped wilderness character.

Natural: **Yes:** X **No:** ☐ **Not Applicable:** ☐

Explain: 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 3 to 4 years. If wild horse herd numbers are not managed, overpopulation could occur. Increased numbers of wild horses could adversely affect the naturalness of the Steens Mountain Wilderness by affecting vegetation, soils, water resources and wildlife populations.

Outstanding opportunities for solitude or a primitive and unconfined type of recreation:

Yes: X **No:** **Not Applicable:**

Explain: If wild horse herd populations are exceeded this could affect the naturalness of the area, which may affect recreationist outstanding opportunities for primitive and unconfined recreation.

Other unique components that reflect the character of this wilderness:

Yes: **No:** X **Not Applicable:** ☐

Explain: The action is necessary for managing wild horse numbers for Wild & Scenic Rivers Outstanding Recreational Values (ORVs) to prevent excess wild horse herd populations causing a downward trend in Rangeland Health Standards in the riparian areas.

F. Describe Effects to the Public Purposes of Wilderness

Is action necessary to support one or more of the public purposes for wilderness (as stated in Section 4(b) of the Wilderness Act) of recreation, scenic, scientific, education, conservation, and historical use?

Recreation: **Yes:** X **No:** **Not Applicable:** ☐

Explain: The action is necessary for managing wild horse numbers for ecological integrity in the Steens Mountain Wilderness promoting outstanding recreation opportunities.

Scenic: **Yes:** X **No:** ☐ **Not Applicable:** ☐

Explain: The action is necessary to maintain wild horse numbers for ecological integrity. Ecological integrity is where the landscapes ecological processes are functioning to have a complex of plant communities, habitats and conditions representative of variable and sustainable successional conditions. The Steens Mountain Wilderness is highly valued for scenic vistas because of the above mentioned ecological process.

Scientific: **Yes:** ☐ **No:** X **Not Applicable:** ☐

Explain:

Education: **Yes:** ☐ **No:** X **Not Applicable:** ☐

Explain:

Conservation: **Yes:** X **No:** ☐ **Not Applicable:** ☐

Explain: The action is necessary to manage wild horse herd numbers for the public purpose of conservation and protection of the natural resources for which the Steens Mountain CMPA was established by congress.

Historical use: **Yes:** X **No:** **Not Applicable:** ☐

Explain: Livestock grazing occurs in a portion of the Steens Mountain Wilderness around the Home Creek area.

Step 1 Decision: Is any administrative action necessary in wilderness?

Yes: X **No:** ☐ **More information needed:** ☐

Explain: NEPA decision is necessary prior to action.

If action is necessary, proceed to Step 2 to determine the minimum activity.

Step 2: Determine the minimum activity.

Please refer to the accompanying MRDG *Instructions* for an explanation of the effects criteria displayed below.

Description of Alternatives

For each alternative, describe what methods and techniques will be used, when the activity will take place, where the activity will take place, what mitigation measures are necessary, and the general effects to the wilderness resource and character.

Alternative #1 – No Action

Description:

In this alternative, no wild horses would be gathered in the Steens Mountain Wilderness. The BLM would monitor the vegetation and horse population numbers and potential loss of naturalness.

Effects:

Wilderness Character

Untrammeled

No Action alternative does leave the wilderness untrammeled from mans' footprint.

Undeveloped

No Action alternative does not create a development.

Natural

No Action alternative initially would not cause any unnaturalness to wilderness resources. But, 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 3 to 4 years. If wild horse herd numbers are not maintained, overpopulation could occur. Increased numbers of wild horses could adversely affect the naturalness of the Steens Mountain Wilderness by effecting vegetation, soils, water resources and wildlife populations.

"Outstanding opportunities for solitude or a primitive and unconfined type of recreation"
Other unique components that reflect the character of this wilderness

No Action alternative, would not affect outstanding opportunities for solitude, or primitive and unconfined type of recreation.

Heritage and Cultural Resources

No effect

Maintaining Traditional Skills

No effect

Special Provisions

No special provisions identified.

Safety of Visitors, Personnel, and Contractors

There would be no safety concerns with the No Action because wild horses would not be gathered. However, there may be potential interactions between aggressive wild horses, people and/or domestic horses competing for the wilderness resources.

Economic and Time Constraints

Under the No Action alternative there would be no money spent and wild horses would not be gathered this year.

HMAs are managed on a priority basis, based on rates of population and sensitivity of wild horses. The BLM Burns District has been appropriated funding to gather wild horses from the South Steens Horse HMA. If funding is not used to gather wild horses then the wild horses herd numbers could expand again another 18 to 25 percent from next spring's foal crop. Delaying the wild horse gather each year results in higher gather costs. Wild horses are not typically gathered in the spring due to foaling season. Not gathering wild horses this year would not be efficient use of money to manage resources.

Additional Wilderness-specific Comparison Criteria

None

Alternative #2 – Use of Horseback Riders

Description:

Alternative #2 horseback riders would be used to gather wild horses in the Steens Mountain Wilderness. Riders would attempt to gather wild horses by horseback round-up methods of riding, hazing and roping. Traditional methods of gathering would be used rather than use helicopter or other mechanized means. No motorized or mechanized methods would be used to gather or transport captured horses. Gathering wild horses using horseback riders could take up to six weeks.

Effects:

Wilderness Character

"Untrammeled"

Under this alternative the wilderness would be affected by the presence of horseback riders gathering wild horses and possible horse traps and associated vehicles for a limited time of approximately six weeks.

"Undeveloped"

Alternative #2 does not create any permanent developments.

"Natural"

Alternative #2 does not negatively affect the naturalness of wilderness. Also, managing the wild horse herd would maintain the naturalness of the area.

"Outstanding opportunities for solitude or a primitive and unconfined type of recreation"

Other unique components that reflect the character of this wilderness

This action of using horseback riders gathering horses would have effects on the solitude of wilderness visitors as the period of time needed to gather would be increased and the riders would have to cover a large physical area of the wilderness.

Heritage and Cultural Resources

Alternative #2 does not have any effect of the heritage and cultural resources.

Maintaining Traditional Skills

In Alternative #2 the BLM Burns District would contract the wild horse gather. The contractors would maintain the traditional skills by using riders on horseback to gather wild horses.

Special Provisions

None

Safety of Visitors, Personnel, and Contractors

Traditional gathering methods put both riders and their horses and the wild horses being gathered at risk. The possibilities of injury to riders and horses is greatly increased while working in rough country with the difficulties of terrain while riding at high rates of speed. This alternative would take longer than using helicopters to gather horses which increases the possibilities of injury. Also, gathering wild horses with only the use of riders would require far more people to be exposed to high risk levels during gather operations.

Economic and Time Constraints

Gathering wild horses using horseback riders could take up to six weeks extending the amount of time wilderness visitors' solitude and experience may be affected. Chances of success in gathering horses in rough country with the difficulties of terrain are low. In addition, the cost of maintaining a gathering crew in the field for six weeks would be high. Otherwise, the increased time would not result in additional wild horses gathered, but the degree of success could affect ecological benefits anticipated from this action.

Additional Wilderness-specific Comparison Criteria

None

Alternative #3 – Use of Helicopter and Horseback Riders

Description:

In this alternative helicopter and horseback riders would be used to gather wild horses in the Steens Mountain Wilderness. Also, in case of emergencies and threats to human and wild horses health and safey, helicopters may be required to land in the Steens Mountain Wilderness. Along the Lauserica Road, motorized vehicles (truck with horse trailers) would be used to transport captured wild horses.

Effects:

Wilderness Character

"Untrammeled"

Under this alternative the wilderness would be affected by the presence of horseback riders gathering wild horses and possible temporary horse traps and associated vehicles for a limited time of approximately two weeks.

"Undeveloped"

There is potential of wild horse trap being temporarily constructed along the Lauserica Road. Every effort would be kept from constructing the temporary trap off of the Steens Mountain Wilderness. No permanent traps would be constructed.

"Natural"

There would be short term impact to the naturalness of the area while the helicopter is in the air. Horseback riders and temporary wild horse traps would cause a short term impact to naturalness. Every effort would be kept from constructing the temporary trap off of the Steens Mountain Wilderness. This would help keep horseback riders from riding in the wilderness. Wild horse populations would be managed, thereby maintaining the naturalness of the area into the future.

"Outstanding opportunities for solitude or a primitive and unconfined type of recreation" Other unique components that reflect the character of this wilderness

Wilderness visitors would be affected by the sights and sounds associated with helicopter over-flights and the horseback riders resulting in the loss of solitude for those visitors. An increase in the number of persons in the wilderness associated with the gather would also affect visitor solitude. Similar effects may be associated with the use of motor vehicles. All of these affects should be short term and last no longer than actual wild horse gather operations.

Heritage and Cultural Resources

None

Maintaining Traditional Skills

The majority of gathering wild horses would be conducted by the helicopter. There would be some traditional skills maintained with the use of horseback riders around the horse trap sites.

Special Provisions

None

Safety of Visitors, Personnel, and Contractors

Using helicopters for this type of operation involves a degree of risk. Standard Office of Aircraft Safety requirements and procedures would be followed. All safety procedures and protocols need to be observed. This alternative is expected to take less time with fewer riders on horseback to gather the required number of wild horses. The less time and riders reduces the length of exposure to risks to personnel as compared to gathering via only riders on horseback.

Economic and Time Constraints

The BLM Burns District has been appropriated funding to gather wild horses from the South Steens Horse HMA. The helicopter would be flying over the wilderness for as short a period of time as necessary. The success of gathers with helicopters and riders on horseback is much higher than with just riders on horseback. Therefore, gathering wild horses with the use of a helicopter would be the most efficient method of funding and time.

Additional Wilderness-specific Comparison Criteria

None

Comparison of Alternatives

It may be useful to compare each alternative's positive and negative effects to each of the criteria in tabular form, keeping in mind the law's mandate to "preserve wilderness character."

	No Action	Alternative 2	Alternative 3	
Untrammeled	+	0	0	
Undeveloped	+	0	0	
Natural	0	- +	- +	
Solitude or Primitive Recreation	+	- +	- +	
Unique components	n/a	n/a	n/a	
WILDERNESS CHARACTER	+3	-2 +2	-2 +2	

	No Action	Alternative 2	Alternative 3	
Heritage & Cultural Resources	None	None	None	
Maintaining Traditional Skills	None	+	0	
Special Provisions	None	None	None	
Safety	None	-	+	
Economics & Time	-	0	+	
Additional Wilderness Criteria	None	None	None	
OTHER CRITERIA SUMMARY	-1	-1 +1 0	+2 0	

Step 2 Decision: What is the Minimum Activity?

Please refer to the accompanying MRDG *Instructions* before describing the selected alternative and describing the rationale for selection.

Selected alternative: Alternative #3 Use of Helicopters and Horseback Riders.

Rationale for selecting this alternative: The No Action alternative was not selected due to not managing the wild horses would not prevent wild horses from multiplying affecting the wilderness character: naturalness, ORVs of Wild & Scenic Rivers, economic and time constraints of having to gather more horses in the future. Also an increase in wild horse herd numbers would increase safety risk of gathering operations in the future.

Alternative #2 and #3 both meet the minimum activity requirement. The use of the helicopter in Alternative #3 would be flying over the wilderness for as short a period of time as necessary. The success of gathers with helicopters is much higher than with just horseback riders. Therefore, gathering wild horses with the use of a helicopter would be the most efficient method of funding and time.

Standard OAS requirements and procedures would be followed. All safety procedures and protocols need to be observed. This alternative is expected to take less time to gather the required number of wild horses so the length of risks to personnel would be reduced compared to gathering via riders on horseback. Less

folks are involved in the gathering of wildhorses than the traditional method; therefore, less folks are at risk.

Wild horse populations would be managed, thereby maintaining the naturalness of the area into the future.

Monitoring and reporting requirements: BLM would continue to monitor the Steens Wilderness.

Check any Wilderness Act Section 4(c) uses approved in this alternative:

X mechanical transport – All effort would be to keep horse trailers off the wilderness

☐ motorized equipment

X motor vehicles – All effort would be to keep vehicles off the wilderness

☐ motorboats

X landing of aircraft – only in emergency situations

☐ temporary road

X structure or installation – temporary construction of horse trap

Record and report any authorizations of Wilderness Act Section 4(c) uses according to agency procedures.

Approvals	Signature	Name	Position	Date
Prepared by:	Eric Haakenson	Eric Haakenson	Outdoor Rec Spec	10/14/09
Recommended:				
Recommended:				
Approved:	Joan Suther	Joan Suther	Field Manager	10/14/09