Kiger and Riddle Mountain Herd Management Areas Wild Horse Gather

ENVIRONMENTAL ASSESSMENT
DOI-BLM-OR-B050-2011-0006-EA

Bureau of Land Management
Burns District Office
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CHAPTER I: INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

A. Introduction

The Bureau of Land Management (BLM) is proposing to gather approximately 210 and remove approximately 120 excess wild horses from within and outside the Kiger and Riddle Mountain Herd Management Areas (HMAs) beginning about July 2011. Of the animals released post-gather, about 38 head would be mares, 38 would be studs, and 8 would be geldings. The released animals would be selected to slightly adjust sex ratios in favor of males in order to slow population growth and to maintain a diverse age structure, with Dun color characteristics and good saddle-type horse conformation (body type). The current policy calls for the use of the contraceptive, Porcine Zona Pellucida (PZP), where the post-gather population exceeds approximately 50 head or the annual growth rate exceeds 5 percent. This policy was implemented to reduce the frequency of gathers and the number of horses in long-term pasture. The "Kiger" horses, as they are commonly known, have had an almost 100 percent adoption rate since 1986. The respective herd sizes are 51 head for Kiger HMA and 33 for the Riddle HMA. Due to the small herd size, popularity, and adoptability, PZP contraceptives will not be considered for these herds.

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

The Appropriate Management Level (AML) for Kiger and Riddle Mountain HMAs were previously established, following a thorough public review during two Resource Management Plan (RMP) processes, as a range from 51 to 82 and 33 to 56 wild horses, respectively, and was incorporated in the Three Rivers Resource Management Plan/Record of Decision (RMP/ROD) (September 1992), Page 2-43 and the Steens Mountain Cooperative Management and Protection Area Resource Management Plan/Record of Decision (CMPA RMP/ROD) (August 2005) Pages 50-52. The AML was expressed as the maximum Animal Unit Months (AUMs) of forage available for use by wild horses in each HMA.

The Kiger and Riddle Mountain HMAs were last gathered in 2007. An April 2010 inventory wild horse numbers within the two HMAs to be 91 head and 60 head, respectively. (Included were 10 and 3 current-year foals, respectively.) Wild horse numbers at the time of the gathering would be approximately 72 head over the high end of AML and 120 head over low AML.

Based upon all information available at this time, the BLM has determined that approximately 120 excess wild horses exist within the HMAs and need to be removed. This assessment is based on the following factors including, but not limited to:

- ❒ A direct count of 151 wild horses in April 2010 and a 25 percent increase in 2011 will total approximately 120 horses in excess of the AML lower limit.
- ❒ Use by wild horses is exceeding the forage allocated to their use by approximately 20 to 25 percent in 2011.

B. Purpose of and Need for Action

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

The need for action derives from excess wild horses within Kiger and Riddle Mountain HMAs. According to the April 2010 inventory and assuming a 20 + percent foal crop for 2010 and again in 2011 there would be approximately 120 excess wild horses within the HMAs by the time a gather operation could occur (20 percent to 25 percent foal crops have been observed for these two herd areas in the past inventories). Based on utilization monitoring, excess wild horses are contributing to the excessive utilization on herbaceous forage species within certain portions of the HMAs.

C. Land Use Plan Conformance

The Action Alternatives are in conformance with the objectives and management actions from the Three Rivers RMP (Pages 2-43 through 49) and Steens Mountain RMP (Page 50). The relevant objectives and actions follow.

Three Rivers RMP:

1. WHB 1: Maintain healthy populations of wild horses and burros in the Kiger and Riddle Mountain HMAs.
2. WHB 2.3: Select for high quality horses when gathered horses are returned to the range.
3. WHB 3: Enhance and perpetuate the special or rare and unique characteristics that distinguish the respective herds.
4. WHB 3.1: Limit any releases of wild horses or burros into an HMA to individuals which exhibit the characteristics designated.

Steens Mountain CMPA RMP/ROD:

1. Designate/retain/adjust HMAs.
2. Designate/retain/adjust Herd Areas in inactive status.
3. Maintain/adjust AMLs and yearlong forage allocations for each HMA.
4. Maintain a thriving natural ecological balance within HMAs.
5. Maintain/improve year-round water sources to sustain wild horse herds.
6. Maintain herd viability, genetic diversity and the genetic and physical characteristics that distinguish the individual herds.

D. Decision Framework

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

E. Decision Factors

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

Would the alternative:

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

F. Decision to be Made

The Authorized Officer would determine whether to implement the proposed population control measures in order to achieve and maintain population size within the established AML and prevent the further deterioration of rangeland and riparian resources resulting from the current wild horse overpopulation. The Authorized Officer's decision would not set or adjust AML nor would it adjust livestock use, as these were set through previous decisions.

G. Conformance with Laws, Regulations, and Policy

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

- The WFRHBA (Public Law 92-195 as amended) and Title 43 Code of Federal Regulations (CFR) Part 4700.
- NEPA (42 U.S.C. 4321-4347)1970.
- Federal Land Policy and Management Act (FLPMA) (43 U.S.C. 1701, 1976), Section 302(b) of FLPMA, states "all public lands are to be managed so as to prevent unnecessary or undue degradation of the lands."
- Public Rangelands Improvement Act (43 U.S.C. 1901. 1978).
- Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the BLM in the States of Oregon and Washington (1997).
- Steens Mountain CMPA RMP/ROD (August 2005)
- 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).
- Smyth-Kiger, Happy Valley and Riddle Mountain Allotment Management Plans (AMPs).
- The following are excerpts from the 43 CFR:

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

CHAPTER II: ALTERNATIVES INCLUDING THE PROPOSED ACTION

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

- Alternative 1: No Action - Defer gather and removal.
- Alternative 2: Proposed Action – Gather wild horses in order to remove 120 excess animals, and establish a population with a 60 percent male/female sex ratio with the breeding portion being 50/50 sex ratio of horses exhibiting a predominance of the Dun color phase.
- Alternative 3: Removal only to low AML with no sex ratio adjustment.

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

A. Alternative 1: No Action

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

B. Management Actions Common to Alternatives 2 and 3

- ❑ The gather would begin about July 2011 and take about 8 days to complete. Several factors such as animal condition, herd health, weather conditions, or other considerations could result in adjustments in the schedule.
- ❑ Gather operations would be conducted in accordance with the Standard Operating Procedures (SOPs) described in the National Wild Horse and Burro Gather Contract (Appendix A). The primary gather (capture) methods would be the helicopter drive method with occasional roping from horseback.
- ❑ Trap sites and temporary holding facilities would be located in previously used sites or other disturbed areas whenever possible. These areas would be seeded with crested wheatgrass if bare soil exceeds more than 10 square yards per location. Undisturbed areas identified as potential trap sites or holding facilities would be inventoried, prior to being used, for cultural resources. If cultural resources are encountered, these locations would not be utilized unless they could be modified to avoid affects to cultural resources.
- ❑ Trap sites and temporary holding facilities would be surveyed for noxious weeds prior to gather activities. Any weeds found will be treated using the most appropriate methods. All gather activity sites would be monitored for at least 2 years post-gather. Any weeds found would be treated.
- ❒ All vehicles and equipment used during gather operations would be cleaned before and following implementation to guard against spreading of noxious weeds.
- ❒ Efforts would be made to keep trap and holding locations away from areas with noxious weed infestations.
- ❒ Gather sites would be noted and reported to range and weed personnel for monitoring and/or treatment of new and existing infestations.

- ❑ An Animal and Plant Inspection Service or veterinarian would be onsite during the gather, as needed, to examine animals and make recommendations to BLM for care and treatment of the wild horses.
- ❑ Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy (Washington Office (WO) Instruction Memorandum (IM) 2009-041). Current policy reference: http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-041.html
- ❑ Data including sex and age distribution, condition class information (using the Henneke rating system), color, size, and other information may also be recorded, along with the disposition of that animal (removed or released).
- ❑ Excess animals would be transported to the Burns BLM corral facility via semi-truck and trailer where they would be prepared (freezemarked, vaccinated and dewormed) for adoption, sale (with limitations) or long-term pasture.
- ❑ Hair samples would be collected to assess genetic diversity of the herd, as outlined in WO IM 2009-062 (Wild Horse and Burro Genetic Baseline Sampling). Approximately 28 hair samples would be collected from horses returned to the range.

C. Alternative 2: Proposed Action

The Proposed Action would gather about 83 and remove approximately 50 excess wild horses from within and outside the Riddle Mountain HMA and gather 116 and remove 65 excess wild horses from the Kiger HMA beginning about July 2011. Trap sites would be selected within the pastures and areas where horses are located to the greatest extent possible. Animals would be removed using a selective removal strategy. Selective removal criteria for the HMA include: (1) First Priority: Age Class – Four Years and Younger; (2) Second Priority: Age Class – Eleven to Nineteen Years; (3) Third Priority: Age Class Five to Ten Years; and 4) Fourth Priority: Age Class Twenty Years and Older should not be removed from the HMA unless specific exceptions prevent them from being turned back to the range. Irrespective of their age class, all animals residing outside the HMA boundary would be removed.

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

- ❒ Fifteen head of the entire herd in Riddle Mountain would be mares and 23 mares in Kiger. These would be selected to maintain a diverse age structure, with Dun-factor color characteristics and good saddle-type horse conformation (body type).
- ❒ Fifteen head of the entire herd in Riddle Mountain would be studs and 23 studs would remain in Kiger. Three geldings would be returned to Riddle Mountain and eight to Kiger. Released horses would be selected to maintain a diverse age structure, Dun-factor color characteristics and good saddle-type horse conformation.

Stallions selected for gelding would meet the following requirements:

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

❒ Post-gather, every effort would be made to return released horses to the same general area from which they were gathered.
❒ AML would be restored within 4 months of the gathering.

D. Alternative 3: Removal Only

Alternative 3 would gather and remove about 65 and 50 excess wild horses from within and outside the Kiger and Riddle Mountain HMAs, respectively, beginning about July 2011. Fertility control would not be applied and no changes to the herd's existing sex ratio would be made. No horses would be returned to the HMA.

E. Alternatives Considered but Eliminated from Detailed Analysis

1. Fertility Control Treatment Only (No Removal)

Population modeling was completed to analyze the potential impacts associated with conducting gathers about every 2 to 3 years over the next 20-year period to treat captured mares with fertility control. Under this alternative, no excess wild horses would be removed. While the average population growth would be reduced for the next couple of years, AML would not be achieved and the damage to the range associated with wild horse overpopulation would continue.

This alternative would not meet the Purpose and Need for the Action, and would be contrary to the WFRHBA, and was dismissed from further study. While the current policy requires the use of fertility control on herds with an annual growth rate of greater than 5 percent, the demand for horses from the Kiger and Riddle herds has been at or near 100 percent since 1986. The cost to gather and administer fertility control and potential long-term holding exceeds the cost of an additional gather.

2. Remove or Reduce Livestock within the HMAs

This alternative was not brought forward for detailed analysis because it is outside the scope of the analysis and it is contrary to previous decisions which allocated forage for livestock use. Such an action would not be in conformance with the existing land use plan, would be contrary to the BLM's multiple-use mission as outlined in the 1976 FLPMA, and would also be inconsistent with the WFRHBA which directs the Secretary to immediately remove excess wild horses.

3. Complete Removal of Horses within the HMAs

Complete removal of horses within the Project Area was eliminated from detailed analysis for the following reasons because it would not be in conformance with the current Steens Mountains RMP. 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. The Proposed Action is not a land use plan allocation; therefore, elimination of wild horses is outside the scope of this analysis.

4. Water and Bait Trapping to Capture Horses

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

5. Population Control by Natural Means

Controlling wild horse numbers by natural means was eliminated from further consideration. Wild horse population size currently exceeds AML and the removal of excess wild horses is required in Section 1333b(2) in order to prevent damage to the range from the deterioration associated with an overpopulation of wild horses. It is also inconsistent with the Steens Mountain CMPA RMP/ROD (August 2005) which directs that Burns District BLM conduct gathers as necessary to achieve and maintain AML.

CHAPTER III: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

A. General Description of the Affected Environment

The Kiger and Riddle Mountain HMAs lay south of Burns about 50 miles and are bordered by Kiger Gorge on the west and East Steens Road on the east (Appendices C and D). Topography varies from steep glacier cut canyons to high plateaus' to prominent buttes, with two distinct drainages running through the area. Elevation varies from approximately 4,000 to 7,400 feet. Precipitation ranges upward of 8 inches annually and comes mainly in the form of snow. Temperatures vary from -30 °F in winter to 95 °F in summer. Major vegetation types are low sagebrush/Thurber's needlegrass, big sagebrush/squirreltail, and big sagebrush/bluebunch wheatgrass.

Several wildfires occurred within the HMAs during the 1980-2009 timeframe. The majority of these fires occurred outside the boundaries of the HMAs with only a small portion (under 1,500 acres) occurring within the HMAs. However, the Kiger Creek Fire of 1996, which encompassed approximately 4,573 acres, occurred almost entirely within the boundaries of the Kiger HMA. Prescribed burns, primarily broadcast burns, have taken place in the HMAs between 1999 and 2010. In 1999, a series of small acreage broadcast burns, ranging from approximately 800 to 3,500 acres occurred within the HMAs. Beginning in 2008, portions of the Five Creeks Upland Vegetation Management Plan, specifically Five Creeks Units 1, 2, and 3 broadcast burns were implemented within portions of the HMAs. Acreage occurring within the boundaries of the HMAs totaled approximately 850 acres for Five Creeks Unit 1, approximately 5,500 acres for Unit 2, and approximately 3,000 acres for Unit 3.

An intensive inventory evaluating the presence of wilderness characteristics on BLM-administered lands in the HMAs was completed in 1979-80. The final decision found that lands in the Herd Areas did not have wilderness characteristics (Wilderness Review Intensive Inventory in Oregon and Washington, March 1980). In 2003, three citizens proposed Wilderness Study Areas (WSAs) were submitted for consideration. Quail Creek WSA was proposed in the Riddle HMA and Riddle Creek WSA and Smyth Creek WSA were proposed in the Kiger HMA. Current conditions were reviewed and documented in these areas and it was determined that conditions had not substantially changed since the original inventory and the units did not have wilderness characteristics.

All three of these Wilderness Inventory Maintenance units met the size criteria but Riddle Creek and Smyth Creek Units did not meet the naturalness criteria because the imprint of man was substantially noticeable and therefore the areas could not be considered for outstanding opportunities of solitude or primitive unconfined recreation. Quail Creek Unit met the naturalness criteria, but did not have outstanding opportunities for solitude or primitive unconfined recreation due to lack of vegetative screening and configuration.

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

Table 1

Issues/Resources	**Present**		**If Not Affected, why? If Affected, Reference Applicable EA Chapter**
Air Quality (Clean Air Act)	Yes	No	The Project Area is located outside a non-attainment area. The implementation of the Proposed Action would result in dust in the area for 1 to 2 hours after horses enter the trap and in route to the trap.
American Indian Traditional Practices	No		
Areas of Critical Environmental Concern (ACECs)	Yes Not	Affected	There are two ACECs excluded from wild horses and livestock. No impacts would occur.
Cultural Resources	Yes	No	All known areas of cultural resources would be avoided during removal operations.
Environmental Justice (Executive Order (EO) 12898)	No	Not Affected	The Proposed Action is not expected to have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations as such populations do not exist in the Project Area.
Flood Plains (EO 13112)	No		
Grazing Management	**Yes**	**Affected**	**Discussed Below**
Hazardous or Solid Waste	No		
Migratory Birds (EO 13186)	**Yes**	**Affected**	**Discussed Below**
Noxious Weeds (EO 13112)	**Yes**	**Affected**	**Discussed Below**
Paleontological Resources	No		
Recreation	Yes	Not Affected	Removal operations would be brief in nature and occur before the major hunting seasons.
Social and Economic Values	Yes	Not Affected	Fewer horses would be on the landscape potentially affecting a person's social values; allotted livestock AUMs would be available (see Grazing Management); and a contractor would remove excess horses with potential to add revenue to local communities, however, economic effects would not be measurable.
Soils and Biological Crusts	**Yes**	**Affected**	**Discussed Below**
Upland Vegetation	**Yes**	**Affected**	**Discussed Below**
Visual Resources	Yes	Not Affected	There are equal amounts of Visual Resource Management (VRM) Classes I, II, and IV in the Riddle HMA, and there would be no permanent structures or impairment to the landscape in either HMA.

Issues/Resources		Present		If Not Affected, why? If Affected, Reference Applicable EA Chapter
Wildlife/ Threatened and Endangered (T&E) Species or Habitat	Fish	No		There are no T&E species or their Critical Habitat affected by the proposed gather.
	Wildlife No		No	There are no T&E species or designated Critical Habitat present or affected by the proposed gather.
	Plants	Yes Not	Affected	
Wildlife/BLM Special Status Species (SSS) and Habitat	Fish	No		There are no SSS or their habitat affected by the proposed gather.
	Wildlife	**Yes**	**Affected**	**Discussed Below**
	Plants	No		There are no SSS or their habitat affected by the proposed gather.
Water Quality (Surface and Ground)		Yes Not	Affected	There are no affects expected to water quality from the proposed gather.
Wetlands/Riparian Zones (EO 11990)		Yes Not	Affected	There are no affects expected to wetlands/riparian zones from the proposed gather.
Wild and Scenic Rivers		No		
Wild Horses and Burros		**Yes**	**Affected**	**Discussed Below**
Wilderness/WSAs		Yes	No	The proposed gather would have no effect on wilderness values on the Stonehouse WSA because of the temporary nature of the Proposed Action and absence of permanent ground disturbance.
Lands With Wilderness Characteristics		No		
Wildlife		**Yes**	**Affected**	**Discussed Below**

B. Grazing Management

Affected Environment

The Smyth-Kiger and Happy Valley Allotments are within the Kiger HMA and the Burnt Flat Allotment is within the Riddle Mountain HMA. There are a total of three livestock operators who are currently authorized to graze livestock in these allotments annually. The operators are authorized to use 8,265 AUMs of forage each year. An AUM is the amount of forage needed to sustain one cow, five sheep, one horse, or five goats for a month. There are a total of 11 pastures within the three allotments. Grazing management consists of different strategies within the pastures. Pastures are managed in generally a graze/deferment rotation; seasonlong rest is implemented when monitoring data shows a need to maintain or improve plant health. The season of use may vary by 1 to 2 weeks annually based upon forage availability, drought conditions, and other management criteria. The BLM allocated forage for livestock use through the Three Rivers RMP, 1992 and Steens Mountain CMPA RMP/ROD (August 2005). These allocations were based on the analysis of monitoring data that included actual use, utilization, climate data, long-term trend studies and professional observations**.**

Table 2 summarizes the livestock use information for the allotments in the HMAs.

Table 2: Livestock Use Information

Allotment	Total Allotment Acres	% of Allotment in HMA	Permittee	Livestock	Authorized Season of Use	Authorized Livestock AUMs (Preference)	Average Actual Livestock Use (Past 4-5 years)
Smyth-Kiger	29,863	77	1	326	04/01-10/31	2,295	2,032
Happy Valley	19,362	32	1	324	04/01-10/15	2,107	1,896
Burnt Flat	32,565	99	1	552	04/01-10/30	3,863	2,104

Livestock grazing is typically deferred until approximately July 1 annually within Burnt Flat Allotment. Livestock typically graze on BLM-managed lands until mid-August when they are moved to adjacent private lands for approximately 45 days. Livestock then begin trailing home through the allotment through the end of October. Livestock use fluctuates from year to year in response to environmental conditions within Burnt Flat Allotment, and has remained below Permitted Use over the past 5 years. Lack of available water sources is the primary reason for reducing livestock use. When waterholes go dry, the permittee moves livestock to more reliable water sources located within adjacent private land pastures before utilization targets are exceeded. Utilization observations over the past 10 years indicate that utilization levels approach moderate to heavy levels as wild horse numbers reach or exceed AML.

Livestock grazing in the Smyth-Kiger and Happy Valley Allotments that occurs within the Kiger HMA typically starts late April and extends into October. In the Smyth-Kiger Allotment livestock enter in late April in the Ant Hill Pasture and then move into other pastures early to mid-May managed as a graze/defer rotation. Happy Valley Allotment has two pastures within the Kiger HMA, which includes North Big Hill and South Big Hill Pastures. These two pastures are grazed by livestock in a graze, rest, and defer rotation from mid-May to the end of July. Livestock then trail back through these two pastures in mid- to late September as they return to private ground for the winter.

Livestock use fluctuates in both allotments within the Kiger HMA, and on average has been below the Permitted Use over the past 5 years. Water has not been a limiting factor in this area. The primary reason Actual Use has been below the Permitted Use is that both allotments that includes approximately 80 percent of the Kiger HMA is within the Five Creeks Rangeland Restoration Project EA (OR-06-027-022). This project has resulted in 3 years of rest in the Smyth-Kiger and Happy Valley Allotments by livestock.

The pasture that has been treated by prescribed burn in the Kiger HMA is the Ruins Pasture completed in September 2009. Other pastures to be treated by both broadcast prescribed burn and pile and burn in the next 2 years are Wood Camp, Swamp Creek, and Yank Springs in the Smyth-Kiger Allotment and South Big Hill in the Happy Valley Allotment.

The April 2010 wild horse inventory identified that within both allotments the wild horse numbers exceeded the AML. Two large bands consisting of approximately 10 to 15 horses each along with several other small bands of 2 to 5 animals in the Wood Camp Pasture in the Smyth-Kiger Allotment resulted in vegetative and soil resource concerns in established territorial areas by wild horse bands. These resource concerns were addressed by the BLM and permittee agreeing to take nonuse by livestock scheduled in this pasture for October 2010 (Photographs 1 and 2). Photographs and documented visual observations during July and August 2010 indicate horse numbers, in particular the two larger bands, now exceeds the April 2010 inventory by approximately 10 animals.

Permittees within Smyth-Kiger, Happy Valley, and Riddle Mountain Allotments have only been able to utilize the following portion of their preference since the last gather: 6,032 AUMs or 73 percent of the permitted use.

Environmental Consequences

Affects Common to All Alternatives

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

While the present livestock grazing systems and efforts to manage the wild horse population within AML has reduced past historic impacts, the current overpopulation of wild horses is continuing to contribute to areas of heavy vegetation utilization, trailing and trampling damage.

Alternative 1 (No Action)

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

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

Affects Common to Alternatives (2 and 3)

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

C. Wild Horses and Burros

Affected Environment

The HMAs were designated for the long-term management of wild horses in the Drewsey Management Framework Plan, 1978. The AML was originally set at 30 to 50 horses in the Riddle HMA and 50 to 80 in the Kiger HMA. It was adjusted upward to 33 to 56 in Riddle Mountain and 51 to 82 in Kiger through a Land Use Plan Amendment in 1986 as the result of a land exchange with the State of Oregon. The AML was reaffirmed at 672 AUMs in Riddle Mountain HMA and 984 AUMs in Kiger HMA in the Three Rivers RMP, 1992 and Steens Mountain CMPA RMP/ROD (August 2005). The AML was established with public participation following an in-depth analysis of resource monitoring studies.

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

The last removal of excess wild horses from Kiger and Riddle Mountain HMAs was completed in September 2007 when 178 horses were gathered and 124 excess horses were removed. Following the gather, 44 horses were returned. Released mares were not given a fertility control vaccine PZP or PZP-22 prior to their release.

The estimated population of wild horses and burros in the HMAs in April 2010 was 151 horses based on a direct-count, aerial population survey (Appendix D). Analysis of these data indicates an average annual growth rate of more than 20 percent since the last gather. The estimated population size of the wild horses, including the entire 2010 foal crop and 2011 foal crop would be approximately 210 head by the time of the scheduled gather.

Between the three allotments within the HMA there are a total of 1,656 AUMs of forage allocated to wild horses. During the last 4 years, based on population estimates, wild horses have used approximately the following amounts of forage:

2007 1,602 AUMs
2008 1,200 AUMs
2009 1,500 AUMs
2010 1,875 AUMs

During the inventory flight of 2010, horses were observed to be in good to excellent condition. The foal ratio early in the foaling season was 11 to 14 percent and the horses were generally below the snowline on the northern portions of both HMAs.

The makeup of the 1974 Kiger and Riddle Mountain wild horse herd included horses abandoned by homesteaders, escaped horses from ranches in the area, and offspring of licensed and trespass horses that have used the area in the past. The first selective gather based on the Kiger and Riddle Mountain Herd Management Plan acknowledged a genetic pool of saddle-type horses that were of average size. Horses returned to the HMA from this gather in 1978 emphasized sound horses of good confirmation. Dun-colored horses were favored, and horses were of average size. The herd was returned to a 50 percent male, 50 percent mare mix with an even age spread below 15 years old.

Typical Terrain

The Kiger and Riddle Mountain wild horse herds have been gathered 11 times since 1976, most recently in 2007. From 1972 to present, 16 wild horse inventories of the HMAs have been completed. Data from these inventories and wild horse gathers have helped define the needs of current and future horse population management.

Environmental Consequences

Results of Win Equus Population Modeling

Population modeling using Version 3.2 of the Win Equus population model (Jenkins 2000) was completed to analyze possible differences that could occur to wild horse populations between the No Action Alternative and Alternatives 2 and 3. The purpose of the modeling was to analyze and compare effects of Action Alternatives on population size, average population growth rate, and average removal number. Tables 3a and 3b summarize the results for each HMA. See Appendix E for additional detail.

Table 3a: Average Population Size, Growth Rates, Next Projected Gather Year for Riddle Mountain HMA

Alternative	Avg. Pop. Size (11 years)	Avg. Growth Rate Next 10 Years (%)	Next Projected Gather (Year)	Est'd No. to Remove (Next 11 years)
Alternative 1 - No Action	208	19	N/A	N/A
Alternative 2 - Proposed Action	66	18	2015	108
Alternative 3 - Gather to Low AML (No fertility control or sex ratio adjustment)	66 1	9	2015	114

Table 3b: Average Population Size, Growth Rates, Next Projected Gather Year for Kiger HMA

Alternative	Avg. Pop. Size (11 years)	Avg. Growth Rate Next 10 Years (%)	Next Projected Gather (Year)	Est'd No. to Remove (Next 11 years)
Alternative 1 - No Action	317	19	N/A	N/A
Alternative 2 - Proposed Action	101	18	2015	170
Alternative 3 - Gather to Low AML (No fertility control or sex ratio adjustment)	103 1	9	2015	167

This modeling was used to identify if any of the alternatives would eliminate the population or cause numbers or growth rates to reach a point where there was no new recruitment to the population. Modeling data indicate sustainable population levels and growth rates would be expected to be within reasonable levels and adverse effects to the population would be unlikely.

The Cumulative Effects Analysis Area (CEAA) for wild horses is within the HMA boundaries to analyze impacts of horse use. All alternatives and other ongoing and reasonably foreseeable future projects would not lead to cumulative effects to wild horses because impacts from the alternatives would be temporary, localized, and combined effects with the other projects would not be measurable due to distance to other projects or lack of direct and indirect effects to species or habitat.

Alternative 1 (No Action)

Under the No Action Alternative, there would be no active management to control the population size within the established AML at this time. In the absence of a gather, wild horse populations would continue to grow at an average rate of 20 percent per year. Without a gather and removal now, the population would grow to 525 head in 11 years' time based on the average annual growth rate.

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

Affects Common to Action Alternatives (2 and 3)

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

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

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

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

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

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

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

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

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

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

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

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

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

By maintaining wild horse population size within the AML, there would be a lower density of wild horses across the HMA, reducing competition for resources and allowing wild horses to utilize their preferred habitat. Maintaining population size within the established AML would be expected to improve forage quantity and quality and promote healthy, self-sustaining populations of wild horses in a thriving natural ecological balance and multiple-use relationship on the public lands in the area. Deterioration of the range associated with wild horse overpopulation would be avoided.

Managing wild horse populations in balance with available habitat and other multiple uses would lessen potential for individual animals or the herd to be affected by drought, and would avoid or minimize the need for emergency gathers, which would reduce stress to animals and increase success of the herd over the long term.

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

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

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

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

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

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

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

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

Adoption or Sale with Limitations, and Long-Term Pasture

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

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

Between 2007 and 2009, nearly 62 percent of excess wild horses or burros were adopted and about 8 percent were sold with limitation to qualified individuals who have appropriate facilities to care for the animals. Within the Kiger and Riddle Mountain herds the adoption demand has been almost 100 percent since 1986. Unadoptable animals 5 years of age and older are generally transported to long-term holding pastures. These pastures are generally located in the Midwest.

Potential effects to wild horses from transport to adoption, sale or long-term holding are similar to those previously described. One difference is when shipping wild horses for adoption, sale or long-term holding, animals may be transported for a maximum of 24 hours. Immediately prior to transportation, and after every 18 to 24 hours of transportation, animals are offloaded and provided a minimum of 8 hours on-the-ground rest. During the rest period, each animal is provided access to unlimited amounts of clean water and 25 pounds of good-quality hay per horse with adequate bunk space to allow all animals to eat at one time.

Most animals are not shipped more than 18 hours before they are rested. The rest period may be waived in situations where the travel time exceeds the 24-hour limit by just a few hours and stress of offloading and reloading is likely to be greater than the stress involved in the additional period of uninterrupted travel.

Long-term pastures are designed to provide excess wild horses with humane, life-long care in a natural setting off public rangelands. Wild horses are maintained in grassland pastures large enough to allow free-roaming behavior and with forage, water, and shelter necessary to sustain them in good condition. About 27,000 wild horses, in excess of the existing adoption or sale demand (because of age or other factors), are currently located on private land pastures in Iowa, Kansas, Oklahoma, and South Dakota. Located in mid or tall grass prairie regions of the United States, these long-term holding pastures are highly productive grasslands as compared to more arid western rangelands. These pastures comprise about 256,000 acres (an average of about 8 to 10 acres per animal). These animals are generally more than 10 years in age.

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

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

Euthanasia and Sale without Limitation

While humane euthanasia and sale without limitation of healthy horses for which there is no adoption demand is authorized under the WFRHBA, Congress prohibited the use of appropriated funds between 1987 and 2004 and again in 2010 for this purpose. Under the new Proposed Strategy introduced February 28, 2011, there would continue to be no wholesale euthanasia or sale without limitation of healthy unadoptable horses.

Cumulative Effects

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

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

Alternative 2 (Proposed Action)

Alternative 2 (Proposed Action) would gather up to 210 horses, of which 120 excess horses would be removed to return wild horse population size to within AML. The post-gather wild horse population target would include 38 mares, 38 studs, and 11 geldings. This would establish a 50/50 stud/mare sex ratio on the breeding population of horses. Releasing 11 geldings would reduce the post-gather breeding population of the herd by nearly 10 percent.

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

Alternative 3

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

D. Rangelands/Weeds

Affected Environment

Plant communities within both HMAs are comprised of mountain and Wyoming big sagebrush-perennial bunchgrass associations in areas containing deeper (>12 inches to restrictive layer) soil types. Idaho fescue, bluebunch wheatgrass, bottlebrush squirreltail, and Sandberg's bluegrass are common perennial grass species within these communities. In areas with shallower soils, low sagebrush/Idaho fescue and low sagebrush/Sandberg's bluegrass communities occur. Wyoming and mountain big sagebrush communities have experienced Phase II and III western juniper encroachment on approximately 25 percent of Riddle Mountain HMA and 20 percent of the Kiger HMA. This tree is a long-lived conifer that historically occupied rocky ridgetops and shallow soil areas in association with low sagebrush, where fine fuels were too low in abundance to carry fire (Miller et al. 2005). Historic stands or pre-settlement woodlands (prior to 1860) were sparse and savanna-like on rocky shallow soils, which only makes up approximately 10 percent of the juniper stands found today across the Great Basin (Miller et al. 2008). However, over the past 130 years western juniper has encroached into more productive big sagebrush, quaking aspen, and riparian habitats. There is a mix of old growth stands (greater than 200 years old) and post-settlement stands in parts of these HMAs. Species composition in the understory vary depending on aspect, elevation, and soil depth, but as western juniper density increases and begins to fully occupy the site shrub species are lost from the plant community along with a decrease in long-lived, deep-rooted perennial grasses and forbs (Miller et al. 2005; Miller et al. 2008). Conversion to western juniper woodlands has reduced the functional and structural diversity, and forage production within these communities.

Through years of extensive and ongoing research that supports juniper removal in vegetative community types mentioned above, treatments are being implemented by using methods such as prescribed burning and mechanical (chain saws) treatments analyzed in the Five Creeks Rangeland Restoration Project EA (OR-06-027-022). There have been approximately 10,340 acres treated within the Kiger HMA and approximately 11,890 acres to be treated in 2011 and 2012. Not all treatment sights in the 2009 prescribed burn treatment burned successfully leaving an estimated 30 percent of juniper encroached areas untreated by fire. Herbaceous vegetative response such as native perennial grasses, forbs and aerial seeding of areas that received high fire intensity has increased plant frequency and vigor. The 2009 burn treatment has resulted in an increase in forage quantity and quality for grazing animals such as wild horses, livestock, and elk.

Noxious weeds have been documented within both the Kiger and Riddle HMAs. Table 4 lists the details:

Table 4

HMA	Weed Species	# of Sites	Total Acres/Spp
Riddle Mountain	Canada thistle	3	0.461
Riddle Mountain	Bull thistle	3	0.635
Riddle Mountain	Medusahead rye	3	0.060
Total		**9**	**1.157 Acres**
Kiger	Whitetop	23	3.561
Kiger	Diffuse knapweed	1	123.575
Kiger	Canada thistle	76	88.738
Kiger	Bull thistle	55	19.532
Kiger	Perennial pepperweed	2	23.329
Kiger	Scotch thistle	11	1.187
Kiger	Mediterranean sage	1	0.001
Kiger	Medusahead rye	37	443.746
Total		**206**	**703.667 Acres**

Approximately 75 percent of these sites were discovered and treated during weed surveys in 2010 as part of the Five Creeks Landscape Management Project. Eighty percent of the weed sites are receiving ongoing treatments and are monitored on an annual basis. Fifty percent of these sites have been reduced from their original extent. The entire extent of each site is kept in the database, monitored as a site, and treated where weeds still occur.

Canada thistle is prominent in most of the riparian areas. Improving desirable riparian vegetation, along with aggressive weed treatments, would reduce the dominance of this noxious weed and allow the riparian areas to recover and function properly.

The most problematic weed issue in the area is medusahead rye, which occupies more than 60 percent majority of the infested acreage and is expanding. Medusahead tends to be a problem primarily in the uplands. In areas with heavy clay soils, medusahead can and will outcompete mid- and late seral species, as well as competitive introduced species such as crested wheatgrass. At this time, Oregon BLM is under a court-ordered herbicide injunction which limits the use of herbicides on BLM lands in Oregon to four active ingredients (dicamba, picloram, glyphosate, and 2, 4-D) for noxious weed control only. The recommended treatment for medusahead is a fall application of Imazapic (Plateau at 6 oz/acre). Glyphosate can be used early in the spring or in the fall but injures any associated desirable vegetation which is actively growing.

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

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

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

Environmental Consequences

The CEAA for weeds extends a couple of miles beyond the HMA boundaries to incorporate invasion or expansion of weed species. Potential effects to weeds would decrease as the distance from the HMAs increases. Wildfires may occur in the future, but predicting the effects of potential wildfires would be speculative and analysis of post-fire rehabilitation plans would address weeds.

Alternative 1 (No Action)

Areas which are presently overutilized within the HMA, such as areas adjacent to water sources, would continue to be used in excess of the 50 percent utilization prescribed for the allotments. The areas of overutilization would continue to increase in both size and degree. The composition of vegetation would change to a higher percentage of undesirable plants, soil cover would be reduced, and erosion would increase.

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

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

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

Alternative 2 (Proposed Action)

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

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

Cumulative effects of reduced noxious weed presence, which would be expected when incrementally adding either of the Action Alternatives include continued improvement of upland vegetation conditions, benefitting permitted livestock, native wildlife, and wild horse population as forage (habitat) quality and quantity is improved over the current level. Benefits from a reduced wild horse population would include fewer animals competing for limited forage and water resources. Cumulatively, there should be more stable wild horse populations, healthier rangelands, healthier wild horses, and fewer multiple-use conflicts in the area over the 3 to 4 years and potentially 10 to 15 years over the long term. Over the next 15 to 20 years, continuing to manage wild horses and burros within the established AML range would achieve a thriving natural ecological balance and multiple-use relationship on public lands in the area.

Alternative 3

Same as the Proposed Action.

E. Special Status Fauna (Terrestrial)

Affected Environment

There are no known Federally listed Threatened or Endangered wildlife species found within the Kiger and Riddle Mountain HMAs. The HMA boundaries encompass nine greater sage-grouse (*Centrocercus urophasianus*) leks, and all but one of the leks are located in the Riddle HMA. Thirty percent of the Kiger HMA and 76 percent of the Riddle HMA contain year-round habitat for sage-grouse. Approximately 54 percent of the HMAs (primarily Kiger HMA) contain potential habitat but some factor, such as juniper encroachment or recent wildfire, has degraded the quality of the site for sage-grouse. The ongoing Five Creeks Restoration Project, including juniper cutting and prescribed burning, is addressing some factors impairing sage-grouse habitat.

Other BLM SSS that potentially utilize the HMAs include pallid bats (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and fringed myotis (*Myotis thysanodes*). Bald eagle (*Halieaeetus leucocephalus*) and other BLM SSS bird species may occur temporarily in the HMAs outside the breeding season or pass though during migration; however, most are unlikely to remain in the area for more than a few days.

Environmental Consequences

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

No Action Alternative

Areas in the HMA which are receiving greater than 50 percent utilization, such as areas adjacent to water sources, would continue to be used excessively. The composition of vegetation would change to a higher percentage of undesirable plants, soil cover would be reduced, and erosion would increase. Attainment of site-specific vegetation management objectives and Standards for Rangeland Health would not be achieved.

Loss of quality habitat would occur by allowing excess numbers of horses within the HMA, and would impact sage-grouse nesting and brood-rearing habitat within the gather area. Heavy grazing in some areas may reduce available vegetative cover and may lead to higher levels of predation on eggs, young, and adults. The limited riparian habitat would also deteriorate as horse numbers increase, which would reduce the quality of sage-grouse brood-rearing habitat. Potential for trampling nests and young by horses would increase, although it would still be a low risk and would not impact population trends.

Alternatives 2 and 3

Direct impacts to sage-grouse are not expected. At the time of the gather, the young sage-grouse would be fully capable of flying and able to easily move away from running horses and avoid the trap area. Impacts to daily activities would occur in some areas, but would likely be of short duration (a few hours a day) and have no noticeable affect to sage-grouse other than temporary displacement. Trap sites would be located at least 200 feet away from known sage-grouse lek sites, and not occur when birds are at the lek during the breeding season.

Reducing the density of horses in the HMA would likely improve habitat condition for greater sage-grouse, or at least prevent the overutilization and degradation of some areas for sage-grouse. The winter diet of sage-grouse consists almost entirely of sagebrush, with forbs and some grasses consumed at other times of the year. There is limited overlap in the diet of horses and sage-grouse, and presence of horses would not directly affect foraging habitat. However, reducing horse grazing pressure may enhance foraging and nesting areas by retaining taller screening cover and decreasing the vulnerability of birds to predators. Trampling of nests and young is unlikely but could still occur, and there would be even less risk under these alternatives as the number of horses is reduced.

Effects of Alternative 3 would be very similar to Alternative 2, except with fewer horses removed, the effects to sage-grouse habitat would be slightly less. Additionally, the effects would not be as long lasting because horse populations would likely increase faster under Alternative 3.

F. Migratory Birds

Affected Environment

The area within Kiger and Riddle Mountain HMAs provides habitat for numerous migratory bird species, including mourning dove (*Zenaida macroura*), mountain bluebird (*Sialia currucoides*), sage sparrow (*Amphispiza belli*), loggerhead shrike (*Lanius ludovicianus*), sage-thrasher (*Oreoscoptes montanus*), golden eagle (*Aquila chrysaetos*), American kestrel (*Falco sparverius*). Many birds use the area for nesting and brood rearing, although some birds only use the area for foraging and resting as they pass through on their yearly migration.

Environmental Consequences

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

No Action Alternative

The impacts to migratory birds with selection of the No Action Alternative would be similar to those identified for SSS. Heavy, continuous grazing by horses would lead to a loss of cover and suitable nesting and foraging habitat for many species, especially those that frequently forage and nest along riparian areas. Loss of cover could likely lead to higher levels of predation or cause many birds to leave the area in search of more suitable habitat.

Alternatives 2 and 3

Impacts to migratory birds from implementing these two alternatives are much the same as noted in SSS. Most migratory birds would be able to fly or seek shelter away from the trapping site and movement of horses during the gather operation. Habitat conditions (foraging, nesting, and hiding cover) would be expected to improve, relative to Alternative 1, by reducing the number of horses to within AML. Distribution and quantity of growing season and residual herbaceous cover would improve under this alternative, primarily around areas where horses tend to concentrate. Horses would likely continue to concentrate in these areas, but fewer animals would affect a smaller area, and consume less forage. The additional herbaceous cover across these two HMAs would create more sites with suitable screening cover for nests to protect incubating adults, eggs, and nestlings from predation and exposure to the elements. Better protection at nests may lead to increased productivity and nest success for migratory birds. Although trampling is unlikely to impact populations, there would be even less potential for trampling of ground nests compared to Alternative 1.

Effects of Alternative 3 would be very similar to Alternative 2, except with fewer horses removed, the effects to migratory bird habitat would be slightly less. Additionally, the effects would not last as long because horse populations would likely increase faster under Alternative 3.

G. Wildlife

Affected Environment

The Kiger and Riddle Mountain HMAs provides suitable habitat for antelope *(Antilocapra americana*), mule deer (*Odocoileus hemionus*), and Rocky Mountain elk (*Cervus elaphus*). These animals may occur in HMAs at any time of the year, including winter and during transition periods between summer and winter areas. Approximately half the HMAs contain elk winter habitat, primarily between 4,800 feet and 6,300 feet elevation on the northwest portion of Riddle Mountain and the southeast portion of Kiger HMA. Mule deer winter range occurs on nearly a quarter of the area within the two HMAs, generally below 5,500 feet elevation with most occurring on the northwest portion of the Kiger HMA. Winter use varies depending on snowfall accumulation and other factors.

Other mammal species present are those commonly found in high desert ecosystems and range from several small animals such as kangaroo rats (*Dipodomys* sp.) and Great Basin pocket mouse (*Perognathus parvus*), to larger animals such as black-tailed jackrabbits (*Lepus californicus*), American badger (*Taxidea taxus*), coyotes (*Canis latrans*), and mountain lions (*Puma concolor*). The area likely also supports several species of bats in the spring through fall. Common reptiles and amphibians inhabiting the HMA include Great Basin spadefoot toad (*Spea intermontana*), gophersnake (*Pituophis catenifer*), Pacific chorus frog (*Pseudacris regilla*), and western rattlesnake (*Crotalus oreganus*). California quail (*Callipepla californica*) and chukar (*Alectoris chukar*) also inhabit the HMA. Birds protected under the Migratory Bird Treaty Act and animals designated as SSS are discussed under separate sections in this document.

Environmental Consequences

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

No Action Alternative

As horse numbers increase, there would be greater competition for limited resources (foraging and hiding cover for animals and their prey). Potential conflicts may occur for some herbivorous wildlife species, such as elk, with at least partial dietary overlap with horses. Wildlife habitat may suffer long-term downward trends from overgrazing and trampling, especially in riparian areas, and most wildlife species would be impacted either through loss of forage or increased risk of predation due to reduced cover where horses tend to concentrate. Smaller animals, such as some rodents and lizards, may be at higher risk of predation as available hiding cover is reduced.

If smaller prey species become less available in an area, predators would have to expand their hunting territory or may be forced to move to another area in search of food. Wildlife species that frequent riparian areas would be impacted most, due to the limited amount of riparian habitat in the HMAs and the year-round use by horses.

Alternatives 2 and 3

Direct impacts to wildlife species are not expected other than a short disruption of daily activities. Disruption of wildlife activities during the gather by both the presence of humans and a low-flying helicopter would be of temporary duration. Most animals, especially larger animals, would simply seek refuge by leaving the area until the disturbance is gone. Smaller wildlife, such as rodents and reptiles, would retreat underground or seek other nearby shelter. Approximately 2 acres of land used as a trap site would be impacted by presence of personnel associated with the gather and concentrated trampling as horses are herded together into holding areas.

Most animals would have already raised their young to an age where there would be little chance of life threatening impacts, such as trampling, from the gather. There would be no impacts to habitat except localized areas around the trap site. This vegetation and ground disturbance may temporarily displace some small animals until the area revegetates and once again provides foraging and hiding cover.

Competition for forage and water resources between wildlife and horses would be reduced for a time until the horse numbers again increase over the next few years.

Effects of Alternative 3 would be very similar to Alternative 2, except with fewer horses removed, the effects to wildlife habitat would be slightly less. Additionally, the effects would not last as long because horse populations would likely increase faster under Alternative 3.

H. Soils and Biological Soil Crusts

Affected Environment

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

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

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

The majority of soils are Ninemile-Westbutte-Carryback on cool soils on shrub and grass-covered plateaus, hills and mountains from 4,000 to 7,000 feet that receive 8 to 16 inches of precipitation. The Ninemile-Westbutte-Carryback soils include gravelly to very cobbly loams or stony to cobbly clays with areas of silty clay loam on slopes from 0 to 70 percent. These soils are shallow to moderately deep and are well drained and have a low potential for wind erosion and a low to moderate potential for water erosion.

Small portions of the HMA also contain the following soil complexes: Baconcamp-Clamp-Rock outcrop: well drained, shallow and moderately deep soils that formed in colluvium and found on mountains at elevations between 5,100 and 9,700 feet; Raz-Brace-Anawalt: well drained, shallow and moderately deep soils that formed in alluvium and colluvium. Found on plateaus and hills that receive 8 to 12 inches of precipitation. Elevation ranges from 4,100 to 6,200 feet; Felcher-Skedaddle: well drained, very shallow to moderately deep soils that formed in colluvium and residuum. Found on mountains and hills at elevations between 4,100 and 7,100 feet. Average annual precipitation is 8 to 12 inches; Fury-Skunkfarm-Housefield: somewhat poorly drained to very poorly drained, very deep soils that formed in lacustrine sediments.

Found on lake plains at elevations of 4,000 to 5,100 feet. Average annual precipitation is 8 to 10 inches; and Poujade-Ausmus-Swalesilver: moderately well drained and somewhat poorly drained, very deep soils that formed in lacustrine sediment and alluvium. Found on lake terraces and plains at elevations ranging between 4,000 and 5,100 feet. Average annual precipitation is 8 to 10 inches.

Environmental Consequences

The CEAA for soils is within the HMA boundaries to incorporate most changes from horses using the area. Potential effects to soils would decrease as the distance from the HMAs increases. Wildfires may occur in the future, but predicting the effects of potential wildfires would be speculative and analysis of post-fire rehabilitation plans would address soil impacts. All alternatives and other ongoing and reasonably foreseeable future projects would not lead to cumulative effects soils, because impacts from the alternatives would be temporary, localized, and combined effects with the other projects would not be measurable due to distance to other projects or lack of direct and indirect effects to the soil component.

No Action Alternative

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

The No Action Alternative would not promote a normal thriving ecological balance because the balance of resources such as forage, water, cover and would seriously be disrupted and all users would have a diminished capacity to thrive and reproduce. There would be an increase soil and BSC compaction, erosion and loss of biotic cover (site-specific disturbances) within the Kiger and Riddle Mountain HMAs.

Alternatives 2 and 3

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

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

I. Water Quality, Special Status Species – Aquatic and Wetlands/Riparian Zones

Affected Environment - Water Quality, Special Status Species – Aquatic and Wetlands/Riparian Zones

Within Riddle Mountain HMA, Squaw Creek is the only perennial stream. Within Kiger HMA there are several perennial streams including Smyth Creek, Yank Creek, Swamp Creek, and Frog Creek. Each of these creeks is grazed by livestock and wild horses, with the exception of Yank Creek. Currently Yank Creek is receiving wild horse use even though it is intended to be excluded from livestock and wild horse use. Wild horses entered the exclosure and after two failed attempts to remove them by horseback, still remain in the exclosure. The gates were left open with the hopes of the horses leaving on their own, but that has not happened at this time. Varying types of juniper treatment have occurred on Smyth, Yank, and Frog Creeks. Junipers along approximately 2 miles of Smyth Creek were clear cut in 2001 and 2002. This area is within the Five Creeks Rangeland Restoration Project and was treated with prescribed burning in the fall of 2009. Yank Creek is the boundary between the Five Creeks Project 2009 and 2011 Prescribed Burn Units. In 2009 the juniper within approximately 200 feet of Yank Creek, for approximately 1-mile, were clear cut and hand piled with the piles scheduled to be burnt during the winter/spring of 2010-2011. Approximately 1-mile of Frog Creek received a juniper clear cut in 2004.

Squaw Creek

Squaw Creek monitoring was conducted in 2008 and 2010 and indicates 80 percent of Squaw Creek at potential as it is stable and composed of a diverse hydric herbaceous and woody riparian community. A Proper Functioning Condition (PFC) Assessment was conducted in 2008 and rated the BLM-managed portion of Squaw Creek at PFC. It appears as though livestock and wild horses were not accessing 80 percent of the BLM-managed portion of Squaw Creek in the HMA because this reach becomes fairly steep and rocky.

Smyth Creek

Smyth Creek is considered habitat for redband trout (*Oncorhynchus mykiss*), a bureau SSS. The Oregon Department of Environmental Quality (ODEQ) has established water quality standards for the State of Oregon designed to protect the most sensitive of these multiple uses. In this case, redband trout is designated as the most sensitive uses and to which the standards in this HMA are based upon. Because water temperature has one of the greatest effects on fish and fish habitat, water quality has been monitored by collecting water temperature data. In 2005 and 2006, water temperature data collected indicate water entering Kiger HMA above ODEQ's 68 ºF water temperature standard and then shows a cooling trend as Smyth Creek travels through the HMA. Shortly after Smyth Creek leaves the HMA, temperature data are collected again which shows the water temperature well below ODEQ's standard. Nevertheless, photo monitoring indicates 60 percent of this portion of Smyth Creek having a downward trend in riparian condition up until 2009.

Prior to 2009, information shows sloughing banks, decadent willows with little to no recruitment, and an early to mid-seral herbaceous component. In 2009, Smyth Creek was rested from livestock grazing and treated with prescribed fire. Since the burn, livestock and wild horses have been excluded from the area, but will be allowed to return in fall 2011. Over the past two seasons of rest, Smyth Creek has shown obvious improvements in its hydric herbaceous cover and woody riparian species recruitment. It is anticipated that with the return of livestock and wild horse grazing and with no change in grazing management, Smyth Creek would return to its previous poor condition. In 1998, a PFC Assessment was conducted on Smyth Creek and rated this reach at Functioning at Risk with no apparent trend. Conditions previous to the prescribed fire rest period were similar to those assessed at the time of the PFC. Monitoring of a road crossing Smyth Creek continues to show high sediment loads into the creek almost year-round. The road passes through the creek then through a spring which drains into Smyth Creek, causing easily erodible soils.

Yank Creek

The most recent 2009 data collected on Yank Creek indicate temperatures rose to 69 ºF, just over ODEQs 68 ºF temperature standard for salmonid bearing streams. Yank Creek is not considered redband trout habitat but it flows into a stream which is. Yank Creek was made into a livestock/wild horse exclosure in 2004. Since then, 5 to 6 wild horses have been getting into the exclosure annually and remaining there throughout most of the year. Removal of these horses by horseback has failed due to the rough terrain. Currently, the exclosure is not functional. Photo monitoring data indicate continued riparian improvement since the creek became excluded from livestock and wild horses.

Swamp Creek

Monitoring through 2010 show good to excellent conditions along Swamp Creek. Streambanks appear stable and desirable stabilizing species are dominant. A PFC Assessment was conducted on Swamp Creek in 1998 and rated the stream at PFC.

Frog Creek

A PFC Assessment was conducted on Frog Creek in 2005 and rated the stream at Functioning at Risk with no apparent trend. Notes indicate some small head cuts present due to a lack of stabilizing hydric herbaceous vegetation and high sediment loads from the road crossing upstream. Annual heavy livestock and wild horse grazing are limiting the recruitment of woody riparian species and the function of stabilizing herbaceous species. Photo monitoring shows mature willows with no younger age classes present. Some of this area has been protected from grazing due to juniper felled in the creek. Those areas with standing juniper have been grazed heavily in the 2005, 2008, and 2009 photographs.

Environmental Consequences - Water Quality, Special Status Species – Aquatic and Wetlands/Riparian Zones

Effects Common to All Alternatives

For the purpose of this analysis, the CEAA for water quality, SSS – aquatic, and wetlands/riparian zones extends to the sub-watershed level beyond the HMA boundary to encompass redband trout habitat elements (i.e., water quality and riparian condition) necessary to support healthy, productive, and diverse populations. The sub-watersheds included in the CEAA include Swamp Creek – Kiger Creek, Headwaters Riddle Creek, Smyth Creek, Little Kiger Creek, Squaw Creek, Paul Creek, Camp Creek, and Quail Creek – Folly Farm Flat. The CEAA does not incorporate the entire annual use area for inland redband trout because effects beyond the sub-watershed are not measurable. Past, present and RFFAs in the CEAA that may contribute to cumulative effects to water quality, wetland/riparian areas and redband trout include livestock grazing, wild horse grazing, fishing, wildfire, sediment load from road crossings, juniper cutting, prescribed burning, and rehabilitation seedings and can be found in Table 5. Livestock grazing, wild horse grazing, fishing, and wildfire are all activities expected to occur over the long term (more than 20 years). Sediment loading from road crossings are planned to be addressed and fixed as funding allows. Juniper cutting, prescribed burning and most of the rehabilitation seeding are associated with Five Creeks Rangeland Restoration Project and the North Steens Ecosystem Restoration Project. The Five Creeks Project is anticipated to continue for the next 3 to 5 years and North Steens Project for the next 7 to 11 years. Both of these projects incorporate various treatments of juniper cutting, followed by various prescribed burning treatments, then followed by rehabilitation seeding of areas previously occupied by Phase III juniper[a] or areas sterilized during prescribed burning treatments. Other seeding planned within the CEAA includes 300 acres of seeding native and nonnative seed to compete with the noxious weed medusahead. This proposed seeding is included in the draft Happy Valley AMP EA.

[a] Phase III Juniper: The final transitional stage of woodland succession. Trees are the dominant vegetation and the primary plant layer influencing ecological processes on the site.

Table 5: Water Quality, Special Status Species – Aquatic, and Wetland/Riparian Zones Past, Present and Reasonably Foreseeable Future Actions

Action	Past Actions	Present Actions	Future Actions
Livestock Grazing	similar to present	157,453[1] acres	same as past
Wild Horse Grazing	similar to present	82,167[2] acres	same as past
Juniper Cutting	24,598[3] acres	N/A	4,000 acres
Prescribed Burning	49,730[4] acres	N/A	8,900 acres
Road Crossing Sediment Load	Five known actively used crossings contributing sediment to streams.		
Rehabilitation Seedings	3,409 acres	N/A	5,709 acres
Wildfires	36,463 acres	N/A	unknown

[1] Total private and public acres in BLM-administered allotments within the CEAA. This does not include other lands within the CEAA which are not within BLM-administered allotments. These lands are likely grazed by livestock as well.
[2] This is the total acres within HMAs within the CEAA.
[3] Incorporates a combination of treatments including clear cutting, variable spaced cutting, cutting and hand/machine piling on BLM-managed lands. There have been several thousand acres of juniper cut on private land within the CEAA.
[4] A majority of these acres were burnt during Five Creeks Project Units 1, 2, and 3 prescribed burns. However, these Five Creeks Project units overlap several hundred acres of prescribed burns which occurred in the late 1990s through early 2000s and were included in this total.

Alternative 1 (No Action)

The No Action Alternative would primarily affect riparian, water quality and/or SSS (aquatic) along Squaw, Swamp, Smyth, Yank, and Frog Creeks. With no gather completed, it is likely under this alternative the BLM Standard for Watershed Function in Riparian/Wetland Areas would not be achieved as horse numbers would continue to increase well above AML and utilization levels become excessive. Research has shown that grazing and trampling of waterways by wild horses has the capacity to cause damage to those waterways and bog habitat. Wild horse trampling near streams can increase runoff and hence reduce water quality (Nimmo 2007). In addition, not achieving the Riparian/Wetland Standard would likely lead to BLM's Water Quality Standard and Native, T&E, and Locally Important Species (redband trout) Standard also not being achieved. Those streams rated as PFC and Functioning at Risk would remain that way or deteriorate in condition. Those currently not receiving much use due to accessibility would likely see additional pressure as horse numbers increased. Yank Creek would most likely continue to have wild horses accessing it as there would be no opportunity to gather with a helicopter. Horses remaining in this exclosure year-round would likely reverse the positive results acquired over the previous 5 years since the area was excluded from grazing.

Riparian degradation caused by excessive wild horse use under this alternative would contradict the watershed effects expected to result from the juniper cutting, prescribed burning and rehabilitation seeding projects currently occurring and in the reasonably foreseeable future within the CEAA.

Alternative 2 (Proposed Action)

Gathering horses down to the low end of AML would maintain numbers to a level that allows for more pliable management of wild horse grazing in riparian areas and their associated watersheds. This alternative would remove horses from Yank Creek Exclosure allowing it to function as an exclosure and continue to, once again, improve riparian condition. Adjusting the sex ratio of the horses on the range to 50/50 would allow for a more predictable reproduction rate. Having the ability to better predict the reproduction rate would aid in planning the future gather schedule to a point prior to wild horse numbers being a cause for riparian, water quality, and SSS – aquatic degradation.

Five Creeks and North Steens Project both incorporate specific riparian area treatments to directly influence the condition of the riparian habitat. The Five Creeks, North Steens, and seeding rehabilitation projects are all designed to improve and protect the habitat conditions for various species including wild horses, livestock, wildlife, and aquatic species. Maintaining wild horse populations at a level known to be sustainable on the land base provided in the HMA would likely limit wild horse pressure on riparian areas/inland redband trout habitat and complement the other actions ongoing within the CEAA.

Alternative 3

Effects to water quality, riparian/wetland zones, and SSS – aquatic would be similar to those discussed under Alternative 2 – Proposed Action. The exception being, an unknown wild horse sex ratio remaining on the range could result in varying reproduction rates between the next planned gather. Reproduction rates would be less predictable under this alternative. Population levels would need to be closely monitored in order to prevent excessive use on riparian habitat.

CHAPTER IV: CUMULATIVE EFFECTS FOR ALL ALTERNATIVES

Cumulative Effects for All Alternatives

The NEPA regulations define cumulative impacts as impacts on the environment that result from the incremental impact of the Proposed Action when added to other past, present, and RFFAs, regardless of what agency or person undertakes such actions (40 CFR 1508.7). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The cumulative impacts study area for the purposes of evaluating cumulative impacts is the Kiger and Riddle Mountain HMAs.

According to the 1994 BLM *Guidelines for Assessing and Documenting Cumulative Impacts*, the cumulative analysis should be focused on those issues and resource values identified during scoping that are of major importance. Accordingly, the issues of major importance to be analyzed are maintaining rangeland health and proper management of wild horses.

Past and Present Actions

Wild Horses

The Steens Mountain CMPA (2005) designated the Kiger and Riddle Mountain HMAs for the long-term management of wild horses. Currently, management and AML of wild horses within the HMA conform to decisions in the Steens Mountain CMPA ROD (2005).

The actions which have influenced today's wild horse population are primarily wild horse gathers, which have resulted in the capture of more than 1,000 horses and release of 218 horses back into the HMA.

Vegetation

Through land use planning decisions, the BLM has allocated the available forage to livestock, wildlife, and domestic livestock. Additional benefits provided by healthy vegetation resources have resulted in land use planning decision to limit unacceptable impacts to vegetation.

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

Reasonably Foreseeable Future Actions

Wild Horses

Over the next 10 to 20 year period, RFFAs include gathers about every 4 years to remove excess wild horses in order to manage population size within the established AML range. The excess animals removed would be transported to short-term corral facilities where they would be prepared for adoption, sale (with limitations), or long-term pastures. Any future wild horse management would be analyzed in appropriate environmental documents following site-specific planning with public involvement.

Rangeland

Continuing to graze livestock in a manner consistent with grazing permit terms and conditions would be expected to achieve or make significant progress toward achieving rangeland health standards and guidelines. Livestock grazing is expected to continue at similar stocking rates and utilization of the available vegetation (forage) would also be expected to continue at similar levels, with appropriate corrective actions implemented if current livestock management practices are found to contribute to not meeting rangeland health standards or guidelines.

Similarly, appropriate actions would be implemented to adjust livestock grazing authorization terms and conditions, including livestock numbers and seasons of use, in the event that current livestock grazing practices are found to contribute to not meeting resource management objectives.

Summary of Past, Present, and Reasonably Foreseeable Future Actions

Impacts Common to Action Alternatives (1 to 3)

The cumulative effects associated with the capture and removal of excess wild horses includes gather-related mortality of less than 1 percent of the captured animals, about 5 percent per year associated with transportation, short-term holding, adoption or sale with limitations and about 8 percent per year associated with long-term holding. This compares with natural mortality on the range ranging from about 5 to 8 percent per year for foals (animals under age 1), about 5 percent per year for horses ages 1 to 15, and 5 to 100 percent for animals age 16 and older (Stephen Jenkins 1996, Garrott and Taylor 1990). In situations where forage and/or water are limited, mortality rates increase, with the greatest impact to young foals, nursing mares and older horses.

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

Impacts of Alternative 1 (No Action)

Under the No Action Alternative, the wild horse population could exceed the low end of AML by approximately four or five times in 4 years. Movement outside the HMA would be expected as greater numbers of horses search for food and water for survival, thus impacting larger areas of public lands. Heavy to excessive utilization of the available forage would be expected and the water available for use could become increasingly limited. Eventually, ecological plant communities would be damaged to the extent that they are no longer sustainable and the wild horse population would be expected to crash.

Emergency removals could be expected under this alternative in order to prevent individual animals from suffering or death as a result of insufficient forage and water. These emergency removals could occur as early as FY 2012. During emergency conditions, competition for the available forage and water increases. This competition generally impacts the oldest and youngest horses as well as lactating mares first. These groups would experience substantial weight loss and diminished health, which could lead to their prolonged suffering and eventual death. If emergency actions are not taken, the overall population could be affected by severely skewed sex ratios toward stallions as they are generally the strongest and healthiest portion of the population. An altered age structure would also be expected.

Cumulative impacts would result in foregoing the opportunity to improve rangeland health and to properly manage wild horses in balance with the available forage and water and other multiple uses. Attainment of site-specific vegetation management objectives and Standards for Rangeland Health would not be achieved. AML would not be achieved and the opportunity to collect the scientific data necessary to reevaluate AML levels, in relationship to rangeland health standards, would be foregone.

Impacts of Alternative 2 (Removal and Sex Ratio Adjustment)

Adjusting the sex ratio of the herd should slightly slow population growth and result in fewer gathers and less frequent disturbance to individual wild horses and the herd's social structure. However, return of wild horses back into the HMA could lead to decreased ability to effectively gather horses in the future as released horses learn to evade the helicopter.

Impacts of Alternative 3 (Removal Only)

Removal only of wild horses has been the predominant method of population control used in the past on this herd. This alternative will result in more frequent gathers and disturbance to the wild horses than Alternatives 1or 2. As wild horses are gathered and sorted through for selecting which animals to release back into the HMA, there could be a decrease in the ability to effectively gather horses in the future as released horses learn to evade the helicopter.

CHAPTER V: MONITORING

The BLM COR and PIs assigned to the gather would be responsible for ensuring contract personnel abide by the contract specifications and the SOPs (Appendix A).

Ongoing monitoring of forage condition and utilization, water availability, aerial population surveys, and animal health would continue.

Monitoring the herd's social behavior would be incorporated into routine monitoring. The objective of this additional monitoring would be to determine if additional studs (or geldings) form bachelor bands or are more aggressive with breeding bands for the forage and water present. Individual behavior of geldings would be observed during the first breeding season following treatment (i.e., June to October). Monitoring would be designed to determine if they interfere with breeding harems (i.e., demonstrate stallion-like behavior) or form bachelor bands.

Periodic population census, together with gather data from future gathers, will be used to determine whether managing a portion of the herd as geldings is effective in slowing the average annual population growth.

CHAPTER VI: LIST OF PREPARERS

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

Bill Andersen, Lead Preparer
Jason Brewer, Wildlife Biologist
Lisa Grant, Riparian Specialist
Rhonda Karges, District Planning and Environmental Coordinator
Doug Linn, Botanist
Gary McFadden, Wild Horse and Burro Specialist
Travis Miller, Rangeland Management Specialist
Lesley Richman, Weed Specialist
Rob Sharp, Rangeland Management Specialist

CHAPTER VII: CONSULTATION AND COORDINATION

A public hearing will be held at the Burns District Office in May 2011, regarding the use of helicopters and motorized vehicles to capture wild horses (or burros) at a Statewide level. During the hearing, the public will be given the opportunity to present new information and to voice any concerns or opinions regarding the use of these methods to capture wild horses (or burros).

CHAPTER VIII: LIST OF REFERENCES

BLM Technical Reference 1730-2
Department of Environmental Quality Web site, www.deq.gov.

CHAPTER IX: APPENDIXES

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

APPENDIX A

Standard Operating Procedures (Gather Operation)

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

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

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

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

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

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

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

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

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

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

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

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

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

    a. Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and holding facilities shall be oval or round in design.
    b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered, plywood, metal without holes.
    c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for burros, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1-foot to 5 feet above ground level for burros and 1-foot to 6 feet for horses. The location of the government-furnished portable fly chute to restrain, age, or provide additional care for the animals shall be placed in the runway in a manner as instructed by or in concurrence with the COR/PI.
    d. All crowding pens including the gates leading to the runways shall be covered with a material which prevents the animals from seeing out (plywood, burlap, plastic snow fence, etc.) and shall be covered a minimum of 1-foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses.

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

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

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

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

8. The Contractor shall provide animals held in the traps and/or holding facilities with a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than 2 pounds of hay per 100 pounds of estimated body weight per day. An animal that is held at a temporary holding facility after 5:00 p.m. and on through the night, is defined as a horse/burro feed day. An animal that is held for only a portion of a day and is shipped or released does not constitute a feed day.

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

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

11. Animals shall be transported to final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the COR/PI for unusual circumstances. Animals to be released back into the HMA following gather operations may be held up to 21 days or as directed by the COR/PI. Animals shall not be held in traps and/or temporary holding facilities on days when there is no work being conducted except as specified by the COR/PI.

The Contractor shall schedule shipments of animals to arrive at final destination between 7:00 a.m. and 4:00 p.m. No shipments shall be scheduled to arrive at final destination on Sunday and Federal holidays, unless prior approval has been obtained by the COR. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than 3 hours. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the COR.

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

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

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

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

    a. A minimum of two saddle-horses shall be immediately available at the trap site to accomplish roping if necessary. Roping shall be done as determined by the COR/PI. Under no circumstances shall animals be tied down for more than 1-hour.
    b. The Contractor shall assure that foals shall not be left behind, and orphaned.

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

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

C. USE OF MOTORIZED EQUIPMENT

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The Contractor shall provide the COR/PI with a current safety inspection (less than 1-year old) for all motorized equipment and tractor-trailers used to transport animals to final destination.

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

3. Only tractor-trailers or stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities, and from temporary holding facilities to final destination(s). Sides or stock racks of all trailers used for transporting animals shall be a minimum height of 6 feet 6 inches from the floor. Single deck tractor-trailers 40 feet or longer shall have two partition gates providing three compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing two compartments within the trailer to separate the animals. Compartments in all tractor-trailers shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have a minimum 5-foot wide swinging gate. The use of double deck tractor-trailers is unacceptable and shall not be allowed.

4. All tractor-trailers used to transport animals to final destination(s) shall be equipped with at least one door at the rear end of the trailer which is capable of sliding either horizontally or vertically. The rear door(s) of tractor-trailers and stock trailers must be capable of opening the full width of the trailer. Panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals.

   The material facing the inside of all trailers must be strong enough so that the animals cannot push their hooves through the side. Final approval of tractor-trailers and stock trailers used to transport animals shall be held by the COR/PI.

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

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

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

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

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

D. SAFETY AND COMMUNICATIONS

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

    a. The proper operation, service and maintenance of all Contractor furnished property is the responsibility of the Contractor. The BLM reserves the right to remove from service any Contractor personnel or Contractor furnished equipment which, in the opinion of the Contracting Officer or COR/PI violate contract rules, are unsafe or otherwise unsatisfactory. In this event, the Contractor will be notified in writing to furnish replacement personnel or equipment within 48 hours of notification. All such replacements must be approved in advance of operation by the Contracting Officer or his/her representative.
    b. The Contractor shall obtain the necessary FCC licenses for the radio system.
    c. All accidents occurring during the performance of any task order shall be immediately reported to the COR/PI.

2. Should the Contractor choose to utilize a helicopter the following will apply:

    a. The Contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the Contractor shall comply with the Contractor's Federal Aviation Certificates, applicable regulations of the State in which the gather is located.
    b. Fueling operations shall not take place within 1,000 feet of animals.

E. SITE CLEARANCES

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

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

F. ANIMAL CHARACTERISTICS AND BEHAVIOR

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

G. PUBLIC PARTICIPATION

Opportunities for public viewing (i.e., media, interested public) of gather operations will be made available to the extent possible, however, the primary consideration will be to protect the health and welfare of the animals being gathered. The public must adhere to guidance from the onsite BLM representative. It is BLM policy that the public will not be allowed to come into direct contact with wild horses or burros being held in BLM facilities. Only authorized BLM personnel or Contractors may enter the corrals or directly handle the animals. The general public may not enter the corrals or directly handle the animals at any time or for any reason during BLM operations.

H. RESPONSIBILITY AND LINES OF COMMUNICATION

Field Office - Contracting Officer's Representative/Project Inspector

The CORs and the PIs have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. The Wild Horse Specialist, Three Rivers Resource Area Field Manager, and Supervisory Natural Resource Specialist will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, State Office, National Program Office, and Burns Corral offices. All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

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

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

APPENDIX B

IM 2006-023, Euthanasia of Wild Horses and Burros

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

October 20, 2005

In Reply Refer To:
4730/4700 (WO-250) 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 obligaton 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 conditons listed in 1-6 above, but is not in acute pain, the authorized officer has the authority to euthanize the animal in a humane manner. Situations where acute suffering of the animal is not involved could include a physical defect or deformity that would adversely impact the quality of life of the animal if placed in the adoption program or on long-term holding. The authorized officer will ensure that there is a report from a veterinarian describing the condition of the animal that was euthanized. These records will be maintained by the holding facility.

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

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

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

Euthanasia at long-term holding facilities:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

APPENDIX C

APPENDIX D

APPENDIX E

2010 Kiger and Riddle Mountain HMAs Gather
Win Equus Population Modeling
July 16, 2010

These population models were ran based on the April 2010 horse inventory which documented 91 horses (including 10 foals) in Kiger HMA and 60 horses (including 3 foals) in Riddle Mountain HMA. On-the-ground foals (2010) were included in the analysis as these horses would be over 1 year of age in 2011**.**

Kiger HMA Trials

No Action:

Population Sizes in 11 Years

	Minimum	Average	Maximum
Lowest Trial	96	209	385
10th Percentile	107	266	516
25th Percentile	109	292	591
Median Trial	112	**317**	666
75th Percentile	120	354	745
90th Percentile	126	380	848
Highest Trial	143	445	1006

Average Growth Rate in 10 Years

Lowest Trial	12.5
10th Percentile	16.7
25th Percentile	17.9
Median Trial	**19.1**
75th Percentile	20.5
90th Percentile	21.7
Highest Trial	23.7

Proposed Action:

Population Sizes in 11 Years

	Minimum	Average	Maximum
Lowest Trial	51	86	108
10th Percentile	62	93	124
25th Percentile	66	96	132
Median Trial	70	**101**	143
75th Percentile	74	106	159
90th Percentile	77	111	179
Highest Trial	82	124	253

Average Growth Rate in 10 Years

Lowest Trial	12.2
10th Percentile	14.8
25th Percentile	16.8
Median Trial	**18.3**
75th Percentile	19.5
90th Percentile	21.1
Highest Trial	23.8

Totals in 11 Years

	Gathered	Removed
Lowest Trial	90	80
10th Percentile	146	132
25th Percentile	168	152
Median Trial	**184**	**170**
75th Percentile	205	188
90th Percentile	224	205
Highest Trial	257	234

Alternative 3:

Population Sizes in 11 Years

	Minimum	Average	Maximum
Lowest Trial	55	87	117
10th Percentile	65	94	126
25th Percentile	68	97	134
Median Trial	72	**103**	144
75th Percentile	75	107	158
90th Percentile	78	111	174
Highest Trial	83	123	238

Average Growth Rate in 10 Years	
Lowest Trial	11.7
10th Percentile	14.8
25th Percentile	16.7
Median Trial	**19.3**
75th Percentile	21.0
90th Percentile	22.6
Highest Trial	24.9

	Totals in 11 Years	
	Gathered	Removed
Lowest Trial	89	84
10th Percentile	142	136
25th Percentile	158	152
Median Trial	**174**	**167**
75th Percentile	198	192
90th Percentile	218	211
Highest Trial	249	237

Riddle Mountain HMA Trials

No Action:

	Population Sizes in 11 Years		
	Minimum	Average	Maximum
Lowest Trial	65	126	245
10th Percentile	70	177	335
25th Percentile	72	189	383
Median Trial	75	**208**	440
75th Percentile	79	231	490
90th Percentile	85	263	574
Highest Trial	118	365	810

	Totals in 11 Years	
	Gathered	Removed
Lowest Trial	56	50
10th Percentile	73	66
25th Percentile	98	90
Median Trial	**118**	**108**
75th Percentile	138	126
90th Percentile	151	140
Highest Trial	203	192

Average Growth Rate in 10 Years	
Lowest Trial	12.6
10th Percentile	16.1
25th Percentile	17.9
Median Trial	**18.9**
75th Percentile	20.4
90th Percentile	22.1
Highest Trial	24.1

Proposed Action:

	Population Sizes in 11 Years		
	Minimum	Average	Maximum
Lowest Trial	32	57	76
10th Percentile	38	62	83
25th Percentile	42	64	88
Median Trial	45	**66**	97
75th Percentile	47	70	114
90th Percentile	49	76	146
Highest Trial	53	93	209

Average Growth Rate in 10 Years	
Lowest Trial	11.6
10th Percentile	13.7
25th Percentile	15.7
Median Trial	**17.9**
75th Percentile	19.4
90th Percentile	21.2
Highest Trial	27.1

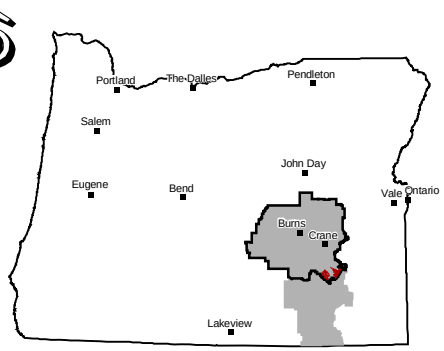
Alternative C:

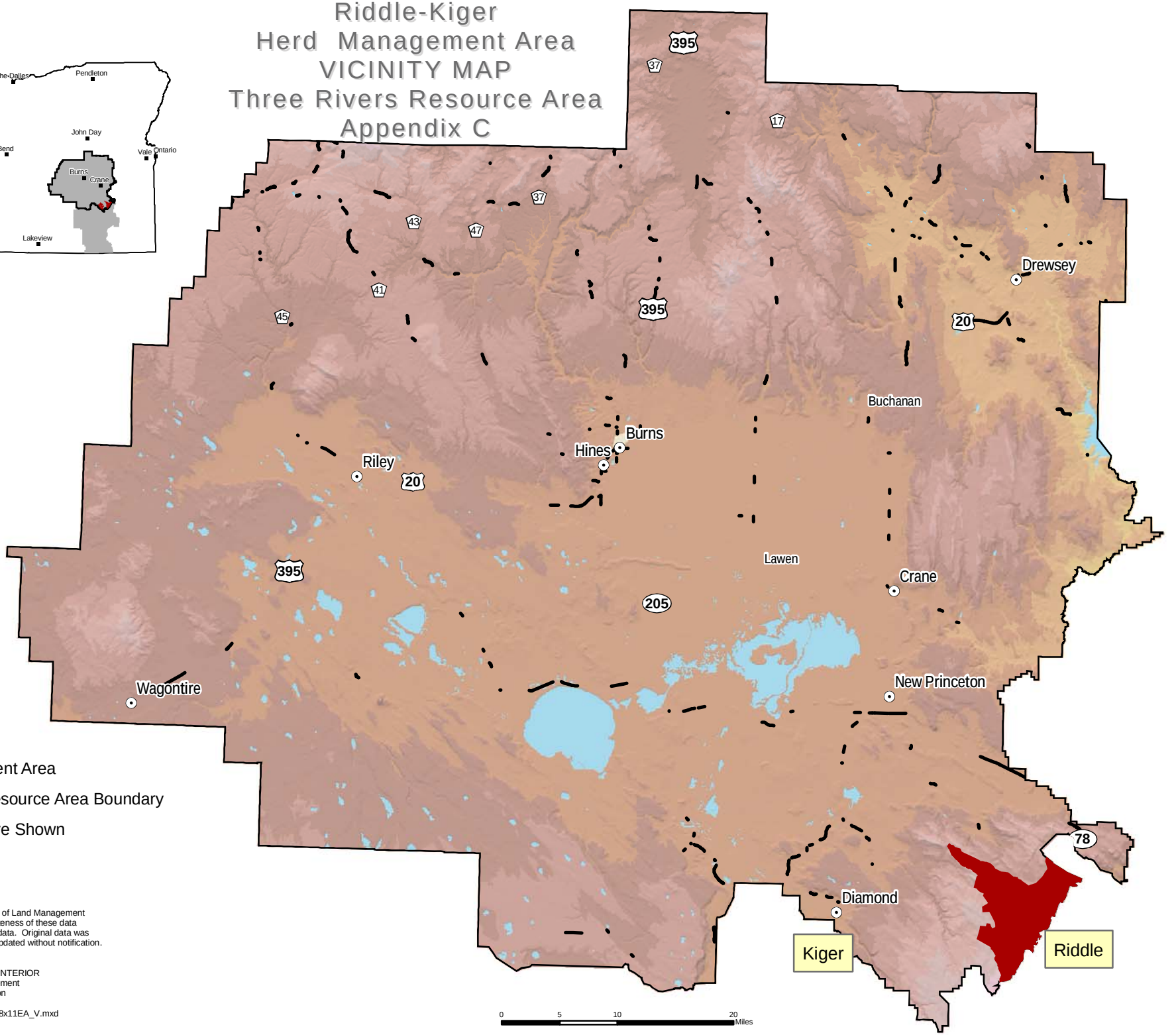
	Population Sizes in 11 Years		
	Minimum	Average	Maximum
Lowest Trial	27	55	72
10th Percentile	40	60	82
25th Percentile	42	63	88
Median Trial	45	**66**	96
75th Percentile	48	70	106
90th Percentile	50	74	126
Highest Trial	57	92	196

Average Growth Rate in 10 Years	
Lowest Trial	9.0
10th Percentile	14.1
25th Percentile	17.0
Median Trial	**19.2**
75th Percentile	21.0
90th Percentile	22.3
Highest Trial	25.7

	Totals in 11 Years	
	Gathered	Removed
Lowest Trial	57	56
10th Percentile	86	84
25th Percentile	102	97
Median Trial	**120**	**114**
75th Percentile	128	123
90th Percentile	148	142
Highest Trial	178	172

Riddle-Kiger
Herd Management Area
VICINITY MAP
Three Rivers Resource Area
Appendix C





Legend

- Herd Management Area
- Three Rivers Resource Area Boundary
- Not All Roads Are Shown

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.

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sfenton/MXD/Horses/Riddle-Kiger8x11EA_V.mxd
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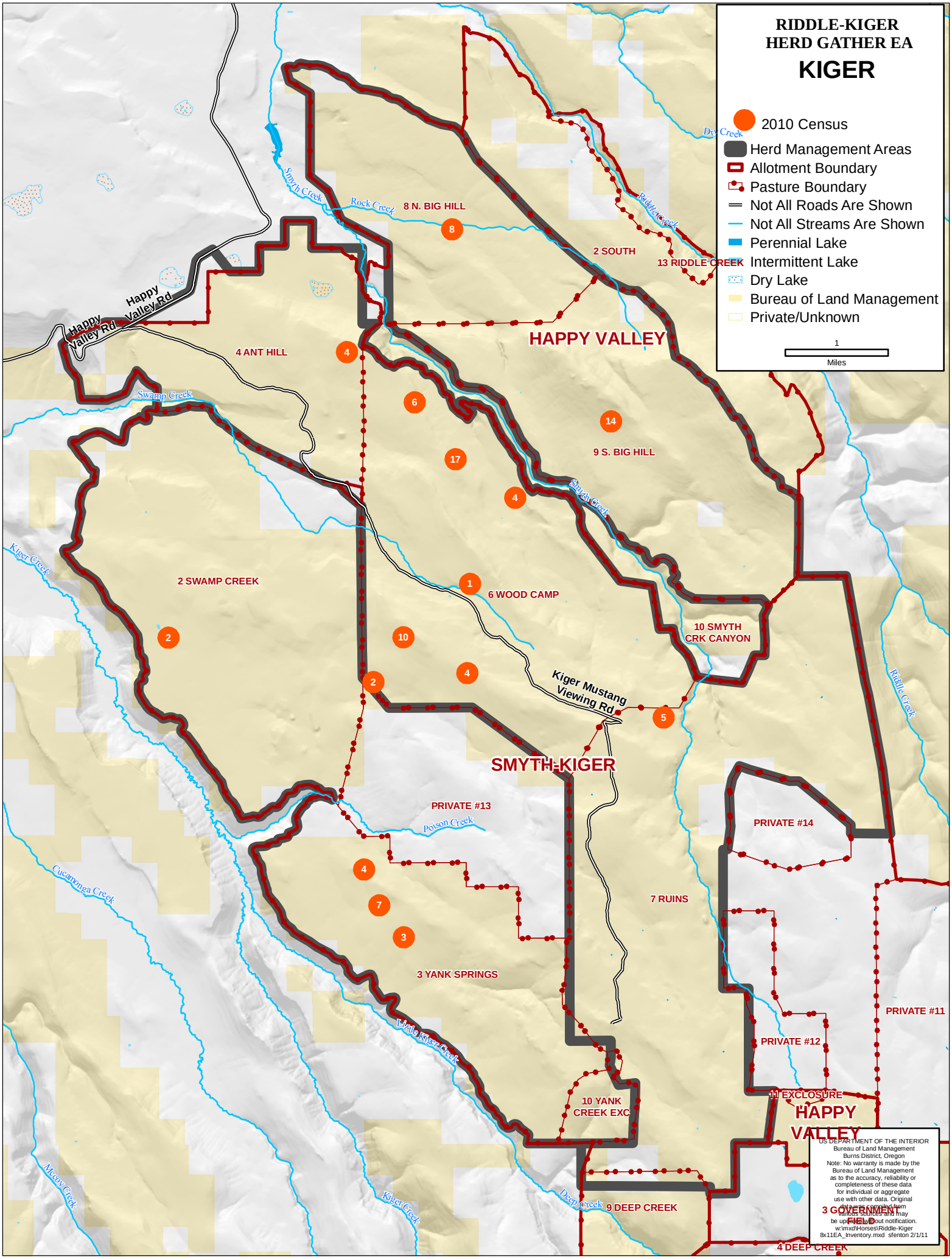
0 5 10 20 Miles


RIDDLE-KIGER
HERD GATHER EA
KIGER
2010 Census
Herd Management Areas
Allotment Boundary
Pasture Boundary
Not All Roads Are Shown
Not All Streams Are Shown
Perennial Lake
Intermittent Lake
Dry Lake
Bureau of Land Management
Private/Unknown
1
Miles
8 N. BIG HILL
8
2 SOUTH
13 RIDDLE CREEK
HAPPY VALLEY
4 ANT HILL
4
6
14
9 S. BIG HILL
17
4
2 SWAMP CREEK
1
6 WOOD CAMP
2
10
10 SMYTH CRK CANYON
4
5
SMYTH-KIGER
PRIVATE #13
PRIVATE #14
4
7
7 RUINS
3
3 YANK SPRINGS
PRIVATE #11
PRIVATE #12
11 EXCLOSURE
10 YANK CREEK EXC
HAPPY VALLEY
9 DEEP CREEK
4 DEEP CREEK
3 GOVERNMENT FIELD
Happy Valley Rd
Smyth Creek
Rock Creek
Dry Creek
Riddle Creek
Swamp Creek
Kiger Creek
Kiger Mustang Viewing Rd
Poison Creek
Cucamonga Creek
Little Kiger Creek
Deep Creek
Meeoy Creek
US DEPARTMENT OF THE INTERIOR
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Burns District, Oregon
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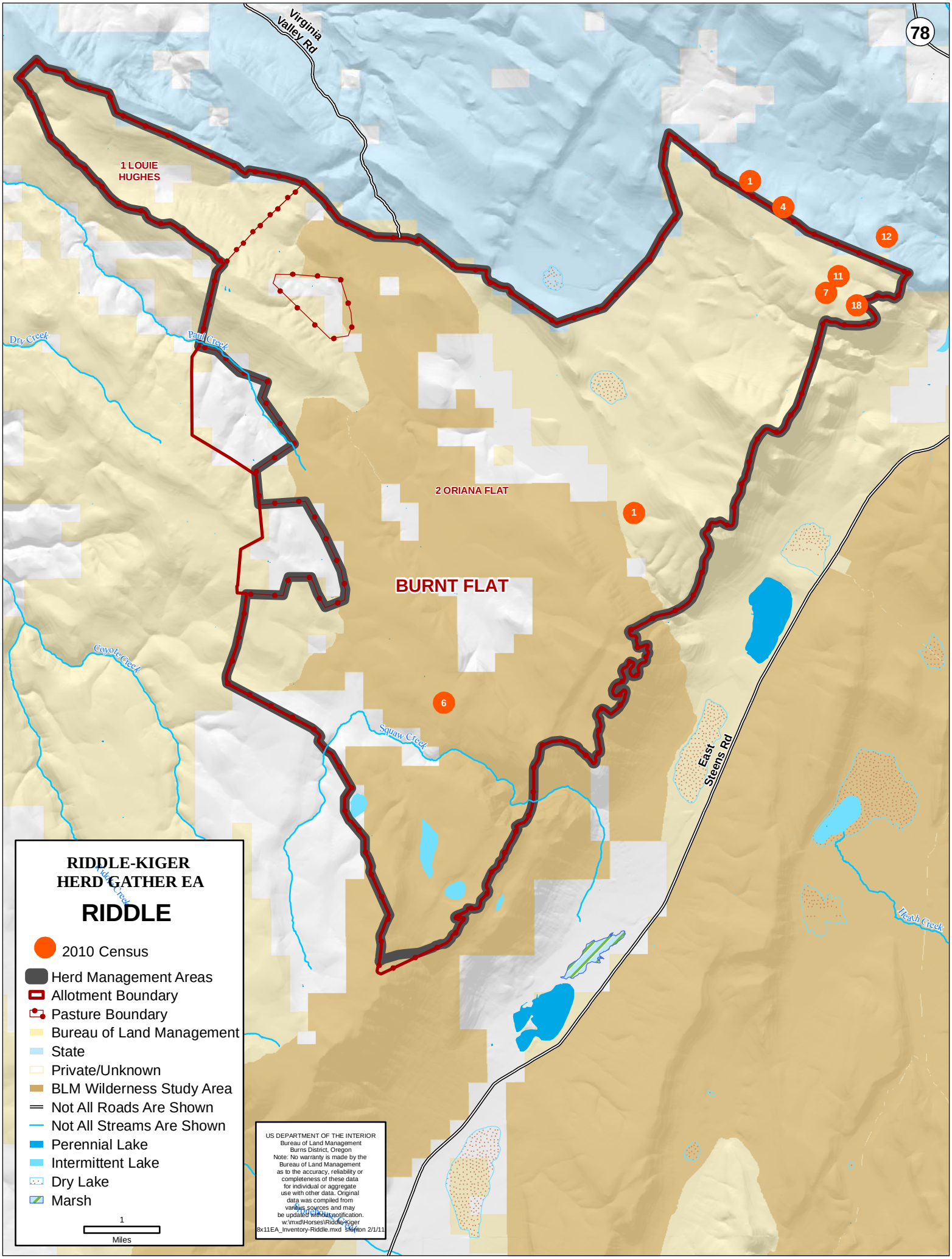
w:\mxd\Horses\Riddle-Kiger 8x11EA_Inventory.mxd sfenton 2/1/11


Virginia Valley Rd
78
1 LOUIE HUGHES
2 ORIANA FLAT
BURNT FLAT
Dry Creek
Paull Creek
Coyote Creek
Squaw Creek
East Steens Rd
Heath Creek
1
4
12
11
7
18
1
6
RIDDLE-KIGER HERD GATHER EA
RIDDLE
2010 Census
Herd Management Areas
Allotment Boundary
Pasture Boundary
Bureau of Land Management
State
Private/Unknown
BLM Wilderness Study Area
Not All Roads Are Shown
Not All Streams Are Shown
Perennial Lake
Intermittent Lake
Dry Lake
Marsh
1
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.
w:\mxd\Horses\Riddle-Kiger 8x11EA_Inventory-Riddle.mxd Stanton 2/1/11