



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Lakeview Resource Area
1301 South G Street
Lakeview, Oregon 97630
www.or.blm.gov/lakeview



SEP 03 2009

In Reply Refer To:
4700 (ORL050)

Dear Recipient:

Enclosed is a copy of the revised Decision Record for the Beatys Butte Herd Management Area (HMA) Wild Horse Population Control and Gather proposal prepared by the Lakeview Resource Area, Bureau of Land Management (BLM). My previous decision is rescinded and replaced with the revised decision.

The Decision record was revised to clarify that some actions would be effective immediately and some actions would occur in the future. You have been sent a copy of this decision because of your demonstrated interest in the wild horse and burro program and/or interest in the project area. An environmental assessment (EA# DOI-BLM-OR-L050-2009-0065-EA) and Finding of No Significant Impact (FONSI) have been prepared to document the potential impacts of the project and can be found on the BLM's website at:

<http://www.blm.gov/or/districts/lakeview/plans/index.php>

The EA has been revised since the August 13, 2009, mailing to incorporate comments received during the last three-week time period.

Please review the enclosed Decision Record. Any party adversely affected by this decision may appeal prior to October 2, 2009, in accordance with the provisions of 43 CFR Parts 4.4. The appeal procedures are outlined in more detail within the enclosed Decision Record. Current addresses relevant to filing an appeal are also enclosed.

Additionally, the Lakeview Resource Area BLM has analyzed a number of alternatives to manage wild horse populations within the Paisley Desert HMA. The HMA is located north of Paisley, Oregon, and east of Summer Lake in central Lake County. The enclosed map 1 shows the location of both HMAs. This EA and FONSI have been prepared to document potential impacts of the proposal. These documents will be available for 30-day public review on the BLM's website on approximately September 9, 2009. The actual comment period dates will be available on the website.

You may request paper copies of these documents from the BLM, Lakeview Resource Area, 1301 South G Street, Lakeview, OR 97630. If you wish to comment on the proposal, you must do so in writing.

Questions concerning either proposal should be directed to Theresa Romasko at (541)947-2177.

Thank you for your continued interest and participation in public land management issues.

Sincerely

A handwritten signature in cursive script that reads "Paul Whitman".

for Thomas E. Rasmussen
Field Manager

Enclosures

Enclosure 2 - Addresses

Field Manager
Lakeview Resource Area
Bureau of Land Management
1301 South G Street
Lakeview, OR 97630

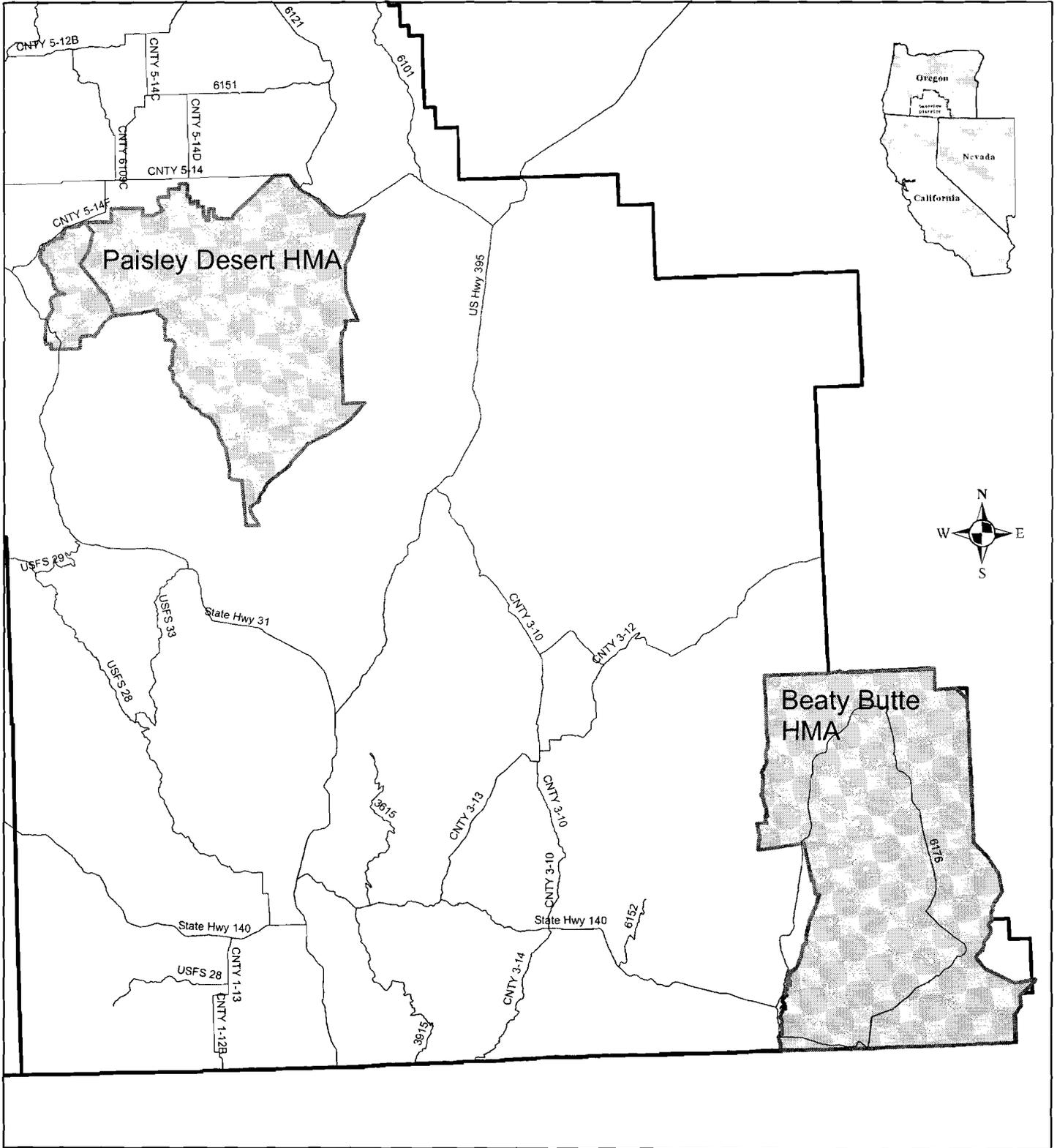
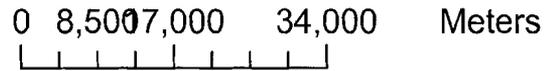
Regional Solicitor
Pacific Northwest Region
U.S. Department of the Interior
805 S.W. Broadway, Suite 600
Portland, OR 97205

Interior Board of Land Appeals
Office of Hearings and Appeals
801 North Quincy Street
Arlington, VA 22203

Map 1 - Herd Management Areas

Legend

- Major Roads
- Herd Management Area
- Lakeview Resource Area Boundary



DECISION RECORD

EA Log No: DOI-BLM-OR-L050-2009-0065-EA
Applicant: Bureau of Land Management
Address: 1301 South G Street
Lakeview, OR 97630
County: Lake, Harney
BLM Office: Lakeview District

Decision:

This decision is issued in two parts:

- 1) Actions effective upon issuance
- 2) Future Actions

1) Actions Effective Upon Issuance:

It is my decision to implement the following actions described in environmental assessment (EA) number DOI-BLM-OR-L050-2009-0065-EA. Implementation of these actions shall be effective immediately upon signature of this decision record.

A total of about 420 excess wild horses will be captured from within and outside the Lakeview Resource Area's Beatys Butte Herd Management Area (HMA). Of these, approximately 320 excess wild horses will be removed and placed in the adoption, long-term holding or sale programs. The remaining animals, approximately 50 males and 50 females, will be maintained in the HMA to achieve the low range of the Appropriate Management Level (AML) of 100 wild horses. All breeding age mares returned to the HMA would be treated with the porcine zona pellucidae (PZP) vaccine prior to being released back to the range. Approximately 30-50 mares would receive PZP.

Rationale:

The selected population control actions are necessary to maintain wild horse population size within AML and to achieve a thriving ecological balance. Removal of the excess wild horses will restore a balance between the vegetation resource and its use by wild horses, livestock and wildlife and will prevent resource deterioration within the Beatys Butte HMA. Current monitoring data shows that an excess of wild horses exists and that the excess horses are presently within and outside of the HMA and need to be removed immediately.

Fertility control will be applied to breeding age mares released back to the HMA post-gather. The objective of fertility control application is to slow herd growth rates, extend the gather cycle, and reduce the number of excess horses which would potentially need to be removed and placed in short or long-term holding during future gathers.

Wild horses gathered outside the HMA will not be returned to this HMA to prevent the same horses from returning to areas outside the HMA.

Authority:

Authority for this decision is found in the Wild and Free Roaming Horses and Burros Act of 1971 (Public Law 92-195 as amended and Title 43 Code of Federal Regulations (CFR) part 4700 including 43CFR4720.1, 43 CFR 4710.3-1 and 4710.4. The authority to provide that all or part of a decision shall be effective upon issuance is found in 43CFR 4770.3(c).

2) Future Actions:

It is also my decision to implement the following actions over the next 10 year period, during future gathers of the Beatys Butte HMA. These actions are described in environmental assessment (EA) number DOI-BLM-OR-L050-2009-0065-EA.

- Excess wild horses will be gathered in the future when, upon examination of current information and a determination by the authorized officer that an excess of wild horses exists. This analysis will include review of population inventory data together with resource monitoring or other data that supports the conclusion that an excess of wild horses exists and removal of these horses is necessary to maintain a thriving natural ecological balance and multiple use relationship in the area, and prevent resource deterioration.
- If population inventory indicates an average herd growth rate greater than 10% following the September 2009 gather, additional population controls will be implemented during future gathers. These may include: adjusting the ratio of males to females to approximately 60/40 and returning geldings to the HMA as part of the male component, in combination with treatment of all breeding age mares released back to the range with PZP to further slow population growth.

Implementation of these actions would enable the Lakeview Resource Area to maintain a 5 year gather cycle, as described in the Lakeview Resource Management Plan and Record of Decision (RMP/ROD), 2003.

Rationale:

Wild horses have few natural means of population control. The Beatys Butte herd size doubles at least every 3 years. Management actions to slow herd growth rates, extend the gather cycle, and reduce the number of excess wild horses which must be removed are necessary to reduce disturbance to individual wild horses and the herd, and to maintain a thriving natural ecological balance and multiple use relationship in the area, and prevent resource deterioration.

Authority:

Authority for the future action decisions are found in the Wild and Free Roaming Horses and Burros Act of 1971 (Public Law 92-195 as amended and Title 43 Code of Federal Regulations (CFR) part 4700 including 43CFR4720.1, 43 CFR 4710.3-1 and 4710.4.

Decision Summary:

All management actions described in this decision record are in conformance with the Lakeview RMP/ROD, 2003 and the Beatys Butte Herd Management Plan (HMP). The environmental impacts of the Proposed Action and other alternatives (including the No Action alternative) have been analyzed in EA Number DOI-BLM-OR-L050-2009-0065-EA, as well as the EAs referenced within the current EA.

The temporary actions described in the above EA as well as the clarifications in the referenced EAs would not conflict with the pending RMP settlement agreement between the BLM and Oregon Natural Desert Association and would not impact wilderness character.

As stated in the EA, population inventory, analysis of grazing utilization, trend in range conditions, actual use and observational data will determine when future management actions would occur.

All alternatives considered have the ability to reduce populations of wild horses except for the No Action alternative. The alternatives may need to be used in combination to extend the time period between gathers and reduce the number of excess horses which would need to be removed over time.

Appeals:

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4. Notice of appeal must be filed in this office (at the above address) within 30 days of receipt of this decision. The appellant has the burden of showing that the decision is in error.

The appellant may wish to file a petition for stay (suspension) of this decision during the time that the appeal is being reviewed by the Board of Land Appeals and to the Office of the Solicitor at the following address:

U.S. Department of Interior
Office of the Regional Solicitor
805 SW Broadway, Suite 600
Portland, OR 97205

The petition for stay must be filed at the same time the original documents are filed with this office. The appellant has the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay:

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of decision pending appeal shall show sufficient justification based on the following standards:

- 1) The relative harm to the parties if the stay is granted or denied
- 2) The likelihood of the appellant's success on the merits
- 3) The likelihood of immediate and irreparable harm if the stay is not granted
- 4) Whether the public interest favors granting stay



Thomas E Rasmussen
Field Manager



Date

**United States Department of the Interior, Bureau of Land Management
Lakeview District Office**

**FINDING OF NO SIGNIFICANT IMPACT
Beatys Butte Herd Management Area
Wild Horse Population Control and Gather
Environmental Assessment
DOI-BLM-OR-LO50-2009-0065-EA**

INTRODUCTION

The Beatys Butte Herd Management Area wild Horse Population Control and Gather Environmental Assessment (DOI-BLM-OR-LO50-2009-0065-EA) was completed to analyze the impacts of several population control alternatives for wild horses including gathering of excess horses within the boundaries of the Beatys Butte Herd Management Area (HMA) and any wild horses immediately outside or adjacent to the HMA. The current population of wild horses within the gather area is estimated to be 455 animals. The Appropriate Management Level (AML) for the herd is 100-250 wild horses. AML for the Beatys Butte Herd Management Area (HMA) has been previously established based on monitoring data and following a thorough public review. Documents containing this information are available for public review at the Lakeview District Office.

SUMMARY OF THE ACTIONs

The alternatives consider gather, immunocontraception, adjusting male to female sex ratio, including gelding to reduce population growth of wild horses from the Beatys Butte HMA. Alternatives would include determining sex, age and color, acquiring blood samples, assessing herd health pregnancy/parasite loading/physical condition/etc.), monitoring results as appropriate, sorting individuals as to age, size, sex, temperament and/or physical condition, and returning selected animals, primarily in the 6 to 10-year age group. This would ensure a vigorous and viable breeding population, reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Free-Roaming Horse and Burro Act of 1971 and land use plans.

FINDING OF NO SIGNIFICANT IMPACT

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

Context

The affected region is limited to portions of Lake and Harney Counties, where the project area is located. The area is located 65 miles east of Lakeview, Oregon. It is adjacent to and southeast of

the Hart Mountain National Antelope Refuge, southwest of Catlow Valley, and is bordered on the south by the Charles Sheldon National Antelope Refuge in Nevada.

Intensity

Based on my review of the EA against the succeeding CEQ's ten considerations for evaluating intensity (severity of effect), there is no evidence that the severity of impacts is significant:

1. *Impacts that may be both beneficial and adverse.* The proposed actions are expected to meet BLM's resource objective for wild horse management of maintaining a thriving natural ecological balance consistent with other multiple uses. Although the gathering and removal of excess wild horses is expected to have short-term impacts on individual animals, it is expected to ensure the long-term viability of the wild horse herds and help to improve forage and habitat conditions in the herd management areas.
2. *The degree to which the proposed action affects public health or safety.* The proposed action alternatives have no effect on public health or safety.
3. *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.* The proposed action alternatives have no potential to affect unique characteristics such as historic or cultural resources or properties of concern to Native Americans or affected ecologically critical areas. There are no wild and scenic rivers, present. Maintenance of appropriate numbers of wild horses is expected to help make progress in meeting resource objectives for improved wetland and terrestrial habitat.
4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial.* Effects of the various actions are well known and understood. No unresolved issues have been raised.
5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.* The proposed action alternatives include measures for monitoring effectiveness on herd population dynamics and toward meeting multiple use objectives for rangeland health throughout the herd management areas.
6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.* The actions would not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration.
7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.* The EA includes an analysis of cumulative effects which considers past, present and reasonably foreseeable future actions in the Beatys Butte HMA that supports the conclusion that the action alternatives are not related to other actions with individually insignificant but cumulatively significant impacts.

8. *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources.* The action alternatives have no potential to adversely affect significant scientific, cultural, or historical resources.
9. *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.* The actions are not likely to adversely affect any listed species, and the action area does not include any habitat determined to be critical under the Endangered Species Act.
10. *Whether the action threatens a violation of Federal, State, local or tribal law or requirements imposed for the protection of the environment.* The proposed gather conforms to the approved 2003 Lakeview Resource Management Plan (RMP). Further the proposed gather is consistent with other Federal, State, local and tribal requirements for protection of the environment to the maximum extent possible.

On the basis of the information contained in the EA and all other information available to me, it is my determination that:

- 1) The implementation none of the Alternatives would not have significant environmental impacts beyond those already addressed in the Lakeview PRMP/FEIS (2003);
- 2) The Proposed Action or the No Action Alternative is in conformance with the Lakeview Resource Management Plan (2003);
- 3) There would be no adverse societal or regional impacts and no adverse impacts to affected interests; and
- 4) The environmental effects against the tests of significance found at 40 CFR 1508.27 do not constitute a major Federal action having a significant effect on the human environment.

Therefore, an EIS is not necessary and will not be prepared.


Thomas E. Rasmussen, Manager
Lakeview Resource Area

8/31/09
Date

**BEATY'S BUTTE HERD
MANAGEMENT AREA
Wild Horse Population
Control and Gather**

**ENVIRONMENTAL ASSESSMENT
DOI-BLM-OR-L050-2009-0065-EA**

**Bureau of Land Management
Lakeview District Office
1301 South G Street
Lakeview, Oregon 97630**

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Maps

Map 1 –Location Map

Map 2-Beatys Butte HMA with WSA Boundaries

CHAPTER I: INTRODUCTION - PURPOSE OF AND NEED FOR ACTION

A. Introduction

Purpose and Need

The Lakeview District Bureau of Land Management (BLM) proposes to analyze and administer multiple options for the purpose of population control of wild horses over a ten year time frame. The ten year timeframe was determined based on two gather cycles of the Herd Management Area (HMA). The AML for Beatys Butte HMA was established with a five year gather cycle. The cycle assumes a normal population growth of 20% per year. A realistic comparison of wild horse populations has the greatest impacts when viewed over time. A onetime management action such as gathering, administering porcine zona pellucidae (PZP) or changing the ratio of males to females results in a short time comparison (one year) view of alternatives. Appendix B describes the standard operating procedures (SOPs) for administering PZP. This short time analysis would be expected to show minor insignificant difference between the alternatives. For example a small 2% reduction in population growth to 18% in a single year would indicate a 5 horse difference in population numbers between the alternatives. The same 2% reduction in population growth attributed to management alternatives to show a 246 horse difference between the alternatives over a 10 year time frame.

The purpose of population control is to achieve and maintain a wild horse AML which reflects the normal thriving ecological balance, collect information on herd characteristics, determine herd health, maintain sustainable rangelands, and maintain a healthy and viable wild horse population.

The need for the analysis of gathering and population control techniques is to maintain a thriving ecological balance and prevent deterioration of the range. As the HMA becomes over populated gathering and removal of excess wild horses within and outside the HMA, fertility control treatments and other population controls would be implemented to prevent resource damage. The decision to gather or implement population controls would be affirmed where it is based on analysis of grazing utilizations, trend in range condition, actual use and observational data demonstrating that an excess of wild horses exists and maintenance of the herd at the prescribed levels in the Lakeview Resource Management Plan, 2003 would meet the management objective described above as well as the HMP objectives described in the Beatys Butte Herd Management Plan.

This Environmental Analysis (EA) contains the site specific analysis of potential impacts that could result with the implementation of the action alternatives or the no action alternative. Based on the following analysis, a determination would be made whether to prepare an Environmental Impact Statement (EIS) or issue a Finding of No Significant Impact (FONSI). A FONSI would document that implementation of the alternatives would not result in impacts that significantly affect the quality of the human environment.

The WinEquus Wild Horse Population Model Version 1.2, April 2002, developed by Dr. Steve Jenkins, Associate Professor, University of Nevada Reno will be used to analyze wild horse populations under the various alternatives.

The Beatys Butte HMA was last gathered in 2007. The Beatys Butte HMA consists of 437,120 acres of federal state, and privately owned land. The area is located 65 miles east of Lakeview, Oregon. The current AML for wild horses is 100-250. The AML was established with the High Desert Management Framework Plan 1983. The AML was reviewed during the planning process for the Lakeview RMP and found to be accurate.

B. Conformance with Existing Land Use Plans and NEPA Documents

The project and actions described within the alternatives have been analyzed for conformance with one or more of the existing BLM plans and NEPA documents. Significant discrepancies, if any, are discussed in the attached EA.

Population control of wild horses is in conformance with Lakeview Resource Management Plan (RMP), 2003. The Lakeview RMP, which constitutes the land use plan for Lakeview Resource Area, stresses the prevention of excess horse utilization of vegetative resources. Applicable sections from this plan are pages 55-56, 70-72, and Appendix E (pages A-8 and A-99) of the Lakeview RMP.

Proposed Jurisdictional Land Exchange Between Hart Mountain National Antelope Refuge, Fish and Wildlife Service, and Lakeview District, Bureau of Land Management – Warner Lakes Management Framework Plan Amendment/Environmental Assessment (1998)

Oregon Wilderness Final Environmental Impact Statement and Record of Decision (1989 and 1991) Volume II, pages 243-318 and Volume III pages 395-426

Wilderness Interim Management Policy (1995)

Supplement to the Northwest Area Noxious Weed Control Program FEIS and ROD (1987)

Integrated Noxious Weed Control Program EA (2004)

Rangeland Reform '94 EIS Record of Decision (1995)

Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington (1997)

Greater Sage-Grouse Conservation Strategy and Assessment for Oregon (2005)

The following Environmental Assessments (EAs) are significant to population control and/or gathering of wild horses:

EA# OR-010-2004-09 Temporary Wild Horse Traps and Holding Facilities within Wilderness Study Areas Environmental Analysis
EA#OR-010-2000-01 Lakeview District Programmatic Wild Horse Fertility Control
EA#OR-010-1995-10 Lakeview District Programmatic Wild Horse Gather which includes synopsis of the previous 8 EAs prepared for wild horse gathers in the Lakeview District.

Management of wild horses, wildlife and livestock grazing is discussed in the Beatys Butte Allotment Management Plan and Environmental Impact Statement, 1998.

C. Relationship to Statutes, Regulations

Actions described are governed by the Wild Free-Roaming Horse and Burro Act of 1971 (Public Law (PL) 92-195 as amended) and Title 43 Code of Federal Regulations (CFR) part 4700. Gathering and disposal of the wild horses would be in accordance with PL 92-195 as amended by PL 94-579 (Federal Land Policy and Management Act (FLPMA)) and PL 95-514 (Public Rangelands Improvement Act). Section 302(b) of FLPMA, states “all public lands are to be managed so as to prevent unnecessary or undue degradation of the lands.”

The following are excerpts from the CFR:

- 1) 43 CFR 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) 43 CFR 4710.3-1 - “Herd Management Areas shall be established for maintenance of wild horse and burro herds.”
- 3) 43 CFR 4710.4- “Management of wild horses and burros shall be undertaken with the objective of limiting the animals’ distribution to herd areas. Management shall be at the minimum level necessary to attain the objectives identified in approved land use plans and herd management area plans.
- 4) 43 CFR 4180.2(b) - “Standards and guidelines must provide for conformance with the fundamentals of 4180.1.”

CHAPTER II: ALTERNATIVES

The proposed action and alternatives represent a reasonable range of alternatives based on the issues and goals identified.

Management Actions Common to Alternatives

The time frame for comparison of alternatives is 10 years. The timeframe for cumulative impact analysis is 20 years.

Population numbers are approximate and actions will attempt to be as close to the projected numbers as feasible.

With all alternatives the base population of wild horses within the HMA as of July 2009 is 256 horses including 205 Adults and 51 foals.

Management Actions Common to all Action Alternatives 1-3

Under all action alternatives, excess horses straying outside the HMA and those from the HMA that would not be returned would be removed and placed in the adoption, sale or long term holding programs.

With the exception of emergencies, gathers would occur outside the foaling season of March through July.

The Standard operating procedures for gathers identified in Appendix A would be followed for all gathers. The euthanasia policy described in Appendix C would be followed if euthanasia becomes necessary.

A. Alternative 1: Remove Excess Horses and Administer Fertility Control

The proposed action is to capture wild horses (85% of the population) in the HMA and all excess horses outside the Beatys Butte HMA (See Location Map A and HMA Map B). 100 wild horses (50 mares and 50 studs) would remain either ungathered or be returned to the HMA at completion of the gather, leaving a post gather population of 100 horses. Approximately 30-50 mares would be treated with the porcine zona pellucidae (PZP) vaccine prior to being released back to the range. This alternative would include determining sex, age and color, assessing herd health (pregnancy/parasite loading/physical condition/etc.), monitoring results as appropriate, sorting individuals as to age, size, sex, temperament and/or physical condition, and returning selected animals, primarily in the 6 to 10-year age group. This would ensure a vigorous and viable breeding population, reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Free-Roaming Horse and Burro Act of 1971 and land use plans.

It is anticipated that numerous capture sites (traps) may be used to capture wild horses from the HMA. Some capture sites would be placed inside of WSA, using existing roads and previously disturbed sites. EA-OR-010-2004-09 analyzes the potential effects of placing traps and holding facilities in WSAs and is applicable to all alternatives which require gathering. Traps would typically be approximately 800 square feet in size. Trap wing configuration will vary, depending on terrain and materials. A holding facility of approximately 2,000 square feet will be constructed to keep horse until they can be returned to the HMA or transported to adoption, sale or long term holding facilities. Trap sites will be selected during the gather. All methods of gathering would be considered and the most efficient, but least impacting to horses would be used. Analysis of the types of gathering including hazing with helicopters, bait trapping and roping are described in EA OR-010-95-10 and not repeated in this analysis. Capture techniques are also described in Appendix A. The majority of gather operations would use a helicopter to drive horses to a trap. All capture and handling activities, including capture site selections, conducted in accordance with SOPs described in Appendix A.

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

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

Alternative 2 would be the same as the alternative 1, except that 100 horses would be left in the HMA. Initially extra horses would be gathered to allow selection or animals returned to the HMA. All excess horses would be placed in the adoption or sale programs as described. The mares would not be treated with PZP or returned to the HMA. This alternative would include determining sex, age and color, assessing herd health (pregnancy/parasite loading/physical condition/etc.), monitoring results as appropriate, sorting individuals as to age, size, sex, temperament and/or physical condition, and returning selected animals, primarily in the 6 to 10-year age group. This would ensure a vigorous and viable breeding population, reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Free-Roaming Horse and Burro Act of 1971 and land use plans.

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

This alternative would be the same as alternative 2 except that the ratio of studs to mares would be adjusted to 60/40. 100 horses would be returned to the HMA 60 would be males and 40 would be mares. Under this alternative gelding of up to 50% of studs would be done prior to their release back to the HMA.

D. Alternative 4 (No Action)

Under this alternative, wild horses would not be removed from the Beatys Butte HMA during the 10 year timeframe of this analysis. The existing population would continue to increase at approximately 20 percent per year, until the 2019 population is 1583 horses.

E. Alternatives Considered but Eliminated from Further Analysis

1. One alternative considered was wild horse management using fertility control measures only to regulate wild horse populations. Periodic capture operations would be required to administer the vaccine to mares, or suitable remote delivery methods would need to be developed. This alternative was eliminated from further analysis since the immunocontraceptive vaccine has not been formally approved by the Food and Drug Administration for management-based applications. Even with formal approval, an effective remote delivery methodology (aerial or water based) has not been developed for current formulations.
2. Closure of the area to livestock use, or reduction of permitted use, was eliminated from consideration since it would not meet existing law, regulation, policy, nor concur with previous land use plan decisions. The Wild Free-Roaming Horse and Burro Act of 1971 does not require that these areas of public lands be managed for wild horses but states under Section 2a (Act) that even in case of ranges that are devoted principally for wild horse management, it is not necessary to devote these lands exclusively to their welfare in keeping with multiple-use management concept for public lands, but rather that these determinations be made through the land use plans.
3. A complete gather of 100% of the herd was eliminated from consideration because it is infeasible to capture 100% of horses in an HMA this size which has limited road access. Most often horses that are trap wise, very young, elderly, injured, or in poor health will not make it to the trap site. Potentially the remaining horses could be roped at high expense to the government and added time to the contract; however this alternative is mainly infeasible and cost prohibitive.

CHAPTER III: AFFECTED ENVIRONMENT

A. Critical Elements

Critical Element	Present	Affected	Rationale
Areas of Critical Environmental Concern	YES	NO	Trap location has the greatest potential to affect ACECs. Traps would not be located in the ACEC
Air Quality	YES	NO	Areas of disturbance would be small and temporary and considered normal for the high desert. Particulate matter would be mainly dust.
Cultural, Paleontological, and American Indian Religious Concerns/Resources	YES	NO	See Narrative
Environmental Justice	NO	NO	Not Present
Prime or Unique Farmlands	NO	NO	Not Present
Floodplains	NO	NO	Not Present
Noxious Weeds	YES	NO	See Narrative
Special Status Species (Plant)	YES	NO	See Narrative and SOPs
Special Status Species (Animal)	YES	NO	See Narrative and SOPs
Migratory Birds	YES	NO	See Narrative and SOPs
Hazardous Materials	NO	NO	Not Present
Water Quality	YES	NO	See narrative
Wetlands and Riparian Zones	NO	NO	See clarification in narrative
Wild and Scenic Rivers	NO	NO	Not Present
Wilderness and wilderness Study Areas (WSAs)	YES	NO	No Impacts
Adverse Energy Impact	NO	NO	No Impacts

1. Areas of Critical Environmental Concern

The 17,339 acre Hawskie-Walksie ACEC/RNA is within the HMA. The ACEC is open to grazing. No activities within the alternatives would be allowed in the ACEC and therefore no impacts would occur. ACECs will not be discussed further in this document.

2. Cultural Resources

Various portions of the HMA have been inventoried for cultural resources. The entire area, inclusive of the HMA, has been inhabited for over 11,000 years and used by prehistoric people for hunting and gathering and by homesteaders settling the region. The Beatys Butte HMA contains several archaeological sites including lithic scatters, quarry workshop sites, occupations sites, burial sites, rock art sites, hunting sites, rock shelters and caves and plant gathering sites. Sites may range in size from less than 10 square meters to sites in the Beatys Butte obsidian flow that cover entire sections. These sites are most frequently located at springs, edges of lakebeds, and at resource areas such as where stones for making tools were gathered.

Trap sites, holding facilities and vehicles have the potential to impact cultural resources. However; these activities are normally located within or immediately adjacent to an existing road or way. All of the trap locations over the past 10 years have been immediately adjacent to the Beatys Butte or Acty Mountain Loop Roads. Traps sites would be determined during the gather process and have not been previously surveyed. Cultural surveys would be completed prior to building traps or holding facilities to assure that concentrated gathering activities do not occur within a cultural site. Cultural resources will not be discussed further in this document.

3. Noxious Weeds

Noxious weeds have been documented on several sites within the HMA, especially in the vicinity of water sources, roads, and trails. The primary infestations consist of white top, scotch thistle, musk thistle and Mediterranean sage.

4. Special Status Species

There are 12 animal species documented in the Beaty's Butte area for which special status has been assigned by either the State of Oregon or the Federal government (additionally kit fox may occasionally frequent the area):

Bald Eagle (*Haliaeetus leucocephalus*): This species is listed as threatened by the Oregon Department of Fish and Wildlife. The species is occasionally seen (BLM Winter Raptor Inventory files) at various locales, wherever carrion is available, from early November through February. No nesting by this species has been observed in the Beaty's Butte area.

Greater Sage Grouse (*Centrocercus urophasianus*): This species is a federal species of concern which the USFWS is reviewing for consideration as a Candidate for listing under the Endangered Species Act. Habitat for sage-grouse exists within the Beaty's Butte area for all aspects of the sage-grouse life cycle including lekking, nesting, brood rearing and winter habitat.

Long-billed Curlew (*Numenius americanus*): This species is listed as vulnerable by the Oregon Department of Fish and Wildlife. Any grassy meadow or reasonably level bunchgrass community could support a nesting pair.

Ferruginous Hawk (*Buteo regalis*): This species is a federal species of concern which the USFWS is reviewing for consideration as a Candidate for listing under the Endangered Species Act. The species has been observed in the Beaty's Butte area. The main prey of ferruginous hawks in Oregon are Townsend's ground squirrels. Ferruginous hawks are most likely found in areas where this prey species is present.

Swainson's Hawk (*Buteo swainsoni*): This species is listed as vulnerable by the Oregon Department of Fish and Wildlife. The species has been observed occasionally in the Beaty's Butte area. Swainson's hawks utilize grassland habitats with scattered trees and may nest around marshes or along riparian corridors.

Burrowing Owl (*Athene cunicularia*): This species is a federal species of concern which the USFWS is reviewing for consideration as a Candidate for listing under the Endangered Species Act. Burrowing owls are known to nest in the Beaty's Butte area.

Pygmy Rabbit (*Brachylagus idahoensis*): This species is a federal species of concern which the USFWS is reviewing for consideration as a Candidate for listing under the Endangered Species Act. Pygmy rabbits occur in some of the upland habitats and are frequently found in alluvial areas with deep soils and sagebrush cover.

White-tailed Jackrabbit (*Lepus townsendii*): Status for this species is listed as undetermined- status is unclear by Oregon Department of Fish and Wildlife. This species has been observed in the Beaty's Butte area, but little is currently known about the population or habitat status for this species.

Kit Fox (*Vulpes macrotis*): This species is listed as threatened by Oregon Department of Fish and Wildlife. Few breeding pairs of kit fox are known in Oregon. Some potential habitat for kit fox may exist in the Beaty's Butte area.

Townsend's Big-eared Bats (*Corynorhinus townsendii*): This species is a federal species of concern which the USFWS is reviewing for consideration as a Candidate for listing under the Endangered Species Act. The species is especially vulnerable to disturbance at maternal colonies and winter hibernacula.

Pallid Bat (*Antrozous pallidus*): This species is a federal species of concern which the USFWS is reviewing for consideration as a Candidate for listing under the Endangered Species Act. The species is vulnerable to predation by snakes, hawks and owls because it feeds on the ground.

Spotted Bat (*Euderma maculatum*): This species is a federal species of concern which the USFWS is reviewing for consideration as a Candidate for listing under the Endangered Species Act. Spotted bats are believed to have historically frequented the Beaty's Butte area but it is not known if they currently use habitat in the area. The species utilizes tall cliff habitat for roosting.

Western Toad (*Bufo boreas*): This species is listed as vulnerable by Oregon Department of Fish and Wildlife. Suitable habitat for western toads extends over most of the entire state of Oregon. In desert areas they have been found to occupy habitat around stock ponds and reservoirs.

Special Status Plant within the Beaty's Butte HMA:

Crosby's Buckwheat (*Eriogonum crosbyae*): BLM Sensitive

Grimy Ivesia (*Ivesia rhypara* var. *rhypara*): BLM Sensitive.

Prostrate Buckwheat (*Eriogonum prociduum*): BLM Sensitive Species

Bastard Kentrophyta (*Astragalus tegetarioides*): BLM Sensitive

Known special status plant and animal habitat will be avoided for all activities analyzed. Surveys will be done prior to building traps, holding facilities or off road vehicle use. See SOPs Appendix A.

5. Migratory Birds

Approximately 70 species of migratory birds are known to inhabit the HMA. These species include Brewer's sparrow, song sparrow, western kingbird, gray flycatcher, American robin, house finch, Townsend's solitaire, kestrel, red-tailed hawk, turkey vulture, golden eagle, Canada goose, common merganser, great blue heron, and many other species.

6. Water Quality/Riparian Areas/Floodplains

There are no floodplains or perennial streams within the Beatys Butte HMA. There are, however, several springs within the Beatys Butte HMA, including Willow Spring, Buena Vista Spring, Twin Springs, DL Spring, and Seep Spring and others. Most spring sources are excluded from grazing with enclosure fencing. Water is piped to troughs or dugouts outside of the spring source protection enclosures. Although no testing of water quality has been done to date, and water is not likely safe for human consumption, the quality of water is

expected to be good in comparison to playa lakebed water sources.

Beatys Butte HMA at the northwestern extent of the Great Basin. Several closed basin playa lakebeds that contain water for at least part of the year. Several closed basin contain pit type water holes for livestock, wild horse and livestock use which are high alkali and generally poor water quality.

Wild horse population would not impact water quality of spring sources as long as the protective exclosures are maintained. Horses would have no impact on the water quality in pit type closed basin play lakes.

Therefore the impacts section will focus on vegetation in the wet zones in the vicinity of seeps and springs and water quality will not be discussed further in this document.

7. Wilderness Study Areas

There are four Wilderness Study Areas (WSAs) located within the Beatys Butte HMA. The WSAs involved are the Spaulding WSA (1-139), Hawk Mountain WSA (1-146A), Sage Hen Hills (1-146B), and Basque Hills (2-84).

These WSAs are predominantly in natural condition and are primarily affected by the forces of nature. Evidence of human activity is mostly isolated. Because of their large size and the topography in and near these WSAs, they offer exceptional opportunities for solitude.

Wilderness characteristics include naturalness, outstanding opportunities for solitude or primitive and unconfined recreation, and the presence of special features. The following definitions are from BLM Manual Handbook H-8550-1 – Interim Management Policy for Lands under Wilderness Review.

Naturalness - refers to an area which "generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable."

Solitude - is defined as "the state of being alone or remote from habitations; isolation. A lonely, unfrequented, or secluded place."

Primitive and Unconfined Recreation - is defined as nonmotorized and undeveloped types of outdoor recreation activities.

Supplemental Values - are listed in the Wilderness Act as "ecological, geological, or other features of scientific, educational, scenic, or historical value."

The Spaulding WSA (1-139) is comprised of 68,589 acres. Wilderness characteristics of the Spaulding WSA are found in Volume II of the Oregon BLM Wilderness Environmental Impact Statement (1989), pages 243-272

The Hawk Mountain WSA (1-146A) is comprised of 45,604 acres. Wilderness characteristics of the Hawk Mountain WSA are found in Volume II of the Oregon BLM Wilderness Environmental Impact Statement (1989). Pages 273-301

The Sage Hen Hills WSA (1-146B) is comprised of 7,988 acres. Wilderness characteristics of the Sage Hen Hills WSA are found in Volume II of the Oregon BLM Wilderness Environmental Impact Statement (1989), pages 303-318

The Basque Hills WSA (2-84) is comprised of 68,368 acres. Wilderness characteristics of the Basque Hills WSA are found in Volume III of the Oregon BLM Wilderness Environmental Impact Statement (1989). Pages 395-426

The alternatives analyzed in this EA would be in conformance with the Interim Management Policy (IMP) for Lands under Wilderness Review for the following reasons:

The preservation of Wilderness values is the "overriding consideration" of Wilderness Study Area (WSA) management. None of the alternatives would affect the Wilderness value of naturalness, primitive unconfined recreation or special features. Opportunities for solitude would be reduced during gather operations, but would be temporary and for a short time period (two weeks). Previously disturbed areas are preferred for trap sites and no ground disturbance would be long term or require reclamation. The alternatives would meet the "overriding consideration."

The alternatives would meet the "nonimpairment criteria" because no permanent structures would be required, the traps are temporary, and the trapping activities would not degrade Wilderness values. Any temporary surface disturbance associated with the trap sites and activities would not require reclamation.

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

WSAs will not be discussed further in this EA.

B. Noncritical Elements

1. Wild Horses

The Beatys Butte HMA has been periodically gathered since 1984. Numbers of wild horses captured and removed for each successive gather are documented in the Lakeview District Office. The last gather/ removal of 255 wild horses was completed in 2007. No horses were returned to the HMA.

The last census in the HMA and surrounding area was done on July 24, 2009. The population within the Beatys Butte HMA was 256 including 204 Adults and 51 foals under one year of age.

189 horses were counted on the Hart Mountain National Wildlife Refuge; of these 157 were adults and 39 were foals under 1 year of age.

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

Peak foaling period for this herd is from March through June. Peak breeding period is from April through July. Currently, the existing sex ratio within the complex is approximately 50/50.

Water is a limiting factor in certain years throughout the Beatys Butte HMA. Most of the watering areas in the HMA are in the form of seasonal reservoirs and springs that provide water during the spring through fall seasons or until they dry up.

Forage is allocated for 100 to 250 wild horses in the Beatys Butte HMA or 3,000 Animal Unit Months (AUMs). Inventory data shows that horse utilization combined with livestock concentrate in the few areas with perennial water sources. Utilization levels can reach the 60-80 percent range within these areas. 10% of the available forage is consumed by wild horses when numbers are within AML. Since horses use the area yearlong, the affects of grazing are prolonged and recovery of plants reduced. Additionally the areas grazed by livestock would be rested from livestock every other year. Wild horses would continue to use areas rested from livestock grazing. Utilization for the rest of the HMA is normally slight to light (6-40 percent).

A long history of horses drifting into and out of the Beatys Butte HMA exists. There is movement between Sheldon and Hart National Wildlife Refuge, private land and the Burns District HMAs including Warm Springs and South Steens.

2. Grazing Management

Forage allocations for livestock in the Beatys Butte HMA are currently 26,121 AUMs of active preference. There is one grazing association that grazes in the

Common Pasture of Beatys Butte Allotment #600. The Common pasture is mainly the same area as the HMA. Forage allocation is 500 AUMs for deer, 22 AUMs for pronghorn, 0 AUMs for elk, 240 AUMs for California bighorn sheep, and 3,000 AUMs for horses.

Water for livestock and wild horses is mainly available from springs and pit type water holes. Water is usually available most of the year from the springs except during drought periods.

Overall rangeland trend is static throughout the Beatys Butte Allotment. Current utilization levels in many areas of the North Common portion of the Beatys Butte Allotment are at or above 50 percent of current year's growth. Monitoring records indicating area of high utilization as well as long term trend are available at the Lakeview District Office.

3. Fish and Wildlife

Pronghorn antelope, mule deer and California bighorn sheep use the HMA for summering and wintering ranges. Other important mammals that utilize the area include, but are not limited to, mountain lion, bobcat, coyotes, badger, jackrabbit, and cottontail rabbits. Some of the common birds include golden eagle, chuckar, California quail, mourning dove, red-tailed hawk, kestrel, and the great horned owl.

4. Vegetation

The vegetation within the Beatys Butte HMA is predominantly sagebrush/grassland communities. Primary species include the following:

Big Sagebrush (*Artemisia tridentata* var. *tridentata*), Wyoming Big Sagebrush (*Artemisia tridentata* var. *wyomingensis*), Low Sagebrush (*Artemisia arbuscula*), Bluebunch Wheatgrass (*Pseudoroegneria spicata*), Indian Ricegrass (*Achnatherum hymenoides*), Thurber's Needlegrass (*Achnatherum thurberianum*)
Needle and Thread Grass (*Hesperostipa comata*), Bottlebrush Squirreltail (*Elymus elemoides*), Basin Wildrye (*Leymus cinereus*)

Other species within the Beaty's Butte HMA found to a lesser degree include the following:

- Grey Rabbitbrush (*Chrysothamnus nauseosus*)
- Green Rabbitbrush (*Chrysothamnus viscidiflorus*)
- Silver Sagebrush (*Artemisia cana*)
- Various Forbs (predominantly *Asteraceae* and *Scrophulariaceae*)

Monitoring studies indicate a trend is stable to upward in upland plant communities.

5. Soils

Soils in the Beatys Butte HMA range from shallow (<20 inches deep) to moderately deep (20 – 40 inches deep) and are located on slopes ranging from 0 to over 60%. The entire area is a series of rims and basins running from north to south.

The texture of the soils found in this area ranges from sandy loams to silty loams. Some soils with high levels of clay particles can be found in the playa bottoms.

6. Recreation

Recreational opportunities throughout the Beatys Butte HMA include hunting, four-wheel driving, backpacking, wildlife viewing, hiking, camping, fishing, sightseeing, photography and wild horse viewing. Most people regard wild horses as a positive asset on the desert and travel many miles specifically to view the horses. Information on wild horse viewing is a fairly common request from the public. The Beatys Butte HMA is one of the easiest areas for people to visit and successfully view wild horses, especially near Hawk Mountain and the South Corral Spring areas.

7. Visual Resources

The Beatys Butte HMA is located within Visual Resource Management (VRM) Class I and IV areas. The WSAs are VRM Class I, while the non-WSA portions are VRM Classes IV. The VRM Class I objective is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude limited management activity. The level of change to the characteristic landscape should be very low and not attract attention. The VRM Class IV objective is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

8. Other Lands with Wilderness Character

The Oregon Natural Desert Association (ONDA) has submitted a written report recommending four areas within the HMA that they feel have wilderness character and are not currently designated as WSA. These proposals include the Spaulding I, Spaulding II, Hart Mountain and Bald Mountain areas and total about 564,577 acres. A large portion of the Hart Mountain proposal crosses jurisdictional boundaries onto the Hart Mountain National Wildlife Refuge to the northwest of the HMA.

The Lakeview BLM staff has completed its own inventory of wilderness character within the Spaulding I, Spaulding II, and Bald Mountain proposals. These documents are available for review at www.blm.gov/or/districts/lakeview/plans/inventas.php. To date, the BLM has found only one small area (about 340 acres) immediately adjacent to Basque Hills WSA to actually contain wilderness character. None of the alternatives analyzed in this EA would impact this area that the BLM has determined has wilderness character because actions are temporary with minimal ground disturbance.

The first factor reviewed was; whether the proposed action would alter a proposed unit boundary or road determination. Since travel would occur on existing roads and trails and no and maintenance would be done for the purpose of gathering wild horses, the potential actions would not affect the road inventory aspect of wilderness character review.

The second factor reviewed was potential ground disturbance caused by vehicles, and high horse concentrations at trap and holding site locations. Previous experience has shown that there are no long term impacts at these sites. Any signs of activity would normally be unnoticeable within two weeks after gather operations.

The final factor of review would be whether the proposed actions would have an impact on wilderness character values of size (acreage), natural condition, outstanding opportunities for solitude or unconfined primitive recreation. The temporary potential actions described in this EA would not be within the normal elements reviewed in making a wilderness characteristic determination. Please refer to the Lakeview web site for example of the above referenced wilderness character reviews for further clarification.

For these reasons wilderness character will not be discussed further in this EA.

CHAPTER IV: ENVIRONMENTAL CONSEQUENCES

The Action Alternatives have largely the same impacts to resources. They vary mainly in impacts to the wild horses themselves. Therefore the Anticipated Effects of alternatives 1-3 are combined and the minor differences described. The no action alternative is analyzed separately as the no action alternative has the greatest impact to resources.

A. Alternative 1-3 Anticipated Effects – Critical Elements

a. Noxious Weeds

Existing noxious weed infestations could be spread to other areas within the HMA by grazing animals including wild horses which eat the seed or

carry the seed in their hair. 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.

b. Special Status Species

There would be no effect of the action alternatives on special status species except sage-grouse and pygmy rabbits. Sage-grouse utilize riparian zones for late season brood rearing. Forage in these areas is important to chick development and survival. A decrease in grazing by horses in these areas would improve habitat conditions for sage-grouse. Additionally, habitat conditions in upland areas would be expected to be maintained in better condition with reduced grazing also benefitting sage-grouse and potentially pygmy rabbits. Pygmy rabbits require increased amounts of grasses and forbs in their diet during the reproductive period. A reduction of grazing by horses could provide additional forage for pygmy rabbits during their reproductive period. By returning the wild horse herd to AML, the number of horses grazing and watering along perennial streams would be reduced thereby helping to improve water quality.

c. Migratory Birds

Gathering horses and reducing the herd population to AML would improve availability of sagebrush and woodland habitat for migratory birds associated with those habitats. The quality of the habitat would be improved due to the decreased number of horses. Reproductive capabilities of migratory birds would be improved as a result of increased food sources. Cover for most ground-nesting species would be increased. Migratory bird species abundance and diversity would be increased within the HMA.

d. Water Quality/Riparian Areas/Floodplains

None of the activities in the action alternatives would not be located adjacent to any surface water sources or riparian areas; therefore, there would be no anticipated impacts.

2. Alternatives 1-3 Anticipated Effects – Noncritical Elements

a. Wild Horses

Appendix E provides the comparison of alternatives resulting from the WinEquus Population Model. Alternatives 1&3 resulted in the smallest

population growth rate. Alternative 1 resulted in the least number of horses removed. Alternative 3 resulted in the least number of horses gathered. Population modeling did not account for the population differences resulting from drifting of horses between neighboring the neighboring, private, BLM and USFW lands.

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

Direct impacts to individual wild horses as a result of the gather and removal operation include the handling stress associated with these activities. Traumatic injuries that may occur typically involve biting and/or kicking that may result in bruises and minor swelling which normally does not break the skin. These impacts are known to occur intermittently during wild horse gather operations. The intensity of these impacts varies by individual, and is indicated by behaviors ranging from nervous agitation to physical distress. Mortality of individuals from these impacts is infrequent but may occur in one half to one percent of horses gathered in a given removal operation (Nevada BLM statistics). Implementation of SOPs in Appendix A would help minimize direct impacts to animals. Alternative 1 has the greatest initial direct impact due to the large amount and degree of handling animals at the trap sites and holding facilities, alternatives 2&3 are about equal in direct impacts to wild horses. However increasing the time period between gathers would also reduce the overall direct impacts to wild horses.

The gelding aspect of alternative 3 is the only irreversible action considered; therefore gelding is the least favorable of the actions presented in this EA. A study of gelding dominant studs in the Beatys Butte HMA found no reduction in population growth. Potentially gelding could reduce population growth rates; however, it is unknown what percentage would be necessary to accomplish this reduction.

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

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

a few weeks) and would disappear within a few weeks following the gather as bands reform.

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

Population wide direct effects are immediate effects which would occur during or immediately following implementation of the action alternatives. They include the displacement of bands during capture and the associated dispersal which occurs following release, the modification of herd demographics (age and sex ratios), the temporary separation of members of individual bands of horses, and the reestablishment of bands following releases, and the removal of animals from the population. Direct population wide effects would be temporary in nature with most if not all effects disappearing within hours to several days of release. No observable effects would be expected within 1-month of release, except for a heightened awareness of human presence.

The removal of horses from the population would not be expected to have effect on herd dynamics or population variables; as long as the selection criteria for the removal ensured a “typical” population structure was maintained.

Effects of Alternative 3

The following affects would be expected from successive removals causing shifts in sex ratios away from normal ranges are. If selection criteria leave more studs than mares, band size would be expected to decrease, competition for mares would be expected to increase, recruitment age for reproduction among mares would be expected to decline, and size and number of bachelor bands would be expected to increase. Gelding of males would not significantly alter these results. Gelding would change the individual behavior of each male horse. Many of the gelded males would be expected to form bachelor bands. Breeding age mares would be expected to breed with available studs regardless of the presence of geldings in the HMA.

For mares, the greatest biological stress is during pregnancy and lactation. In wild horse populations, this occurs in late winter or early spring when forage availability is at its lowest level, and body condition is at its

poorest. For studs, biological stress is at its peak during the breeding season. This peak biological demand is in the late spring and early summer and is more suited to a rapid recovery and a lower energy deficit than for mares.

Immunocontraception

Population modeling found no significant difference in results among action alternatives comparing the lowest average population size in 11 years. However, immunocontraception results indicate this alternative would result in the least number of horses gathered and placed in long term holding, adoption or sale programs over a 10 year period.

a. **Grazing Management**

The action alternatives would minimize competition for forage and water between livestock wildlife and wild horses and maintain the thriving ecological balance of the Beatys Butte HMA.

c. Fish and Wildlife

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

d. Vegetation

Some short-term disturbance to the vegetation would occur in and around the trap sites due to trampling and vehicle use. The disturbance would be kept to as small an area as possible. Disturbance of this type is normally not noticeable within a few days of completion of gather activities.

Reducing and then maintaining wild horse numbers within AML over the next ten years would reduce the overall impacts of heavy or repeated utilization. Heavy utilization or grazing during critical growth stages each year effects plant health. Reducing grazing pressure would improve forage species vigor, cover, and allow individual plant health recovery after grazing. The action alternatives would limit the intensity of use at or near water sources and surrounding uplands.

e. Soils

Soil loss would be expected to decrease in those areas of step topography near water sources where horses concentrate.

f. Recreation

For a period of two weeks, vehicle access to some areas would be temporarily blocked by gather activities and facilities, displacing recreationists to other, nearby areas. People recreating in the HMA may be bothered by low-flying helicopters. Conversely, gather activities may attract additional people to the area. Public notification regarding gathering activities has been, and will continue to be, distributed prior to commencement of gather operations. Effects to recreation in the WSAs are described in the WSA section.

g. Visual Resources

The traps and holding facilities would temporarily add complex rectangular and circular forms which would contrast with the surrounding landscape. These forms would be composed primarily of short vertical and long horizontal lines.

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

C. Alternative 4 (No Action)

1. Anticipated Effects – Critical Elements

a. Noxious Weeds

The increase of horse numbers above the AML would increase the likelihood of spreading existing noxious weeds to areas within the HMA that have not been infested, primarily along riparian areas, springs and reservoirs.

b. Special Status Species

Nesting and brood-rearing habitat for sage-grouse would continue to be degraded as wild horse numbers increased and upland riparian conditions deteriorated. The loss of cover in nesting areas would allow for more predation of nests while loss of forb species important to sage-grouse for nutrition during nesting and brood rearing would decrease the general health and reproductive status for the hens. Loss of cover around important water sources leaves hens and broods susceptible to predation as well. Heavy grazing could reduce grasses and forbs available for pygmy rabbit forage. Grasses in particular have been found to be an important component of pygmy rabbit diets during the reproductive period. Pygmy rabbit reproductive success could be altered if grasses were reduced below a critical level during the pygmy rabbit reproductive period.

c. Migratory Birds

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

2. Alternative 4 (No Action) Anticipated Effects – Noncritical Elements

a. Wild Horses

The horses would continue to multiply and the population would increase at a rate of 20 percent per year until approximately 1718 horse would be present in the HMA and surrounding areas. The habitats ability to support the horse population along with other grazing animals would be reduced. Wild horses would most likely move outside the HMA as they have historically done in the past. The horses within HMA boundaries would continue to overuse the available forage and water and resources would deteriorate. The ecological balance within the HMA would be disrupted.

Population modeling found that Alternative 4 (No Action) resulted in the highest average population size in 11 years. Under this alternative, natural controls would regulate wild horse numbers through predation, disease, and forage and water availability. Historically predation and disease have not substantially regulated horse numbers in the Beatys Butte HMA. This alternative would not comply with The Wild Free-Roaming Horse and Burro Act of 1971 which mandates the Bureau to “prevent the range from deterioration associated with overpopulation” and “preserve and maintain a thriving natural ecological balance and multiple use relationships in that area.”

b. Grazing Management

The HMA would potentially continue to support an existing population initial population of 256 horses. Assuming that livestock and wildlife populations are managed to allocated levels, the carrying capacity of the HMA would be over allocated as the horse population continued to increase over time. The level of livestock use would need to be or reduced to compensate for the excess number of horses until the appropriate balance of wild horses is restored.

c. Fish and Wildlife

Wildlife populations would probably move outside the HMA to areas of less competition for limited water and forage for at least part of the year.

d. Vegetation

Areas which are presently over utilized, such as areas adjacent to water sources, would continue to be over used. The composition of vegetation would change to a higher percentage of undesirable plants, soil cover would be reduced, and the potential for erosion on steeper slopes would increase.

e. Soils

The majority of the Beatys Butte HMA has flat to rolling topography. Soil loss would not be expected to increase except in those areas near water sources with steeper slopes sources where horses concentrate.

f. Recreation

Overall, recreation in the HMA would not be affected. Opportunities for viewing wild horses would be improved, because of the larger number of wild horses. Hunting would potentially be reduced if wildlife move outside the HMA.

g. Visual Resources

Visual resources would not be affected. VRM Class I, and IV objectives would be met.

CHAPTER V: CUMULATIVE IMPACTS

A. Alternatives 1-3 (Gather)

The potential for cumulative impact on most of the identified resources other than wild horses is minimal. There would be lessened competition for forage and limited water with fewer numbers of horses. Gathering the HMA to the lower level of the AML (100 head) may reduce the frequency of gathers that are needed to maintain a thriving, ecological balance, thereby, reducing the stress on the horses related to gather activities.

(Immunocontraception)

The potential for cumulative impact on most of the identified resources other than wild horses is minimal. There would be lessened competition for forage and limited water

with fewer numbers of horses. Gathering the HMA to the lower level of the AML (100 head) and administration of the immunocontraception vaccine, PZP, may reduce the frequency of gathers that are needed to maintain a thriving, ecological balance, thereby, reducing the stress on the horses related to gather activities.

Drifting

Sheldon-Hart Mountain Refuges have made commitments to strengthen and maintain existing fences as well as constructing new fence where necessary. Strengthening the boundaries should reduce the potential for horses to drift between these adjacent lands.

C. Alternative 4 (No Action)

The horses would continue to over populate the HMA and would move outside the HMA to areas without forage allocation for wild horses. Range condition would deteriorate, watershed cover would be reduced near water sources, wildlife use patterns would be potentially be altered, and domestic livestock would need to be reduced or altered to compensate for the increased number of horses.

Appendix A

Standard Operating Procedures (Gather Operation)

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

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

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

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

1. Helicopter Drive Trapping. This capture method involves utilizing a helicopter to herd wild horses and burros into a temporary trap.
2. Helicopter Assisted Roping. This capture method involves utilizing a helicopter to herd wild horses or burros to ropers.
3. Bait Trapping. This capture method involves utilizing bait (water or feed) to lure wild horses and burros into a temporary trap.

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

A. Capture Methods used in the Performance of Gather Contract Operations

1. The primary concern of the contractor is the safe and humane handling of all animals captured. All capture attempts shall incorporate the following:
 - All trap and holding facilities locations must be approved by the Contracting Officer's Representative (COR) and/or the Project Inspector (PI) prior to construction.
 - The Contractor may also be required to change or move trap locations as determined by the COR/PI.
 - All traps and holding facilities not located on public land must have prior written approval of the landowner.
2. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who will consider terrain, physical barriers, weather, condition of the animals and other factors.
3. All traps, wings, and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:
 - a. Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and holding facilities shall be oval or round in design.
 - b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered, plywood, metal without holes.
 - c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for burros, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to

5 feet above ground level for burros and 1 foot to 6 feet for horses. The location of the government furnished portable fly chute to restrain, age, or provide additional care for the animals shall be placed in the runway in a manner as instructed by or in concurrence with the COR/PI.

- d. All crowding pens including the gates leading to the runways shall be covered with a material which prevents the animals from seeing out (plywood, burlap, plastic snow fence, etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses.
 4. All pens and runways used for the movement and handling of animals shall be connected with hinged 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 two pounds of hay per 100 pounds of estimated body weight per day. An animal that is held at a temporary holding facility after 5:00 p.m. and on through the night, is defined as a horse/burro feed day. An animal that is held for only a portion of a day and is shipped or released does not constitute a feed day.
 9. It is the responsibility of the Contractor to provide security to prevent loss, injury or death of captured animals until delivery to final destination.
 10. The Contractor shall restrain sick or injured animals if treatment is necessary. The COR/PI will determine if injured animals must be destroyed and provide for destruction of such animals. The Contractor may be required to humanely euthanize animals in the field and to dispose of the carcasses as directed by the COR/PI.
 11. Animals shall be transported to final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the COR/PI for unusual circumstances. Animals to be released back into the HMA following gather operations may be held up to 21 days or as directed by the COR/PI. Animals shall not be held in traps and/or temporary holding facilities on days when there is no work being conducted except as specified by the COR/PI. The Contractor shall schedule shipments of animals to arrive at final destination between 7:00 a.m. and 4:00 p.m. No shipments shall be scheduled to arrive at final destination on Sunday and Federal holidays, unless prior approval has been obtained by the COR. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the COR.

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

1. Capture attempts may be accomplished by utilizing bait (feed or water) to lure animals into a temporary trap. If the contractor selects this method the following applies:
 - a. Finger gates shall not be constructed of materials such as "T" posts, sharpened willows, etc., that may be injurious to animals.
 - b. All trigger and/or trip gate devices must be approved by the COR/PI prior to capture of animals.
 - c. Traps shall be checked a minimum of once every 10 hours.

2. Capture attempts may be accomplished by utilizing a helicopter to drive animals into a temporary trap. If the contractor selects this method the following applies:
 - a. A minimum of two saddle-horses shall be immediately available at the trap site to accomplish roping if necessary. Roping shall be done as determined by the COR/PI. Under no circumstances shall animals be tied down for more than one hour.
 - b. The contractor shall assure that foals shall not be left behind, and orphaned.
3. Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. If the contractor with the approval of the COR/PI selects this method the following applies:
 - a. Under no circumstances shall animals be tied down for more than one hour.
 - b. The contractor shall assure that foals shall not be left behind, or orphaned.
 - c. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who will consider terrain, physical barriers, weather, condition of the animals and other factors.

C. USE OF MOTORIZED EQUIPMENT

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The Contractor shall provide the COR/PI with a current safety inspection (less than one year old) for all motorized equipment and tractor-trailers used to transport animals to final destination.
2. All motorized equipment, tractor-trailers, and stock trailers shall be in good repair, of adequate rated capacity, and operated so as to ensure that captured animals are transported without undue risk or injury.
3. Only tractor-trailers or stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities, and from temporary holding facilities to final destination(s). Sides or stock racks of all trailers used for transporting animals shall be a minimum height of 6 feet 6 inches from the floor. Single deck tractor-trailers 40 feet or longer shall have two (2) partition gates providing three (3) compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing two (2) compartments within the trailer to separate the animals. Compartments in all tractor-trailers shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have a minimum 5 foot wide swinging gate. The use of double deck tractor-trailers is unacceptable and shall not be allowed.
4. All tractor-trailers used to transport animals to final destination(s) shall be equipped with at least one (1) door at the rear end of the trailer which is capable of sliding either horizontally or vertically. The rear door(s) of tractor-trailers and stock trailers must be capable of opening the full width of the trailer. Panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of all trailers must be strong enough so that the animals cannot push their hooves through the side. Final approval of tractor-trailers and stock trailers used to transport animals shall be held by the 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 foot 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 feet 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.

G. 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.

H. WILDLIFE

Holding Facility and Capture Site Selection

Sites selected for holding facilities, capture sites (traps) and capture site approaches shall be located a minimum of 100 yards from any pygmy rabbit or burrowing owl burrows. A qualified individual shall survey each intended site to determine if pygmy rabbit or burrowing owl burrows are present. When burrows for these species are located the intended site shall be moved a minimum of 100 yards from the closest burrow for these species. For the purpose of site selection, capture site approaches shall be considered to be the intended approach path for herding the horses into the trap for a distance of 300 yards from the trap entrance.

Emergency Captures March 1st to July 31st

Generally captures will take place outside of the reproductive period (March 1st to July 31st) for sage-grouse and migratory birds. In the event of an emergency capture during the period of time from March 1st to July 31st, the BLM wildlife biologist shall be consulted to develop a plan that will reduce impacts to nesting bird species. At minimum, no holding or capture facilities will be placed within 1 mile of any known active sage-grouse lek from March 1st to May 15th. Additionally, no capture activities will be allowed in sage-grouse nesting habitat from March 1st to June 15th.

I. 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.

J PUBLIC PARTICIPATION

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

authorized BLM personnel or contractors may enter the corrals or directly handle the animals. The general public may not enter the corrals or directly handle the animals at anytime or for any reason during BLM operations.

K. RESPONSIBILITY AND LINES OF COMMUNICATION

Lakeview Field Office - Contracting Officer's Representative/Project Inspector

The Contracting Officer's Representatives (CORs) and the project inspectors (PIs) have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. The Lakeview Assistant Field Manager and the Lakeview Field Manager will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, State Office, National Program Office, Burns, PVC Corral or appropriate Corral offices. All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

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

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

Appendix B

Standard Operating Procedures (Fertility Control Treatment)

The following management and monitoring requirements are part of the Proposed Action:

- PZP vaccine would be administered by trained BLM personnel.
- The fertility control drug is administered with two separate injections: (1) a liquid dose of PZP is administered using an 18 gauge needle primarily by hand injection; (2) the pellets are preloaded into a 14 gauge needle. These are loaded on the end of a trocar (dry syringe with a metal rod) which is loaded into the jabstick which then pushes the pellets into the breeding mares being returned to the range. The pellets and liquid are designed to release the PZP over time similar to a time release cold capsule.
- Delivery of the vaccine would be as an intramuscular injection while the mares are restrained in a working chute. 0.5 cubic centimeters (cc) of the PZP vaccine would be emulsified with 0.5 cc of adjuvant (a compound that stimulates antibody production) and loaded into the delivery system. The pellets would be loaded into the jabstick for the second injection. With each injection, the liquid and pellets would be propelled into the left hind quarters of the mare, just below the imaginary line that connects the point of the hip and the point of the buttocks.
- All treated mares would be freeze-marked on the hip to enable researchers to positively identify the animals during the research project as part of the data collection phase.
- At a minimum, monitoring of reproductive rates using helicopter flyovers will be conducted in years 2 through 4 by checking for presence/absence of foals. The flight scheduled for year 4 will also assist in determining the percentage of mares that have returned to fertility. In addition, field monitoring will be routinely conducted as part of other regular ground-based monitoring activities.
- A field data sheet will be used by the field applicators to record all the pertinent data relating to identification of the mare (including a photograph when possible), date of treatment, type of treatment (1 or 2 year vaccine, adjuvant used) and HMA, etc. The original form with the data sheets will be forwarded to the authorized officer at NPO (Reno, Nevada). A copy of the form and data sheets and any photos taken will be maintained at the field office.
- A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, disposition of any unused PZP, the number of treated mares by HMA, field office, and state along with the freeze-mark applied by HMA.
- The field office will assure that treated mares do not enter the adoption market for three years following treatment. In the rare instance, due to unforeseen circumstance, treated mare(s) are removed from an HMA before three years has lapsed, they will be maintained in either a BLM facility or a BLM-contracted long term holding facility until expiration of the three year holding period. In the event it is necessary to remove treated mares, their removal and disposition will be coordinated through NPO. After expiration of the three year holding period, the animal may be placed in the adoption program or sent to a long-term holding facility.

Appendix C
Euthanasia Policy

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240
October 20, 2005

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

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

To: All Field Officials (except Alaska)
From: Assistant Director, Renewable Resources and Planning
Subject: Euthanasia of Wild Horses and Burros

Program Area: Wild Horses and Burros

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

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

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

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

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

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

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

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

If, for humane or other reasons, the need for euthanasia of an unusually large number of animals during a gather operation is anticipated, the euthanasia procedures should be identified in the pre-gather planning process. When pre-gather planning identifies an increased likelihood that animals may need to be euthanized, plans should be made for an APHIS veterinarian to visit the gather site and consult with the authorized officer on euthanasia decisions. In all cases, the final responsibility and decision regarding euthanasia of a wild horse or burro rests solely with the authorized officer (43 CFR 4730). Euthanasia will be carried out following the procedures described in the 4730 manual.

Euthanasia at short-term holding facilities:

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

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

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

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

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

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

Euthanasia at long-term holding facilities:

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

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

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

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

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

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

1. All animals will be inspected by field observation to evaluate body condition and identify animals that may need to be euthanized to prevent a slow death due to deterioration of condition as a result of aging.

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

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

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

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

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

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

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

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

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

Background: The authority for euthanasia of wild horses or burros is provided by the Wild Free-Roaming Horse and Burro Act of 1971, Section 3(b)(2)(A) 43 CFR 4730.1 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

Authenticated by:

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

Appendix D
Selective Removal Criteria
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240
August 10, 2005

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

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

To: All Field Officials (except Alaska)
From: Assistant Director, Renewable Resources and Planning
Subject: Gather Policy & Selective Removal Criteria

Program Area: Wild Horse and Burro Program

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

A. Gather Requirements

1. Appropriate Management Level Achievement (AML)

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

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

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

- a. Results of population modeling that forecast impacts to the Herd Management Area's (HMA's) population resulting from removals and fertility control treatments.
 - b. The desired post-gather on-the-range population number, age structure and sex ratio for the managed population.
 - c. Fertility control will be considered in all Gather Plan/NEPA documents (IM No. 2004-138) and will be addressed in the population model analysis. A "do not apply" decision will be justified in the rationale.
 - d. The collection of blood samples for development of genetic baseline data.
3. Where removals are necessary to achieve or maintain thriving natural ecological balance, all decisions shall be issued full force and effect under the authority of 43 CFR § 4770.3(c).
 4. All gathers that have been approved by Washington Office (WO) through the annual work plan process and that are listed on the National Gather Schedule may proceed without further approval. Changes to the gather schedule involving increased removal numbers for listed gathers, adding new gathers, or substituting gathers require approval by WO-260. Requests for such gathers will be submitted using Attachment 1 to WO-260, Reno National Program Office (NPO), for review and approval by the WO-260 Group Manager.
 5. No WO approval is required for the removal of up to 10 nuisance animals per instance unless a national contractor conducts the removal.
 6. A gather and removal report (Attachment 2) is required for each wild horse and burro gather. Partial completion reports shall be filed periodically (every 2 to 5 days) during large lengthy gathers. A final report for all gathers will be submitted to the State WH&B Lead and WO-260, NPO, within ten days of

gather completion.

B. Selective Removal Requirements

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

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

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

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

- a). Age Class -Five Years and Younger
Wild horses five years of age and younger should be the first priority for removal and placement into the national adoption program.
- b). Age Class - Six to Fifteen Years Old
Wild horses six to fifteen years of age should be removed last and only if management goals and objectives for the herd can't be achieved through the removal of younger animals.
Animals encountered during gather operations should be released if, in the opinion of the Authorized Officer, they may not tolerate the stress of transportation, preparation and holding but would survive if released. Older animals in acceptable body condition with significant tooth loss and/or excessive tooth wear should also be released. Some situations, such as removals from private land, total removals, or emergency situations require exceptions to this.
- c). Age Class Sixteen Years and Older
Wild horses aged sixteen years and older should not be removed from the range unless specific exceptions prevent them from being turned back and left on the range.

C. Potential Exceptions to Selective Removal Requirements

1. Nuisance animals
2. Animals outside of an HMA
3. Land use plan or activity plan identifies certain characteristics that are to be selectively managed for in a particular HMA (Examples: Spanish characteristics, Bashkir "Curly" or others).
4. Total removals required by law or land use plan decisions
5. Court ordered gathers
6. Emergency gathers (see IM 2004-151)
7. Removal of wild horses treated with fertility control PZP. Specific instructions are outlined in IM 2004-138 in regards to removal of these animals.

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

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

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

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

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

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

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

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

Signed by:
Laura Ceperley
Acting Assistant Director
Renewable Resources and Planning

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

Appendix E- Population Model
Population Sizes in 11 years

Alternatives	Population sizes in 11 years			Gather Rates			Average Growth Rate(10yr)
	Min	Ave	Max	Gathered	Removed	Treated	
Alternative 1 Gather with Fertility Control							
Alternative 1 –Lowest trial	128	202	259	435	217^	65	9.6%
Alternative1- Median trial	169	219	295	679	350^	109	15.3
Alternative 1 –Highest trial	190	235	389	937	510^	166	19.7
Alternative 2- Gather Only							
Alternative 2 –Lowest Trial	108	209	261	312	298	0	14.6
Alternative 2- Median Trial	169	228	298	459	438	0	19.5
Alternative 2 -Highest	189	247	385	625	599	0	24.7
Alternative 3 –Adjust Ratio Males/Females							
Alternative 3-Lowest Trial	118	199	263	270*	255	0	9.7%
Alternative 3-Median Trial	168	227	300	454*	434	0	19.5
Alternative 3-Highest	189	242	383	574*	554	0	23.7
Alternative 4- No Action							
Alternative 4-Lowest Trial	258	573	1082	0	0	0	14.4
Alternative4-Median Trial	282	818	1718	0	0	0	19.7
Alternative 4-Highest Trial	411	1559	3759	0	0	0	24.8

Model results

No significant difference in population size between the action alternatives

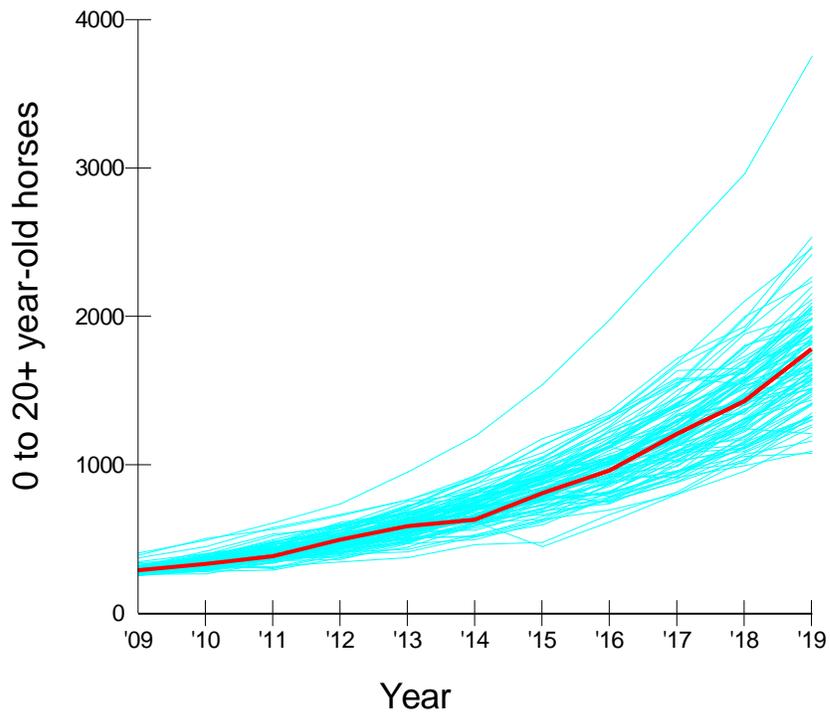
*Least number gathered- Alternative 3

^Least removed- Alternative 1

% Smallest Growth Rate –Alternative 1&3

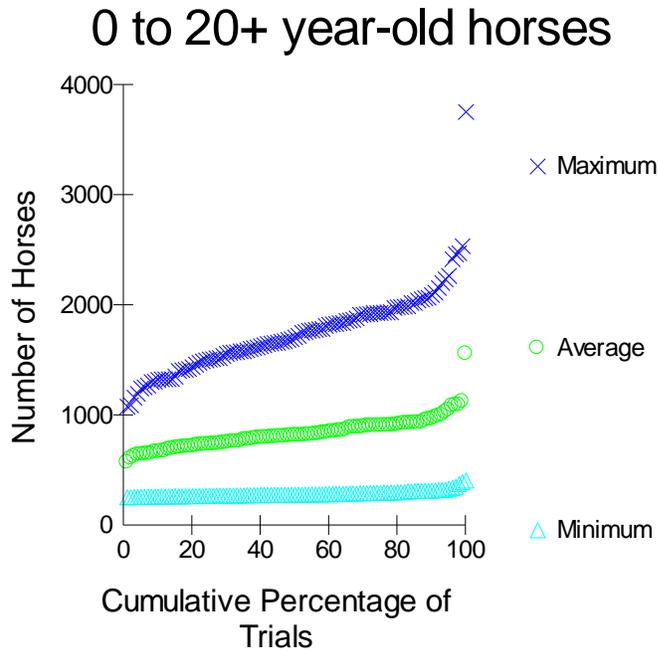
Appendix E - Beaty Butte Population Modeling No Action Alternative

Most Typical Trial



Appendix E - Beaty Butte Population Modeling No Action Alternative

Population Size



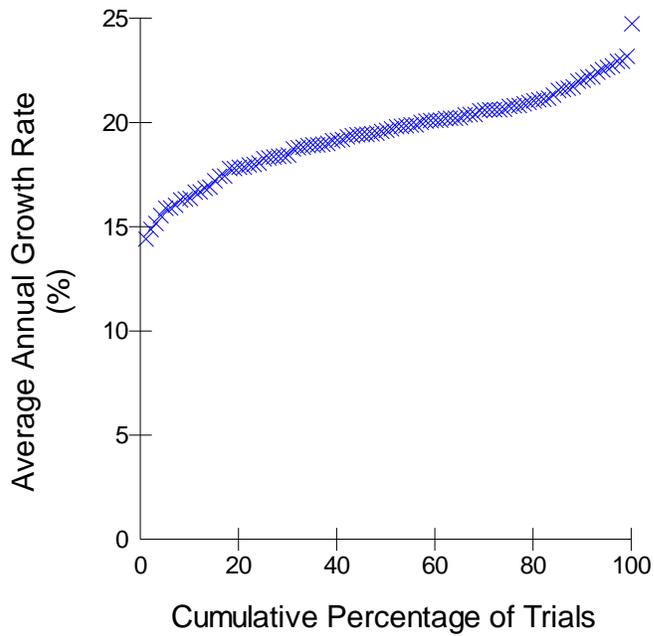
	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	258	573	1082
10th Percentile	265	671	1328
25th Percentile	271	738	1512
Median Trial	282	818	1718
75th Percentile	300	907	1936
90th Percentile	320	972	2108
Highest Trial	411	1559	3759

* 0 to 20+ year-old horses

Appendix E - Beaty Butte Population Modeling No Action Alternative

Gather Rate – NA

Growth Rate

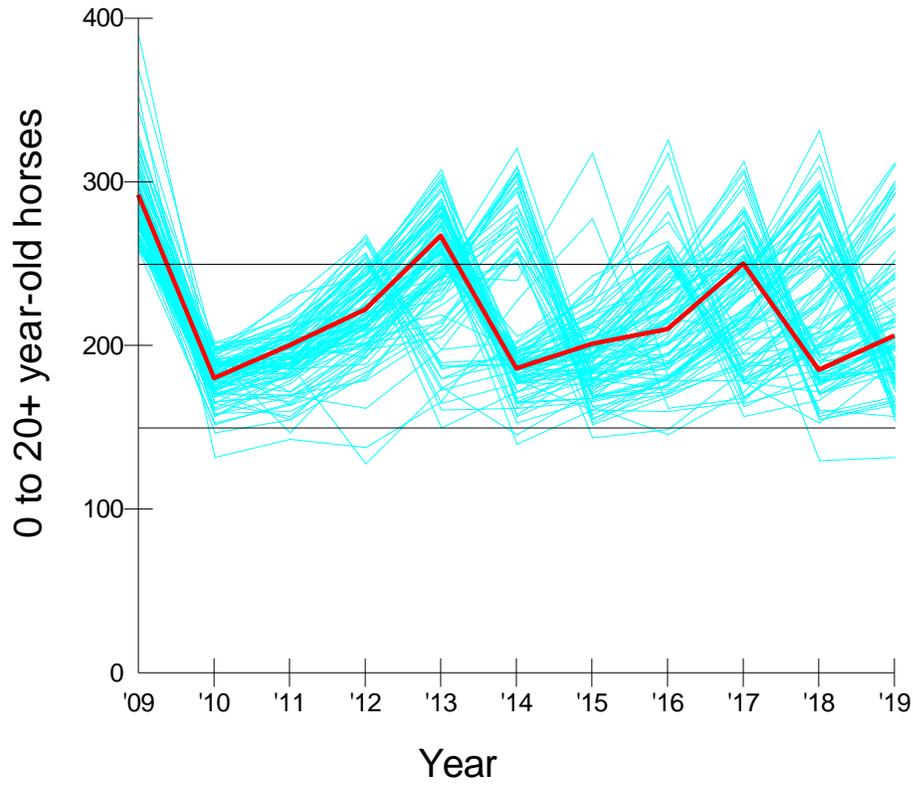


Average Growth Rate in 10 Years

Lowest Trial	14.4
10th Percentile	16.5
25th Percentile	18.3
Median Trial	19.7
75th Percentile	20.8
90th Percentile	22.1
Highest Trial	24.8

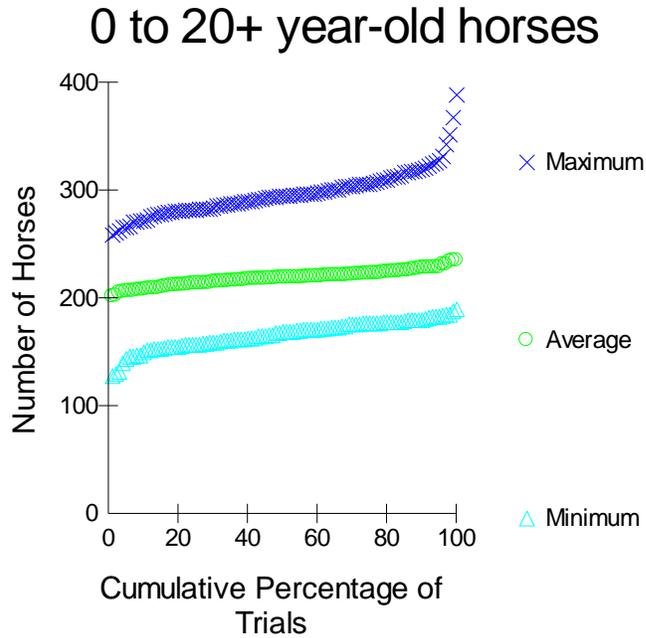
Appendix E - Beaty Butte Population Modeling Alternative I - Fertility Control

Most Typical Trial



Appendix E - Beaty Butte Population Modeling Alternative I - Fertility Control

Population Size



Population Sizes in 11 Years*
Minimum Average Maximum

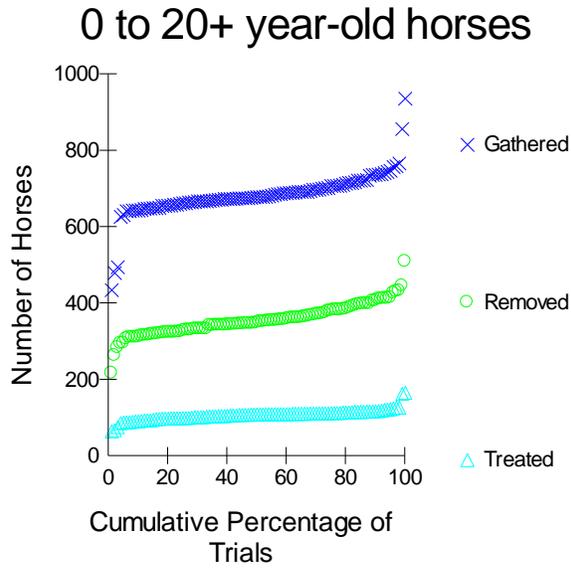
Lowest Trial	128	202	259
10th Percentile	151	208	272
25th Percentile	157	214	282
Median Trial	169	219	295
75th Percentile	177	223	306
90th Percentile	180	228	320
Highest Trial	190	235	389

* 0 to 20+ year-old horses

In 11 years and 100 trials, the lowest number of 0 to 20 yr old horses ever obtained was 128 and the highest was 389. In half the trials, the minimum population size in 11 yrs was less than 169 and the maximum was less than 295. The average population size in 11 yrs ranged from 202 to 235.

Appendix E - Beaty Butte Population Modeling Alternative I - Fertility Control

Gather Rates

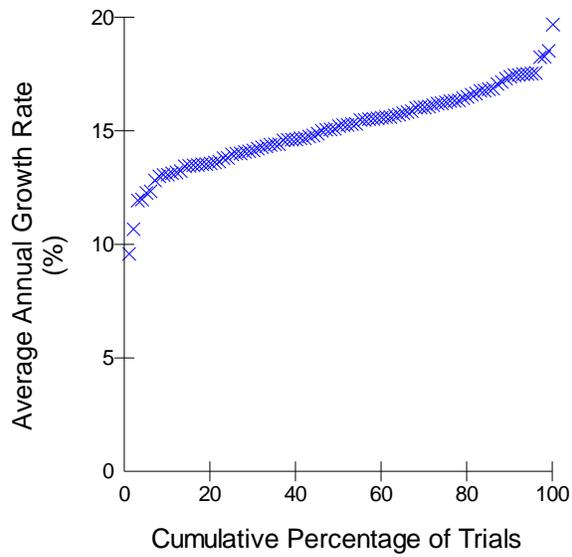


	Totals in 11 Years*		
	Gathered	Removed	Treated
Lowest Trial	435	217	65
10th Percentile	644	314	92
25th Percentile	663	329	100
Median Trial	679	350	109
75th Percentile	708	382	113
90th Percentile	738	409	118
Highest Trial	937	510	166

* 0 to 20+ year-old horses

Appendix E - Beaty Butte Population Modeling Alternative I - Fertility Control

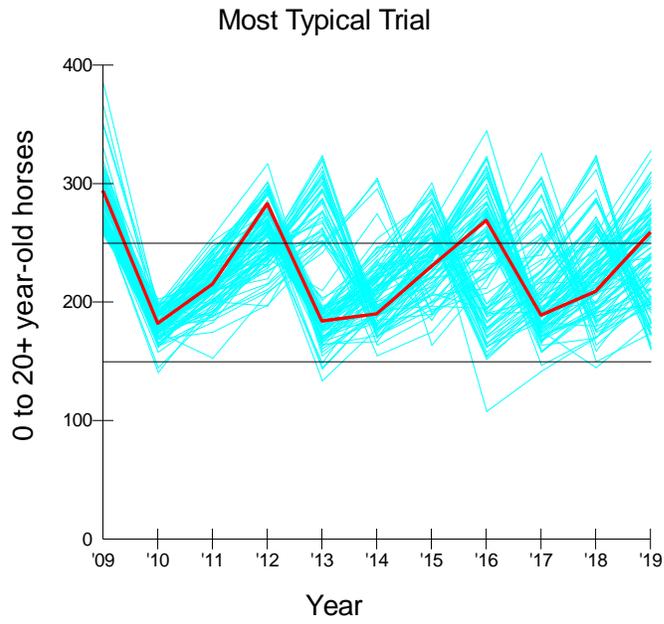
Growth Rates



Average Growth Rate in 10 Years

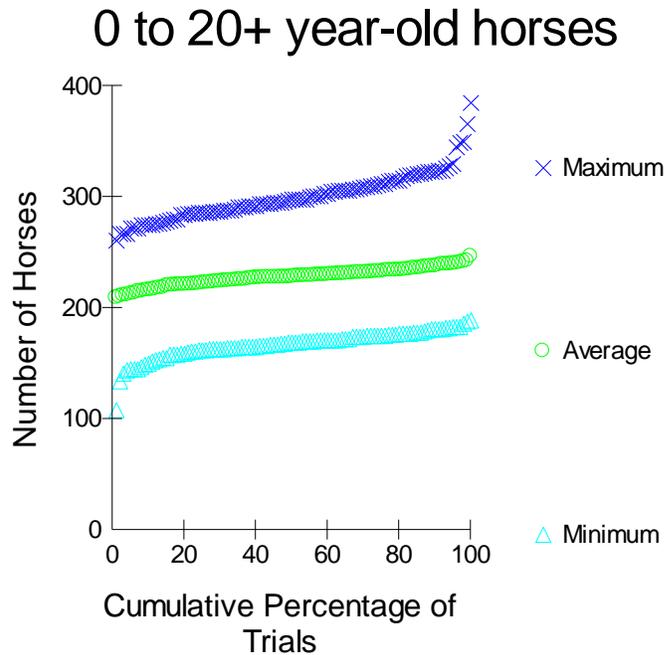
Lowest Trial	9.6
10th Percentile	13.1
25th Percentile	14.0
Median Trial	15.3
75th Percentile	16.3
90th Percentile	17.4
Highest Trial	19.7

Appendix E - Beaty Butte Population Modeling Alternative II – Gather Only



Appendix E - Beaty Butte Population Modeling Alternative II – Gather Only

Population Size



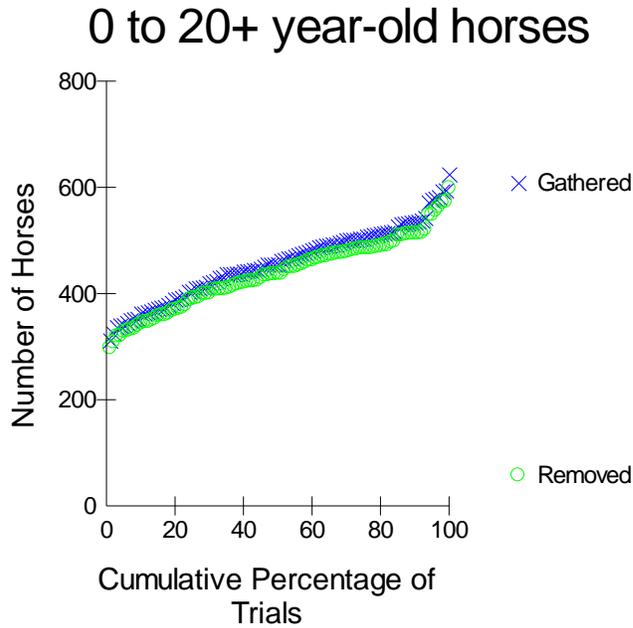
	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	108	209	261
10th Percentile	151	216	275
25th Percentile	162	223	286
Median Trial	169	228	298
75th Percentile	175	233	312
90th Percentile	181	238	324
Highest Trial	189	247	385

* 0 to 20+ year-old horses

In 11 years and 100 trials, the lowest number of 0 to 20 yr old horses ever obtained was 108 and the highest was 385. In half the trials, the minimum population size in 11 yrs was less than 169 and the maximum was less than 298. The average population size in 11 yrs ranged from 209 to 247.

Appendix E - Beaty Butte Population Modeling Alternative II – Gather Only

Gather Rate

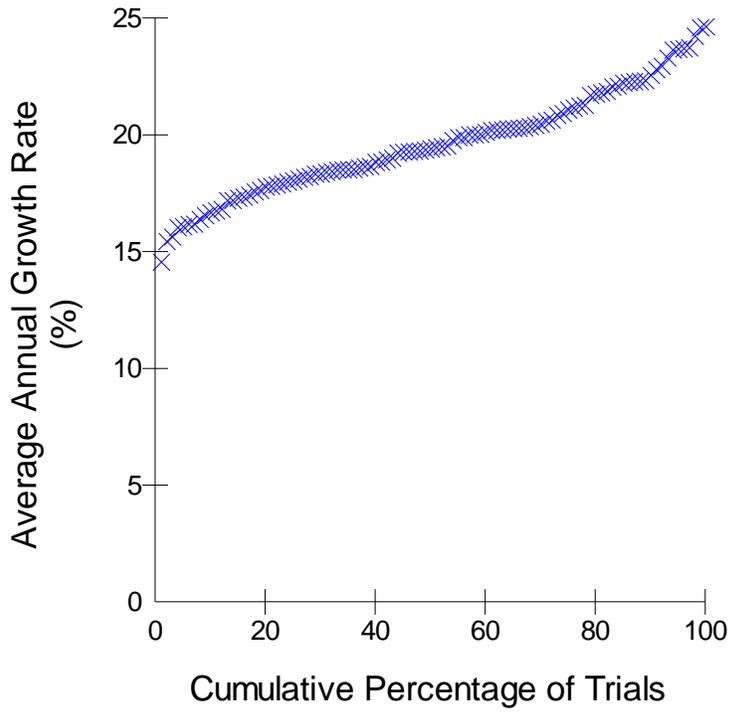


	Totals in 11 Years*	
	Gathered	Removed
Lowest Trial	312	298
10th Percentile	363	346
25th Percentile	408	392
Median Trial	459	438
75th Percentile	506	486
90th Percentile	536	514
Highest Trial	625	599

* 0 to 20+ year-old horses

Appendix E - Beaty Butte Population Modeling Alternative II – Gather Only

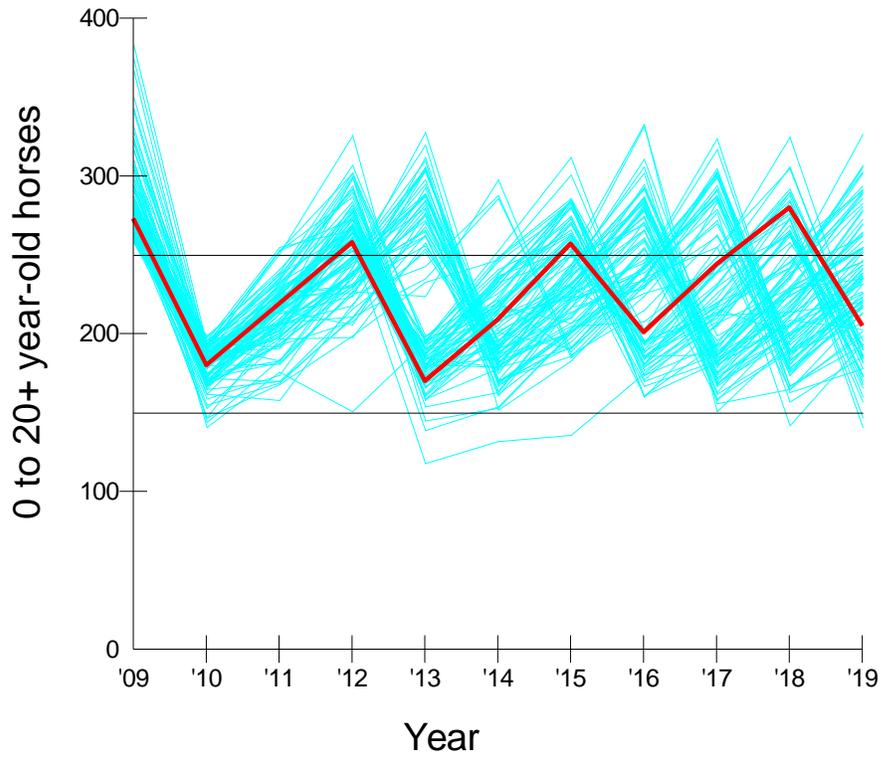
Growth Rate



Average Growth Rate in 10 Years	
Lowest Trial	14.6
10th Percentile	16.7
25th Percentile	18.1
Median Trial	19.5
75th Percentile	21.1
90th Percentile	22.7
Highest Trial	24.7

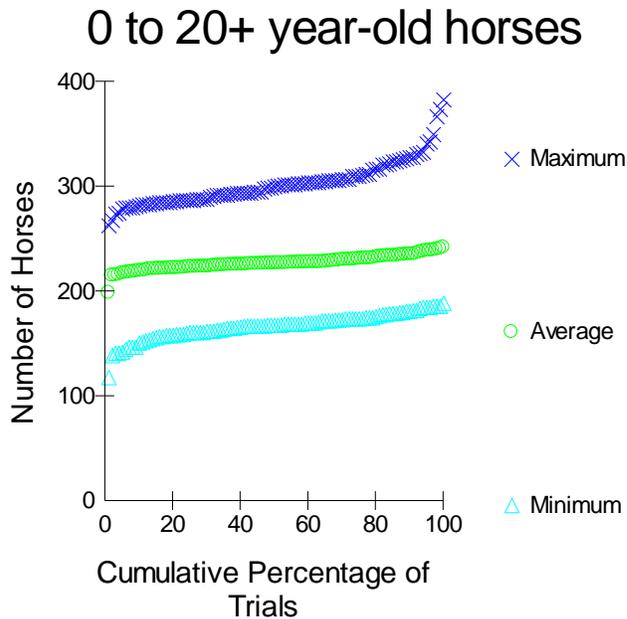
Appendix E - Beaty Butte Population Modeling
Alternative III - 60/40 Ratio – Males to Females

Most Typical Trial



Appendix E - Beaty Butte Population Modeling Alternative III - 60/40 Ratio – Males to Females

Population Size



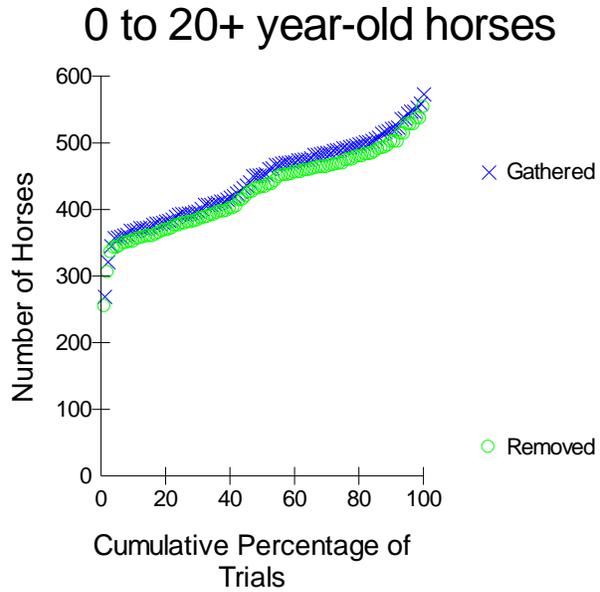
	Minimum	Average	Maximum
Lowest Trial	118	199	263
10th Percentile	152	220	282
25th Percentile	161	223	287
Median Trial	168	227	300
75th Percentile	174	231	310
90th Percentile	182	235	328
Highest Trial	189	242	383

* 0 to 20+ year-old horses

In 11 years and 100 trials, the lowest number of 0 to 20 yr old horses ever obtained was 118 and the highest was 383. In half the trials, the minimum population size in 11 yrs was less than 168 and the maximum was less than 300. The average population size in 11 yrs ranged from 199 to 242.

Appendix E - Beaty Butte Population Modeling
 Alternative III - 60/40 Ratio – Males to Females

Gather Rate

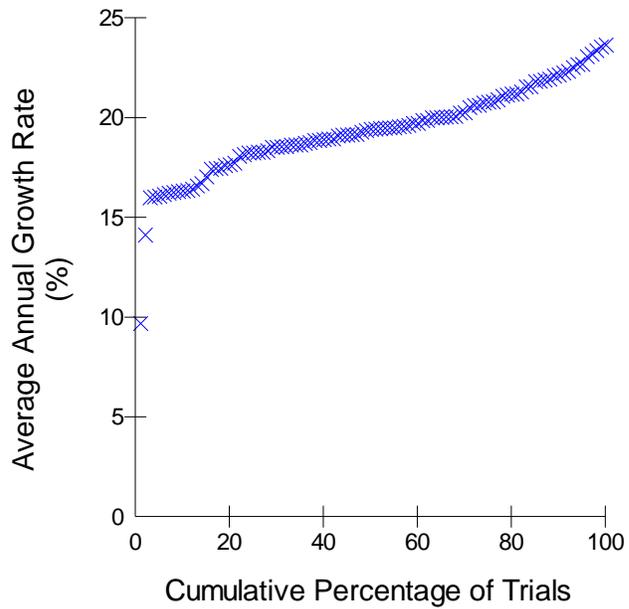


	Totals in 11 Years*	
	Gathered	Removed
Lowest Trial	270	255
10th Percentile	370	354
25th Percentile	394	379
Median Trial	454	434
75th Percentile	493	472
90th Percentile	522	502
Highest Trial	574	554

* 0 to 20+ year-old horses

Appendix E - Beaty Butte Population Modeling Alternative III - 60/40 Ratio – Males to Females

Growth Rate



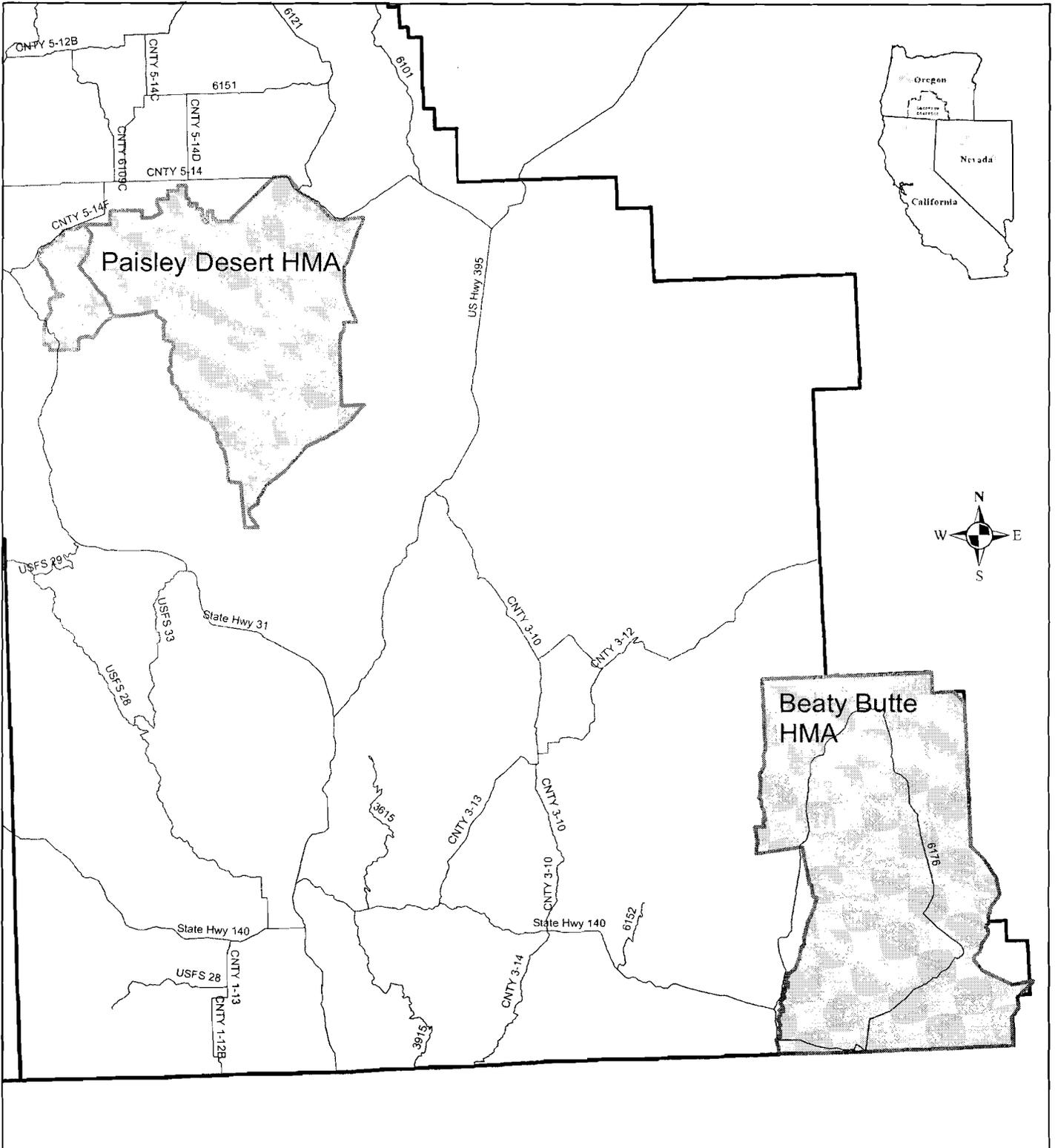
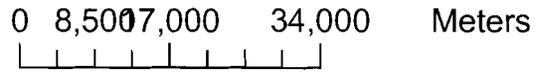
Average Growth Rate in 10 Years

Lowest Trial	9.7
10th Percentile	16.4
25th Percentile	18.3
Median Trial	19.5
75th Percentile	20.8
90th Percentile	22.2
Highest Trial	23.7

Map 1 - Herd Management Areas

Legend

- Major Roads
- ▨ Herd Management Area
- ▭ Lakeview Resource Area Boundary



Map 2 - Wilderness Study Areas in Relation to the Beaty Butte Herd Management Area

Legend

- Major Roads
- WSAs
- Herd Management Area

