

**U.S. Department of the Interior
Bureau of Land Management**

Preliminary Environmental Assessment

**Three Fingers Herd Management Area
Wild Horse Gather Plan**

U.S. Department of the Interior
Bureau of Land Management
Vale District/Malheur Field Office
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TABLE OF CONTENTS

1.0 Purpose of and Need for Action	1
1.1 Background.....	1
1.2 Purpose of and Need for Action.....	1
1.3 Land Use Plan Conformance	2
1.4 Relationship to Laws, Regulations, and Other Plans	2
1.5 Conformance with Rangeland Health Standards and Guidelines	3
1.6 Decision to be Made	3
2.0 Proposed Action and Alternatives	3
2.1 Introduction.....	3
2.2 Description of Alternatives Considered in Detail.....	3
2.3 Summary Comparison of Alternatives.....	5
2.4 Alternatives Considered but Dismissed from Detailed Analysis.....	5
3.0 Affected Environment	6
3.1 General Description	6
3.2 Description of Affected Resources/Issues	6
4.0 Environmental Consequences	12
4.1 Introduction.....	12
4.2 Predicted Effects of Alternatives	13
4.3 Cumulative Effects for All Alternatives	21
4.4 Reasonably Foreseeable Future Actions	22
4.5 Summary of Past, Present, and Reasonably Foreseeable Future Actions	22
5.0 Monitoring and Mitigation Measures	24
6.0 List of Preparers	24
7.0 Consultation and Coordination	24
8.0 References	25
9.0 Appendices	25

1.0 Purpose of and Need for Action

1.1 Background

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

Since the passage of the Wild Horse and Burro Act, management knowledge regarding horse population levels has increased. For example, wild horses are capable of increasing numbers 18 to 25% annually, resulting in the doubling of wild horse populations about every 4 years. National Awareness and attention for wild horse and burro issues, as well as the opportunities for wild horse viewing has also grown. These two factors have resulted in the BLM shifting program emphasis with wild horse and burro program goals expanded beyond simply establishing a “thriving natural ecological balance” (setting appropriate management level (AML)) for individual herds, to include achieving and maintaining viable, vigorous and stable populations.

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

The Three Fingers Herd Management Area (HMA) comprises about 62,508 acres of public land. The HMA is located in Malheur County, about 25 miles N from Jordan Valley, Oregon (Map 1). The AML for wild horses within the HMA is 75-150 wild horses. The AML was established in Southern Malheur Management Framework Plan (MFP) (1975) and was analyzed in the Southeast Oregon Resource Management Plan Final Environmental Impact Statement (SEORMP/FEIS, 2001). The HMA was last gathered in August 2006.

The BLM is proposing to gather about 250 wild horses and remove approximately 175 excess wild horses from within and outside the Three Fingers HMA beginning about August 2011. Seventy-five wild horses would remain in the HMA after the gather; of these, about 30 would be mares treated with fertility control and about 45 would be studs or geldings to adjust the sex ratio and slow population growth.

Based upon all information available at this time, the BLM has determined that approximately 175 excess wild horses exist within the HMA and need to be removed. This assessment is based on the following factors including, but not limited to:

- A direct count of 218 wild horses in April 2010 and a 17% increase in 2011 will total approximately 175 horses in excess of the AML lower limit.
- Use by wild horses is exceeding the forage allocated to their use by approximately 25-30% in 2010.
- Utilization monitoring completed in 2009 and 2010 documents moderate to severe utilization by wild horses on key forage species within the upland areas of the HMA and outside the HMA.
- Utilization monitoring completed in 2008, 2009 and 2010 documents severe utilization of forage within riparian habitats, and extensive trampling and trailing damage by wild horses.

1.2 Purpose of and Need for Action

The purpose and need for the proposed action is to meet the established objectives and goals of the SEORMP/ROD by maintaining the AML for the Three Fingers HMA (SEORMP/ROD, 2002, 55-57). The purpose of the action is to gather and remove excess wild horses from the Three Fingers HMA. This action is necessary to maintain a

thriving natural ecological balance which protects public land resources from deterioration. During the most recent field monitoring in 2010, heavy to severe utilization of riparian and upland vegetation in and adjacent to perennial streams, springs, and reservoirs was observed. Resource damage is occurring in some areas of the HMA due to the current overpopulation of wild horses, and is likely to continue to occur as well as increase without immediate action.

This action is needed in order to achieve and maintain a population size within the established AML, protect rangeland resources from further deterioration associated with the current overpopulation, and restore a thriving natural ecological balance and multiple use relationship on public lands in the area consistent with the provisions of Section 3(b)(2) of the Wild Free-Roaming Horses and Burros Act (WFRHBA) of 1971.

During the most recent population inventory completed on April 19, 2010, a total of 218 wild horses were counted within the HMA. The SEORMP/ROD states minimum and maximum population levels of 75 and 150 horses in the HMA.

1.3 Land Use Plan Conformance

The Action Alternatives are tiered to the SEORMP/FEIS (2001, Chapter 3 242-246) and are in conformance with decisions made in the SEORMP/ROD (2002, 55-57). Objectives identified for wild horse herds in these documents include (1) maintaining and managing HMAs at AMLs to ensure a thriving natural ecological balance between wild horse populations, wildlife, livestock, vegetation resources, and other resource values, and (2) enhancing and perpetuating special and unique characteristics that distinguish the herd.

1.4 Relationship to Laws, Regulations, and Other Plans

Statutes and Regulations

This action is governed by the WFRHBA 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 (PRIA)). Included are:

43 CFR 4710.3-1 Herd management areas.

Herd management areas shall be established for the maintenance of wild horse and burro herds. In delineating each herd management area, the authorized officer shall consider the appropriate management level for the herd, the habitat requirements of the animals, the relationships with other uses of the public and adjacent private lands, and the constraints contained in 4710.4. The authorized officer shall prepare a herd management area plan, which may cover one or more herd management areas.

43 CFR 4710.4 Constraints on management.

Management of wild horses and burros shall be undertaken with limiting the animals' distribution to herd areas. Management shall be at the minimum feasible level necessary to attain the objectives identified in approved land use plans and herd management area plans.

43 CFR 4720.1 Removal of excess animals from public lands.

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.

43 CFR 4740.1 Use of motor vehicles or aircraft.

(a) Motor vehicles and aircraft may be used by the authorized officer in all phases of the administration of the Act, except that no motor vehicle or aircraft, other than helicopters, shall be used for the purpose of herding or chasing wild horses or burros for capture or destruction. All such use shall be conducted in a humane manner.

(b) Before using helicopters or motor vehicles in the management of wild horses or burros, the authorized officer shall conduct a public hearing in the area where such use is to be made.

1.5 Conformance with Rangeland Health Standards and Guidelines

As stated in 43 CFR 4180.2(b) - "Standards and guidelines must provide for conformance with the fundamentals of 43 CFR 4180.1." The Standards and Guidelines for Grazing Management for public lands have been reviewed by the Departmental Review Team who found that they comply with the requirements of the regulations. Gathering excess horses conforms to the standards and guides which were developed with full public participation and in consultation with Oregon/Washington's resource advisory councils and are in conformance with appropriate land use plans.

1.6 Decision to be Made

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

2.0 Proposed Action and Alternatives

2.1 Introduction

This section of the EA describes the Proposed Action and alternatives, including any that were considered but eliminated from detailed analysis. Five alternatives are considered in detail:

- Alternative 1: Proposed Action – Capture wild horses in order to remove approximately 175 excess animals, apply PZP-22 fertility control vaccine to released mares, and establish a 60% male sex ratio.
- Alternative 2: Removal only (no fertility control or sex ratio adjustment).
- Alternative 3: Capture wild horses in order to remove approximately 175 excess animals and apply PZP-22 fertility control vaccine to released mares.
- Alternative 4: Capture wild horses in order to remove approximately 175 excess animals and establish a 60% male sex ratio.
- Alternative 5: No Action — Defer gather and removal.

The Proposed Action, Alternative 2, Alternative 3 and Alternative 4 were developed to respond to the identified resource issues and the Purpose and Need to differing degrees. The No Action Alternative would not achieve the identified Purpose and Need. However, it is analyzed in this EA to provide a basis for comparison with the other action alternatives, and to assess the effects of not conducting a gather at this time. The No Action Alternative is in violation of the WFRHBA which requires the BLM to immediately remove excess wild horses.

2.2 Description of Alternatives Considered in Detail

2.2.1 Management Actions Common to Alternatives 1-4

- The gather would begin in August 2011 and take about 10 days to complete. Several factors such as animal condition, herd health, weather conditions, or other considerations could result in adjustments in the schedule.
- Gather operations would be conducted in accordance with the Standard Operating Procedures (SOPs) described in the National Wild Horse and Burro Gather Contract (Appendix A). The primary gather (capture) methods would be the helicopter drive method with occasional helicopter assisted roping (from horseback).
- Trap sites and temporary holding facilities will be located in previously used sites or other disturbed areas whenever possible. Undisturbed areas identified as potential trap sites or holding facilities would be

inventoried for cultural resources and special status species plants. If cultural resources or special status plant species are encountered, these locations would not be utilized unless they could be modified to avoid impacts to cultural resources and special status plant species.

- ❑ An Animal and Plant Inspection Service (APHIS) or other veterinarian may be on-site during the gather, as needed, to examine animals and make recommendations to BLM for care and treatment of wild horses.
- ❑ Decisions to humanely euthanize animals in field situations will be made in conformance with BLM policy (Washington Office Instruction Memorandum 2009-041). Current policy reference: http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-041.html
- ❑ Data including sex and age distribution, condition class information (using the Henneke rating system), color, size and other information may also be recorded, along with the disposition of that animal (removed or released).
- ❑ Hair samples would be collected on about 25-100 animals to assess the genetic diversity of the herd. Samples would also be collected during future gathers as needed to determine whether BLM's management is maintaining acceptable genetic diversity (avoiding inbreeding depression).
- ❑ Excess animals would be transported to the Burns BLM corral facility where they will be prepared (freeze-marked, vaccinated and de-wormed) for adoption, sale (with limitations) or long-term holding.
- ❑ Temporary closure of roads within the HMA during gather operations may be instituted as necessary to allow for safe and effective operations to proceed.

2.2.2 Alternative 1: Proposed Action

The Proposed Action would gather about 250 and remove approximately 175 excess wild horses from within and outside the Three Fingers HMA beginning in August 2011. Animals would be removed using a selective removal strategy. Selective removal criteria for the HMA include: (1) First Priority: Age Class – Four Years and Younger; (2) Second Priority: Age Class – Eleven to Nineteen Years (3) Third Priority: Age Class Five to Ten Years 4) Fourth Priority: Age Class Twenty Years and Older should not be removed from the HMA unless specific exceptions prevent them from being turned back to the range. Irrespective of their age class, all animals residing outside the HMA would be removed. Up to 75 of the captured wild horses would be released; of these, about 30 would be mares treated with fertility control and about 45 would be studs (or geldings) as follows:

- ❑ Mares would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine and released back to the range. Fertility control treatment would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures (SOPs, Appendix B). Mares would be selected to maintain a diverse age structure, herd characteristics and conformation (body type).
- ❑ Studs and geldings would be selected for release with the objective of establishing a 60% male sex ratio. Studs and geldings would be selected to maintain a diverse age structure, herd characteristics and body type (conformation).
- ❑ Post-gather, every effort would be made to return released horses to the same general area from which they were gathered.

2.2.3 Alternative 2: Removal Only

Alternative 2 would gather and remove about 175 excess wild horses from within and outside the Three Fingers HMA beginning in about August 2011. Fertility control would not be applied and no changes to the herd's existing sex ratio would be made.

2.2.4 Alternative 3: Removal with Fertility Control

Alternative 3 would gather and remove about 175 excess wild horses from within and outside the Three Fingers HMA beginning in about August 2011. Fertility control would be applied, but no changes to the herd's existing sex ratio would be made.

2.2.5 Alternative 4: Removal with Sex Ratio Adjustment

Alternative 4 would gather and remove about 175 excess wild horses from within and outside the Three Fingers HMA beginning in about August 2011. The herd's existing sex ratio would be adjusted to establish a 60% male sex ratio. Fertility control would not be applied.

2.2.6 Alternative 5: No Action

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

2.3 Summary Comparison of Alternatives

Table 1: Summary Comparison of the Alternatives

Item	Alternative 1: Proposed Action	Alternative 2: Removal Only	Alternative 3: Removal and Fertility Control only	Alternative 4: Removal and Sex Ratio only	Alternative 5: No Action
<u>Impacts to Wild Horses</u>					
• Gather Number	250	250	250	250	0
• Removal Number	175	175	175	175	0
• Fertility Control - # Mares	30	0	37-38	0	0
• Post-Gather Sex Ratio	60/40	50/50	50/50	60/40	0
• Post-Gather Population Size	75	75	75	75	255

2.4 Alternatives Considered but Dismissed from Detailed Analysis

2.4.1 Use of Bait and/or Water Trapping

It would not be timely, cost-effective or practical to use bait and/or water trapping as the primary gather method because the number of water sources on both private and public lands within and outside the HMA would make it almost impossible to restrict wild horse access to the selected water trap sites. When water sources become limited, accessibility to these water sources is extremely remote, thereby, becoming an unpractical and economically unfeasible method of gathering horses. As a result, this alternative was dismissed from detailed analysis.

2.4.2 Remove or Reduce Livestock within the HMA

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

2.4.3 Gather the HMA to the AML Upper Limit

This alternative was dismissed from detailed study because AML would be exceeded the foaling season following the gather in 2011. This would result in the need to follow up with another gather within one year, and increased stress to individual wild horses and the herd and continuing resource damage due to wild horse overpopulation in the interim. Nor would this alternative be consistent with the WFRHBA, which upon determination excess wild horses are present, requires their immediate removal.

2.4.4 Fertility Control Treatment Only (No Removal)

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

would continue. This alternative would not meet the Purpose and Need for the Action, and would be contrary to the WFRHBA, and was dismissed from further study.

3.0 Affected Environment

This section of the EA briefly discusses the relevant components of the human environment which would be either affected or potentially affected by the Action Alternatives or No Action (Table 2). Direct impacts are those that result from the management actions while indirect impacts are those that exist once the management action has occurred.

3.1 General Description of the Affected Environment

The Three Fingers HMA encompasses 62,508 acres of public land within Malheur County, Oregon (Map 1). The HMA is bordered on the east by the Owyhee Reservoir, on the south by the Leslie Gulch Road, and on the north by the Owyhee Dam. The HMA is made up of the Wildhorse Basin Pasture/Board Corral Allotment and Riverside Pasture/Three Fingers Allotment.

The topography of the HMA varies from isolated flats and slightly rolling hills to steep mountainous country. There are several high, steep ridges in the area with rims and rocky outcrops. The central portion of the Riverside pasture is made up of steep, highly dissected sediments referred to as the canyon lands. The southern portion of the Riverside pasture is made up of the Shadscale Flat area and surrounding ridges. Elevation varies from approximately 2,600 to 5,000 feet. Precipitation averages 8 inches at lower elevations to 10 inches at the highest elevations. Most of this precipitation comes during the winter and spring months in the form of snow, supplemented by localized thunderstorms during the summer months.

The primary vegetation found in the allotment is big sagebrush, rabbitbrush, bluebunch wheatgrass, and Sandberg bluegrass. Since the wildfires that occurred in 2002 and 2007, there has been an invasion of annual grasses in the uplands. Vegetative studies in the HMA since 1972 indicate downward trend of perennial grasses.

3.2 Description of Affected Resources/Issues

Table 2 lists the elements of the human environment subject to requirements in statute, regulation, or executive order which must be considered.

Table 2: Supplemental Authorities and Other Elements

Supplemental Authorities	Present	Affected	Rationale
ACECs	YES	NO	Honeycombs Research Natural Area and Owyhee Views ACEC.
Air Quality	YES	NO	The planning area is outside a non-attainment area. Implementation of the Proposed Action would result in small and temporary areas of disturbance.
Cultural Resources	YES	NO	To prevent any impacts to cultural resources, trap sites and temporary holding facilities would be located in previously disturbed areas. Cultural resource surveys would be required prior to using trap sites or holding facilities outside existing areas of disturbance.
Environmental Justice	NO	NO	Not present.
Fish Habitat	NO	NO	Not present.
Floodplains	NO	NO	Not present.
Forest and Rangelands	YES	YES	Discussed below.
Human Safety	YES	NO	Implementing the road closures identified in Section 2.2 would eliminate the impacts to human safety created by the proposed action.
Migratory Birds	YES	YES	Discussed below.
Native American Religious Concerns	NO	NO	There are no known Native American Religious Concerns regarding this project.
Noxious Weeds	NO	NO	To prevent the risk for spread, any noxious weeds or non-native invasive weeds would be avoided when establishing and accessing trap sites and holding facilities.
Prime or Unique Farmlands	NO	NO	Not present.
Riparian-Wetland Zones	YES	YES	Discussed below.
T&E Species	YES	YES	Discussed below.
Water Quality	YES	NO	Locate trap sites and temporary holding facilities away from any riparian areas to avoid impacts to water quality.
Waste (Hazardous or Solid)	NO	NO	Not present.
Wild and Scenic Rivers	NO	NO	Not present.
Wilderness and Wilderness Study Area	YES	NO	Wilderness Characteristic areas Wild Horse Basin and Honeycombs WSAs OR-034-047, 061, 067 and 068 are within the HMA. To prevent any impacts to wilderness characteristics, trap sites and temporary holding facilities would be located in previously disturbed areas. Use of trap sites or holding facilities outside existing areas of disturbance would not be located in areas with existing wilderness characteristics.
Wilderness Characteristics	NO	NO	Not present.

In addition to the critical elements listed in Table 2, the following resources may be affected by the Action Alternatives and/or the No Action Alternative. The existing situation (affected environment) relative to these resources is described below.

3.2.1 Wild Horses

The area's designation as a herd management area was maintained in the SEORMP/FEIS ROD (2002). AML was established a population range of 75-150 wild horses in 1975 in the Southern Malheur MFP.

Forage is allocated for 75 to 150 horses in the Three Fingers HMA or 1800 animal unit months (AUMs). The HMA is divided into two pastures which are called Wildhorse Basin and Riverside Pastures. Inventory data show that horses have historically concentrated in areas near Wildhorse Basin and Shadscale Flat during the summer and fall. As the HMA approaches or goes over the high end of the AML, wild horses concentrate on the southernmost ridge in the Riverside Pasture throughout the spring and summer. During the winter and early spring, the horses can graze the canyon lands in both pastures if there is sufficient precipitation to provide seasonal surface water.

The current estimated population of 262 wild horses in the Three Fingers HMA is based on a direct count aerial population survey completed in April 2010 documenting 218 wild horses. This number is broken down into 217 adults and 45 foals. Analysis of these data indicates an average annual growth rate of approximately 17 % since the last gather. The current population is about 2 ½ times over the AML lower limit.

The utilization transects in both pastures are located to identify and monitor wild horse use of uplands. Utilization levels in the Shadscale Flat area were in the 40 to 60% range, while the Wildhorse Basin area ranged from 20 to 65%. Utilization levels in the southern portion of the Wildhorse Basin pasture and along the southernmost ridge in the Riverside Pasture are currently ranging from 60 to 90% in proximity to perennial water sources. The northern portion of the Wildhorse Basin pasture and the canyon lands area of the Riverside pasture has lower utilization levels due to a lack of perennial (hot season) water sources.

Owyhee Reservoir, Rookie Creek, Cherry Creek, and a few springs or seeps are the only natural perennial water sources within the Three Fingers HMA. The reservoir is not used regularly by the horses due to limited access. Water is a limiting factor in most years throughout the HMA, with concentrations of horses around the few perennial water sources. As the hot season progresses, wild horses are forced to congregate in riparian areas more often and in greater numbers as other water sources within the HMA are depleted. Competition for limited water and forage increases thus creating more confrontations and conflict among the bands. Excessive trailing by increasing numbers of wild horses coming into these water sources is apparent. Most of the other water sources in the HMA are seasonal seeps, springs, reservoirs, and drainages. These water sources are used in the winter and early spring.

The last removal of excess wild horses from the Three Fingers HMA was completed in August 2006 when 180 horses were gathered and 180 were removed. The un-gathered population was estimated at 75 animals (about 45 males and 30 females or a 60/40 % male/female sex ratio).

In the early 1970's, wild horses within the Three Fingers HMA were predominantly sorrel, bay, roan, black, pinto, dun, and brown. Most have saddle horse type conformation. Some of the horses in the HMA are probably descendants of army remount studs. Characteristics of the herds have remained the same since 1975. Adult horses in the HMA weigh an average of 950 to 1050 pounds and stand between 14.2 and 15.2 hands, with some stallions being slightly larger.

Stallions from other herds with similar characteristics have been periodically introduced into this HMA to help ensure genetic diversity. Baseline genetic diversity samples were taken in 2002. These samples indicate that genetic variability within the Three Fingers HMA is high and the herd appears to be of mixed origins. In comparison with other Oregon herds, the Three Fingers herd shows closest resemblance to the Paisley herd which reflects similar, diverse origins.

Most of the wild horses observed in the HMA in 2010 were a Body Condition Score of 4-5 using the Henneke Body Condition Chart. Peak foaling period for this herd is from March through May. Peak breeding period is from April through June.

Table 3: Wild Horse Gather History

HMA	Year	Captured	Removed	Released	Died/Euthanized
Three Fingers	2006	180	180	0	2
Three Fingers	2002	324	285	38	1
Three Fingers	1996	124	111	13	0
Three Fingers	1991	78	70	8	0
Three Fingers	1983	95	95	0	3
Three Fingers	1982	79	65	13	1
Three Fingers	1978	340	340	0	0
Three Fingers	1975	254	250	0	3
Three Fingers	1974	2	2	0	0

3.2.2 Grazing Management

The BLM allocated forage for livestock use most recently in the 2002 record of decision for the Southeastern Oregon Resource Management Plan (SEORMP). The allocation was carried forward from the Southern Malheur Rangeland Program Summary (January 1984), and will be revisited during activity planning associated with evaluation and assessment within Succor Creek Geographic Management Area as described in the SEORMP.

The Three Fingers Allotment as a whole has been managed under a deferred grazing system with a year round season of use with the exception of the Riverside pasture. There are 4 permittees that graze the Riverside pasture from March 1st to May 1st every year. The Riverside pasture is 53,998 acres and is the only pasture within the boundary of the Three Fingers HMA.

Year round use is authorized for Board Corrals Allotment. The Wildhorse Basin Pasture is 17,568 acres and is the only pasture in the Three Fingers HMA. The grazing system in Wildhorse Basin Pasture is a three year rotation of spring/early summer one year, summer/fall the next year, and late fall/winter the third year. There is currently 1 permittee authorized to graze livestock in Wildhorse Basin pasture.

Table 4 summarizes information about livestock grazing in Three Fingers and Board Corral Allotments and the relationship to wild horse management within the Three Fingers HMA.

Table 4: Livestock Use Information

Allotment	Total Allotment Acres	% of Allotment in HMA	Number of Permittees	Number of Authorized Livestock	Authorized Season of Use	Authorized Livestock AUMs in Allotment	Average Actual Livestock Use (AUMs) (Past 5 years)
Three Fingers	122,506 PD 23,033 Pvt 2,534 State	35%	4	1,311 Cattle	3/1 – 10/31	9,030	8,468 Average 6,671 Minimum 10,157 Maximum
Board Corral	55,675 PD 1,725 Pvt 0 State	28%	3	328 Cattle 8 Horses	3/1-2/28	Cattle 2298 Horses 56	3,048 Average 2,354 Minimum 4,112 Maximum

3.2.3 Wildlife

Wildlife species and populations found in the proposed project area are typical of Wyoming big sagebrush/bluebunch wheatgrass and sagebrush/cheatgrass disturbed habitat types in the northern Great Basin and Owyhee Uplands communities. The steeper “badland” topography near the Owyhee Reservoir, including the area burned, and the main side canyons provide important habitat for a herd of California bighorn sheep. Other big game species in the project area include pronghorn antelope, mule deer, and mountain lion. Pronghorn antelope and mule deer are present in the HMA year-long with most concentrated use in winter. A major concern in the Three Fingers HMA is competition for winter forage and summer water at the few natural springs in the area between bighorn sheep and wild horses. Forage demand is identified in the SEORMP in cooperation with Oregon

Department of Fish and Wildlife for mule deer and antelope within the HMA.

A variety of small mammals, reptiles, neotropical migratory birds and raptors common to southeast Oregon can be found throughout the area. Chukar partridge and California quail are found in the area year-round. Small mammals such as black-tailed jackrabbits and woodrats, reptiles including western rattlesnakes and western fence lizard, numerous species of neotropical migratory birds and several raptor species including the golden eagle common to southeast Oregon can be found throughout the area.

No fish occur in the proposed project area. Pacific tree frogs are abundant in reservoirs and springs throughout the Vale District, but no other amphibians have been observed within the project area.

3.2.4 Threatened and Endangered/Special Status Species

Six Bureau sensitive special status plant species are known to occur in the HMA. These include Ersters senecio (*Senecio ertterae*), Mentzelia packardiae (*Packard's mentzelia*), Owyhee clover (*Trifolium owyheense*), Hooker's buckwheat (*Eriogonum hookeri*), sterile milkvetch (*Astragalus cusickii* var. *sterilis*), and Grimy ivesia (*Ivesia rhypara* var. *rhypara*). None of these are listed under the federal Endangered Species Act, although the U.S. Fish and Wildlife Service consider the first four species listed Species of Concern. Owyhee clover and grimy ivesia are listed by the state of Oregon as Endangered, Mentzelia packardiae and sterile milkvetch are listed by the state as Threatened and Ersters senecio is a state Candidate. The senecio, mentzelia and ivesia occupy highly specific ash sites, with the senecio and mentzelia on loose talus rubble at few sites in Malheur County only, and the ivesia on six sites of shallow, more compacted ash in this area and with limited sites in Lake County, Oregon. Owyhee clover and sterile milkvetch grow in less definitive habitat within the Wyoming big sagebrush type, but are restricted globally to the ash soils of the Owyhee River canyon area between Birch Creek and Owyhee Dam. Although the milkvetch has been found both east and west of Owyhee River, the clover has not yet been found west of the river. Several sites of these two species are known in Idaho just to the east at the edge of their eastern range. While incidental surveys of sterile milkvetch have transpired an additional five occurrences within its extent overall inventory has been incomplete for all six species within the area due to the extremely rugged topography. It is anticipated that more sites would be found of the other species, particularly of the clover and milkvetch, with additional inventory.

The project area contains habitat for the following special status wildlife species: sage grouse, loggerhead shrike, western burrowing owl, long-nosed leopard lizards, Mojave black collared lizards, northern sagebrush lizards and desert horned lizards. Sage grouse are found within the HMA and are listed as Federal Candidate Species under the ESA. There are two leks adjacent to the HMA, one to the northeast and one to the southeast. These leks were last surveyed in 1997. The lek to the northeast had nine males in attendance, and the lek to the southeast was not active. The two leks are approximately two miles from the eastern boundary of the HMA. Although there have been sage grouse observed within the HMA in the past, overall sage grouse numbers in this area have declined over the last decade due to loss of habitat from large wildfires resulting in loss of sagebrush cover and associated forbs and an increase in cheatgrass and other non-natives.

Loss of sagebrush cover can directly affect food reserves for sage grouse. In addition, loss of sagebrush and other shrubs could directly reduce the quantity and quality of nesting and winter habitat. Reduction in escape cover can result in increased predation pressure on both nests and birds which could be exacerbated in the presence of wild horses (Beever and Aldridge 2011).

Changes in sagebrush and other communities, including riparian areas, induced by wild horses that most strongly affect sage grouse and other sagebrush obligates include: a reduction in grass abundance and cover, alterations to the structure and composition of the shrub mosaic (including a reduction in cover and increased fragmentation), increases in soil compaction and an increased dominance of forbs unpalatable to sage grouse and other wildlife species. All of these alterations may increase the vulnerability of sage grouse and other species to predation, parasites or disease, increase in energetic costs and stress levels required to locate suitable habitat or resources, and

can negatively affect nest success, chick survival or other aspects of fitness and survival, all of which could ultimately affect the viability of some populations (Beever and Aldridge, 2011).

BLM's policy is to manage habitat for species so there will not be a need to list under the Endangered Species Act. Bureau special status species documented within the HMA include loggerhead shrikes, long-nosed leopard lizards, Mojave black collared lizards, and desert horned lizards. Burrowing owls and golden eagles have been documented within 3 miles of the project area.

3.2.5 Vegetation

Upland Vegetation

Shrub steppe vegetation communities in the area result from cold winters and hot dry summers. Historically, the project area supported a wide variety of sagebrush/perennial grassland cover types. Disturbance factors such as wildfires, wild horse grazing use, historic domestic livestock grazing use, and invasive plants have converted large areas of shrub and perennial grass rangeland to annual grasses including cheatgrass (*Bromus tectorum*) and Medusahead (*Taeniatherum caput-medusae*). Stands of bluebunch wheatgrass (*Pseudoroegneria spicata*) occupy many north-facing slopes that have not been impacted by horses or fire. Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*) and basin big sagebrush (*Artemisia tridentata* ssp. *tridentata*) stands are common, generally associated with bluebunch wheatgrass, Thurber's needlegrass (*Stipa thurburiana*), Indian rice grass (*Achnatherum hymenoides*), needle and thread (*Stipa comata*), basin wildrye (*Leymus cinereus*), bottlebrush squirreltail (*Elymus elymoides*), and Sandberg bluegrass (*Poa secunda*). Pockets of low sagebrush (*Artemisia arbuscula*), primarily associated with Sandberg bluegrass and bluebunch wheatgrass are common on ridgetops along the fence route. Both gray rabbitbrush (*Ericameria nauseosa*) and green rabbitbrush (*Chrysothamnus viscidiflorus*) are scattered throughout the area. Broom snakeweed (*Gutierrezia sarothrae*) is ubiquitous. Forbs on areas in mid to late seral conditions include, but are not limited to, hermit milkvetch (*Astragalus erimiticus*), Pursh's milkvetch (*Astragalus purshii*), Hood's phlox (*Phlox hoodii*), arrowleaf balsamroot (*Balsamorhiza sagittata*), and showy penstemon (*Penstemon speciosus*). A number of volcanic ash pockets occur in and near the proposed project location. Associated with these unusual soils are bare-stemmed buckwheat (*Eriogonum novonudum*), yellow phacelia (*Phacelia lutea*), and an annual atriplex (*Atriplex* sp.).

Invasive Non-Native Species

A variety of noxious weeds and invasive annual plants of varying significance are scattered throughout Steamboat Ridge/Leslie Gulch area. As mentioned above, disturbed areas support extensive blocks of annual non-native grasses. Invasive non-native annual forbs including clasping pepperweed (*Lepidium perfoliatum*), blue mustard (*Chorispora tenella*), *Sisymbrium* spp., Russian thistle (*Salsola iberica*) and kochia (*Kochia scoparia*) are common. Halogeton (*Halogeton glomeratus*) is becoming established in the Shadscale Flat area just north of the proposed project. Scotch thistle (*Onopordum acanthium*), bull thistle (*Cirsium vulgare*) and Canada thistle (*Cirsium arvense*) are scattered about the Steamboat Ridge/Leslie Gulch area as well.

Several noxious, perennial weeds can be found in isolated patches at or within a ten mile radius of the project area. They consist of: Whitetop, or hoary cress, (*Lepidium* spp.), saltcedar (*Tamarix ramosissima*), perennial pepperweed (*Lepidium latifolium*), Russian knapweed (*Acroptilon repens*), dalmation toadflax (*Linaria genistifolia* ssp. *dalmatica*), diffuse knapweed (*Centaurea diffusa*), and yellow starthistle (*Centaurea solstitialis*). These noxious species are a particularly serious threat to the area because (1) they are easily moved about by various means including wind, water, human activities, livestock, wildlife, and wild horses and (2) they are often very difficult to kill and the products that will remove them are not available for use on public land in Oregon and (3) they may entirely replace native plants including special status species.

3.2.6 Soils

The soils found in the Three Fingers HMA were surveyed and described in Oregon's Long Range Requirements for Water 1969, Appendix I-11, Owyhee Drainage Basin. Unit 60, Unit 98 and portions of Unit 76 occur on 20 to 60 percent slopes, while remaining portions of Unit 76 occur on 3 to 12 percent slopes. Microbiotic crusts have not been inventoried, but are known to exist throughout the HMA.

The area has Unit 60 soils that are moderately fine textured, well drained soils underlain by old lacustrine sediments. They occur on gently sloping to hilly uplands. This makes up approximately 60% of the HMA.

Unit 76 soils are shallow, clayey, very stony, well drained soils over basalt, rhyolite, or welded tuff. These soils occur on gently undulating to rolling lava plateaus and some very steep faulted and dissected terrain. This soil occurs mixed with Unit 77 soils in the northern end of the HMA on 3 to 12 percent slopes. It also occurs mixed with Unit 60 soils on steeper slopes. This soil makes up approximately 20% of the HMA.

Unit 98 is a miscellaneous land unit that makes up approximately 10% of the HMA. It consists of highly eroded and dissected raw old lacustrine sediments occurring as "badlands". Vegetative cover is very sparse in this soil.

3.2.7 Riparian Areas and Water Resources

There are only a few perennial water sources in the HMA including the Owyhee Reservoir which has terrain limited access. Wildhorse Basin Pasture has perennial water in Rookie Creek, Cherry Creek, and a handful of springs associated with both drainages. Riverside Pasture has perennial water along portions of Three Fingers Gulch and at various springs concentrated on the south end of the pasture.

The horses that typically used these riparian areas are currently displaced and putting pressure on other water sources due to the invasion of cheatgrass and medusahead into the burned areas. Some of the horses have moved into the Roger Spring area near the upper end of Three Fingers Gulch, but there is very little nutritional feed in this area. Many of the horses have relocated to the very southern end of the Riverside Pasture where there are several small perennial seeps along a ridgeline. These horses have been grazing outside of the HMA in the Leslie Gulch Area of Environmental Concern. The unauthorized entry and concentration of use has caused the denuding of riparian vegetation and loss of soil leading to the degradation of water quality and water holding capacity at spring sources in the ACEC. Areas of extreme wild horse grazing have seen encroachment of upland vegetation into the riparian area and due to yearlong use by wild horses, prevented any regrowth of riparian vegetation. Most of the perennial springs in the HMA have been developed. The herbaceous and woody riparian vegetation in all of the riparian areas is typically heavily utilized. There is very little recruitment or regeneration of the herbaceous or woody vegetation. There are also many areas that are trampled and pawed by the horses looking for water. Trails into the perennial sources are heavily utilized and are causing stream bank instability. Season-long horse grazing in these areas becomes a resource concern as horse numbers increase.

There are also many seasonal or intermittent seeps, springs, and creeks that the horses impact. Many of these cool season water sources are severely impacted by hoof traffic and pawing. Horses tend to paw in these areas as the water dries up during the hot season. This type of hoof action negatively impacts the water sources as much of the capability of the area for soil-water storage is decreased with soil loss.

4.0 Environmental Consequences

4.1 Introduction

This section of the EA documents the potential environmental impacts which would be expected with implementation of the Action Alternatives (Alternatives 1-4) and/or the No Action Alternative. These include the direct impacts (those that result from the management actions) and indirect impacts (those that exist once the management action has occurred).

4.2 Predicted Effects of Alternatives

The direct and indirect impacts to these resources which would be expected to result with implementation of the Action Alternatives or No Action Alternative are discussed in detail below.

4.2.1 Wild Horses

Results of Win Equus Population Modeling

The Alternatives were modeled using Version 3.2 of the Win Equus population model (Jenkins, 2000). The purpose of the modeling was to analyze and compare the effects of the Action Alternatives on population size, average population growth rate, and average removal number. Another objective of the modeling was to identify if any of the alternatives “crash” the population or cause extremely low population numbers or growth rates.

Minimum population levels and growth rates were found to be within reasonable levels and adverse impacts to the population are not likely. There was not a significant difference in the Action Alternatives for the number average number of horses removed over the next 11 years. See Appendix C for additional detail.

Impacts Common to Action Alternatives (1-4)

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

The BLM has been conducting wild horse gathers since the mid-1970s. During this time, methods and procedures have been identified and refined to minimize stress and impacts to wild horses during gather implementation. The SOPs (Appendix A) would be implemented to ensure a safe and humane gather occurs and would minimize potential stress and injury to wild horses. In addition to implementation of the SOPs, BLM would temporarily close roads in the HMA where gather operations were occurring to assist in ensuring the safety of the public, BLM contractors, BLM personnel, and wild horses.

In any given gather, gather-related mortality averages about one half of one percent (0.5%), which is very low when handling wild animals. Approximately another six-tenths of one percent (0.6%) of the captured animals could be humanely euthanized due to pre-existing conditions and in accordance with BLM policy (IM-2009-041).

These data affirm that the use of helicopters and motorized vehicles has proven to be a safe, humane, effective, and practical means for the gather and removal of excess wild horses (and burros) from the public lands. The BLM also avoids gathering wild horses by helicopter during the 6 weeks prior to and following the peak foaling season (i.e., March 1 through June 30).

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

Other injuries may occur after a horse has been captured and is either within the trap site corral, the temporary holding corral, during transport between facilities, or during sorting and handling. Occasionally, horses may sustain a spinal injury or a fractured limb but based on prior gather statistics, serious injuries requiring humane euthanasia occur in less than 1 horse per every 100 captured.

To minimize the potential for injuries from fighting, the animals are transported from the trap site to the temporary (or short-term) holding facility where they are sorted as quickly and safely as possible, then moved into large holding pens where they are provided with hay and water.

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

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

A few foals may be orphaned during a gather. This can occur if the mare rejects the foal, the foal becomes separated from its mother and cannot be matched up following sorting, the mare dies or must be humanely euthanized during the gather, the foal is ill or weak and needs immediate care that requires removal from the mother, or the mother does not produce enough milk to support the foal. On occasion, foals are gathered that were previously orphaned on the range (prior to the gather) because the mother rejected it or died. These foals are usually in poor, unthrifty condition. Every effort is made to provide appropriate care to orphan foals. Veterinarians may administer electrolyte solutions or orphan foals may be fed milk replacer as needed to support their nutritional needs. Orphan foals may be placed in a foster home in order to receive additional care. Despite these efforts, some orphan foals may die or be humanely euthanized as an act of mercy if the prognosis for survival is very poor.

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

It is not expected that genetic health would be negatively impacted by the Proposed Action. The AML range of 75-150 should provide for acceptable genetic diversity.

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

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

About 175 excess horses would be removed. Animals would be transported from the capture/temporary holding corrals to the designated BLM short-term holding corral facility(s) according to SOPs (Appendix A). During transport, potential impacts to individual horses can include stress, as well as slipping, falling, kicking, biting, or being stepped on by another animal. Unless wild horses are in extremely poor condition, it is rare for an animal to be seriously injured or die during transport.

Upon arrival at the short term holding facility, most wild horses begin to eat and drink immediately and adjust rapidly to their new situation. Recently captured wild horses, generally mares, in very thin condition may have difficulty transitioning to feed. Some of these animals are in such poor condition that it is unlikely they would have survived if left on the range. Similarly, some mares may lose their pregnancies. Every effort is taken to help the mare make a quiet, low stress transition to captivity and domestic feed to minimize the risk of miscarriage or death.

After recently captured wild horses have transitioned to their new environment, they are prepared for adoption or sale. During the preparation process, potential impacts to wild horses are similar to those that can occur during handling and transportation. Serious injuries and deaths from injuries during the preparation process are rare, but can occur.

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

From there, they would be made available for adoption or sale to qualified individuals or to long-term holding (grassland) pastures.

Adoption or Sale with Limitations, and Long Term Holding

Other indirect impacts include transportation to adoptions, sales, or long-term pastures (LTP). Adoptions are conducted in accordance with 43 CFR 5750. Sales of wild horses are conducted in accordance with Bureau policy. The BLM has maintained long-term pastures (LTP) in the Midwest for over 20 years. Potential impacts to wild horses from transport to adoption, sale or LTP are similar to those previously described.

LTPs are designed to provide excess wild horses with humane, life-long care in a natural setting off the public rangelands. Handling by humans is minimized to the extent possible although regular on-the-ground observation and weekly counts of the wild horses to ascertain their numbers, well-being, and safety are conducted.

Impacts of Alternative 1 (Proposed Action)

PZP application would be done according to SOPs (Appendix B). When injected, PZP (antigen) causes the mare's immune system to produce antibodies and these antibodies bind to the mare's eggs, and effectively block sperm binding and fertilization (Zoo Montana, 2000). PZP is relatively inexpensive, meets BLM requirements for safety to mares and environment, and can easily be administered in the field. In addition, among mares, PZP contraception appears to be completely reversible.

The highest success for fertility control has been obtained when applied during the timeframe of November through February. This gather would require PZP application outside the window for highest success. Below is the efficacy for the application of the two-year PZP vaccine:

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
Summer Application	Normal	80%	65%	50%
Winter Application	Normal	94%	82%	68%

One-time application at the capture site would not affect normal development of the fetus, hormone health of the mare or behavioral responses to stallions, should the mare already be pregnant when vaccinated (Kirkpatrick, 1995). The vaccine has also proven to have no apparent effect on pregnancies in progress, the health of offspring, or the behavior of treated mares (Turner, 1997). Mares would foal normally in 2012 (Year 1).

Mares receiving the vaccine would experience slightly increased stress levels associated with handling while being vaccinated and freeze-marked. Serious injection site reactions associated with fertility control treatments are rare in treated mares. Any direct impacts associated with fertility control, such as swelling or local reactions at the injection site, would be minor in nature and of short duration. Most mares recover quickly once released back to the HMA, and none are expected to have long term consequences from the fertility control injections.

Under Alternative 1, some captured wild horses would be released back to the range to achieve a post-gather sex ratio of 60% studs or geldings and 40% mares. Under this alternative, 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. These effects would be slight, as the proposed sex ratio is not an extreme departure from normal sex ratio ranges. Modification of sex ratios for a post-gather population favoring studs or geldings would further reduce growth rates in combination with fertility control.

Impacts of Alternative 2 (Removal Only)

Implementation of Alternative 2 would result in capturing fewer wild horses than would be captured in Alternative 1. Alternative 2 would not involve fertility control; mares would not undergo the additional stress of receiving fertility control injections or freeze-marking and would foal at normal rates until the next gather is conducted. The post-gather sex ratio would be about 50:50 mares to studs. This would be expected to result in fewer and smaller bachelor bands, increased reproduction on a proportional basis within the herd, larger band sizes, and individual mares would likely begin actively producing at a slightly older age.

Impacts of Alternative 3 (Removal and Fertility Control)

Alternative 3 would involve fertility control; therefore, impacts related to fertility control would be the same as Alternative 1. The post-gather sex ratio would be about 50:50 mares to studs. This would be expected to result in fewer and smaller bachelor bands, increased reproduction on a proportional basis within the herd, larger band sizes, and individual mares would likely begin actively producing at a slightly older age.

Impacts of Alternative 4 (Removal and Sex Ratio Adjustment)

Alternative 2 would not involve fertility control; therefore, impacts related to fertility control would not apply. The post-gather sex ratio would be about 60:40 studs or geldings to mares. These impacts would be similar to those discussed in Alternative 1.

Impacts of Alternative 5 (No Action)

Under the No Action Alternative, there would be no active management to control the population size within the established AML at this time. In the absence of a gather, wild horse populations would continue to grow at an average rate of 17% per year. Without a gather and removal now, the population would grow to 478 in four years based on the average annual growth rate.

Use by wild horses would continue to exceed the amount of forage allocated for their use. Competition between wildlife, livestock and wild horses for limited forage and water resources would continue. Damage to rangeland resources would continue or increase. Over time, the potential risks to the health of individual horses would increase, and the need for emergency removals to prevent their death from starvation or thirst would also increase.

Over the long-term, the health and sustainability of the wild horse population is dependent upon achieving a thriving natural ecological balance and sustaining healthy rangelands. Allowing wild horses to die of dehydration or starvation would be inhumane and would be contrary to the WFRHBA which requires that excess wild horses be immediately removed. Allowing rangeland damage to continue to result from wild horse overpopulation would also be contrary to the WFRHBA which requires the BLM to “*protect the range from the deterioration associated with overpopulation*”, “*remove excess animals from the range so as to achieve appropriate management levels*”, and “*to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area.*”

4.2.2 Grazing Management

There will be no direct impacts to livestock and management practices from activity associated with gathering, including disturbance resulting from moving horses with a helicopter in the Riverside Pasture. The gather would occur after the cattle have been removed from the area. Minimal direct impacts to livestock would occur in the Wildhorse Basin Pasture where livestock are scheduled for summer use.

Impacts Common to Action Alternatives (1-4)

Removal of approximately 175 head of horses from the HMA would reduce competition between livestock and wild horses for the available forage and water resources. Indirect impacts would include an increase in the quality and quantity of the available forage in the short-term. Over the longer-term, improved vegetation resources would lead to a thriving natural ecological condition.

Impacts of Alternative 1 (Removal, Sex Ratio Adjustment, and Fertility Control) – Impacts of removal would benefit livestock management opportunities due to limitations for forage and water resources as identified above. Those benefits would be extended by limiting future growth of the horse herd through sex ratio adjustments and fertility control.

Impacts of Alternative 2 (Removal Only) – Impacts would not be as beneficial as in Alternative 1 and 3 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures or adjusting the sex ratio of the herd.

Impacts of Alternative 3 (Removal and Fertility Control) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not adjusting the sex ratio of the herd.

Impacts of Alternative 4 (Removal and Sex Ratio Adjustment) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures.

Impacts of Alternative 5 (No Action)

The current wild horse population is approximately 25-30% above their forage allocation. Heavy to severe utilization is occurring in areas where wild horses concentrate. The indirect impacts of No Action (Defer Gather and Removal) would be continued damage to the range, continuing competition between livestock, wild horses and wildlife for the available forage and water, reduced quantity and quality of forage and water, and undue hardship on the livestock operators who would be unable to fully use the forage resource they are authorized to use.

4.2.3 Wildlife

Impacts Common to Action Alternatives (1-4)

Wildlife populations in the areas from which horses are gathered by the helicopter would be forced to seek cover in areas adjacent to the flight path, trap sites, and other areas of human activity associated with the gather operation. The disturbance would be of short duration (8 to 10 days) and very localized causing individuals to be temporarily

displaced and therefore would not cause them to permanently abandon their normal habitat areas. Competition for water and/or forage that might exist between wild horses and wildlife would be reduced.

Impacts of Alternative 2 (Removal Only) – Impacts would not be as beneficial as in Alternative 1 and 3 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures or adjusting the sex ratio of the herd.

Impacts of Alternative 3 (Removal and Fertility Control) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not adjusting the sex ratio of the herd.

Impacts of Alternative 4 (Removal and Sex Ratio Adjustment) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures.

Impacts of Alternative 5 (No Action)

Wildlife populations in the HMA would be forced to compete more for limited water and forage, which would most likely alter use patterns. Habitat degradation would decrease wildlife populations and wildlife use in the HMA.

4.2.4 Threatened and Endangered/Special Status Species

Impacts Common to Action Alternatives (1-4)

Reducing the number of wild horses in the HMA will lead to increased herbaceous cover as well as maintained or improved vegetative conditions. This will benefit sage grouse and other special status species identified in the affected environment by limiting habitat fragmentation and providing increased forage and vegetative structure required by the various life processes of these species. Habitat quality and quantity would be increased reducing potential threats to the species viability within the Three Fingers HMA.

Impacts of Alternative 1 (Removal, Sex Ratio Adjustment, and Fertility Control) –

The trap site would be surveyed accordingly prior to gathering in order to avoid all adverse impacts to special status plants. Adoption of the proposed action would decrease adverse impacts from over population of wild horses on special status plants and their potential habitat. The land use plan objective to “Manage in order to conserve or lead to the recovery of threatened or endangered species” (ROD p 43) and the Leslie Gulch ACEC Management Plan objective to “Protect the special status plants within the ACEC from potential impacts from wild horses” (p 14) would be met.

The proposed action will allow present livestock use at allocated levels to continue. Fertility control would delay wild horse populations for one to two years thereby delaying competition between wildlife, livestock and wild horses.

Impacts of Alternative 2 (Removal Only) – Impacts would not be as beneficial as in Alternative 1 and 3 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures or adjusting the sex ratio of the herd.

Impacts of Alternative 3 (Removal and Fertility Control) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not adjusting the sex ratio of the herd.

Impacts of Alternative 4 (Removal and Sex Ratio Adjustment) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures.

Impacts of Alternative 5 (No Action)

Special status species would be affected by increased horse numbers through degradation of habitat conditions which could reduce productivity of these species. Riparian vegetation browsing and trampling springs, primarily due to wild horse use, would further degrade habitat conditions for wildlife.

Inaction would result in difficulty meeting the following objectives as stated in the 1995 Leslie Gulch ACEC Management Plan: “Maintain viable populations of the five special status plant species found in the Leslie Gulch ACEC on all suitable habitat” (p 14), “Protect the special status plants within the ACEC from potential impacts from wild horses” (p14).

4.2.5 Vegetation

Impacts Common to Action Alternatives (1-4)

In the immediate vicinity of the catch pens or corrals and the loading chute, short-term disturbance would occur. The soil would be compacted and vegetation would be trampled during panel installation by personnel and vehicles and severely trampled in the catch pen area by wild horses, domestic horses, and the wranglers. It is estimated and anticipated that 1 to 3 years would be required for native vegetation to become reestablished or regain vigor under average conditions with no reclamation. The total area of impact per trap would be approximately 2 acres, with less than ¼ acre severely disturbed. Less than one AUM of livestock forage would be temporarily lost for one grazing season at each trap site used.

There would be a positive impact to the upland and riparian vegetation by reducing the total numbers of wild horses grazing year long within the HMA. Lessened utilization would allow critical growth period rest for key cool season grasses. The composition of vegetation would change to a higher percentage of desirable plants, soil cover would increase and the potential for erosion would decrease.

Impacts of Alternative 1 (Removal, Sex Ratio Adjustment, and Fertility Control) – Impacts of removal would benefit vegetation resources as identified above. Those benefits would be extended by limiting future growth of the horse herd through sex ratio adjustments and fertility control.

Impacts of Alternative 2 (Removal Only) – Impacts would not be as beneficial as in Alternative 1 and 3 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures or adjusting the sex ratio of the herd.

Impacts of Alternative 3 (Removal and Fertility Control) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not adjusting the sex ratio of the herd.

Impacts of Alternative 4 (Removal and Sex Ratio Adjustment) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures.

Impacts of Alternative 5 (No Action)

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

4.2.6 Soils

Impacts Common to Action Alternatives (1-4)

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

Soil would be displaced and/or compacted on approximately two acres at each site in the construction of the trap, use of the access routes, and in the round-up and loading of the wild horses. The area of severe surface disturbance is normally less than 2,000 square feet. Minimal surface wind and water erosion is expected on these areas during the vegetative rehabilitation period (approximately 1 to 3 years).

Impacts of Alternative 2 (Removal Only) – Impacts would not be as beneficial as in Alternative 1 and 3 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures or adjusting the sex ratio of the herd.

Impacts of Alternative 3 (Removal and Fertility Control) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not adjusting the sex ratio of the herd.

Impacts of Alternative 4 (Removal and Sex Ratio Adjustment) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures.

Impacts of Alternative 5 (No Action)

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

4.2.7 Riparian Areas and Water Resources

Impacts Common to Action Alternatives (1-4)

The proposed action would limit the intensity of use at water sources and surrounding uplands. Regulating the number of wild horses in the HMA would reduce use near water sources and riparian areas by minimizing degradation to these resources.

The trap sites would not be located adjacent to any surface water sources or riparian areas, therefore, there would be no anticipated direct impact due to the gather.

Impacts of Alternative 2 (Removal Only) – Impacts would not be as beneficial as in Alternative 1 and 3 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures or adjusting the sex ratio of the herd.

Impacts of Alternative 3 (Removal and Fertility Control) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not adjusting the sex ratio of the herd.

Impacts of Alternative 4 (Removal and Sex Ratio Adjustment) - Impacts would not be as beneficial as in Alternative 1 due to the wild horse population increasing at a faster rate as a result of not conducting fertility control measures.

Impacts of Alternative 5 (No Action)

Increasing numbers of wild horses in the HMA would result in greater use and degradation of riparian areas. This

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

4.3 Cumulative Effects for All Alternatives

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

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

Past and Present Actions

4.3.1 Wild Horses

The Central Resource Area MFP (1975) designated the Three Fingers HMA for the long-term management of wild horses. The HMA area was reduced to its current size in the Leslie Gulch ACEC Management Plan (1995). Currently, management and AML of wild horses within the HMA conforms to decisions in the SEORMP/ROD (2002).

The actions which have influenced today's wild horse population are primarily wild horse gathers, which have resulted in the capture of some 1476 wild horses, the removal of 1398 excess horses, and release of 72 horses back into the HMA (see Table 3, Section 3.2.2).

4.3.2 Vegetation

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

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

4.4 Reasonably Foreseeable Future Actions

4.4.1 Wild Horses

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

4.4.2 Vegetation

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

4.5 Summary of Past, Present, and Reasonably Foreseeable Future Actions

Impacts Common to Action Alternatives (1-4)

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

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

Impacts of Alternative 1 (Proposed Action)

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

Impacts of Alternative 2 (Removal Only)

Removal only of wild horses has been the predominant method of population control used in the past on this herd. This alternative will result in more frequent gathers and disturbance to the wild horses than Alternatives 1, 3 or 4. As wild horses are gathered and sorted through for selecting which animals to release back into the HMA, there could be a decrease in the ability to effectively gather horses in the future as released horses learn to evade the helicopter.

Impacts of Alternative 3 (Removal and Fertility Control)

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

Impacts of Alternative 4 (Removal and Sex Ratio Adjustment)

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

Impacts of Alternative 5 (No Action)

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

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

Cumulative impacts would result in foregoing the opportunity to improve rangeland health and to properly manage wild horses in balance with the available forage and water and other multiple uses. Values identified for special management areas (ACEC, RNA, and WSAs) and special status plant species and habitat would be negatively impacted resulting in violation of rules governing management of these resources. Special status plant species and habitat would be adversely impacted and out of compliance with the SEORMP ROD (USDOI BLM 2002). Attainment of site-specific vegetation management objectives and Standards for Rangeland Health would not be achieved. AML would not be achieved and the opportunity to collect the scientific data necessary to re-evaluate AML levels, in relationship to rangeland health standards, would be foregone. Wilderness character and wilderness values would not be protected or maintained in the long term due the potential of exceeding the AML over the near term (within four to five years). The predominant value that would not be protected is naturalness. The special features for both the Honeycombs and Wild Horse Basin WSA s include vegetation and California big horn sheep habitat.

5.0 Monitoring and Mitigation Measures

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

Fertility control monitoring would be conducted in accordance with the SOPs (Appendix B). Monitoring the herd's social behavior would be incorporated into routine monitoring. The objective of this additional monitoring would be to determine if additional studs form bachelor bands or are more aggressive with breeding bands for the forage and water present.

If genetic monitoring indicates a loss of genetic diversity, then mares would be introduced into the Three Fingers HMA from an HMA with similar characteristics.

6.0 List of Preparers

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

- Shaney Rockefeller - Wild Horse and Burro Specialist
- Garry Brown - Range Management Specialist
- Michelle Caviness - Wildlife Biologist, Fisheries
- Diane Pritchard – Archaeologist
- Lynne Silva, Weed Specialist
- Todd Allai – Hydrologist, Soil Scientist, Riparian Management
- Gillian Wigglesworth – Botanist, ACEC/RNA Coordinator
- Kari Frederick – Recreation, VRM, Wilderness Characteristics
- Eric Mayes - Planning and Environmental Coordinator
- Pat Ryan – Field Manager, Malheur Resource Area

7.0 Consultation and Coordination

Public hearing(s) are held as a single state-wide annual hearing at the Burns District Office regarding the use of helicopters and motorized vehicles to capture wild horses (or burros). During the hearing(s), the public is given the opportunity to present new information and to voice any concerns or opinions regarding the use of these methods to capture wild horses (or burros). The Burns BLM Office held a hearing on April 21, 2010. No members of the public attended the meeting. BLM reviewed its Standard Operating Procedures in response to the views and issues expressed at the hearing and determined that no changes to the SOPs were warranted.

A notice of the action was sent to the groups and individuals on the District Mailing List including wild horse and burro interest groups.

Livestock operators in the Three Fingers HMA have been consulted.

Coordination has been conducted with Oregon Department of Fish and Wildlife.

8.0 References

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9.0 Appendices

Appendix A – Standard Operating Procedures (Gather Operation)

Appendix B – Standard Operating Procedures (Fertility Control Application and Monitoring)

Appendix C – Win Equus Population Modeling Results

Map 1 – Three Fingers HMA

APPENDIX A

Standard Operating Procedures (SOPs) for Wild Horse (or Burro) Gathers

Gathers are conducted by utilizing contractors from the Wild Horse (or Burros) Gathers-Western States Contract or BLM personnel. The following procedures for gathering and handling wild horses 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 Aviation Management Handbook* (January 2009).

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 a large number of animals may need to be euthanized or capture operations could be facilitated by a veterinarian, these services would be arranged 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 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 whenever possible.

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 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 (e.g., water or feed) to lure wild horses into a temporary trap.

The following procedures and stipulations will be followed to ensure the welfare, safety and humane treatment of wild horses 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. Under normal circumstances this travel should not exceed 10 miles and may be much less dependent on existing conditions (i.e. ground conditions, animal health, extreme temperature (high and low)).

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 larger than 2"x4".

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

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

4. 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.

5. 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.

6. Alternate pens, within the holding facility shall be furnished by the Contractor to separate mares or jennies with small foals, sick and injured animals, estrays or other animals the COR determines need to be housed in a separate pen 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.

7. The Contractor shall provide animals held in the traps and/or holding facilities with a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day. The contractor will supply certified weed free hay if required by State, County, and Federal regulation. An animal that is held at a temporary holding facility 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.

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

9. The Contractor shall restrain sick or injured animals if treatment is necessary. The COR/PI will determine if animals must be euthanized and provide for the 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.

10. Animals shall be transported to their final destination from temporary holding facilities as quickly as possible after capture unless prior approval is granted by the COR 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. 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. 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 in any 24 hour period. 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/PI or Field Office horse specialist.

B. Capture Methods That May Be Used in the Performance of a Gather

1. Capture attempts may be accomplished by utilizing bait (feed, water, mineral licks) to lure animals into a temporary trap. If this capture method is selected, the following applies:

- a. Finger gates shall not be constructed of materials such as "T" posts, sharpened willows, etc., which 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 half 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, if requested, 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 at least two (2) partition gates providing at least three (3) compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing at least 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 as much as possible during transport.
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:

- 11 square feet per adult horse (1.4 linear foot in an 8 foot wide trailer);
- 8 square feet per adult burro (1.0 linear foot in an 8 foot wide trailer);
- 6 square feet per horse foal (.75 linear foot in an 8 foot wide trailer);
- 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 utilizing a VHF/FM Transceiver or VHF/FM portable Two-Way radio. If communications are ineffective the government will take steps necessary to protect the welfare of the animals.
 - a. The proper operation, service and maintenance of all contractor furnished property is the responsibility of the Contractor. The BLM reserves the right to remove from service any contractor personnel or contractor furnished equipment which, in the opinion of the contracting officer or COR/PI violate contract rules, are unsafe or otherwise unsatisfactory. In this event, the Contractor will be notified in writing to furnish replacement personnel or equipment within 48 hours of notification. All such replacements must be approved in advance of operation by the Contracting Officer or his/her representative.
 - b. The Contractor shall obtain the necessary FCC licenses for the radio system
 - c. All accidents occurring during the performance of any task order shall be immediately reported to the COR/PI.
2. Should the contractor choose to utilize a helicopter the following will apply:
 - a. The Contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the Contractor shall comply with the Contractor's Federal Aviation Certificates, applicable regulations of the State in which the gather is located.
 - b. Fueling operations shall not take place within 1,000 feet of animals.

E. Site Clearances

No personnel working at gather sites may excavate, remove, damage, or otherwise alter or deface or attempt to excavate, remove, damage or otherwise alter or deface any archaeological resource located on public lands or Indian lands.

Prior to setting up a trap or temporary holding facility, BLM will conduct all necessary surveys (archaeological, T&E, etc.). All proposed site(s) must be inspected by a government archaeologist. Once the archaeological survey has been conducted, the trap or temporary holding facility may be set up. Said surveys shall be arranged for by the COR, PI, or other BLM employees.

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

F. Animal Characteristics and Behavior

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

G. Public Participation

Opportunities for public viewing (i.e. media, interested public) of gather operations will be made available to the

extent possible; however, the primary considerations will be to protect the health, safety and welfare of the animals being gathered and the personnel involved. The public must adhere to guidance from the on-site BLM representative. It is BLM policy that the public will not be allowed to come into direct contact with wild horses or burros being held in BLM facilities. Only authorized BLM personnel or contractors may enter the corrals or directly handle the animals. The general public may not enter the corrals or directly handle the animals at anytime or for any reason during BLM operations.

H. Responsibility and Lines of Communication

Contracting Officer's Representative/Project Inspector

Shaney Rockefeller

Contracting Officer's Representative/Project Inspector

Gary McFadden

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 Malheur Resource Area Assistant Field Manager and Field Manager will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, State Office, National Program Office, and BLM Holding Facility offices. All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

All publicity, formal public contact and inquiries will be handled through the District Public Affairs Officer. This individual will be the primary contact and will coordinate with the COR/PI on any inquiries.

The COR will coordinate with the contractor and the BLM Corrals to ensure animals are being transported from the capture site in a safe and humane manner and are arriving in good condition.

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

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

APPENDIX B

Standard Operating Procedures for Population-level Fertility Control Treatments

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

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

a lost dart may be noted and marked, and recovery efforts made at a later time. All discharged darts would be examined after recovery in order to determine if the charge fired and the plunger fully expelled the vaccine.

12. All mares targeted for treatment will be clearly identifiable through photographs to enable researchers and HMA managers to positively identify the animals during the research project and at the time of removal during subsequent gathers.

13. Personnel conducting darting operations should be equipped with a two-way radio or cell phone to provide a communications link with the Project Veterinarian for advice and/or assistance. In the event of a veterinary emergency, darting personnel would immediately contact the Project Veterinarian, providing all available information concerning the nature and location of the incident.

14. In the event that a dart strikes a bone or imbeds in soft tissue and does not dislodge, the darter would follow the affected horse until the dart falls out or the horse can no longer be found. The darter would be responsible for daily observation of the horse until the situation is resolved.

22-month time-release pelleted vaccine: The following implementation and monitoring requirements are part of the Proposed Action:

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

Monitoring and Tracking of Treatments:

1. At a minimum, estimation of population growth rates using helicopter or fixed-wing surveys will be conducted before any subsequent gather. During these surveys it is not necessary to identify which foals were born to which mares; only an estimate of population growth is needed (i.e. # of foals to # of adults).
2. Population growth rates of herds selected for intensive monitoring will be estimated every year post-treatment using helicopter or fixed-wing surveys. During these surveys it is not necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e. # of foals to # of adults). If, during routine HMA field monitoring (on-the-ground), data describing mare to foal ratios can be collected, these data should also be shared with the NPO for possible analysis by the USGS.

3. A PZP Application Data sheet will be used by field applicators to record all pertinent data relating to identification of the mare (including photographs if mares are not freeze-marked) and date of treatment. Each applicator will submit a PZP Application Report and accompanying narrative and data sheets will be forwarded to the NPO (Reno, Nevada). A copy of the form and data sheets and any photos taken will be maintained at the field office.

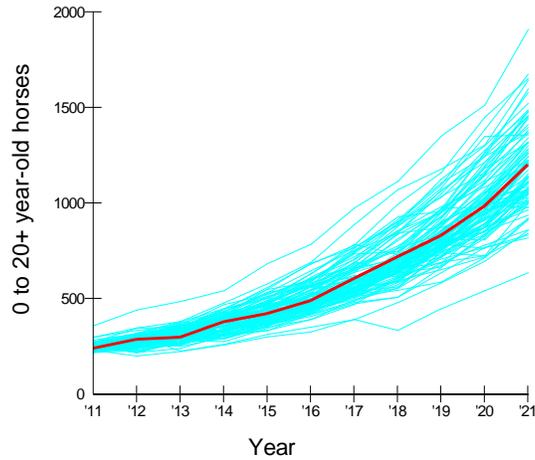
4. A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, disposition of any unused PZP, the number of treated mares by HMA, field office, and State along with the freeze-mark(s) applied by HMA and date.

APPENDIX C

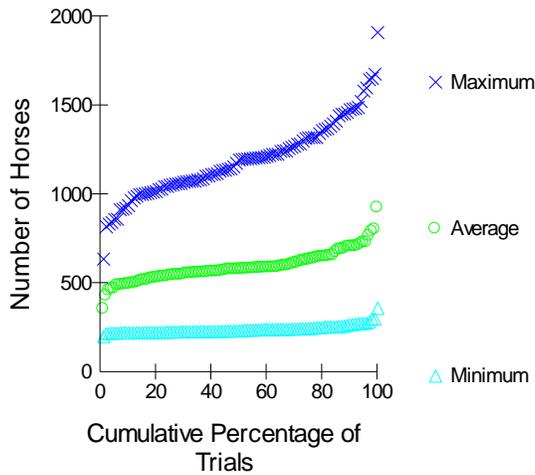
Population Modeling

Three Fingers HMA – No Action

Most Typical Trial



0 to 20+ year-old horses



Population Sizes in 11 Years*

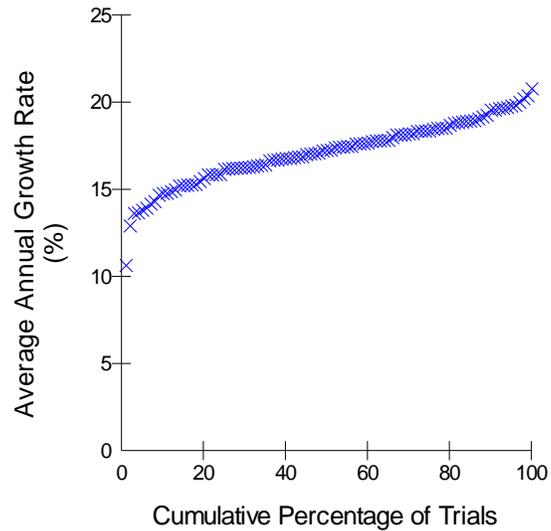
	Minimum	Average	Maximum
Lowest Trial	201	355	637
10th Percentile	222	496	952
25th Percentile	226	543	1054
Median Trial	233	579	1196
75th Percentile	247	633	1320
90th Percentile	269	706	1480
Highest Trial	360	925	1911

* 0 to 20+ year-old horses

Three Fingers HMA – No Action (cont.)

Explanation:

In 11 years and 100 trials, the lowest number of 0 to 20+ year-old horses ever obtained was 201 and the highest was 1911. In half the trials, the minimum population size in 11 years was less than 233 and the maximum was less than 1196. The average population size across 11 years ranged from 355 to 925.

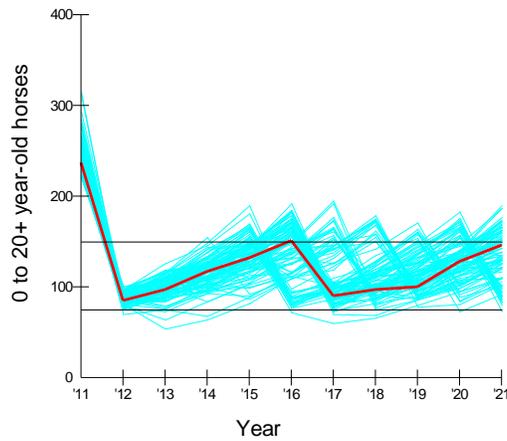


Average Growth Rate in 10 Years

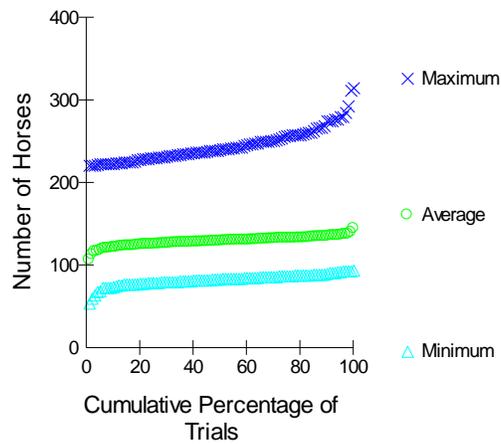
Lowest Trial	10.7
10th Percentile	14.8
25th Percentile	16.2
Median Trial	17.3
75th Percentile	18.4
90th Percentile	19.6
Highest Trial	20.8

Three Fingers HMA – Removal Only

Most Typical Trial



0 to 20+ year-old horses



Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	60	90	218
10th Percentile	65	112	224
25th Percentile	77	120	230
Median Trial	81	126	242
75th Percentile	86	133	258
90th Percentile	90	140	271
Highest Trial	95	148	329

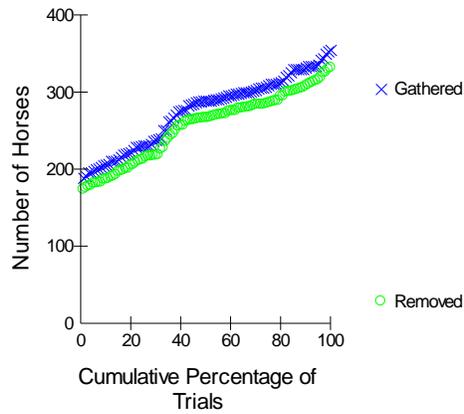
* 0 to 20+ year-old horses

Explanation:

In 11 years and 100 trials, the lowest number of 0 to 20+ year-old horses ever obtained was 54 and the highest was 315. In half the trials, the minimum population size in 11 years was less than 84 and the maximum was less than 240. The average population size across 11 years ranged from 107 to 145.

Three Fingers HMA – Removal Only (cont.)

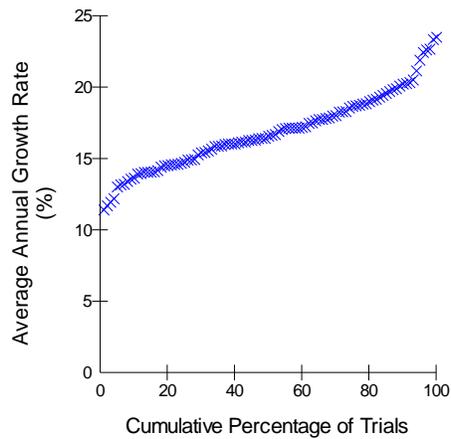
0 to 20+ year-old horses



Totals in 11 Years*

	Gathered	Removed
Lowest Trial	189	174
10th Percentile	206	188
25th Percentile	231	214
Median Trial	289	267
75th Percentile	310	286
90th Percentile	333	309
Highest Trial	355	332

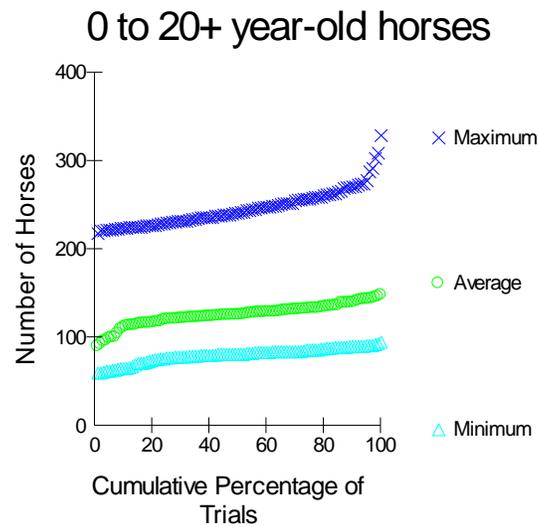
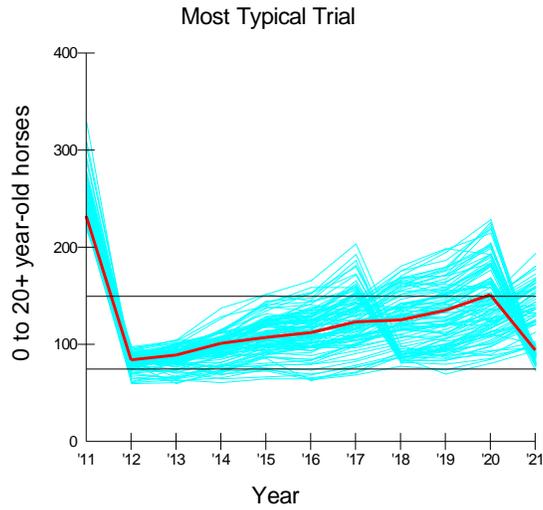
* 0 to 20+ year-old horses



Average Growth Rate in 10 Years

Lowest Trial	11.4
10th Percentile	13.8
25th Percentile	14.9
Median Trial	16.6
75th Percentile	18.7
90th Percentile	20.3
Highest Trial	23.5

Three Fingers HMA – Removal and Fertility Control and Removal with Fertility Control and Sex Ratio Skew



Population Sizes in 11 Years*

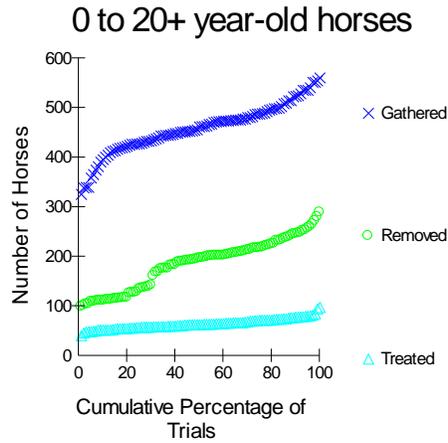
	Minimum	Average	Maximum
Lowest Trial	60	90	218
10th Percentile	65	112	224
25th Percentile	77	120	230
Median Trial	81	126	242
75th Percentile	86	133	258
90th Percentile	90	140	271
Highest Trial	95	148	329

* 0 to 20+ year-old horses

Explanation:

In 11 years and 100 trials, the lowest number of 0 to 20+ year-old horses ever obtained was 60 and the highest was 329. In half the trials, the minimum population size in 11 years was less than 81 and the maximum was less than 242. The average population size across 11 years ranged from 90 to 148.

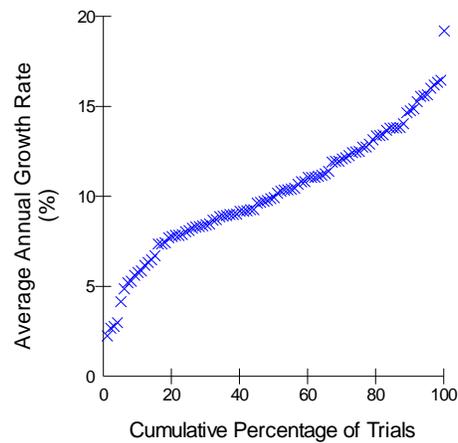
Three Fingers HMA – Removal and Fertility Control and Removal with Fertility Control and Sex Ratio Skew (cont.)



Totals in 11 Years*

	Gathered	Removed	Treated
Lowest Trial	326	99	41
10th Percentile	398	112	52
25th Percentile	428	135	58
Median Trial	462	197	63
75th Percentile	488	218	72
90th Percentile	524	246	78
Highest Trial	561	289	98

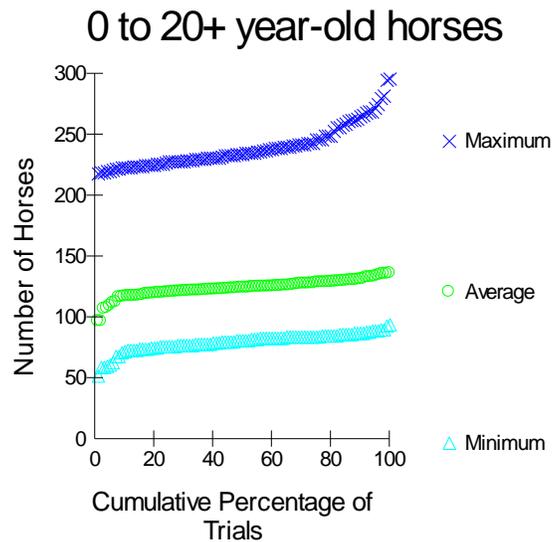
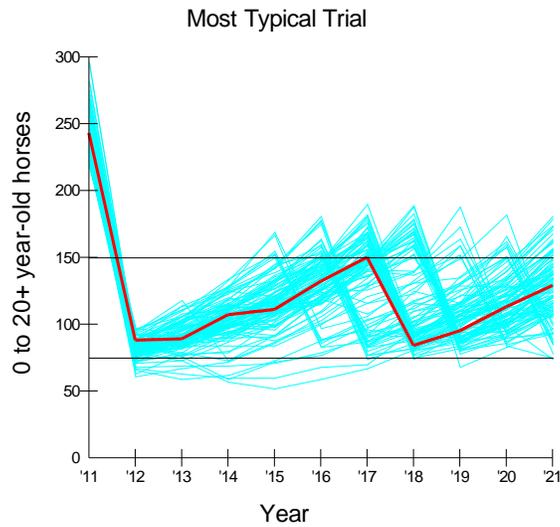
* 0 to 20+ year-old horses



Average Growth Rate in 10 Years

Lowest Trial	2.3
10th Percentile	5.9
25th Percentile	8.2
Median Trial	10.1
75th Percentile	12.7
90th Percentile	14.8
Highest Trial	19.2

Three Fingers HMA – Removal and Sex Ratio Skew



Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	52	97	218
10th Percentile	72	117	223
25th Percentile	76	121	228
Median Trial	81	124	234
75th Percentile	84	129	246
90th Percentile	87	131	266
Highest Trial	94	136	296

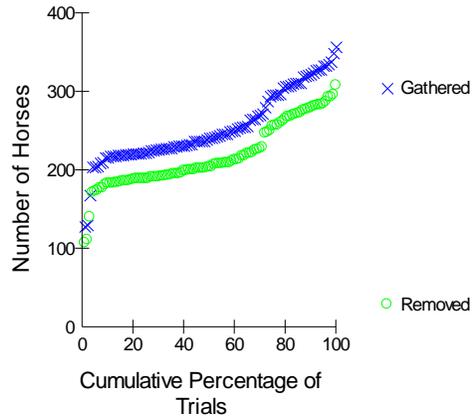
* 0 to 20+ year-old horses

Explanation:

In 11 years and 100 trials, the lowest number of 0 to 20+ year-old horses ever obtained was 52 and the highest was 296. In half the trials, the minimum population size in 11 years was less than 81 and the maximum was less than 234. The average population size across 11 years ranged from 97 to 136.

Three Fingers HMA – Removal and Sex Ratio Skew (cont.)

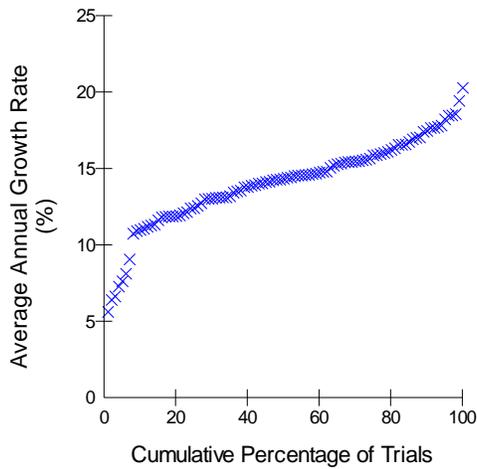
0 to 20+ year-old horses



Totals in 11 Years*

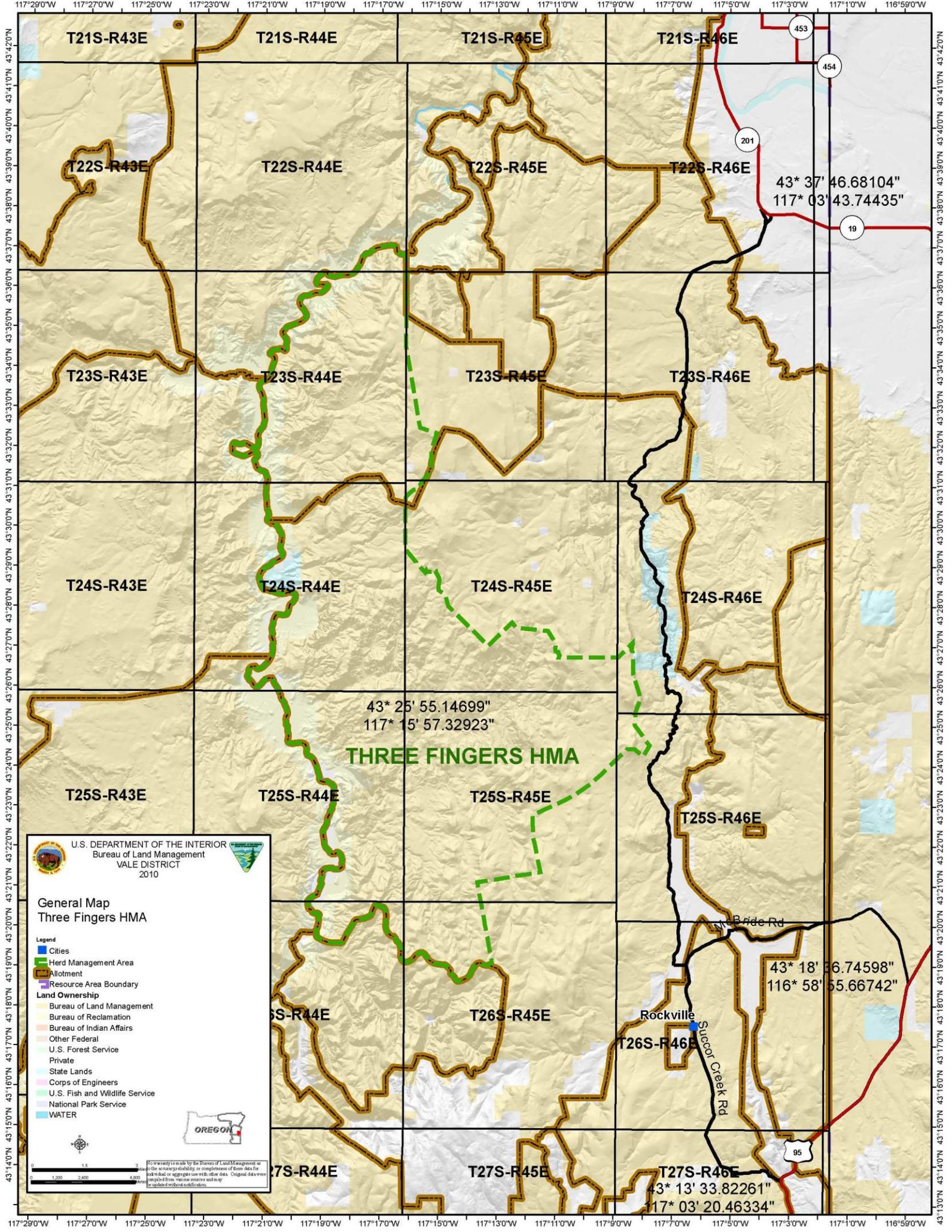
	Gathered	Removed
Lowest Trial	128	107
10th Percentile	217	183
25th Percentile	222	189
Median Trial	241	204
75th Percentile	296	256
90th Percentile	323	280
Highest Trial	357	308

* 0 to 20+ year-old horses



Average Growth Rate in 10 Years

Lowest Trial	5.7
10th Percentile	11.1
25th Percentile	12.5
Median Trial	14.4
75th Percentile	15.9
90th Percentile	17.6
Highest Trial	20.3



43° 25' 55.14699"
 117° 15' 57.32923"
THREE FINGERS HMA

43° 37' 46.68104"
 117° 03' 43.74435"

43° 18' 36.74598"
 116° 58' 55.66742"

43° 13' 33.82261"
 117° 03' 20.46334"

U.S. DEPARTMENT OF THE INTERIOR
 Bureau of Land Management
 VALE DISTRICT
 2010

**General Map
 Three Fingers HMA**

Legend

- Cities
- Herd Management Area
- Allotment
- Resource Area Boundary
- Land Ownership**
- Bureau of Land Management
- Bureau of Reclamation
- Bureau of Indian Affairs
- Other Federal
- U.S. Forest Service
- Private
- State Lands
- Corps of Engineers
- U.S. Fish and Wildlife Service
- National Park Service
- WATER

Scale: 0 to 4,000 feet

Now ready to make by the Bureau of Land Management as the accuracy, reliability or completeness of these data for individual or aggregate use with other data. Original data were supplied from various sources and may be subject to revision without notification.

OREGON