

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

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**Final Environmental Assessment  
DOI-BLM-UT-C010-2012-0018-EA**

# FRISCO WILD HORSE HERD MANAGEMENT AREA PLAN (HMAP) AND GATHER PLAN



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## **1.0 Purpose and Need for the Proposed Action**

### **1.1 Introduction**

This Environmental Assessment (EA) has been prepared to analyze the Bureau of Land Management (BLM) Cedar City Field Office's (CCFO) proposal to prepare a Herd Management Area Plan (HMAP) for the Frisco Herd Management Area (HMA) and to gather and remove excess wild horses from within and outside the Frisco Wild Horse HMA in or after November 2012.

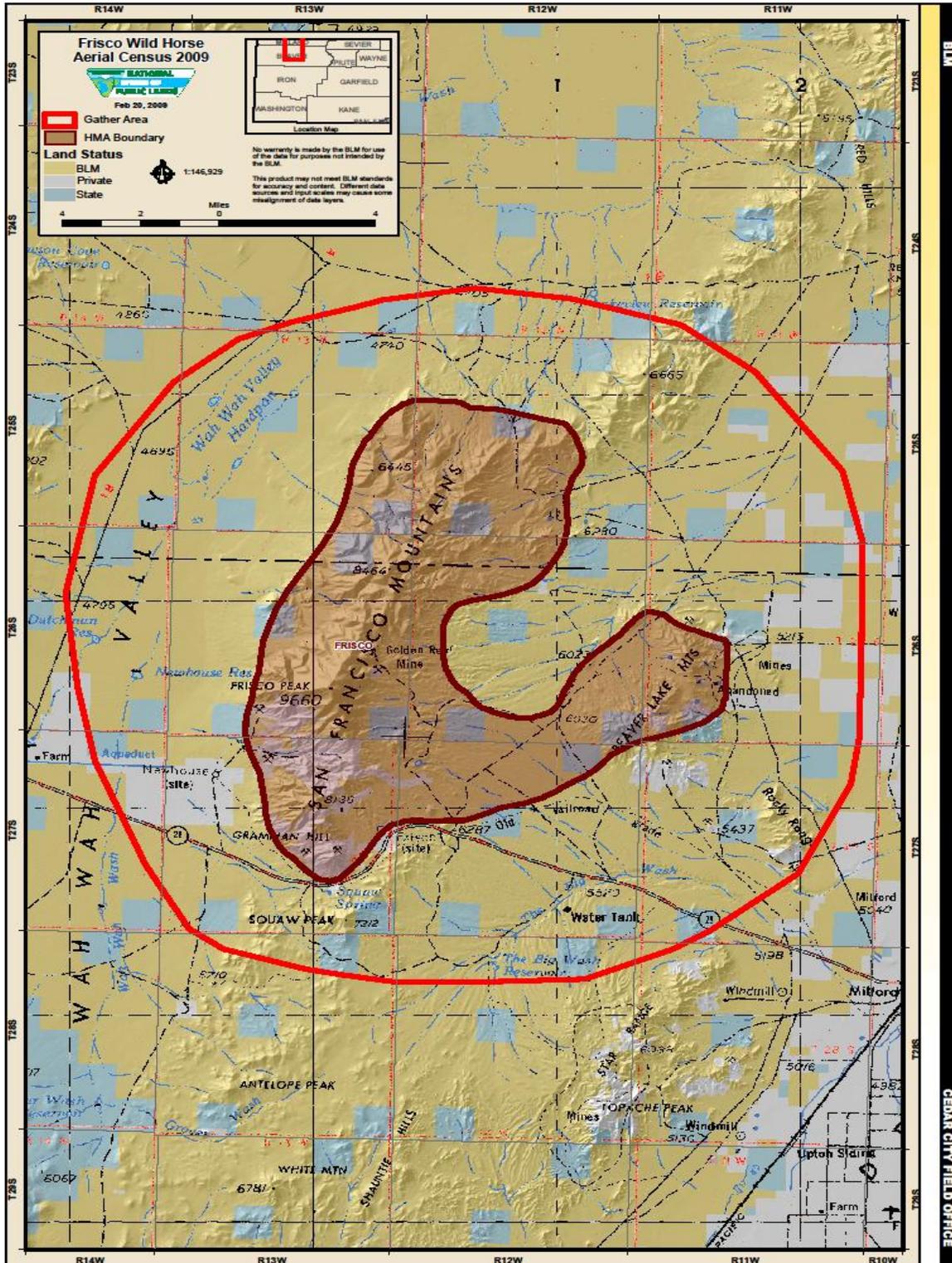
The Frisco HMAP would establish short and long term management and monitoring objectives for the wild horse herd and their habitat. These objectives would guide management of the Frisco HMA wild horses. The gather and removal would occur to meet current population objectives or the HMAP objectives once it is approved. This EA is a site-specific analysis of the potential impacts that could result from the implementation of the Proposed Action or alternatives to the Proposed Action. The EA assists the BLM CCFO in project planning, ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether "significant" impacts could result from the analyzed actions. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI).

This document is tiered to the *Pinyon Management Framework Plan/Final EIS (MFP; 1983)*. Should a determination be made that implementation of the Proposed Action or alternative actions would not result in "significant environmental impacts" or "significant environmental impacts beyond those already addressed in the MFP/EIS and MFP Record of Decision," a FONSI will be prepared to document that determination and a Decision Record issued providing the rationale for approving the chosen alternative.

### **1.2 Background**

The Frisco HMA is approximately 60,367 acres and is located, approximately 15 miles northwest of Milford, Utah (*Map 1*). Of the 60,367 acres in the HMA approximately 48,852 of these are public land acres, 5,745 of these acres are state and 5,770 acres are private land acres. The HMA ranges from 5,600 in the valleys to 9,500 feet in elevation at the top of Frisco Peak. The wild horses primarily use the lower benches in the winter and the higher elevations in the summer.

Map 1 Frisco HMA



The Appropriate Management Level (AML) was established for the Frisco HMA as a population range of (12-60) wild horses in the Pinyon MFP (1983), which is “the removal of horses as required to maintain horse numbers at or below 1982 inventory levels, but not less than 1971 levels.” The average estimated population on the HMA over the past 10 years has been 95 head.

The Frisco HMA currently does not have a Herd Management Area Plan (HMAP), so it is managed in accordance with the currently policies and regulations for wild horses, but does not have management objectives specific to the HMA.

**Table 1. Current AML for Frisco HMA**

<b>HMA</b>	<b>Total Acres</b>	<b>Appropriate Management Level</b>	<b>Estimated Population</b>	<b>% of AML</b>
<b>Frisco HMA</b>	<b>60,367</b>	12 -60	220	1,833%-366%
<b>Outside</b>	<b>0</b>	<b>0</b>	0	-
<b>Total</b>	<b>60,367</b>	<b>12 -60</b>	220	1,833%-366%

The estimated population of wild horses within the Frisco HMA as of November 2012 or the beginning of the Fiscal Year (FY) 2013 would be 220 wild horses. This number is based on an aerial population inventory completed in April of 2012. A mark-resight method was used. The HMA was flown 6 times with transects that were approximately 1 mile apart and in three different directions. Photos of each band of horses was taken during each transect along with additional data. The photos were reviewed with 212 head of individual horses identified in 47 bands ranging in size from 1 to 11 head with an average band size of 5 head. The data was then statically analyzed to estimate the number of wild horses to be 220 head  $\pm$  14 head. During ground inspections of water sources during the summer of 2012 it was recorded that approximately 40 plus wild horses of the estimated 220 horses have moved northeast to feed and water sources outside the HMA.

The last gather of the Frisco HMA occurred in August of 2006. At that time, 43 wild horses were gathered, 36 removed, and 7 released back to the range. Post-gather, it was estimated that 54 wild horses with a sex ratio of 50/50 males to females remained within the HMA. Based on the most recent population inventory the 2006 population estimation was low. Additional horses may occur on the HMA for several other reasons that include, but are not limited to the following: (1) wild horses may have been captured illegally by members of the public in other wild horse areas and moved into this area (this illegal activity has been suspected in past years), (2) domestic or stray horses may have been released into the HMA.. In February of 2011 three (3) domestic horses were released just outside of the HMA and were reported to the BLM. These horses were removed from public lands with the assistance of the BLM by the Beaver County Animal Control Officer. This was one of several cases throughout Utah were domestic horses were released on to public lands.

Based upon all the information available at this time, the BLM has determined that 180 excess wild horses exist within or near the HMA and need to be removed beginning in November of 2012. This assessment is based on the following factors including, but not limited to, the following:

- ❑ A population inventory of wild horses in April 2012 showed the Frisco HMA to have 180 excess wild horses above the lower AML in the by November of 2012.
- ❑ By November 2012 the use by wild horses would exceed the forage allocated for wild horses in that area by over 360%.
- ❑ By comparison, over the last 10 years livestock use has averaged 29% to 78% of that authorized depending on the allotment.
- ❑ Utilization monitoring, completed in 2010, documents Moderate to Heavy utilization by wild horses on key forage species within the HMA.
- ❑ Utilization monitoring, completed in early summer of 2012, documents Moderate to Heavy utilization by wild horses on key forage species within the HMA.
- ❑ Based on the wild horse inventories in 2003 and 2012 the elk numbers have increased in and around the HMA. The increased elk population on the HMA has increased the competition for forage and water resources.

### **1.3 Purpose and Need for the Proposed Action**

The purpose and need for the Proposed Action is to establish short and long term management and monitoring objectives for the wild horse herd and their habitat. These objectives would guide management of the Frisco HMA wild horses. The Proposed Action would remove excess wild horses from within the Frisco HMA and to remove all horses that have moved outside the HMA. Included would be application of fertility control to mares released following the gather and adjustment of sex ratios to favor males. Any wild horses located outside the HMA (in areas not designated for their use) would also be removed.

This action is needed in order to achieve and maintain a population size within the established AML, establish short and long term management and monitoring objectives for the wild horse herd and their habitat, 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* of 1971 (WFRHBA).<sup>1</sup>

### **1.4 Land Use Plan Conformance**

The Pinyon Management Framework Plan (PMFP) (1983) identifies the Frisco HMA as suitable for wild horses, and allows for, “the removal of horses as required to maintain horse numbers at or below 1982 inventory levels, but not less than 1971 levels.” (Pinyon MFP Wild Horse Amendment)(1983).

The MFP also states that the number of herd units and the population of each herd would depend on the results of monitoring studies, range condition, viewing opportunities, cooperative management, and range developments.

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<sup>1</sup> The Interior Board of Land Appeals (IBLA) defined the goal for managing wild horse (or burro) populations in a thriving natural ecological balance as follows: “As the court stated in Dahl vs. Clark, supra at 594, the ‘benchmark test’ for determining the suitable number of wild horses on the public range is ‘thriving natural ecological balance.’ In the words of the conference committee which adopted this standard: ‘The goal of WH&B management should be to maintain a thriving ecological balance (TNEB) between WH&B populations, wildlife, livestock and vegetation, and to protect the range from the deterioration associated with overpopulation of wild horses and burros.’”

## **1.5 Relationship to Laws, Regulations, and Other Plans**

In conformance with the policy developed by the BLM's Utah State Director and approved by the Secretary of Interior, the Proposed Action Alternative would be in compliance with the following:

Gathering excess wild horses is in compliance with Public Law 92-195 (WFRHBA) as amended by Public Law 94-579 (FLPMA), and Public Law 95-514 (Public Rangelands Improvement Act [PRIA] of 1978). WFRHBA, as amended, requires the protection, management, and control of wild free-roaming horses and burros on public lands. And the preparation and transport of wild horses will be conducted in conformance with all applicable state statutes.

The Proposed Action is in conformance with all applicable regulations at 43 Code of Federal Regulations (CFR) 4700 and policies. The following are excerpts from 43 CFR relating to the protection, management, and control of wild horses under the administration of the BLM.

43 CFR 4700.0-2 One of the objectives regarding wild horse management is to manage wild horses "as an integral part of the natural system of the public lands under the principle of multiple use . . ."

43 CFR 4700.0-6(a-c) Requires that BLM manage wild horses "...as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat ... considered comparably with other resource values ..." while at the same time "...maintaining free-roaming behavior."

43 CFR 4700.0-6 (e): Healthy excess wild horses for which an adoption demand by qualified individuals exists shall be made available at adoption centers for private maintenance and care.

43 CFR 4710.3-1 "Herd management areas shall be established [through the land use planning process] 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 "Management of wild horses and burros shall be undertaken with the objective of limiting the animals' distribution to herd areas. Management of wild horses shall be at the minimum level necessary to attain the objectives identified in approved land use plans and herd management area plans."

43 CFR 4720.1 "Upon examination of current information and a determination by the authorized officer that an excess of wild horses or burros exists, the authorized officer shall remove the excess animals immediately."

43 CFR 4740.1 "(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."

Under 43 CFR 4180, it is required that all BLM management actions achieve or maintain healthy rangelands.

All federal actions must be reviewed to determine their probable effect on threatened and endangered plants and animals (the Endangered Species Act).

Section 106 of the National Historic Preservation Act requires federal agencies to determine the possible effects of their actions on historic properties (those archaeological or historic sites eligible for or listed on the National Register of Historic Places). See 36 CFR 800 for a description of this process..

Executive Order 13212 directs the BLM to consider the President's National Energy Policy and adverse impacts the alternatives may have on energy development.

The proposed Action is also in conformance with Decision Records and Finding of No Significant Impacts for the EA-UT-040-03-036 Frisco HMA Emergency Wild Horse Gather Plan, (signed 07/30/2003); EA-UT-044-98-009 Wild Horse Gather and Removal Plan FY98 (signed 01/25/00); EA-UT-044-94-007 Sulphur, Frisco, and Bible Springs Horse Removal ( signed 12/23/93); and DNA-UT-040-05-045 Frisco Peak Fire Emergency Stabilization/Rehabilitation (signed 08/04/2005).

The proposed action complies with BLM Utah Riparian Management Policy (Instruction Memorandum [IM] UT-93-93, March 1993). This policy states that riparian areas will be maintained in or improved to "Proper Functioning Condition." In addition, the Proposed Action and No Action Alternative would comply with the following laws and/or agency regulations, other plans and are consistent with federal, state and local laws, regulations, and plans to the maximum extent possible.

- Taylor Grazing Act (TGA) of 1934
- FLPMA of 1976 (43 U.S.C. 1701 et seq.) as amended
- PRIA of 1978
- Endangered Species Act (ESA) of 1973, as amended
- Bald and Golden Eagle Protection Act of 1962
- BLM Manual 6840 – Special Status Species Management
- Migratory Bird Treaty Act
- Utah Comprehensive Wildlife Conservation Strategy (CWCS)
- Utah Partners in Flight Avian Conservation Strategy Version 2.0
- Birds of Conservation Concern 2002
- Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds
- IM 2008-50, Migratory Bird Treaty Act – Interim Management Guidance
- Protection, Management, and Control of Wild Free-Roaming Horses and Burros, Title 43 CFR 4700
- Standards of Quality for Waters of the State, R317-2-6, Utah Administrative Code, December, 1997
- Utah BLM Riparian Management Policy (IM UT-93-93) of 1993
- National Environmental Policy Act of 1969, as amended
- American Indian Religious Freedom Act of 1979
- Archaeological Resource Protection Act of 1979

- National Historic Preservation Act of 1966, as amended
- Appropriations Act, 2001 (114 Stat. 1009) (66 Fed. Reg. 753, January 4, 2001)
- United States Department of the Interior Manual (910 DM 1.3).
- Standards and Guidelines for Healthy Rangelands, 1997 (BLM-UT-GI-98-007-1020)
- Fundamentals of Rangeland Health, Title 43 CFR 4180

### **1.6 Decision to be Made**

The authorized officer would determine whether to implement all, part, or none of the proposed action as described in Section 2.2.1 to manage wild horses within the HMA. The authorized officer's decision would not adjust livestock use within HMA, as this was set through previous decisions. The authorized officer's decision may set or adjust AML, select goals and objectives for management of wild horses within the Frisco HMA, select gather methods, timeframes of actions, and numbers of horses gathered, treated and released depending on the alternative or parts of any alternative chosen.

### **1.7 Scoping and Identification of Issues**

Public Involvement was initiated on this Proposed Action on June 1, 2012 by posting on Environmental Notification Bulletin Board (ENBB). The Utah State Office initiated public involvement at a public hearing about the use of helicopters and motorized vehicles to capture and transport wild horses (or burros) on July 13, 2012 at the BLM's Fillmore Field Office in Fillmore, Utah. This specific gather was addressed at that public meeting as well as other gathers that may occur within the state of Utah over approximately the next 12 months. This meeting was advertised in papers and radio stations statewide. Refer to section 8.0 Public Involvement and Appendix 11 to see comments and interest from the public and organizations.

Based on internal scoping and experience with previous HMAPs, and gathers, the following issues have been identified:

#### 1. Sustain Healthy Populations of wild horses:

- Adjustment of sex ratios to "natural" percentages
- Age Distribution
- Genetic mix (diversity)
- Population control
- Gather and Handling Methods

#### 2. Health wild horse habitat. Measurement indicators for this issue include:

- Rangeland Health
- Potential impacts to vegetation/soils and riparian/wetland resources.
- Disperse Wild Horse Use (forage utilization).

#### 3. Impacts to individual wild horses and the herd. Measurement indicators for this issue include:

- Projected population size and annual growth rate (Win Equus population modeling);
- Expected impacts to individual wild horses from stress due to handling;
- Expected impacts to herd social structure;
- Expected effectiveness of proposed fertility control applications;
- Potential effects to genetic diversity; and

- Potential impacts to animal health and condition.
4. Impacts to wildlife, migratory birds, and threatened, endangered, and special status species and their habitat. Measurement indicators for this issue include:
- Potential for temporary displacement, trampling, or disturbance;
  - Potential competition for forage and water over time.
  - Inadequate or poorly maintained water sources to spread forage use of the HMA by wild horses?

### **1.7.1 Critical Elements of the Human Environment and other Resources/Areas of Concern**

Identification of issues for this assessment was accomplished by considering the resources that could be affected by implementation of one of the alternatives, through involvement with the public and input from the BLM interdisciplinary team.

Critical elements of the human environment, as identified in BLM Handbook 1790-1, Appendix 5, must be considered. Resources within the project area that may be affected must also be discussed. Those critical elements of the human environment and resources which are not present, or are not affected by the Proposed Action or alternatives, are included as part of the Interdisciplinary team checklist (Appendix 1). Rationale for dismissing specific resources or critical elements is also contained in Appendix 1.

Those critical elements of the human environment and resources which may be affected by the Proposed Action and/or alternatives are carried forward throughout this analysis, and are discussed briefly as follows.

#### **1.7.1.1 Rangeland Health/Vegetation**

Set wild horse management objectives in order to sustain healthy rangelands with the population of wild horses managed or controlled within AML.

Drought conditions and overpopulation of wild horses in 2002, 2006-2009 and 2012 have reduced forage production in some of the key wild horse habitat areas. Although livestock numbers were reduced and/or completely removed from the pastures of the allotments in the Frisco HMA during these years excess wild horses overgrazed many areas during critical growth periods. This, along with the reduced vigor of the plants because of the drought, caused mortality of key forage species throughout the HMA. Inadequate residual vegetation (forage) and litter remaining on certain key use areas allowed soil loss and erosion. As of June 30, 2012 precipitation data indicate that the HMA has received only 59% of normal moisture with almost 50% coming at the last of June in short duration thunderstorms outside the growing season. This places the HMA in extreme drought going in to the 2012 summer. Utilization completed June 25, 2012 showed heavy use within 1 mile of riparian areas and water sources used by wild horses. The use on vegetation on the rest of the HMA ranged from light to moderate. These use levels normally occur on the HMA at the end of summer and not the beginning. Appendixes 2-4 contain the Rangeland Health Standards and Guidelines.

#### **1.7.1.2 Livestock Grazing**

Portions of five (5) grazing allotments are part of the HMA. All of these allotments have livestock grazing privileges. Of these, three (3) are sheep allotments (Crystal Peak, Frisco, and Red Rock) and two are cattle allotments (Beaver Lake and Wah Wah Lawson). Overlap of areas of use between wild horses and

livestock occurs on specific sites on all the allotments causing competition for forage, water, and cover. Wild horses, wildlife, and livestock compete directly for the same cover, water, and forage resources. Year-long wild horse grazing reduces forage availability for livestock. Grazing by excess wild horses during the critical growing season and during drought conditions can reduce forage production, vigor, reproduction, and availability for several years. Detailed information about the authorized livestock use within the HMA is provided in Term Grazing Permit Renewal EAs EA-UT-040-06-35, EA-UT- 040-06-36 and DOI-BLM-UT-C010-2011-0034 for these allotments.

#### **1.7.1.3 Wildlife including: (T & E, BLM Special Status Species and Migratory Birds)**

Setting short and long term management objectives for wild horses should minimize the displacement, trampling, or disturbance to wildlife. Reduce the competition for forage between wild horses and wildlife, particularly big game.

Wild horse numbers over AML result in increased competition for forage with wildlife, particularly big game. The removal of excess wild horses reduces this competition.

#### **1.7.1.4 Wild Horses and Burros**

A need to set short and long term objectives to maintain population size within AML using a variety of population control methods while maintaining wild horse health.

Rangeland resources and wild horse health have been and are currently being affected within the Frisco HMA, due to drought and overpopulation. Excess wild horses above the AML have reduced available water and forage, resulting in increased competition for available resources. Wild horses have expanded outside of the HMA in search of forage, water, and cover. The gather and removal of wild horses from the Frisco HMA would have direct and indirect impacts to individual animals and the social structure of bands in the area. Most impacts would be short term (under 1 year), but some would be long term (greater than a year). These impacts will be discussed within this EA.

#### **1.7.1.5 Wetlands/Riparian Zones**

SOPs for the gather would have limited to no impacts on riparian wetland zones. Long term impacts of management and population control of wild horse herds would improve overall functionality of riparian/wetland areas in the Frisco HMA.

## 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: No Action – Continue Existing Management. No Gather and Removal
- Alternative 2: Proposed Action – Implement HMAP with a management strategy which would include a number of population control methods, together with the development of new and/or reconstruction of existing water developments. Adjustment to the low AML to maintain some breeding animals. Gather/removal of excess wild horses, and apply fertility control two to four times over a six to ten year period .
- Alternative 3: Implement HMAP with a management strategy which would include some population control methods, together with maintenance and reconstruction of existing water developments. Adjustment of AML. Gather/removal of excess wild horses, apply fertility control including release of geldings as part of the male population.
- Alternative 4: No Action on HMAP. Gather and Removal with Fertility control as outlined in Alternative 2 (Proposed Action).
- Alternative 5: No Action on HMAP. Gather and Removal without fertility control.

### 2.2 Description of Alternatives Considered in Detail

#### Management Actions Common to All HMAP Alternatives and Alternatives 2-5 for Gather and Removal

- Gather operations would be conducted in accordance with the Standard Operating Procedures (SOPs) described in Appendix 5 and/or the National Wild Horse Gather Contract as adjusted or amended through the National and State wild horse and burro program direction.
- When gather objectives require gather efficiencies of 50-80% or more of the animals to be captured from multiple gather sites (traps) within the Frisco HMA, the helicopter drive method and helicopter assisted roping from horseback will be the primary gather methods used. To the extent possible gather sites (traps) will be located in previously disturbed areas. Post-gather, every effort would be made to return released animals to the same general area from which they were gathered.
- Given a summer or early fall gather window, bait and/or water trapping may be used provided the gather operations timeframe is consistent with current animal and resource conditions. Bait and/or water trapping may also be selected in other special circumstances as appropriate.
- An Animal and Plant Inspection Service (APHIS) or other licensed veterinarian may be on-site during future gathers, 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.
- Animals would be removed using a selective removal strategy. Selective removal criteria for the Frisco HMA include: (1) First Priority: Age Class - Four Years and Younger; (2) Second Priority: Age Class – Eleven to Nineteen Years Old; Third Priority: Age Class Five to Ten.
- Data including sex and age distribution, reproduction, survival, 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 and/or blood samples would be acquired every gather, to determine whether BLMs management is maintaining acceptable genetic diversity (avoiding inbreeding depression).

### 2.2.1 Proposed Action and Alternatives

#### **Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal**

Under this Alternative, the HMA would be managed as a range of 12-60 animals as follows:

- The sex ratio of animals released back to the range following future gathers would be approximately 50% males and 50% females.
- Studies will be continued and improved to determine and monitor mortality, age structure, sex ratio, productivity, population growth rate, habits and movements.
- Existing monitoring including: utilization, forage condition, water availability, animal health and periodic population census and sampling for genetic diversity would continue.
- Existing water developments would be periodically maintained, but not replaced or reconstructed when they outlive their useful life.
- AML would be adjusted, as needed, based on remaining available water resources.
- Fertility control would not be applied to animals released back to the range following future gathers.

*Table 1. No Action (Continue Existing Management) in HMAP Format*

Management Objective(s)	Monitoring Objective(s)	Implementation Objective(s)
<p><b><u>A. Control Population Numbers</u></b> Manage wild horse populations within the established AML range to protect the range from deterioration associated with overpopulation.</p>	<p>Population Inventories a minimum of once every 3-4 years. Additional inventories as money and time allows. Determine population number and annual growth rate.</p>	<p>Schedule gathers to remove excess wild horses when the total wild horse population exceeds the AML for the HMA (about every 3-4 years), when animals permanently reside on lands outside the Frisco HMA boundaries (i.e. use is more than seasonal drift), or whenever animal health/condition is at risk.</p>
<p><b><u>B. Age Distribution</u></b> Assure all age classes are represented post-gather.</p>	<p>Monitor post-gather results.</p>	<p>Manage wild horses to achieve the following relative age distribution:</p> <ul style="list-style-type: none"> <li>• 35% Young Age Class (Ages 0-4)</li> <li>• 50% Middle Age Class (Age 5-10)</li> <li>• 15% Old Age Class (Age 11+)</li> </ul>
<p><b><u>C. Additional Selective Removal Criteria</u></b>  <b>Objective 1:</b> Maintain or improve animal conformation.</p>	<p>Maintain photos of wild horse released back into the HMA and/or are introduced to the HMA.</p>	<p>In selecting animals for return to the range post-gather, animal size and conformation will have priority over color.</p>
<p><b><u>D. Assure Rangeland Health</u></b></p>	<p>Locate key monitoring areas</p>	<p>Complete the rangeland health</p>

<p><b>Objective 1.</b> Assess rangeland health approximately every 10 years on BLM administered lands.</p> <p><b>Objective 2.</b> Limit utilization by all herbivores to 50% of the current year’s above ground primary production for key grasses and 45% for key shrubs and forbs.</p>	<p>within the HMA.</p> <p>Assess rangeland health using procedures outlined in Technical Reference 1734-6 and/or the most recent rangeland health technical reference adopted by the local district office.</p> <p>Establish baseline trend studies using the frequency sampling procedures as outlined in the Rangeland Monitoring Handbook.</p> <p>Measure utilization at key areas/use pattern mapping annually.</p>	<p>assessment for the HMA as a whole. Summarize trend, precipitation, riparian, utilization and use pattern mapping every 10 year.</p> <p>Establish additional site-specific resource management objectives for key areas, as needed.</p> <p>Based on above, re-adjust AML or identify management actions to address/resolve rangeland health issues, as needed/appropriate. Re-adjustments in AML will be based on vegetation monitoring, herd monitoring and water availability as the limiting factors.</p>
<p><b><u>E. Sustain Healthy Populations of Wild Horses</u></b></p> <p><b>Objective 1:</b> Manage wild horses to achieve an average body condition class score of 3+.</p>	<p>Visually observe wild horse body condition (Henneke Condition Class Method) key watering locations annually.</p> <p>Record average body condition and document during periodic gather and population inventories operations.</p>	<p>Reconstruct existing water developments to assist in limiting the distance horses trail to and from water sources.</p> <p>Annually maintain water developments.</p> <p>Conduct emergency removals when needed if animal body condition is less than Henneke condition class score 3 due to drought, wildfire or other unplanned/unforeseen event.</p>
<p><b><u>F. Sex Distribution</u></b></p> <p>Adjust the sex ratio immediately following gathers to “natural” percentages (50% females/50% males) consistent with past management actions.</p>	<p>Document number of mares and stallions released following each gather.</p>	<p>Manage a breeding population of 12-60 animals within any given 3 year period.</p>

***No Gather and Removal***

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.

***Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)***

The Proposed Action would implement a management strategy which would incorporate a number of population control methods, together with the development and/or maintenance or reconstruction of

existing water sources. Under this strategy, wild horses would be managed under the HMAP objectives and goals within an AML range of 30-60 animals, with updates and revisions of the plan occurring when policies, regulations, laws or LUP change substantially, as follows:

- Approximately 30-60 animals would be managed as a breeding population.
- During future gathers, the sex ratio of the population would be adjusted slightly in favor of males as compared to females (60/40 male/female sex ratio).
- Horses that display good confirmation and a variety of colors would be selected first to be placed back on the HMA.
- Every 4-5 years 1-3 studs or mares from a different HMA, with similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic diversity on the HMA.
- Excess animals would be removed to the low-range of the AML upon determination that excess animals are present.
- Immunocontraceptive research would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures. Breeding age mares selected for release back to the range would be treated with Porcine Zona Pellucida (PZP) vaccine or other fertility control vaccines, which would slow reproduction of the treated mares for one to three breeding seasons.
- Any new fertility controls could be used as directed through the most recent direction of the National Wild Horse and Burro Program. The use of any new fertility controls would use the most current best management practices and humane procedures available for the implementation of the new controls.
- A minimum of two and up to four water developments (wells, pipelines, storage tanks, troughs, etc...) would be developed, maintained or reconstructed over the next ten to twenty year period within the Frisco HMA. Additional NEPA would be needed to complete these projects.

Table 2. Alternative 2 (Proposed Action/Proposed HMAP) in HMAP Format

Management Objective(s)	Monitoring Objective(s)	Implementation Objective(s)
<b>Items A-E from Table 1 above, plus the following:</b>		
<p><b><u>F. Assure Genetic Diversity</u></b>            Maintain genetic diversity within the herd (avoid inbreeding depression) as evidenced by no additional loss (&gt;10%) of genetic diversity (<math>H_o</math>) over the next twenty years.</p>	<p>Collect blood and/or hair samples every gather to detect any changes from the baseline genetic diversity (<math>H_o=.329</math>).</p>	<p>Every gather 1-3 studs or mares from a different HMA, but displaying similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic diversity on the HMA.</p> <p>Horses selected to be returned to the HMA would be based on diversity including color, conformation, and genetic analysis (if available). Size would be a secondary consideration (change management objective c above).</p> <p>If baseline genetic diversity changes decrease more than 10% additional wild horses will be introduced into the HMA.</p>
<p><b><u>G. Assure</u></b></p>		

<p><b><u>Riparian/Wetland Area Health</u></b></p> <p><b>Objective 1:</b> Improve riparian condition throughout the HMA.</p> <p><b>Objective 2:</b> Develop new water sources (ie wells, ponds, pipelines) away from riparian areas to reduce wild horses use in riparian areas.</p>	<p>Re-evaluate riparian functionality every ten years using the Proper Functioning Condition (PFC) method on all riparian areas in the HMA.</p> <p>Assess utilization annually.</p> <p>Monitor use of water sources with the use of wildlife cameras to determine season of use and numbers using the sources.</p>	<p>Reconstruct the existing spring developments, pipelines, troughs, and ponds within the HMA to provide water for use by wild horses. Develop new wells, ponds and pipelines within the HMA.</p> <p>If trend conditions remain static or are downward by 2022, exclosure fences may be constructed to promote riparian recovery, or additional management measures, including, adjusting AML, or continued development of off-site water for wild horses could be considered where feasible.</p>
<p><b><u>H. Disperse Wild Horse Use</u></b></p> <p><b>Objective 1:</b> Decrease utilization by wild horses within a 1-3 mile radius of existing water sources within HMA from heavy/severe to light/moderate by 2020.</p> <p><b>Objective 2:</b> Ensure adequate water is available throughout the hot summer months until additional water sources can be developed.</p> <p><b>Objective 3:</b> Disperse wild horse use throughout the Frisco HMA.</p>	<p>Measure utilization at key areas/use pattern mapping annually.</p> <p>Monitor water sources continuously through the summer months to ensure adequate water availability and to determine if/when supplemental water hauling will be needed.</p> <p>Monitor utilization to determine whether construction of new water developments is effective in reducing wild horse utilization from heavy to light or moderate within the Frisco HMA.</p> <p>Monitor movements of identified wild horses to determine use patterns, seasonal migrations and range of travel.</p>	<p>Construct new water developments and vegetative treatments that provide increased water and forage availability.</p> <p>Reconstruct existing water developments and maintain vegetation treatments that produce forage to assist in limiting the distance horses trail to and from water sources.</p> <p>Annually maintain water developments following reconstruction.</p> <p>Develop a minimum of two and up to four water sources to better disperse wild horse use. Prior to construction of any new water developments, the following would be required:</p> <ul style="list-style-type: none"> <li>✓ Acquisition of the necessary water rights.</li> <li>✓ Planning and design of the water developments.</li> <li>✓ Completion of a site-specific environmental analysis.</li> <li>✓ Completion of a site-specific cultural resource inventory.</li> <li>✓ Acquisition of necessary funding.</li> </ul> <p>Annually maintain developments following construction and/or reconstruction.</p>

		<p>Haul water during time of drought to provide water in areas with adequate forage.</p> <p>Increase and maintain forage production within the HMA through vegetation manipulation including mechanical treatments, seeding, prescribed burns and fuels reduction. Rehab fires that occur within in the HMA with forage species that stabilize the soil and compete with invasive and noxious weed species.</p> <p>Use population inventories, GPS collars, photos, field reports, mapping, and other tracking methods to monitor movements of wild horses within and outside the HMA.</p> <p>Do not allow additional fencing (except around riparian area) within the HMA. Eliminate fencing within the HMA whenever possible.</p>
<p><b><u>I. Additional Population Control Measures</u></b>  <b>Objective 1:</b> Adjust the sex ratio of the breeding population slightly in favor of males.</p> <p><b>Objective 2:</b> Gather to the low-range of the AML and apply fertility control to mares released back to the range following future gathers.</p>	<p>Document the number of mares/stallions released following each gather. Conduct post-fertility control monitoring in accordance with established procedures Appendix 6.</p>	<p>Manage a breeding population of 30-60 animals within any given 4-7 year period. Within the population, achieve a 60%/40% ratio of males to females immediately following future gathers.</p> <p>Immunocontraceptive research would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures. Breeding age mares selected for release back to the range would be treated with Porcine Zona Pellucida (PZP) vaccine that would slow reproduction of the treated mares for one to three breeding seasons.</p> <p>New population control vaccines and/or methods may be used within the HMA as directed through the most recent direction of the National Wild Horse and Burro Program. The use of any new fertility controls would use the most current best management practices and humane procedures available for the implementation of the new controls.</p>

<p><b><u>J. Partnerships</u></b>  <b>Objective 1:</b> Involve stakeholders, organizations, other agencies, universities, adjacent land owners, and public in achieving the objectives of the HMAP.</p>	<p>Keep an interested public list for the Frisco HMA. Send notices, links, e-mails and/or hard copies of all wild horse management documents to those on this list.</p>	<p>Develop agreements to accomplish specific projects, monitoring, and tasks within the Frisco HMA.</p> <p>Involve these groups in updates and modification of the HMAP.</p>
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**Gather and Removal**

**Management Actions Common to Alternatives 2 - 5**

- ❑ The first gather is planned to begin in November 2012 and take about 6 days to complete. Several factors such as animal condition, herd health, weather conditions, holding capacity limitations or other considerations could result in adjustments in the schedule.
- ❑ Additional gathers over the next 10 years may be needed to reach the lower AML based on gather success, holding capacity limitations, population growth rates and other national gather priorities. Additional gathers would be based on a two year gather cycle for the treatment of PZP.
- ❑ Gather operations would be conducted in accordance with the Standard Operating Procedures (SOPs) described in Appendix 5 and/or the National Wild Horse and Burro Gather Contract. The primary gather (capture) methods would be the helicopter drive method with occasional helicopter assisted roping (from horseback). Bait trapping including water trapping may also be used during following years to meet objectives to reach the lower AML.
- ❑ 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. If cultural resources are encountered, these locations would not be utilized unless they could be modified to avoid impacts to cultural resources.
- ❑ 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. For bait trapping veterinarian services would be provided at the holding facilities.
- ❑ 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](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-041.html)
- ❑ Data including sex and age distribution, condition class information (using the Henneke rating system), color, size and other information may also be recorded, along with the disposition of that animal (removed or released).
- ❑ Excess animals would be transported to a BLM corral facility where they would be prepared (freeze-marked, vaccinated and de-wormed) for adoption, sale (with limitations) or long-term holding.
- ❑ Public notifications would be sent out to the press and public and would be posted on the Utah BLM webpage. Before a gather operations would occur. These public notifications would inform the public of viewing opportunities and where information on the gather operations can be found.

**Alternative 2 Gather and Removal**

The Propose Action (Alternative 2) Gather and Removal would be a pilot management alternative designed to address large scale wild horse gathers while still achieving BLM’s management goals of attaining AML, reducing population growth rates, and obtaining a thriving natural ecological balance on

the range as identified within the WFRHBA. The pilot alternative would also address holding capacity limitations within short and long-term holding facilities by targeting smaller removal numbers versus what is needed to immediately reach low AML.

Under the Proposed Action, the BLM would gather approximately 70%-75% of the existing wild horses (approximately 155-166 animals in the initial 2012 gather) every two to three years with a target removal of approximately 40-120 excess wild horses per gather over a period of six to ten years until the population is within the AML. The principal management goal for the HMA would be to retain a core breeding population of 30-60 wild horses, which is the AML. To help reduce population growth rates, the core breeding population would be managed to achieve a 60% male sex ratio and all mares released back to the HMA would be treated with fertility control (PZP-22 or most current formulation). The combination of these actions should lower the population growth rate within the HMA. Since proposed action in winter 2012 would only allow for the removal of approximately 104 excess wild horses, dependent on available holding space, and would not achieve the desired low end of AML; it is anticipated that two to four follow-up gathers over a period of six to ten years would be needed to achieve the low end of AML for the HMA based on current population estimates, projected rates of increase, and projected scheduling of future gathers. This would also allow the BLM to implement the population control components (PZP treatments and sex ratio adjustment) as proposed. Population inventories and routine resource/habitat monitoring would be completed between gather cycles to document current population levels, growth rates, and areas of continued resource concern (horse concentrations, riparian impacts, over-utilization, etc.) prior to any follow-up gather. Any follow-up gather activities would be conducted in a manner consistent with those described for the winter 2012 gather and would be conducted during the period November through February which is identified for maximum effectiveness of the fertility control. Funding limitations and competing priorities may require delaying the follow-up gather and population control component. Bait or water trapping could be conducted during the months of July to September, but mares would be held until October so that PZP could be administered before release.

Under the Proposed Action a sufficient number of wild horses would be gathered from heavily concentrated areas within the project area to reduce resource impacts and all wild horses residing in areas adjacent to the HMA (outside established boundaries) would be gathered and removed. Fertility control (PZP-22 or most current formulation) would be applied to all released mares to decrease the future population growth rate. By completing the gather in the proposed fashion, the BLM would be able to treat a larger number of mares with fertility control and continue the treatments with future gather compared to a gather operation that goes to low AML immediately where very few mares would be treated with the first gather. The procedures to be followed for implementation of fertility control is detailed in Appendix 6. Stallions would be selected for release to adjust the sex ratio of the core breeding population to 60% male sex ratio. Every 4-5 years 1-3 studs or mares from a different HMA, with similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic health on the HMA. All horses identified to remain in the HMA population would be selected to maintain a diverse age structure, herd characteristics and body type (conformation).

**Alternative 3:HMAP with adjusted AML, gather, remove and treat with release of geldings**

Alternative 3 would implement a management strategy which would include some population control methods, together with the development, together with development, and reconstruction of existing water developments. Under Alternative 3, wild horses would be managed under the HMAP objectives and goals within an AML range of 30-60 animals, with updates and revisions of the plan occurring when policies, regulations, laws or LUP change substantially, as follows:

- Approximately 40% of the male population of the herd (about 20-40 animals) would be managed as a non-breeding population of geldings.
- The balance of the herd (or about 30 - 60 animals) would be managed as a breeding population.
- Sex ratio of the breeding population would be maintained at about half males and half females over time.
- Excess animals would be removed to the low-range of the AML range upon determination that excess animals are present.
- Immunocontraceptive research would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures. Breeding age mares selected for release back to the range would be treated with Porcine Zona Pellucida (PZP) vaccine which would slow reproduction of the treated mares for one to three breeding seasons (see Appendix 6 for the current SOPs for the use of PZP vaccine and post-treatment monitoring).
- Existing water developments would be reconstructed over the next 1-5 year period and maintained annually to the construction standard, or as needed.

The upper AML in this alternative is the average population of wild horses in the HMA between 2002 and 2012. The estimated population ranged from 35 to 220 during this time.

Table 3. Alternative 3 in HMAP Format

Management Objective(s)	Monitoring Objective(s)	Implementation Objective(s)
<b>Items A-E from Table 1, together with Items F-G in Table 2 above, plus the following:</b>		
<p><b>H. Disperse Wild Horse Use</b></p> <p><b>Objective 1:</b> Decrease utilization by wild horses within a 1-3 mile radius of Water Sources from heavy/severe to light/moderate by 2025.</p> <p><b>Objective 2:</b> Ensure adequate water is available throughout the hot summer months in areas with adequate forage to sustain Healthy wild horses.</p> <p><b>Objective 3:</b> Disperse wild horse use throughout the Frisco HMA.</p>	<p>Measure utilization at key areas/use pattern mapping annually.</p> <p>Monitor water sources continuously through the summer months to ensure adequate water availability and to determine if/when supplemental water hauling will be needed.</p> <p>Monitor utilization to determine whether maintenance and reconstruction of existing water developments is effective in reducing wild horse utilization from heavy to light or moderate within the Frisco HMA.</p> <p>Monitor movements of identified wild horses to determine use patterns, seasonal</p>	<p>Develop water sources and vegetative treatments that provide increased water and forage availability.</p> <p>Reconstruct existing water developments and maintain vegetation treatments that produce forage to assist in limiting the distance horses trail to and from water sources.</p> <p>Annually maintain water developments following reconstruction.</p> <p>Increase and maintain forage production within the HMA through vegetation manipulation including mechanical treatments, seeding, prescribed burns and fuels reduction. Rehab fires that occur within in the HMA with forage species that stabilize the soil and compete with invasive and noxious weed species.</p>

	migrations and range of travel.	<p>Use population inventories, GPS collars, photos, field reports, mapping, and other tracking methods to monitor movements of wild horses within and outside the HMA.</p> <p>Do not allow additional fencing (except around riparian area) within the HMA. Eliminate fencing within the HMA whenever possible.</p>
<p><b><u>I. Additional Population Control Measures</u></b></p> <p><b>Objective 1.</b> Manage a portion of the herd as a non-breeding population of geldings.</p> <p><b>Objective 2:</b> Gather to the low-range of AML and apply fertility control to mares released back to the range following future gathers (pending additional site-specific environmental analysis and population modeling).</p>	<p>Document number of mares/stallions and geldings released following each gather; conduct post-fertility control monitoring as outlined in Appendixes 6 and 7.</p> <p>Periodic population inventories, together with gather data from future gathers, will be used to determine whether managing a portion of the Frisco HMA herd as geldings is effective in slowing the average annual population growth.</p> <p>The herd behavior of geldings post-treatment would also be observed. Anecdotal evidence suggests geldings will form bachelor bands. Monitoring will be completed to determine whether bachelor bands form as expected, or if geldings intermix with the breeding population.</p>	<p>Manage a breeding population of 30-60 animals and a small non-breeding population of 20-40 geldings within any given 10 year period. Within the breeding population, achieve a 50%/50% ratio of males to females immediately following future gathers. The following management requirements apply to the non-breeding population:</p> <ul style="list-style-type: none"> <li>✓ Limit gelding to stallions between 5 and 15 years of age</li> <li>✓ Limit geldings to stallions that have a Henneke body condition score of 4 or above.</li> <li>✓ Surgery would be performed at a temporary holding facility, at a BLM managed holding center, or in the field by a Utah licensed veterinarian in good standing, using appropriate anesthetic agents and surgical techniques.</li> <li>✓ When gelding is done in the field, geldings would be released near a water source approximately 24-48 hours following surgery. When the gelding is performed at a BLM-managed facility, selected stallions would be shipped to the facility, gelded, held in a separate pen to minimize risk for disease, and returned to the range near</li> </ul>

		<p>water within 30-60 days following recovery (recovery is indicated by animals moving freely to/from forage and water).</p> <ul style="list-style-type: none"> <li>✓ Gelded animals would be monitored for approximately 7-10 days post-surgery.</li> <li>✓ Gelded animals would be freeze branded and the brand recorded as a gelded horse released in the HMA.</li> </ul> <p>Immunocontraceptive research would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures. Breeding age mares selected for release back to the range would be treated with Porcine Zona Pellucida (PZP) vaccine that would slow reproduction of the treated mares for one to three breeding seasons.</p> <p>New population control vaccines and/or methods may be use within the HMA as directed through the most recent direction of the National Wild Horse and Burro Program. The use of any new fertility controls would use the most current best management practices and humane procedures available for the implementation of the new controls.</p>
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**Alternative 3 Gather and Removal**

Alternative 3 would gather about 200 and remove approximately 170 excess wild horses from within and outside the Frisco Herd Management Area (HMA) beginning in November 2012. Beginning gather dates may change based on several factors. 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 Old; (3) Third Priority: Age Class - Five to Ten Years Old; (4) Fourth Priority: Age Class – Twenty Years and Older. Up to 30 head of the captured wild horses would be released; of these, approximately 10 head would be mares treated with fertility control and about 20 head would be studs (or geldings). If gather success, holding capacity limitations, population growth rates, other national gather priorities or other factors do not allow for achievement of the goal to bring the population down to the lower AML then the gather operation would be repeated two to four times in the next ten years to achieve the goal.

In addition, it is proposed to manage for a non-breeding component of 20-40 geldings, which would bring the overall population to approximately 50-100 wild horses within the HMA. During the first gather operation, approximately 10-15 stallions would be gelded (castrated) and released back into the HMA representing a non-reproductive component in the HMA. Additional geldings would also be phased-in over the next two to three gathers in order to observe how the geldings are transitioning into the overall population as well as utilizing their habitat. The procedures to be followed for gelding of stallions are detailed in the Gelding SOPs in Appendix 7. With this non-breeding component, the HMA would be managed over the long term at mid-range of 75 wild horses.

The Proposed Action reflects the proposed management strategies are consistent with the intent of the WFRHBA to use sterilization as a means of population control.

**Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.**

No HMAP would be established at this time. No specific management goals or objectives would be established for the Frisco HMA at this time. The Frisco HMA would continue to be managed in accordance with current policies and regulations.

Gather and Removal would be conducted as outline in the Alternative 2 Proposed Action's Gather and Removal section. The BLM would gather approximately 70%-75% of the existing wild horses (approximately 166 animals in the initial 2012 gather) every two to three years with a target removal of approximately 40-120 excess wild horses per gather over a period of six to ten years. The principal management goal for the HMA would be to retain a core breeding population of 30-60 wild horses, which is the AML. To help reduce population growth rates, the core breeding population would be managed to achieve a 60% male sex ratio and all mares released back to the HMA would be treated with fertility control (PZP-22 or most current formulation). The combination of these actions should lower the population growth rate within the HMA. Since proposed action in winter 2012 would only allow for the removal of approximately 104 excess wild horses, dependent on available holding space, and would not achieve the desired low end of AML; it is anticipated that two to four follow-up gathers over a period of six to ten years would be needed to achieve the low end of AML for the HMA based on current population estimates, projected rates of increase, and projected scheduling of future gathers. This will also allow the BLM to implement the population control components (PZP treatments and sex ratio adjustment) as proposed. Population inventories and routine resource/habitat monitoring would be completed between gather cycles to document current population levels, growth rates, and areas of continued resource concern (horse concentrations, riparian impacts, over-utilization, etc.) prior to any follow-up gather. Any follow-up gather activities would be conducted in a manner consistent with those described for the winter 2012 gather and would be conducted during the period November through February which is identified for maximum effectiveness of the fertility control. Funding limitations and competing priorities may require delaying the follow-up gather and population control component.

Under the Proposed Action a sufficient number of wild horses would be gathered from heavily concentrated areas within the project area to reduce resource impacts and all wild horses residing in areas adjacent to the HMA (outside established boundaries) would be gathered and removed. Fertility control (PZP-22 or most current formulation) would be applied to all released mares to decrease the future population growth rate. By completing the gather in the proposed fashion, the BLM will be able to treat a larger number of mares with fertility control and continue the treatments with future gather compared to a gather operation that goes to low AML immediately where very few mares would be treated with the first gather. The procedures to be followed for implementation of fertility control is detailed in Appendix 6.

Stallions would be selected for release to adjust the sex ratio of the core breeding population to 60% male sex ratio. Every 4-5 years 1-3 studs or mares from a different HMA, with similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic health on the HMA. All horses identified to remain in the HMA population would be selected to maintain a diverse age structure, herd characteristics and body type (conformation).

**Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.**

No HMAP would be established at this time. The goals and objectives for management of the wild horses within the Frisco HMA would be general. No specific goals or objectives would be established for the Frisco HMA at this time.

The Proposed Action would gather about 200 and remove approximately 180 excess wild horses from within and outside the Frisco Herd Management Area (HMA). The gather would be planned to begin November 2012. If gather objectives are not met additional gathers in following years would occur until the population reaches 40 head. 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 Old; (3) Third Priority: Age Class - Five to Ten Years Old; (4) Fourth Priority: Age Class – Twenty Years and Older. Up to 20 head of the captured wild horses would be released; of these, approximately 10 head would be mares and 10 head would be studs. Studs and mares would be selected for release back in to the HMA 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.

**Table 5. Summary Comparison of the Impacts of the Alternatives for HMAP**

Item	Alternative 2 (Proposed HMAP)	Alternative 3	Alternative 4-5		No Action
<b>Population Management Range</b>	The Frisco HMA wild horses would be managed within the established AML range of <b>30-60</b> animals, under the HMAP objectives and goals with updates and revisions of the plan occurring when policies, regulations, laws or LUP change substantially, or until AML is adjusted as described below.	The Frisco HMA wild horses would be managed within the established AML range of <b>50-100</b> animals, under the HMAP objectives and goals with updates and revisions of the plan occurring when policies, regulations, laws or LUP change substantially, or until AML is adjusted as described below.	Same as No Action		The Frisco HMA wild horses would be managed within the established AML range of <b>12-60</b> animals, under the HMAP objectives and goals with updates and revisions of the plan occurring when policies, regulations, laws or LUP change substantially, or until AML is adjusted as described below.
<b>Population Control Methods</b>	Future gathers to remove excess wild horses would be implemented under all alternatives as outlined below.				
	Additional population control methods include	Additional population control methods include	Apply fertility	Same as No	No additional population control methods would

	slightly adjusting the sex ratio in favor of males immediately following future gathers, and applying fertility control to mares released post-gather.	managing a portion the herd as a non-breeding population of geldings, and applying fertility control to mares released post-gather.	control to mares released post-gather.	Action	be applied under this alternative.
<b>Size – Breeding Population</b>	100%	50%-60%	100%		100%
<b>Size – Non-breeding Population</b>	0 (no geldings)	20-40 animals managed as geldings	0 (no geldings)		0 (no geldings)
<b>Desired Sex Ratio</b>	60/40 Males/Females	50/50 Males/Females	No Action		50/50 Males/Females
<b>Approx. # Mares Treated with Fertility Control During November 2012 Gather</b>	31	10	31	0	0
<b>Total # Wild Horses Remaining Following November 2012 Gather</b>	117 (Double upper AML)	50 (Low-range AML)	117 (Double upper AML)		N/A
<b>Total # Wild Horses Remaining Following Future Gathers</b>	30 (Low-range AML)	50 (Low-range AML)	12 (Low-range AML)		12 (Low-range AML)
<b>Age Distribution</b>	Future gathers will ensure representation of all age classes based on the following relative age distribution: 35% young, 50% middle and 15% older.				
<b>Selective Removal Criteria</b>	Selection would focus on returning animals with good conformation or size as compared to color over the next twenty years.				

<b>Genetic Diversity</b>	Maintain genetic diversity within the herd (avoid inbreeding depression, i.e. maintain $H_o$ at .329 (+ or - 10%)).	Maintain genetic diversity within the herd (avoid inbreeding depression, i.e. maintain $H_o$ at .329 (+ or - 10%)).	Same as No Action	No objective
	Under Alternatives 2, if future genetics sampling indicates greater than 10% loss in $H_o$ over the next 1-20 years, 1-3 studs and/or mares from genetically similar HMAs would be introduced every other gather.	Under Alternatives 2, if future genetics sampling indicates greater than 10% loss in $H_o$ over the next 1-20 years, 1-3 studs and/or mares from genetically similar HMAs would be introduced every other gather.	Same as No Action	No mitigation to correct potential future genetic loss would be implemented under this alternative.
<b>Rangeland Health</b>	Utilization by all herbivores is limited to 50% of current year's production for key grasses and 45% for key shrubs and forbs. Rangeland health evaluation to be completed every 10 years on BLM administered lands.			
	Locate key areas within the Frisco HMA. Assess rangeland health and establish frequency studies to monitor changes in range condition.			
<b>Riparian Health/ Disperse Wild Horse Use</b>	If trend conditions remain static or is downward within riparian areas by 2022, enclosure fences may be constructed to promote riparian recovery, or additional management measures, including, adjusting AML, or continued development of off-site water for wild horses could be considered where feasible.			
	Construct new water developments and vegetative treatments that provide increased water and forage availability.	Construct new water developments and vegetative treatments that provide increased water and forage availability.	Same as No Action.	Maintain existing water developments until they outlive their useful life then remove them and re-adjust AML based on available water within the Frisco HMA.
	Reconstruct existing water developments and maintain vegetation treatments that produce forage to assist in limiting the distance horses trail to and from water sources.	Reconstruct existing water developments and maintain vegetation treatments that produce forage to assist in limiting the distance horses trail to and from water sources.		Haul water during time of drought to provide water in areas with adequate forage.
Annually maintain water developments following reconstruction.	Annually maintain water developments following reconstruction.			

	<p>Develop a minimum of two and up to four new water developments to better disperse wild horse use. Prior to construction of any new water developments, the following would be required:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Acquisition of the necessary water rights.</li> <li><input type="checkbox"/> Planning and design of the water developments.</li> <li><input type="checkbox"/> Completion of a site-specific environmental analysis.</li> <li><input type="checkbox"/> Completion of a site-specific cultural resource inventory.</li> <li><input type="checkbox"/> Acquisition of necessary funding.</li> </ul> <p>Annually maintain developments following construction and/or reconstruction.</p> <p>Haul water during time of drought to provide water in areas with adequate forage.</p>			
<p><b>Vegetation, Wildlife, Migratory Birds and Special Status Species Habitat</b></p>	<p>Short-term displacement during reconstruction of existing water developments and construction of 2-4 new developments. Over long-term, disperses wild horse use more broadly across the Frisco</p>	<p>Same as Alternative 2.</p>	<p>Same as No Action.</p>	<p>As existing water developments exceed their useful life and become nonfunctional, use by wild horses would concentrate at the remaining water sources. AML would be further adjusted based on the remaining available water.</p>

	HMA following construction of 2-4 new water developments.			
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**Table 6: Summary Comparison of the Alternatives for Gather and Removals (Summarize and compare potential impacts)**

Item	Alternative 2 Proposed Action	Alternative 3:	Alternative 4	Alternative 5	Alternative 1: No Action
<u>Impacts to Wild Horses</u> <ul style="list-style-type: none"> <li>• Gather Number</li> <li>• Removal Number</li> <li>• Fertility Control - # Mares</li> <li>• Post-Gather Sex Ratio</li> <li>• Post-Gather Population Size</li> </ul>	Approximately 104 head of wild horses would be removed during the first gather planned to begin in November 2012. Two to four follow-up gathers over the next ten years gathering 100- 200 head of wild horses would be needed to reach the lower AML of 30 head.	Approximately 200 head of wild horses would be gathered and 180 head of horses would be removed.	Approximately 104 head of wild horses would be removed during the first gather planned to begin in November 2012. Two to four follow-up gathers over the next ten years gathering 100- 200 head of wild horses would be needed to reach the lower AML of 30 head.	Approximately 200 head of wild horses would be gathered and 180 head of horses would be removed.	No wild horses would be gathered or removed.
	Approximately 117 head of wild horses would remain on the HMA, which is 87 head above the upper AML. Additional gathers would eventually remove the population	Approximately 50 head of wild horses would remain on the HMA, which would be the lower AML.	Approximately 117 head of wild horses would remain on the HMA, which is 87 head above the upper AML. Additional gathers would eventually remove the population	Approximately 40 head of wild horses would remain on the HMA, which is 28 head above the lower AML.	The population of wild horses would continue to increase above the 220 horses currently estimated in the HMA area.

	down to the lower AML of 30 head.		down to the lower AML of 30 head.		
	Studs and mares would be selected for release back in to the HMA to maintain a diverse age structure, herd characteristics and body type (conformation).	In breeding population studs and mares would be selected for release back in to the HMA to maintain a diverse age structure, herd characteristics and body type (conformation).	Studs and mares would be selected for release back in to the HMA to maintain a diverse age structure, herd characteristics and body type (conformation).	Studs and mares would be selected for release back in to the HMA to maintain a diverse age structure, herd characteristics and body type (conformation).	No horses would be gathered or released.
	Studs would be selected for release with the objective of establishing a 60% male sex ratio.	Studs and geldings would be selected for release with the objective of establishing a 50% male sex ratio.	Same as Alternative 2	Studs would be selected for release with the objective of establishing a 50% male sex ratio.	No horses would be gathered so sex ratios would not be adjusted.
	Approximately 31 mares would be treated with a two-year Porcine Zona Pellucida (PZP-22) and released back on to the HMA. During additional gathers any mares released would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine	Approximately 10 mares would be treated with a two-year Porcine Zona Pellucida (PZP-22) and released back on to the HMA. During additional gathers any mares released would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine	Approximately 31 mares would be treated with a two-year Porcine Zona Pellucida (PZP-22) and released back on to the HMA. During additional gathers any mares released would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine	Same as No Action.	NO mares would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine and released back on to the HMA.
Impacts to	Short-term displacement due to gather activities from about 1 to 20 days.				Increase

Vegetation/Soils and Riparian/Wetland Resources	Reduced competition for forage and water leading to healthier rangeland vegetation, soils and riparian areas.				damage to resources as wild horse population continue to exceed carrying capacity of the forage and water resources within the HMA.
	Improvements to vegetation, soils, and riparian areas would not occur for 6 to 10 years or until the wild horse population is within the AML. The removal of some animals would maintain the conditions of the vegetation, soils, and riparian areas.	The higher population (higher AML) would reduce the benefits to vegetation, soils, and riparian areas when compared to Alternative 2 4 and 5. A wild horse population within the new AML would maintain, not improve the conditions of the vegetation, soils, and riparian areas.	Same as Alternative 2	If gather objectives are met, improvements to vegetation, soils, and riparian areas from wild horse population being within the AML would begin within a year.	
Impacts to Migratory Birds, Wildlife and TES	Short-term displacement during gather activities. Over long-term, reduced competition for limited forage and water resources.				Increase in competition for limited forage and water resources.
	Reduced competition for limited forage and water resources would occur slowly over 6 to 10 years or until the wild horse population is within the AML.	The higher population (higher AML) would increase competition for limited forage and water resources when compared to Alternative 2 and 5. In the Short-term competition for limited forage and water resources would be reduced quicker than Alternatives 2 and 4.	Same as Alternative 2	If gather objectives are met, competition for limited forage and water resources would be reduced immediately after the gather.	

## **2.3 Alternatives Considered But Eliminated From Further Analysis**

### **2.3.1 HMAP**

#### ***Provide Supplemental Feed and Water***

Providing supplemental feed (hay) or hauling water (other than during a short-term emergency situation) does not meet the definition of minimum feasible management and is inconsistent with current law, regulation and policy. Refer to 43 CFR 4710.4.

#### ***Manage the Entire Population as a Non-Breeding Population of Geldings***

One possible management alternative which has been suggested is to manage the Frisco HMA in its entirety as a non-breeding population of geldings. This alternative could require a land use plan amendment or other possible regulatory changes. Therefore, it was not analyzed in detail at this time.

#### ***Return the HMA to Herd Area Status with Zero AML***

Another alternative which has been suggested is to return the Frisco HMA to Herd Area status and establish the AML as “0” animals. This suggestion is made because the limited naturally occurring (undeveloped) water available to the Frisco HMA wild horse population is not adequate to maintain the population in a thriving natural ecological balance and multiple use relationship without the need for continued supplementation during drought. With reconstruction of the existing water developments the available water is expected to be adequate to support a population of 30-60 animals and possibly more. Therefore this alternative was not considered in detail.

### **2.3.2 Gather and Removals**

#### **Remove or Reduce Livestock within the HMA**

This alternative would involve no removal of wild horses and instead address the excess wild horse numbers through the removal or reduction of livestock within the HMA. This alternative was not brought forward for detailed analysis because it is outside of the scope of the analysis, is inconsistent with both the Pinyon MFP and the WFRHBA, which directs the Secretary to immediately remove excess wild horses, and is inconsistent with multiple use management. Livestock grazing can only be reduced following the process outlined in the regulations found at 43 CFR Part 4100. Several reductions and changes have been made to livestock grazing within allotments associated to the Frisco HMA through this process. The elimination of livestock grazing in an area would require an amendment to the Pinyon MFP. Such changes to livestock grazing cannot be made through a wild horse gather decision.

Livestock permit renewals were completed from 2007 – 2012 on the allotments within and adjacent to the Frisco HMA. Each of these renewals had Environmental Assessments and Decision Records completed. These decisions established stocking rates for livestock. The decisions also established seasons of use,

areas of use, kind and class of livestock and management actions to improve livestock distribution. These management actions included the establishment of grazing systems, allowable use levels, salting and herding practices. Some livestock reductions were made in these decisions on allotments within the Frisco HMA. Livestock grazing continues to be evaluated for allotments and use areas within the Frisco HMA. Monitoring and evaluation of livestock grazing is in accordance with the Pinyon MFP's Rangeland Program Summary Section IV, 17, which states:

“Rangeland studies and monitoring programs will be continued and/or initiated to determine if rangeland management objectives are being achieved and if proposed grazing use levels must be adjusted. This monitoring program will continue on all allotments. Particular attention will be given those areas where there is high resource conflict or there is the possibility of rapid improvement or deterioration of the rangeland resources. The concentration of rangeland monitoring will be on those allotments in the "I" category.

The monitoring program will evaluate changes in range condition and trend which includes determination of plant vigor, plant character, plant density, plant phenology, ground cover and degree of forage utilization on key species. Four primary studies will be used in this evaluation: (1) actual grazing use, (2) forage utilization, (3) range trend, and (4) climate analysis. In addition, data on wildlife habitat, riparian vegetation, and watershed condition will be collected and used as needed. When results of studies are evaluated and it is determined that the objectives are not being achieved on a specific allotment, modifications could include changes in grazing systems, livestock numbers, season of use, additional rangeland developments, or any combination of these alternatives.”

The BLM is currently authorized to remove livestock from the HMA, “if necessary to provide habitat for wild horses or burros, to implement herd management actions, or to protect wild horses or burros from disease, harassment or injury” under CFR 4710.5. This authority is usually applied in cases of emergency and not for general management of wild horses or burros in a manner that would be inconsistent with the land-use plan and the separate decisions establishing the appropriate levels of livestock grazing and wild horse use, respectively. Available data also indicates that wild horse use – including where livestock use has been excluded – has resulted in excessive vegetative utilization and impacts to rangelands that are recovering from wildfire.

### **Gather the HMA to the AML Upper Limit**

A post-gather population size at the upper level of the AML range would result in the AML being exceeded with the next foaling season. This would be unacceptable for several reasons.

The AML represents “that ‘optimum number’ of wild horses which results in a thriving natural ecological balance and avoids a deterioration of the range” (Animal Protection Institute, 109 IBLA 119; 1989). The IBLA has also held that, “Proper range management dictates removal of horses before the herd size causes damage to the rangeland. Thus, the optimum number of horses is somewhere below the number that would cause resource damage” (Animal Protection Institute, 118 IBLA 63, 75; 1991).

The upper level of the AML established within the HMA represents the maximum population for which thriving natural ecological balance would be maintained. The lower level represents the number of animals to remain in the HMA following a wild horse gather, in order to allow for a periodic gather cycle, and to prevent the population from exceeding the established AML between gathers.

Additionally, gathering to the upper range of AML would result in the need to follow up with another gather within one year (with resulting stress on the wild horse population), and could result in overutilization of vegetation resources and damage to the rangeland if the BLM is unable to gather the excess horses in the HMA on an annual basis. This alternative would not reduce the wild horse population growth rate of 20-25% in the Frisco HMA and the BLM would not be able to conduct periodic gathers and still maintain a thriving natural ecological balance. For these reasons, this alternative did not receive further consideration in this document.

### **Fertility Control Treatment Only Including Using Bait/Water Trapping To Dart Mares with PZP Remotely (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 to about (11) % per year, 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.

The use of remote darting to administer PZP within HMAs where the horses are not accustomed to human activity has been shown to be very difficult. In the Cedar Mountain HMA during a two year study where administration of PZP by remote darting was to occur not a single horse was successfully darted. This method has been affective in some HMAs where the wild horses are more approachable but the Frisco HMA is not such an area, so this method of administering PZP was dismissed from further study.

### **Bait or Water Trap Only**

An alternative considered but eliminated from detailed analysis was use of bait and/or water trapping as the primary gathering method. The use of bait and water trapping, though effective in specific areas and circumstances, would not be timely, cost-effective or practical as the primary gather method for this HMA due to the timing of the proposed gather. However, water or bait trapping may be used to achieve the desired goals of Alternatives 2-5 if gather efficiencies are too low using a helicopter or a helicopter gather cannot be scheduled. This alternative was dismissed from detailed study as a primary gather method for the following reasons: (1) the project area is too large to effectively use this gather method; (2) road access for vehicles to potential trapping locations necessary to get equipment in/out as well as safely transport gathered wild horses is limited; and (3) the presence of scattered water sources on both private, state and public lands inside and outside the HMAs would make it almost impossible to restrict wild horse access to the extent necessary to effectively gather and remove the excess animals through bait and/or water trapping to achieve management goals.

### **Wild Horse Numbers Controlled by Natural Means**

This alternative was eliminated from further consideration because it is contrary to the WFRHBA which requires the BLM to prevent the range from deterioration associated with an overpopulation of wild horses. It is also inconsistent with the Pinyon MFP, which directs that Cedar City Field Office BLM conduct gathers as necessary to achieve and maintain the AML. The alternative of using natural controls to achieve a desirable AML has not been shown to be feasible in the past. Wild horses in the Frisco HMA are not substantially regulated by predators. In addition, wild horses are a long-lived species with documented foal survival rates exceeding 95% and they are not a self-regulating species. This alternative would result in a steady increase in numbers which would continually exceed the carrying capacity of the range until severe and unusual conditions that occur periodically-- such as blizzards or extreme drought-- cause catastrophic

mortality of wild horses.

### **Gather and Release Excess Wild Horses Every Two Years and Apply Two-Year PZP to Horses for Release.**

Another alternative to gather a substantial portion of the existing population (90%) and implement fertility control treatment only, without removal of excess horses was modeled using a two-year gather/treatment interval over a 10 year period. Based on WinEquus population modeling, this alternative would not result in attainment of AML for the HMA. And the wild horse population would continue to have an average population growth rate of -2% to 7.9% adding to the current wild horse overpopulation, albeit at a slower rate of growth than the No Action Alternative. The modeling reflected an average population size in 11 years of 245 to 474 wild horses under a two year treatment interval. In 90% of the trials this alternative would not decrease the existing overpopulation of wild horses, resource concerns and rangeland deterioration would continue, and implementation would result in substantially increased gather and fertility control costs relative to the alternatives that remove excess wild horses to the AML range. In addition to not achieving AML, the time needed to complete a gather would also increase over time, because the more frequently an area is gathered, the more difficult wild horses are to trap. They become very evasive and learn to evade the helicopter by taking cover in treed areas and canyons. Wild horses would also move out of the area when they hear a helicopter, thereby further reducing the overall gather efficiency. Frequent gathers would increase the stress to wild horses, as individuals and as entire herds. It would become increasingly more difficult over time to repeat gathers every two years to successfully treat a large portion of the population. For these reasons, this alternative was dropped from detailed study.

### **Use alternative capture techniques instead of helicopters to capture of excess wild horses**

An alternative using capture methods other than helicopters to gather excess wild horses was suggested, other than bait/water trapping, through the public review process. As no specific alternative methods were suggested, the BLM identified chemical immobilization, net gunning, and wrangler/horseback drive trapping as potential methods for gathering horses. Net gunning techniques normally used to capture big games also rely on helicopters. Chemical immobilization is a very specialized technique and strictly regulated. Currently the BLM does not have sufficient expertise to implement either of these methods and they would be impractical to use given the size of the HMA, access limitations and approachability of the horses.

Use of wrangler on horseback drive-trapping to remove excess wild horses can be fairly effective on a small scale; but due to the number of excess horses to be removed, the large geographic size of the HMA, access limitations and approachability of the horses this technique would be ineffective and impractical. Horseback drive-trapping is also very labor intensive and can be very harmful to the domestic horses and the wranglers used to herd the wild horses. For these reasons, this alternative was eliminated from further consideration.

## **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 Proposed Action or No Action Alternatives. 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 Frisco HMA is approximately 60,367 acres and is located, approximately 15 miles northwest of Milford, Utah (Map 1). Access is provided to the HMA by several dirt roads that originate from Utah State Highway 21. However, the condition of the roads can vary on a daily basis due to weather conditions. Temperatures range from 105°F. in the summer, to sub-zero in the winter. Of the 60,367 acres in the HMA approximately 48,852 of these are public land acres, 5,745 of these acres are state and 5,770 acres are private land acres. The wild horses primarily use the lower benches in the winter and the higher elevations in the summer. The HMA is heavily forested with pinyon/juniper trees. The soils within the area are primarily loams. There are considerable amounts of surface rock and scattered rocky outcrops within canyons resulting in wild horses having difficulty traveling long distances and having to take circuitous routes between forage and water.

The HMA ranges from 5,600 in the valleys to 9,500 feet in elevation at the top of Frisco Peak. The wild horses primarily use the lower benches in the winter and the higher elevations in the summer. The HMA supports vegetation types of big sagebrush and pinyon/juniper. The pinyon/juniper vegetation type dominates the HMA and can be dense with minimal under story forage. Open areas outside of the pinyon/juniper canopy are dominated by sagebrush/grasslands. Indian ricegrass, needleandthread grass, and small amounts of curlygrass are the primary forage species. Forage is suffering from drought conditions of below normal precipitation in 2007, 2008, 2009 and 2012. Spring moisture this year was only 55% of normal which reduced both water flows at springs and forage production. Forage conditions have not made sufficient improvement since 2008. Minimal vegetative growth of plants and heavy grazing have already reduced much of the available vegetation. Vegetation near water has been impacted heavily.

The HMA has twelve springs. Five of the springs are developed with the rest undeveloped. Most of these water sources are dry this year. Only three springs (Dipper, Moorehouse, and High Rock Springs) have sufficient water to sustain wild horses and wildlife through the summer. Dipper and High Rock Springs are in the northeast portion of the HMA. Moorehouse spring is in the central eastside of the HMA. This limits the wild horse movement to eastside of the HMA. These springs also relies on pipelines and troughs to provide the water sources for the wild horses. Currently the pipelines and troughs are in working order, but if they fail these sources could go dry quickly.

There are an estimated 220 wild horses within the HMA at present with an estimated 40 of these colts. As forage within close proximity of water sources is depleted the wild horses will need to range greater distances for forage. The distance the animals must travel can result in rapid physical deterioration of the animals. In addition, an overlapping dependence of wildlife for the same habitat as the wild horses, necessitates action to reduce competition for limited resources and to preserve physical condition of all animals.

### **3.2 Description of Affected Resources/Issues**

Identification of issues for this assessment was accomplished by considering the resources that could be affected by implementation of one of the alternatives, as well as public involvement and input from the BLM's interdisciplinary team. The public was invited to participate through posting of the proposal on the Utah BLM Environmental Notification Bulletin Board on June 1, 2012. A preliminary Frisco HMA Gather Plan EA was available to the public at the Cedar City Field Office, and on-line at <http://www.ut.blm.gov/> or <https://www.blm.gov/ut/enbb/> for a 30-day review/comment period beginning on August 7, 2012 and ending September 5, 2012. (see section 8.0 Public Involvement).

As required by regulation [43 CFR 4740.1(b)], a public hearing was held in Fillmore, Utah on July 9, 2012 to discuss the use of helicopters and motorized vehicles in managing Utah BLM's wild horses and burros.

This specific gather was addressed at that public meeting as well as other gathers that may occur within the state of Utah over approximately the next 12 months. This meeting was advertised in papers and radio stations statewide. The meeting was attended by 1 member of the public who submitted hers and another person's comments at the meeting. In addition the Utah State Office received one comment by e-mail on the "Use of Helicopters, Motorized Vehicles" approximately a week after the public hearing. All the comments submitted from the public were considered during the development of the alternatives within this document. The BLM reviewed its SOPs in response to the views and issues expressed at the hearing and determined that no changes to the SOPs were warranted.

Critical elements of the human environment as identified in BLM Handbook 1790-1, Appendix 5 must be considered. Resources within the project area that may be affected must also be discussed. Those critical elements of the human environment and resources which are not present, or are not affected by the Proposed Action or alternatives, are included as part of the interdisciplinary team checklist (see Appendix 1). Rationale for dismissing specific resources or critical elements is also contained as part of this appendix. These critical elements and resources will not be discussed further.

Those critical elements of the human environment and resources which may be affected by the Proposed Action and/or alternatives are carried forward throughout this analysis, and are discussed briefly as follows.

### **3.2.1 Rangeland Health/Vegetation**

Rangeland Health Studies have been completed on all of the livestock grazing allotments that are or have a portion of the allotment within the Frisco HMA. These studies can be found within the allotment files at the BLM Cedar City Field Office. The methodology of each study was completed using technical reference 1734-6. Vegetation production and vigor has been reduced by drought (Standard and Guideline Studies). Drought is defined as prolonged dry weather generally when precipitation is less than 75% of average annual amount (Society for Range Management 1974). Precipitation is the most important single factor determining the type and productivity of vegetation in an area. Forage production increases rapidly as precipitation increases up to about 20 inches per year (Holechek, 1989). Slight reduction from normal precipitation can cause severe reductions in plant yield in areas with less than 12 inches of precipitation (Klages 1942). The valleys within the Frisco HMA average less than 8 inches per year. During the period from 2007-2009 the precipitation was below 75% for that area.

The current drought cycle has had a tremendous influence on rangeland vegetation. As described above, year-long grazing by wild horses has put additional stress on key forage species already affected by drought. Some key forage species have been lost. Recovery could take 5 to 15 years, depending on how severely the drought affected a particular area. Two or more years of drought have far greater impact on vegetation than one year of drought followed by normal or above-normal precipitation.

The Frisco HMA supports multiple vegetation types including: Pinyon-Juniper (PJ), sagebrush, and grasslands (see Table 2 below). The PJ woodland type dominates the HMA and is very dense with minimal understory forage. Open areas outside the PJ canopy are dominated by big sagebrush with Indian ricegrass, wheatgrass, bluegrass, and squirreltail grass as the primary forage species. Only 12% of the HMA produces forage that can be used by ungulates, with only 3% of the HMA considered a good forage producer.

Table 2 Vegetation Within the Frisco HMA.

HMA Name	Vegetation Cover	Acres	Percent
FRISCO	Mountain Fir	510	1%
FRISCO	Pinyon-Juniper	52,484	87%
FRISCO	Sagebrush	5,505	9%
FRISCO	Sagebrush/ Perennial grass	1,868	3%
<b>Total</b>		<b>60,367</b>	<b>100%</b>

Frisco HMA Northern Portion of HMA



Frisco Peak Central Portion of HMA



Monitoring data collected within the Frisco HMA indicated the Utah BLM Standards and Guidelines for Healthy Rangelands were not being fully met and that causal factors for non-attainment of Standard 2 and 3 include dewatering of riparian resource, excessive use by wild horses and elk, the prevalence of invasive species including cheatgrass and halogeton, pinyon and juniper tree encroachment, historic livestock grazing and climatic conditions (drought).

Utilization studies that have been completed during the past 20 years, along with CCFO staff observations, suggest that as wild horse populations increase they contribute to the decrease of forage species. This is especially true in grassland, sagebrush/grassland, and seeded areas. The High Rock seeding has been overtaken by PJ woodland and sagebrush with little grass understory left. The Frisco fire continues to be primarily grasses, but no utilization studies completed on it due to its remoteness.

Utilization studies completed on the Beaver Lake Allotment at the end of June, 2012 showed that in a pasture used only by cattle the utilization on Indian Ricegrass was Slight (13%), while the two adjacent pastures that received use by cattle and wild horses was Moderate to Heavy use (41%-65%).

Seven trend studies were set up within and adjacent to the Frisco HMA by the BLM. These studies describe the soils as being in a stable trend with browse trending slightly down and herbaceous species trending from slightly down to slightly up depending on location within the HMA. These Frequency trend studies suggest the trend is in general stable or static condition. Additional information on the vegetation studies have been summarized in Term Grazing Permit Renewal EAs for the allotments within the HMA.

Year-long grazing by wild horses has been one contributing factor to the downward trend of the grasses

and the change from cool season grasses to warm season grasses. Horses, because they are territorial, are grazing the same areas repeatedly throughout the spring during critical growing periods for grasses. High populations of wild horses can reduce the available forage for not only the year the grasses are grazed, but also for years to come. Horses will graze the most desirable forage plants first before grazing on other species. Wild horses are capable of cropping forage much more closely than wild or domestic ruminants, causing a loss of the most desirable forage species and reducing plant diversity.

From 1998 to 2003 and 2008 to present the excess number of wild horses (numbers over AML) within the HMA reduced the amount of available forage for all grazing animals.

### 3.2.2 Wetlands/Riparian Zones

Several small wetland/riparian areas are present within the Frisco HMA and consist of streams, seeps, and springs that all occur on BLM lands. There are approximately 0.5 miles of lotic (stream) habitat and a total of approximately 2.6 acres of lentic (spring/seep) areas in the Frisco HMA that have been inventoried. An unknown amount of riparian/wetland that occurs within the Frisco HMA still needs to be inventoried. Common riparian/wetland species are willows, cottonwoods, sedges, rushes, Woods rose, and Kentucky bluegrass. The riparian/wetland areas that have been inventoried since 1995, have approximately 0.9 acres rated in proper functioning condition, 0.23 acres rated as functioning at risk with no apparent trend, 0.86 acres functioning at risk with downward trend, and 0.5 miles and 0.67 acres rated as nonfunctional. Riparian habitats represent less than 1 percent of the total acreage of public lands in the Frisco HMA. Reptiles, amphibians, mammals, and bird species routinely use riparian areas for food, water, cover or migration routes. Many neotropical migratory birds are riparian obligates.

**Table 5 Lentic Resources for Frisco HMA**

Site Name	Year Assessed	Riparian Functional Rating – Acres of Riparian					Total
		PFC	FAR-UP	FAR-NA	FAR-DN	NF	
Bardsley Spring	2006	0.01					0.01
Cattail Spring	2007	0.4					0.4
Diaper Spring	2007					0.03	0.03
Horse Spring	2010				0.01		0.01
West Three Kiln	1995			0.23			0.23
Lower Morehouse Spring	2010	0.26					0.26
Smith Spring	2007	0.17					0.17
West Spring	2007	0.06					0.06
Tub Spring	2007				0.01		0.01

<b>Sawmill Seep 1</b>	<b>2007</b>					<b>0.17</b>	<b>0.17</b>
<b>Sawmill Seep 2</b>	<b>2007</b>					<b>0.06</b>	<b>0.06</b>
<b>Sawmill Seep 3</b>	<b>2007</b>					<b>0.38</b>	<b>0.38</b>
<b>Coyote Spring</b>	<b>2007</b>				<b>0.8</b>		<b>0.8</b>
<b>Douglas Spring</b>	<b>1995</b>					<b>0.03</b>	<b>0.03</b>
<b>Armstrong Spring (0.4 miles outside HMA boundary)</b>	<b>2007</b>					<b>0.04</b>	<b>0.04</b>
<b>Frisco HMA Lentic Total Acres</b>		<b>0.9</b>		<b>0.23</b>	<b>0.86</b>	<b>0.67</b>	<b>1.83</b>
<b>Percent of Total Acres</b>						<b>100%</b>	<b>100%</b>
<b>PFC=Proper Functioning Condition</b> <b>FAR-UP= Functional at risk with upward trend</b>  <b>FAR-NA= Functional at risk, trend not apparent</b> <b>FAR-DN= Functional at risk with downward trend</b>  <b>NF= Non-functional</b>							

**Table 6 Lotic Resources for Frisco HMA**

<b>Site Name</b>	<b>Year Assessed</b>	<b>Riparian Functional Rating – Miles of Stream</b>					<b>Total</b>
		<b>PFC</b>	<b>FAR-UP</b>	<b>FAR-NA</b>	<b>FAR-DN</b>	<b>NF</b>	
Sawmill Canyon	2007					0.5	0.5
Frisco HMA Lotic Total Miles						0.5	0.5
Percent of Total Miles						0.5	100%
<b>PFC=Proper Functioning Condition</b> <b>FAR-UP= Functional at risk with upward trend</b> <b>FAR-NA= Functional at risk, trend not apparent</b> <b>FAR-DN= Functional at risk with downward trend</b> <b>NF= Non-functional</b>							

**Causal Factors:**

The rationale for the less than PFC rating was water development, dewatering, road encroachment, upstream channel conditions, juniper encroachment, rabbitbrush encroachment, recreation, and riparian exclosure maintenance. Livestock, wild horses, and wildlife were also noted as causal factors for portions of the streams not rating at PFC. Wild horses, wildlife, and livestock graze riparian areas due to the presence of water, shade, and succulent vegetation. Riparian areas are vulnerable to the effects of overgrazing due to heavy concentration of wild horses, wildlife, and livestock within these areas. Livestock, wildlife, and wild horse grazing impacts water in many ways. Grazing impacts can alter the chemical, physical and biologic integrity of the water. Grazing impacts also have the ability to modify the

hydrologic response of watersheds by reducing infiltration, reducing vegetative cover, stream channel/floodplain degradation, accelerated erosion processes, surface roughness, and increase compaction. All of these impacts are known to occur, but the impacts cannot be quantified in a predictive manner. Many of the causal factors are within the control of management.

Riparian-wetland areas support a wide variety of avian fauna, mule deer, elk, pronghorn, greater sage grouse, Townsend's big-eared bat and many other small mammals, reptiles, and amphibians. Riparian-wetland resources provide food, shelter, breeding ground, and migration corridors for a variety of wildlife species. Mule deer and elk are attracted to riparian areas due to cooler summer temperatures, valuable forage, water availability, and in treed sites the ability of the communities to provide hiding cover as well as thermal cover in the winter. Lowland riparian areas provide a valuable source of water and succulent forage for pronghorn. Mule deer utilize riparian-wetland areas during fawn rearing because riparian vegetation along springs, streams, meadows, and aspen stands are a source of succulent grasses and forbs; which provide important nutrition during gestation and lactation.

Below are photos of Armstrong Spring in 1995 (wild horse population within AML) and in 2012 (368% over upper AML). The only use that occurs on Armstrong Spring is wild horses, a few elk and occasional non-permitted livestock.



Armstrong Spring 1995 Non-Functioning with upward trend.



Armstrong Spring 2012. Non-Functioning with downward trend

### 3.2.3 Livestock Grazing

Approximately 8939 sheep AUMs and 12,442 cattle AUMs are permitted on five (5) allotments that have some portion of the allotment within the HMA (see Table 3 below). Using acreage percentages only it is estimated that the portions of allotments within the HMA account for 1238 cattle AUMs and 2,175 sheep AUMs. However, the use by livestock within the HMA boundaries is less than this. The Frisco HMA is very limiting to livestock due to steep terrain and thick Pinyon-Juniper woodlands. Livestock use the outer portions of the HMA that are within a pasture of the allotment, but rarely do livestock use the inner parts of the HMA. Most livestock and wild horse conflicts occur when wild horses increase above the AML and range along the very edges of the HMA and outside of the HMA. When wild horses occur along the very

boundary of the HMA the majority of the water sources that they use are on private or state lands or are outside the HMA.

Livestock preference as reflected in existing permits for the allotments that overlap Frisco HMA has remained essentially the same from 1983 to present. For the past ten years actual livestock use with the HMA has been substantially reduced or even eliminated during the years of drought and during years when the wild horse estimated population was above AML. All of the livestock 10-year term permits have been renewed in the past six years. Adjustments to livestock grazing permits have included seasons-of-use, kind-of-livestock, AUM's, and numbers of livestock, in order to improve or maintain the vegetative condition on the allotments. As livestock grazing permits are evaluated, additional adjustments to the total number of AUM's of specified livestock grazing on each allotment, seasons-of-use, and kind-of-livestock may be made. Detailed information about the authorized livestock use within the HMA is provided in Term Grazing Permit Renewal EAs EA-UT- 040-06-36, DOI-BLM-UT-C010-2011-0034-EA, and EA-UT- 040-06-35 for those allotments.

Allotment	Operator Display Name	Livestock Number	Livestock Kind	Grazing Begin	Period End	%PL	AUMs	% of Allotment Within HMA
Beaver Lake	Pearson, Ralph & Sons	496	cattle	11/01	05/31	100%	3457	31%
		100	cattle	06/01	06/30	100%	99	
Frisco	R. Larson Sheep Company	2640	sheep	10/16	03/31	92%	2683	23%
		1800	sheep	04/01	05/31	92%	664	
		50	cattle	10/16	05/31	100%	376	
Wah Wah Lawson	Wintch & Co., LTD	335	cattle	10/01	10/15	87%	144	11%
		1280	cattle	10/16	02/28	87%	4999	
		1100	cattle	03/01	06/15	87%	3367	
Crystal Peak	Frischknecht Livestock	403	Sheep	11/01	04/30	100%	430	28%
	Mickel Brothers LLC	3700	Sheep	10/14	04/30	91%	4361	
Red Rock	Allred Sheep Company	2465	Sheep	03/01	04/30	81%	801	8%
<b>TOTAL AUMs</b>							<b>21,381</b>	

During years of drought, the reduction in the amount of available forage and the utilization of forage by wild horses caused most operators to place a substantial portion of their grazing preference in non-use, as approved by the BLM. Reasons for non-use vary with the operator and area, but often include recognition that either there is not sufficient forage for both the present numbers of wild horses and the preference level of livestock grazing, and the economics of the range livestock industry are down.

Allotment	Pasture or All Allotment	6 year Avg AUMs	Active AUMs	% Actual Use
Beaver Lake	Kiln Spring/High Rock	1013	1712	59%
Frisco	All	1161	3723	31%

Wah Wah Lawson	Hardpan	749	3869	19%
Crystal Peak	All	1881	4791	39%
Red Rock	All	932	1312	71%

Although voluntary reductions in cattle AUMs have been taken by permittees, horse numbers have remained at or above the upper AML levels throughout most of the drought years.

Wild horses will drive away livestock and wildlife from watering and feeding areas (Miller, 1981). Wild horses driving livestock and wildlife away from water sources has been observed this year by the CCFO staff. When these resources become depleted, wildlife and wild horses will move to a new location, while livestock must be removed. Sheep could seasonally adjust diets to accommodate horse grazing (Smith 1986b), which reduces the competition for forage and water between domestic sheep and wild horses. Overlap between horses and cattle have been shown to increase at higher stocking density. Large numbers of any two species (cattle or horses) increase the negative interactions (Smith 1986b).

Livestock in these allotments depend on springs, wells, pipelines and water hauling during the periods they are on the allotment. Several small springs and seeps are scattered throughout the allotments and HMA. During normal precipitation years these small springs and seeps disperse wild horse use throughout the HMA reducing competition between livestock and wild horses. The springs and seeps also allow wild horses to use forage at higher elevations where livestock do not graze. During drought years these small springs and seeps dry up and wild horses must move to lower elevations to find water sources. These water sources are the larger springs that have been developed with pipelines and troughs, which are also used by livestock. Wild horses also travel outside of the HMA in search of water sources. This increases competition between wild horses and livestock. The BLM has hauled water onto the HMA for wild horses several times during the past ten years.

Some fences have been damaged by wild horses in their natural movement and in their search for water. Most of these fences were in place before the passage of the Wild and Free Roaming Horse and Burro Act of 1971 or were placed around riparian areas to protect them from livestock and wild horse use, with water provided outside the enclosure. These fences inhibit the natural and free roaming nature of the wild horses but are necessary for livestock management.



This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.

Projection: UTM, Zone 12 North  
Datum: North American Datum of 1983 (NAD83)  
Cedar City Field Office, GIS  
October 11, 2012

Map Scale: 1:80,000

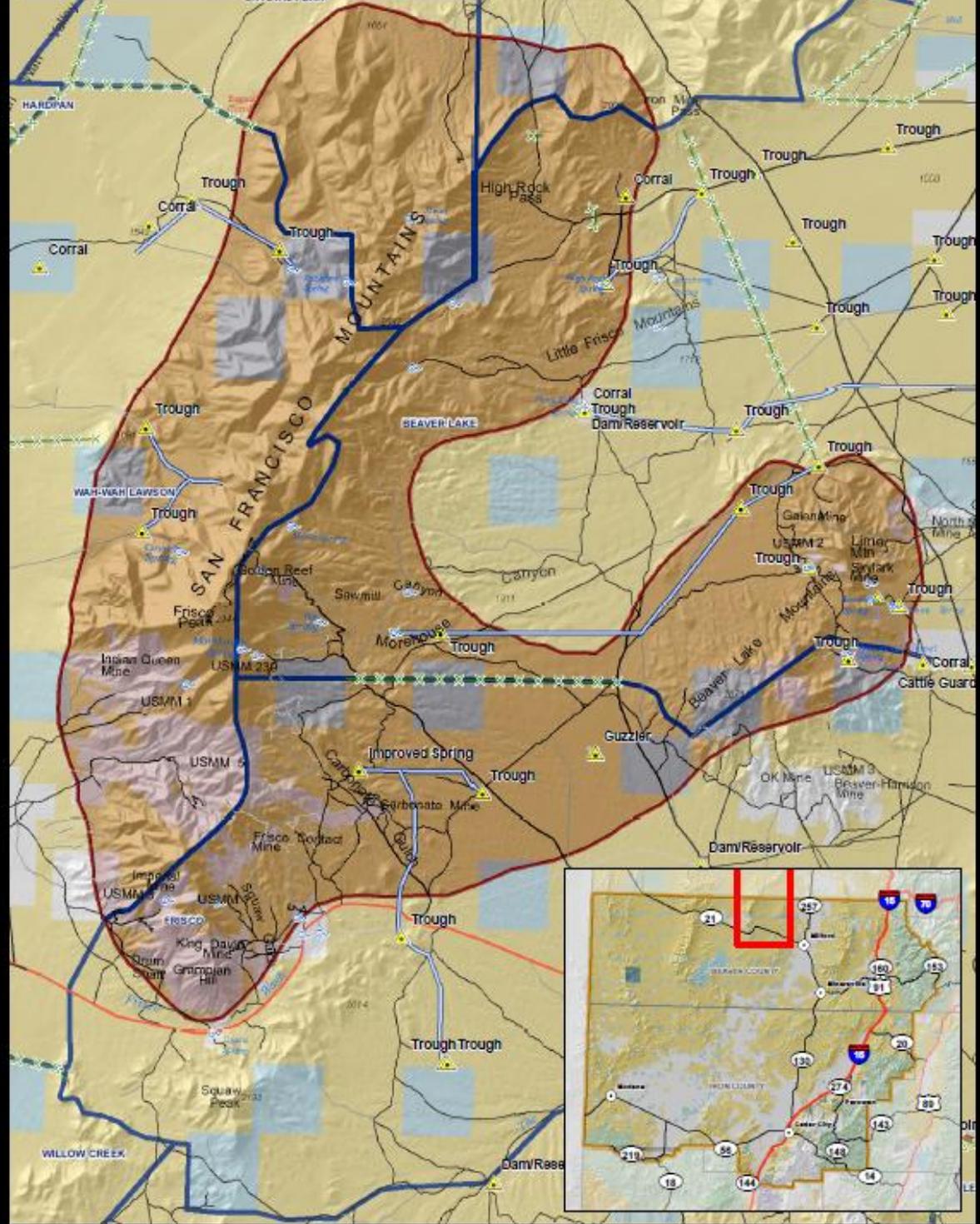
2.5 1.25 0 2.5  
Miles

**Legend:**

- Range Improvement Point (Yellow triangle with exclamation mark)
- Fence/line (Green dashed line with 'X' markers)
- Pipeline (Blue line)
- Allotment Boundary (Blue outline)
- Herd Management Area (HMA) Boundary (Red outline)

**Land Status:**

- BLM (Light brown)
- Private (Light blue)
- State (Light green)



### 3.2.4 Wildlife including T & E, BLM Special Status Species and Migratory Birds

#### Special Status Wildlife Species, Big Game, Upland Game, and Migratory Birds/Raptors

##### Threatened, Endangered and Candidate Species

No federally listed threatened, endangered or candidate species have been identified within the Frisco HMA and they will not be discussed further in this document.

##### BLM Sensitive Wildlife Species

BLM's 6840 Manual addresses the management of Special Status Species. Special status species are those species which are proposed for listing, officially listed as threatened or endangered, or are candidates for listing as threatened or endangered under provisions of the Endangered Species Act (ESA); those listed by a state in a category such as threatened or endangered implying potential endangerment or extinction; and, those designated by each BLM State Director as sensitive.

The following list summarized the Special Status Wildlife Species (excluding species listed under ESA) recognized by management under BLM's 6840 Manual and Instruction Memorandum No. UT2007-078. These species are known to occur or have a high probability of occurrences within the Frisco WHMPA.

Ferruginous Hawk (*Buteo regalis*): The Ferruginous hawk may occur within the Frisco HMA. Primary breeding habitat is pinyon-juniper and secondary breeding habitat is shrubsteppe. Edges of pinyon-juniper woodland, utility structures (transmission poles), cliffs and isolated trees serve to provide nesting as well as perching structures for ferruginous hawk.

Townsend Big-Eared Bat (*Corynorhinus townsendii*): Townsend big-eared bat primary breeding habitat consists of pinyon-juniper woodlands and mountain shrub communities. Small moths and a variety of soft-bodied insects are typical food habits.

##### Big Game

Mule Deer (*Odocoileus hemionus*): Mule deer habitat in the Frisco HMA has been identified as crucial winter range. During spring, summer and early fall, deer fed primarily on a variety of forbs and grasses, with light use on big sagebrush, black sagebrush and antelope bitterbrush. In fall and winter, deer shift their diets to shrubs including big sagebrush, black sagebrush, antelope bitterbrush, Gambel oak and curlleaf mountain mahogany.

Rocky Mountain Elk (*Cervus Canadensis*): The Frisco HMA has been identified as yearlong elk habitat. Elk primarily forage on grasses, but also utilize shrubs, trees and forbs.

Pronghorn (*Antilocapra Americana*): Pronghorn typically utilize a variety of vegetation with shrubs being highest in composition followed by forbs and grasses. The Frisco HMA has been identified as yearlong pronghorn habitat.

##### Upland Game

Chukar (*Alectoris chukar*): Chukar prefers to inhabit open, rocky mountain slopes and forage on seeds from a variety of shrubs, grass and forbs within the Frisco HMA.

### **Migratory Birds and Raptors**

The Migratory Bird Treaty Act (16 U.S.C. §703-712, July 3, 1918, as last amended in 1989) prohibits taking, killing, or possessing migratory birds including nests and eggs. In 2001, Executive Order 13186 was issued to outline responsibilities of federal agencies to protect migratory birds under the Migratory Bird Treaty Act (66 FR 3853-3856). Instruction memorandum 2008-050 provides interim guidance to enhance coordination and communication towards meeting BLM's obligations to the Migratory Bird Treaty Act and Executive Order 13186.

BLM recently entered into a Memorandum of Understanding (BLM- MOU WO-230-2010-04) with USFWS to promote the conservation of migratory birds; specifically, *to strengthen migratory bird conservation by identifying and implementing strategies that promote conservation and avoid or minimize adverse impacts on migratory birds through enhanced collaboration between the Parties, in coordination with state, tribal, and local governments.*

#### Golden Eagle (*Aquila chrysaetos*)

Golden eagles may occur on the Frisco HMA year round. The SWreGAP Animal Habitat Model has shown know or probable winter habitat. A majority of the WHMPA would be used for foraging.

### **Special Status Plant Species**

#### **Threatened, Endangered and Candidate Species**

Three federally listed threatened, endangered or candidate species have been identified to occur within the Frisco HMA.

Frisco Buckwheat (*Eriogonum soledium*): Frisco buckwheat typically grows in sagebrush and juniper communities within limestone outcrops, from 6,600 to 7,300 feet elevation. Densely matted, mound-forming with white or pink flowers and leaves approximately 2-5 mm long.

Frisco Clover (*Trifolium friscanum*): Frisco clover is found within volcanic gravels and limestone in pinyon-juniper woodlands, from 6,900 to 7,300 feet elevation. Flowers are reddish purple, trifoliolate leaves, short petioles.

Ostler Pepperplant (*Lepidium ostleri*): Oster pepperplant is found in crevices of limestone outcrops within pinyon-juniper communities, from 5,800 to 6,800 feet elevation. Petals are white with occasional purple; leaves are grayish and typically only 3-5 lobes.

Because the Frisco gather is expected to occur outside the threatened, endangered and candidate growing season, impacts are not anticipated and will not be discussed any further.

#### **BLM Sensitive Plant Species**

No BLM sensitive plant species have been identified within the Frisco HMA and will not be discussed any further.

### **3.2.5 Wild Horses and Burros**

The last removal of excess wild horses from the Frisco HMA was completed in August of 2006 when 43 horses were gathered and 36 were removed. Following the 2006 gather, three stallions and 4 mares were released back into the HMA. The un-gathered population was estimated at approximately 50 animals. In 2009 and 2010 partial population inventories were completed using direct count with an estimated %

missed added. These partial population inventories were found to be below the actual number of horses that occurred on the HMA when a full inventory was completed in 2012.

The current estimated population of wild horses within the HMA is estimated at 220 head  $\pm$  14 head. This number is based on an aerial population inventory from the Mark-Resight method. A statistical analysis provide a 95% confidence interval population estimate is within 14 head of 220 horses on the HMA. The population inventory was conducted in April 2012 (BLM Wild Horse Gather and Population Inventory Files).

Since the passage of the Wild Free-Roaming Horses and Burros Act of 1971 (WFRHBA) over 40 years ago, field observations, herd health monitoring and population inventories have recorded locations in and around the HMA where wild horses have occurred. Horses normally do not move outside the HMA (excluding the valley between the San Francisco Mountains and the Beaver Lake Mountains) unless the population is above AML and/or there are drought conditions.

Rangeland resources and wild horse health have been and are currently being affected within the Frisco HMA, due to drought and overpopulation. Excess wild horses above the AML have reduced available forage, resulting in increased competition for available resources. Some older horses within the HMA are now showing signs of loss of body condition due to drought and over population. Wild horses have expanded outside of the HMA in search of forage, water, and cover. The gather and removal of wild horses from the Frisco HMA would have direct and indirect impacts to individual animals and the social structure of bands in the area. Most impacts would be short term (under 1 year), but some would be long term (greater than a year). These impacts will be discussed in this EA.



Stealth Cam 076 F 06-25-2012 20:21:15

Stealth Cam 078 F 06-28-2012 21:12:14

Wild Horse Condition at Dipper Spring. Older and younger horses body condition dropping.



Heavy Utilization on Key Forage Species 1 mile from Hidden Spring.

The AML for the Frisco HMA was set in the Pinyon Management Framework Plan (PMFP) (1983) which allows for, “the removal of horses as required to maintain horse numbers at or below 1982 inventory levels, but not less than 1971 levels.” The MFP also allocated forage for wild horses, livestock, and wildlife. The BLM CCFO has attempted since the completion of the MFP in 1983 to maintain the wild horse population within the AML on the Frisco HMA. Since 1994 four (4) gathers and removals have been conducted within the HMA in an attempt to keep the horse population within the AML. In 2003, 2004 and 2007 the population was down near the upper end of the AML. Gathers of wild horses within this HMA have proven difficult due to heavy tree cover, terrain, and horse movement. As the population increases, it becomes harder to gather the number of horses needed to reduce the population to within the AML.

Wild horse populations above AML compete for forage, water, and cover allocated to wildlife and livestock. High populations of wild horses impact riparian areas with increased trampling, vegetative use, and trampling. Wild horses will drive away livestock and native ungulates from watering and feeding areas (Miller 1981).

Because horses have a cecal digestive system and can cover longer distances than domestic ruminants, wild horses can remain in good health under forage conditions fatal to domestic ruminants (Holechek 1989). In 1999 through 2004, range conditions within the HMA became so bad that even though livestock use was reduced or eliminated on the BLM allotments and several hundred head of wild horses removed, health of some horses declined to critical conditions. Some horses were lost to starvation and dehydration during those years.

The overriding limiting factor for the carrying capacity of wild horses in the HMA is not the available forage, although this is a concern, but is the supply of reliable water during the summer months. Wild horses in this HMA congregate in portions of the HMA to stay close to available water sources. This concentration increases as drought reduces the available water in and around the HMA. Upland vegetation

in proximity to water sources are used heavily by wild horses and wildlife, while vegetation in areas farther from water (i.e., greater than six miles) is used slightly to moderately. Horses have moved outside the HMA to areas north and east of the HMA that has adequate forage, but can only be used in the winter and spring when livestock troughs are turned on or water is hauled to those locations. During drought conditions, as has occurred during 1999-2004 and the last few years, water has been hauled and troughs have been turned on during summer to sustain these horses outside the HMA.

The Hidden and Three Kiln Springs are two water sources that are heavily used by wild horses, but occur on state and private lands. Since 2006 these two water sources have been used by wild horses and wildlife exclusively. These water sources have been impacted heavily by this use.

The increased concentration of wild horses at all the reliable water sources in the HMA have reduced vegetation and caused soil compaction. Due to the high population of wild horses within the HMA, water hauling may need to occur before the proposed action to sustain the current population of wild horses.



Three Kiln Spring

The AML is not large enough to maintain a good genetic health without introduction of horses from outside the HMA. A handful of horses from the different HMAs have been released into this HMA since the passage of the WFRHBA. Blood samples for genetic testing were taken in 2006 to create a baseline for

the wild horses that occur within the Frisco HMA. These samples were sent to Dr. Gus Cothran and Texas A&M, but the results have not yet been received by the BLM.

It is anticipated that the age structure of the Frisco HMA wild horses resemble a normal age structure with ages ranging from foals to animals in excess of 20 years of age. The sex ratio is estimated to be approximately 50% mares and 50% stallions with variations 10% below or above these levels.

Population modeling was completed for the Frisco HMA using Version 3.2 of the WinEquus population model (Jenkins 2000) to analyze how the alternatives would affect the wild horse population. This modeling analyzed removal of excess wild horses with no fertility control, as compared to removal of excess wild horses with fertility control and sex ratio adjustments for released horses. The No Action (no removal) Alternative was also modeled. One objective of the modeling was to identify whether 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 not likely. Graphic and tabular results are also displayed in detail in Appendix 8.

### **3.2.6 Public Safety**

In recent gathers, members of the public have increasingly traveled to the public lands to observe BLM’s gather operations. Members of the public can inadvertently wander into areas that put them in the path of wild horses that are being herded or handled during the gather operations, creating the potential for injury to the wild horses or burros and to the BLM employees and contractors conducting the gather and/or handling the horses as well as to the public themselves. Because these horses are wild animals, there is always the potential for injury when individuals get too close or inadvertently get in the way of gather activities.

The helicopter work is done at various heights above the ground, from as little as 10-15 feet (when herding the animals the last short distance to the gather corral) to several hundred feet (when doing a recon of the area). While helicopters are highly maneuverable and the pilots are very skilled in their operation, unknown and unexpected obstacles in their path can impact their ability to react in time to avoid members of the public in their path. These same unknown and unexpected obstacles can impact the wild horses or burros being herded by the helicopter in that they may not be able to react and can be potentially harmed or caused to flee which can lead to injury and additional stress. When the helicopter is working close to the ground, the rotor wash of the helicopter is a safety concern by potentially causing loose vegetation, dirt, and other objects to fly through the air which can strike or land on anyone in close proximity as well as cause decreased vision.

During the herding process, wild horses or burros will try to flee if they perceive that something or someone suddenly blocks or crosses their path. Fleeing horses can go through wire fences, traverse unstable terrain, and go through areas that they normally don’t travel in order to get away, all of which can lead them to injure people by striking or trampling them if they are in the animal’s path.

Disturbances in and around the gather and holding corral have the potential to injure the government and contractor staff who are trying to sort, move and care for the horses and burros by causing them to be kicked, struck, and possibly trampled by the animals trying to flee. Such disturbances also have the potential for similar harm to the public themselves.

Public observation of the gather activities on public lands will be allowed and would be consistent with BLM IM No. 2010-164 and in compliance with visitation protocols for scheduled and nonscheduled visitation found in Appendix 10.

## **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 Proposed Action and/or the No Action Alternative. These include the direct impacts (which are caused by the action and occur at the same time and place) and indirect impacts (which are caused by the action and are later in time or farther removed in distance).

### **4.2 Predicted Effects of Alternatives**

The direct and indirect impacts to these resources which would be expected to result with implementation of the Proposed Action, Alternatives 3-5 or No Action Alternatives are discussed in detail below.

#### **4.2.1 Rangeland Health/Vegetation**

##### **Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal**

No HMAP would be completed at this time. The HMA would be managed under the objectives of the Pinyon MFP, and current regulations and policies with no objectives specific to the management of wild horses within the Frisco HMA.

Under the No Action Alternative, wild horses would continue to increase in population size beyond the capacity of the habitat to provide water and forage. Heavy and severe use of vegetation resources by wild horses would continue and increase, resulting in further degradation of plant communities, increased soil erosion, and susceptibility to invasive species. Downward trends in key perennial species would be expected in conjunction with reductions in ecological condition and soil stability. The vegetative functional groups (i.e. grass, shrubs, trees etc.) would be changed as grasses are over utilized during critical growing seasons. Vegetation would also experience reduced production resulting in reduced forage availability to wildlife, livestock, and wild horses. Eventually rangeland health would be reduced below a threshold that would be difficult to recover from.

##### **Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)**

This Alternative would include identifying key areas to facilitate future utilization and vegetation condition and trend monitoring. A rangeland health assessment would be completed every 10 years; based on the results of this assessment additional site-specific resource management objectives for the key areas could potentially be established. During this assessment, current data will be collected on noxious and invasive weeds.

This alternative includes the reconstruction of existing water developments over the next 1-5 years and maintaining them annually thereafter. Reconstruction and maintenance activities would be confined to the existing area of disturbance; short-term disturbance of soil, vegetation, riparian and water resources within the affected area would result. Modifications requiring disturbance outside the existing area of disturbance would require a site-specific cultural resource clearance and additional environmental analysis, as appropriate. If cultural resources are found within the area of potential effect, the proposed project would be relocated or redesigned so there are no negative impacts to those resources.

Over a period of 6 to 10 years competition for forage and water between wild horses, wild life and livestock would be directly reduced. A reduced number of wild horses over this period of time within the Frisco HMA would improve and/or sustain rangeland health and lower utilization levels.

Indirect impacts from gathering to the low-range of the AML include reduced trailing by wild horses (less vegetation trampling/disturbance) as they travel to/from water and forage. Actual forage utilization by wild horses would also be reduced from heavy (61+% of annual year's growth) at the present time to moderate or less (<40-60%) within a 1-3 mile radius of the available water. Over the long term, reduced forage utilization would promote vegetation re-growth and provide for natural recovery of overgrazed plants. A reduced demand for forage would help improve the vigor of vegetation, allow for seedling establishment, increase ground cover, and thereby maintain a thriving natural ecological balance. The recovery from this year's drought and the extended drought would be allowed to continue and should show improved vegetative trend of key forage species, if precipitation remains near or above long-term average levels. Long-term rangeland health would continue to be met within and/or improve within the allotments as key forage and riparian areas would receive less use, especially during time of drought when wild horse are hardest on vegetation near water.

Reducing the wild horse population to within the AML would contribute to maintaining sufficient vegetation and litter within HMA to protect soil from erosion, meet plant physiological requirements, facilitate plant reproduction, and reduce potential for spread of noxious weeds.

This alternative would result in periodic gathers to remove excess wild horses from the Frisco HMA to try achieve then maintain the population within AML. For helicopter round ups direct impacts to vegetation would include short-term (1 to 10 days) disturbance of native vegetation immediately in and around temporary trap sites, and holding and handling facilities. For bait trapping the direct impacts to vegetation would be longer (5-365 days) but would still be considered short term. There would be direct impacts to the vegetation immediately in and around temporary trap sites, and holding, sorting and animal handling facilities. Impacts are created by vehicle traffic and hoof action of penned horses can be locally severe in the immediate vicinity of the corrals or holding facilities. Keeping the sites approximately ½ acre in size would minimize the disturbance area. Since most trap sites and holding facilities are re-used during recurring wild horse gather operations, any impacts would remain site specific and isolated in nature. In addition, most trap sites or holding facilities are selected to enable easy access by transportation vehicles and logistical support equipment and would therefore, generally be near or on roads, pullouts, water haul sites or other previously disturbed flat spots. These common practices would minimize the cumulative effects of these impacts.

The use of fertility control on wild horses during gathers would not impact rangeland resources and vegetation directly but would have indirect impacts, if wild horse populations were reduced or maintained within AML for longer periods of time. The lower wild horse populations or the increase in amount of time that populations are within the AML would extend the beneficial impacts describe in this section above.

**Alternative 3:HMAP with adjusted AML, gather, remove and treat with release of geldings**

Under Alternative 3, would increase the AML with a breeding population (30-60 animals) and a non-breeding population of (20-40 geldings) being managed. The gelding population would be expected to form bachelor bands; this could result in concentrating use around available water, with the potential for

increased utilization and trampling of soil, vegetation and riparian resources or alternatively, could result in geldings roaming further to/from water, resulting in decreased utilization of soil, vegetation and riparian resources. Post-treatment monitoring would be conducted to determine actual impacts.

Competition for forage and water between wild horses, wild life and livestock would be directly increased with additional horses on the HMA when the population is at or near the high AML. The higher population (higher AML) would reduce the benefits to vegetation, soils, and riparian areas when compared to Alternative 2, 4 and 5. A wild horse population within the new AML would maintain not improve the conditions of Rangeland Health, that includes vegetation, soils, and riparian.

Impacts of Alternative 3 objective H and the gather, removal and treatment of released mares with PZP would be similar to those described in Proposed Action.

**Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.**

No HMAP would be completed at this time. The HMA would be managed under the objectives of the Pinyon MFP, and current regulations and policies with no objectives specific to the management of wild horses within the Frisco HMA.

Over the longer term, existing water developments would be phased out as they outlive their useful life; riparian areas would be fenced to exclude wild horses if needed to maintain or improve riparian condition. This could have short-term direct impacts to soils, vegetation and riparian resources by concentrating wild horse use around remaining water until such time as AML could be adjusted downward. It could also result in continued supplementation of water (increased disturbance from water hauling to soils and vegetation resources) to wild horses during this timeframe.

Impacts of the gather, removal and treatment of released mares with PZP would be similar to those described in Alternative 2 Proposed Action.

**Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.**

Under this alternative, fertility control would not be applied and the growth rate (population increase) would be higher than Alternatives 2-4. This would result in more frequent gathers of the Frisco HMA once the AML was achieved than under Alternatives 2-4. Increased gathers means greater short-term disturbance of vegetation and soils in and around temporary trap sites and holding and handling facilities.

Impacts of the gather and removal would be similar to those described in Proposed Action, but there would be not impacts do to released mares being treated with PZP. However, without slowing reproduction, a steady increase in the number of wild horses through natural foaling rates would result in impacts to vegetation. Removal of excess wild horses would be beneficial to vegetative resources but plant communities may not receive as much opportunity to recover as under the Alternative 4.

#### **4.2.2 Livestock Grazing**

**Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal**

Livestock would not be displaced or disturbed due to gather operations under the No Action Alternative. However, forage conditions (quality and quantity) would continue to deteriorate on the range. As wild horse numbers increase, livestock grazing within the HMA may have to be further reduced in an effort to

slow the deterioration of the range to the greatest extent possible or because rangeland conditions do not support the multiple uses for which the public lands are being managed.

**Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)**

The HMAP would not have any direct impacts to livestock grazing. Objectives that identify improvements to forage and water availability would reduce competition for these resources within the HMA, if they are accomplished.

Livestock located near gather activities may be temporarily disturbed or displaced by the helicopter and the increased vehicle traffic during the gather operation. This displacement would be temporary and the livestock would move back into the area once gather operations moved. Past experience has shown that gather operations have little impacts on grazing cattle and sheep. No adjustments in permitted livestock use, active AUMs, season of use and/or terms and conditions would occur as a result of the Proposed Action. Direct impacts of the gather activities itself would be minor and short-term.

Indirect impacts to livestock grazing would be an increase in forage availability and quality, reduced competition for water and forage, and improved vegetative resources that would lead to a thriving ecological condition over the course of 6 to 10 years. Water sources that are developed or repaired for use by wild horses would also be of benefit to livestock.

**Impacts of Alternative 3: HMAP with adjusted AML, gather, remove and treat with release of geldings**

The direct impacts of the gather and removal would be similar to Alternative 2.

In the short-term the indirect impacts to livestock grazing by reducing the current wild horse population to the new AML in this proposal would be an increase in forage availability and quality, reduced competition for water and forage, and improved vegetative resources within in a year. Water sources that are developed or repaired for use by wild horses would also be of benefit to livestock.

Because the HMAP increases the current AML, the long-term impacts to livestock grazing within the HMA may include further reductions in use in an effort to slow the deterioration of the range to the greatest extent possible or because rangeland conditions do not support the multiple uses for which the public lands are being managed. These adjustments in livestock use would have to be evaluated and analyzed in other documents.

**Impacts of Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.**

Impacts of the gather and removal would be the same as Alternative 2 Proposed Action. The impacts of the no HMAP would be the same as the Alternative 1 No Action.

**Impacts of Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.**

Impacts of the gather and removal would be similar to the Proposed Action; however, wild horse populations may increase at a faster rate and exceed the high end of the AML increase competition between livestock and wild horses sooner.

#### **4.2.3 Wetlands/Riparian Zones**

**Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal**

The No Action Alternative would not have any direct impacts to riparian/wetland resources. Indirect

impacts would result from continued and increased utilization on riparian vegetation as wild horse populations continue to increase. Wild horse population size would continue to increase in excess of the established AML. Riparian areas currently rated at Proper Functioning Condition (PFC), could experience downward trends caused by utilization of riparian vegetation and browse, and trampling by populations of wild horses in excess of AML. Riparian areas rated below PFC (Functional at Risk and Non-Functional) would likely not improve, and downward trends would continue. Wild horses have been identified through Proper Functioning Condition Assessments as a contributing factor in riparian areas within the Frisco HMA not being in PFC. Standard 2 in the Standards for Rangeland Health which states “*Riparian and wetland areas are in properly functioning condition...*” is not currently being met for riparian areas within the HMA.

**Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)**

The only direct impact to riparian/wetland areas that could result from the Proposed Action would be from possible use of riparian areas for employment of water trapping. Impacts from water trapping would include construction of a temporary trap around a water source that is designed to hold the horses until they can be transported or treated. Also, trampling of riparian vegetation could occur while the horses are in the trap. Helicopter trap sites and temporary holding facilities would not be constructed on riparian resources.

The Proposed Action would indirectly impact riparian wetland zones and water quality due to the decreased utilization by wild horses in these sensitive areas allowing for the possibility of riparian wetland areas to improve through natural processes. With only gathering and removing 100-200 wild horses in each successive gather operation the improvements would occur incrementally as the wild horses are gathered over the next six to ten years until the low end of AML is reached. Under this alternative native plant health, soils and would slowly improve. An opportunity to make progress toward achieving and maintain riparian areas in properly functioning condition would be foregone until reaching the lower end of AML.

Implementing the Proposed Action would slightly decrease current competition for water sources and alleviate pressures exerted on riparian habitat due to wild horses congregating around these sensitive areas. If the breeding mares left on the HMA were treated with PZP birthrates would decrease, thus reducing the population growth for up to 3 years. This would further reduce utilization impacts on wetlands/riparian resources by extending the time the population is reduced. The functionality of riparian resources would improve in condition towards a more properly functioning condition (PFC) with the removal of excess wild horses.

**Alternative 3:HMAP with adjusted AML, gather, remove and treat with release of geldings**

Alternative 3 would not have any direct impacts to riparian wetland zones or water quality. Trap sites and temporary holding facilities would not be constructed on riparian resources. Any water source development or maintenance would be addressed in additional NEPA documents.

Alternative 3 would indirectly impact riparian wetland zones and water quality due to the decreased current utilization by wild horses in these sensitive areas allowing for the possibility of riparian wetland areas to improve through natural processes. Implementing Alternative 3 would slightly decrease current competition for water sources and alleviate pressures exerted on riparian habitat due to wild horses congregating around these sensitive areas. The use of fertility control that reduces reproduction rates reduce utilization impacts on wetlands/riparian resources by extending the time the population is within

AML. The functionality of riparian resources would improve in condition towards a more properly functioning condition (PFC) with the removal of excess wild horses.

Over the long term the increased AML in that includes a population of gelded horses would put more pressure on the riparian areas compared to populations being managed within the current AML. Riparian areas would not be expected to improve with this increased AML, but the current condition would be maintained.

**Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.**

Alternative 4 would not have any direct impacts to riparian wetland zones or water quality. Trap sites and temporary holding facilities would not be constructed on riparian resources.

Alternative 4 would indirectly impact riparian wetland zones and water quality and would be similar to that described in Alternative 2 Proposed Action.

**Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.**

Alternative 5 would not have any direct impacts to riparian wetland zones or water quality. Trap sites and temporary holding facilities would not be constructed on riparian resources.

Alternative 5 would indirectly impact riparian wetland zones and water quality due to the decreased utilization by wild horses in these sensitive areas allowing for the possibility of riparian wetland areas to improve through natural processes. Implementing Alternative 5 would slightly decrease current competition for water sources and temporarily alleviate pressures exerted on riparian habitat due to wild horses congregating around these sensitive areas until wild horse population increases through reproduction to levels above AML. The functionality of riparian resources would improve in condition towards a more properly functioning condition (PFC) with the removal of excess wild horses until wild horse populations returned to levels above AML.

#### **4.2.4 Wildlife**

**Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal**

Special Status Wildlife Species

Under the No Action Alternative impacts would continue between BLM special status species and wild horses; such as destruction and degradation of foraging habitat.

Big Game

Under the No Action Alternative, competition between wild horse and big game would continue and likely increase as the horse population increases. Key perennial species vigor and production would be reduced, thus limiting available forage to big game.

Upland Game

Under the No Action Alternative, wild horses would compete with upland game species for habitat that is suitable for nesting and foraging.

Migratory Birds and Raptors

The No Action Alternative would have no direct impact to migratory birds and golden eagles since the gather would not occur. Indirect impacts would be decreased forage and cover, which would cause a loss of habitat for some species of migratory birds.

**Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)**

Competition for available forage between wild horses and wildlife would continue until the AML numbers have been achieved. Activities using helicopters, construction of temporary holding facilities and water trapping locations can have short-term effects on wildlife from noise and human disturbance. Bait or water trapping can be time consuming, however; activities from noise and human disturbance would be decreased vs. helicopter trapping. During the hot summer months, wildlife will become more reliant on available water resources. This could create an avoidance by wildlife until after the gather is completed or until wildlife become accustomed to these structures.

Proposed fertility control treatments over the long-term, would be expected to provide a decrease in the wild horse population and lessen utilization on key forage species. Wildlife and wildlife habitat would be indirectly affected by the Proposed Action as it pertains to resulting improvements in resource health from the removal of wild horses.

**Special Status Wildlife Species**

Impacts from wild horse grazing would include destruction and degradation of foraging habitat for ferruginous hawk. Destruction of riparian habitat could potentially impact Townsend big-eared bats foraging opportunities. Development of new and/or reconstruction of water provides Townsend big-eared bat potential foraging areas.

**Big Game**

Direct impacts would consist primarily of disturbance and short-term displacement of big game by the low-flying helicopter, construction of temporary trap/holding facilities and water trapping locations. A reduction of the wild horse population would decrease competition for available forage, cover, space and water between big game and wild horses once the AML has been achieved. Development of new and/or reconstruction of existing water developments would decrease competition for water sources between big game and wild horses.

Protection of riparian areas are important for big game due to cooler summer temperatures, valuable forage, water availability, and provide hiding cover as well as thermal cover in the winter. Mule deer and elk utilize riparian-wetland areas during fawn rearing because riparian vegetation provides a source of succulent grasses and forbs, which provide important nutrition during gestation and lactation. Lowland riparian areas provide a valuable source of water and succulent forage for pronghorn.

**Upland Game**

Wild horses would compete with upland game species for habitat that is suitable for nesting in upland habitats such as sagebrush and grassland areas.

**Migratory Birds and Raptors**

Because the proposed gather is not expected to occur during the migratory bird nesting season, typically April 1 – July 30, the gather would likely have a low potential for disturbance to individual nesting birds and no potential for impact to migratory bird populations. Riparian areas provide important habitat requirements for migratory birds. These areas are used as riparian corridors and for breeding and wintering habitat.

The proposed gather is not expected to occur during the golden eagle nesting season, typically January 1 – August 31, the gather would likely have a low potential for disturbance to individual golden eagle nesting birds.

**Alternative 3: HMAP with adjusted AML, gather, remove and treat with release of geldings**

Wildlife impacts under this alternative would be similar to those identified in the Proposed Action. The increased AML would likely increase competition between big game and wild horses in these important riparian areas and decrease the nesting and hiding cover requirements for migratory birds.

**Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.**

Wildlife impacts under this alternative would be similar to those identified in the Proposed Action, however, competition for water resources would be expected to continue.

**Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.**

Wildlife impacts under this alternative would be similar to those identified in the Proposed Action. However, without slowing the reproduction rate a steady increase of wild horses through natural foaling rates would occur and increase the competition between wild horses and wildlife for available forage, cover and water resources.

#### **4.2.5 Wild Horses**

**Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal**

No HMAP would be completed at this time. The HMA would be managed under the objectives of the Pinyon MFP, and current regulations and policies with no objectives specific to the management of wild horses within the Frisco HMA.

If No Action is taken, excess wild horses would not be removed from within or outside the Frisco HMA at this time. The animals would not be subject to the individual direct or indirect impacts as a result of a gather operation in November 2012. Over the short-term, individuals in the herds would be subject to increased stress and possible death as a result of increased competition for water and forage as the wild horse population continues to grow. The number of areas experiencing severe utilization by wild horses would increase over time. This would be expected to result in increasing damage to rangeland resources throughout the HMA. Trampling and trailing damage by wild horses in/around riparian areas and water sources would also be expected to increase, resulting in larger, more extensive areas of bare ground. Competition for the available water and forage between wild horses, domestic livestock, and native wildlife would increase.

Wild horses are a long-lived species with documented survival rates exceeding 92% for all age classes and do not have the ability to self-regulate their population size. Predation and disease have not substantially regulated wild horse population levels within or outside the Frisco HMA. Some mountain lion predation may occur, but does not appear to be substantial. Coyotes are not prone to prey on wild horses unless young or extremely weak. Other predators such as wolf or bear do not exist within the HMA. As a result, there would be a steady increase in wild horse numbers for the foreseeable future, which would continue to exceed the carrying capacity of the range. Individual horses would be at greater risk of death by starvation and lack of water. The population of wild horses would compete for the available water and forage resources, affecting mares and foals most severely. Social stress would increase. Fighting among stud

horses would increase as they protect their position at scarce water sources, as well as injuries and death to all age classes of animals.

Substantial loss of the wild horses in the HMA due to starvation or lack of water would have obvious consequences to the long-term viability of the herd. Continued decline of rangeland health and irreparable damage to vegetative, soil and riparian resources, would have obvious impacts to the future of the HMA and all other users of the resources, which depend upon them for survival. As a result, the No Action Alternative would not ensure healthy rangelands, would not allow for the management of a healthy, self-sustaining wild horse population, and would not promote a thriving natural ecological balance.

As populations increase beyond the capacity of the available habitat, more bands of horses would leave the boundaries of the HMA in search of forage and water. This alternative would result in increasing numbers of wild horses in areas not designated for their use, would be contrary to the Wild Free-Roaming Horse and Burro Act and would not achieve the stated objectives for wild horse herd management areas, to “prevent the range from deterioration associated with overpopulation,” and “preserve and maintain a thriving natural ecological balance and multiple use relationship in that area.”

**Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)**

The Proposed Action would only decrease the existing overpopulation of wild horses by approximately 100-200 wild horses in each successive gather operation over a period of six to ten years and stallions would be selected for release with the objective of establishing a 60% male ratio within the core breeding population of 30-60 horses on the range. The target population when the objectives of this alternative are reached would result in a total population at approximately mid-range AML or 45 horses. Every 4-5 years 1-3 studs or mares from a different HMA, with similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic health on the HMA. All animals selected to remain in the core breeding population would be selected to maintain a diverse age structure, herd characteristics and body type (conformation). The Proposed Action would not reduce all of the associated impacts to the wild horses and rangeland resources. Over the short-term, individuals in the herd would still be subject to increased stress and possible death as a result of continued competition for water and forage until the project area's population can be reduced to the AML range. Although lessened the areas experiencing heavy and severe utilization levels by wild horses would remain near current levels and impacts to rangeland resources (concentrated trailing, riparian trampling, increased bare ground, etc.) throughout the HMAs would be expected to continue until the project area's population can be reduced to the AML range and concentration of horses can be reduced.

Because it will take several successive gather operations over a period of six to ten years to get the combined area's wild horse population to low end of AML, bands of horses would continue to leave the boundaries of the HMA into areas not designated for their use in search of forage and water and would not achieve the stated objectives for wild horse herd management area, to “prevent the range from deterioration associated with overpopulation”, and “preserve and maintain a thriving natural ecological balance and multiple use relationship in that area”.

Removal of excess wild horses would improve herd health. Decreased competition for forage and water resources would reduce stress and promote healthier animals. This removal of excess animals coupled with anticipated reduced reproduction (population growth rate) as a result of fertility control should result in improved health and condition of mares and foals as the actual population comes into line with the population level that can be sustained with available forage and water resources, and would allow for healthy range conditions (and healthy animals) over the longer-term. Additionally, reduced population

growth rates would be expected to extend the time interval between gathers and reduce disturbance to individual animals as well as to the herd social structure over the foreseeable future.

Bringing the wild horse population back to low range AML by achieving the proposed action would reduce damage to the range from the current overpopulation of wild horses and allow vegetation resources to start recovering, without the need for additional gathers in the interim. As a result, there would be fewer disturbances to individual animals and the herd, and a more stable wild horse social structure would be provided.

Impacts to individual animals may occur as a result of handling stress associated with the gathering, processing, and transportation of animals. The intensity of these impacts varies by individual animal and is indicated by behaviors ranging from nervous agitation to physical distress. Mortality to individual animals from these impacts is infrequent but does occur in 0.5% to 1% of wild horses gathered in a given gather. Other impacts to individual wild horses include separation of members of individual bands of wild horses and removal of animals from the population.

Indirect impacts can occur after the initial stress event, and may include increased social displacement or increased conflict between stallions. These impacts are known to occur intermittently during wild horse gather operations. Traumatic injuries may occur, and typically involve bruises from biting and/or kicking, which do not break the skin.

The gathers would occur frequently making wild horses more difficult to trap. The horses would become very evasive and learn to evade the helicopter by taking cover in treed areas and canyons. Wild horses would also move out of the area when they hear a helicopter, thereby further reducing the overall gather efficiency. Frequent gathers would increase the stress to wild horses, as individuals and as entire herds. It would become increasingly more difficult over time to repeat gathers if the gathers are within two year intervals to successfully treat mares with PZP.

Stallions selected for release would be released to increase the post-gather sex ratio to approximately 60% stallions in the remaining herds. Stallions would be selected to maintain a diverse age structure, herd characteristics and body type (conformation). It is expected that releasing additional stallions to reach the targeted sex ratio of 60% males would result in smaller band sizes, larger bachelor groups, and some increased competition for mares. With more stallions involved in breeding it should result in increased genetic exchange and improvement of genetic health within the herd.

### **Fertility Control treatments**

All mares selected for release would be treated with a two-year Porcine Zona Pellucida (PZP-22) or similar vaccine/fertility control and released back to the range. Immuno-contraceptive (fertility control) treatments would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures (SOPs, Appendix 6). Mares selected for release would be selected to maintain a diverse age structure, herd characteristics and conformation (body type).

Each released mare would receive a single dose of the two-year PZP contraceptive vaccine. When injected, PZP (antigen) causes the mare's immune system to produce antibodies; 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 the environment, and can easily be administered in the field. In addition, among mares, PZP contraception appears to be completely reversible. One-time application at the capture site would not affect normal development of a fetus should

the mare already be pregnant when vaccinated, hormone health of the mare, or behavioral responses to stallions (Kirkpatrick et al, 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 et. al, 1997).

The treatment would be controlled, handled, and administered by a trained BLM employee (SOPs, Appendix 6). 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 impact from the fertility control injections. Newly captured mares that do not have markings associated with previous fertility control treatments would be marked with new freeze-mark letters for tracking purposes. This information would also be used to determine the number of mares captured that were not previously treated and provide additional insight to gather efficiency.

Ransom et al. (2010) found no differences in how PZP-treated and control mares allocated their time between feeding, resting, travel, maintenance, and social behaviors in three populations of wild horses, which is consistent with Powell's (1999) findings in another population. Likewise, body condition of PZP-treated and control mares did not differ between treatment groups in Ransom et al.'s (2010) study. Turner and Kirkpatrick (2002) found that PZP-treated mares had higher body condition than control mares in another population, presumably because energy expenditure was reduced by the absence of pregnancy and lactation.

In two studies involving a total of four wild horse populations, both Nunez et al. (2009) and Ransom et al. (2010) found that PZP-treated mares were involved in reproductive interactions with stallions more often than control mares, which is not surprising given the evidence that PZP-treated females of other mammal species can regularly demonstrate estrus behavior while contracepted (Shumake and Wilhelm 1995, Heilmann et al. 1998, Curtis et al. 2002). Ransom et al. (2010) found that control mares were herded by stallions more frequently than PZP-treated mares, and Nunez et al. (2009) found that PZP-treated mares exhibited higher infidelity to their band stallion during the non-breeding season than control mares. Madosky et al. (in press) found this infidelity was also evident during the breeding season in the same population that Nunez et al. (2009) studied, resulting in PZP-treated mares changing bands more frequently than control mares. Long-term implications of these changes in social behavior are currently unknown.

#### *Sex Ratio*

Population control methods including the adjustment of sex ratios to favor stallions would be expected to have relatively minor impacts to overall population dynamics. Under the Proposed Action and Alternative 4, impacts of additional stallions in the population could include: decreased band size, increased competition for mares, and increased size and number of bachelor bands. These effects would be slight, as the proposed sex ratio is not an extreme departure from normal sex ratio ranges. Conversely, a selection criterion, which leaves more mares than stallions, would be expected to result in fewer and smaller bachelor bands, increased reproduction on a proportional basis with the herd, and larger band sizes. With more stallions involved in breeding it should result in increased genetic exchange and improvement of genetic health within the herd.

#### *Water/Bait Trapping (if used)*

Bait and/or water trapping generally requires a long window of time for success. Although the trap would be set in a high probability area for capturing excess wild horses residing within the area and at the most effective time periods, time is required for the horses to acclimate to the trap and/or decide to access the water/bait.

Trapping involves setting up portable panels around an existing water source or in an active wild horse area, or around a pre-set water or bait source. The portable panels would be set up to allow wild horses to go freely in and out of the corral until they have adjusted to it. When the wild horses fully adapt to the corral, it is fitted with a gate system. The acclimatization of the horses creates a low stress trap. During this acclimation period the horses would experience some stress due to the panels being setup and perceived access restriction to the water/bait source.

When actively trapping wild horses, the trap would be checked on a daily basis. Horses would be either removed immediately or fed and watered for up to several days prior to transport to a holding facility. Existing roads would be used to access the trap sites.

Gathering of the excess horses utilizing bait/water trapping could occur at any time of the year and would extend until the target number of animals are removed to relieve concentrated use by horses in the area, reach AML, to implement population control measures, and to remove animals residing outside HMA boundaries. Generally, bait/water trapping is most effective when a specific resource is limited, such as water during the summer months. For example, in some areas, a group of wild horses may congregate at a given watering site during the summer because few perennial water resources are available nearby. Under those circumstances, water trapping could be a useful means of reducing the number of horses at a given location, which can also relieve the resource pressure caused by too many horses. As the proposed bait and/or water trapping in this area is a low stress approach to gathering of wild horses, such trapping can continue into the foaling season without harming the mares or foals. Conversely, it has been documented that at times water trapping could be stressful to wild horses due to their reluctance related to approaching new, human structures or intrusions. In these situations, wild horses may avoid watering or may travel greater distances in search of other watering sources.

The wild horses that are gathered would be subject to one or more of several outcomes listed below.

#### *Temporary Holding Facilities During Gathers*

Wild horses gathered would be transported from the trap sites to a temporary holding corral near the HMA in goose-neck trailers or straight-deck semi-tractor trailers. At the temporary holding corral, the wild horses will be aged and sorted into different pens based on sex. The horses will be provided ample supply of good quality hay and water. Mares and their un-weaned foals will be kept in pens together. All horses identified for retention in the HMA will be penned separately from those animals identified for removal as excess. All mares identified for release will be treated with fertility control vaccine in accordance with the SOPs for Fertility Control Implementation in Appendix 6.

At the temporary holding facility, a veterinarian, when present, will provide recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club foot, and other severe congenital abnormalities) would be humanely euthanized using methods acceptable to the American Veterinary Medical Association (AVMA).

#### *Transport, Short Term Holding, and Adoption Preparation*

Wild horses removed from the range as excess would be transported to the receiving short-term holding facility in a goose-neck stock trailer or straight-deck semi-tractor trailers. Trucks and trailers used to haul the wild horses will be inspected prior to use to ensure wild horses can be safely transported. Wild horses will be segregated by age and sex when possible and loaded into separate compartments. Mares and their un-weaned foals may be shipped together depending on age and size of foals. Mare and un-weaned foals are not separated for longer than 12 hours. Transportation of recently captured wild horses is limited to a maximum of 8 hours. 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 die during transport.

Upon arrival, recently captured wild horses are off-loaded by compartment and placed in holding pens where they are fed good quality hay and water. Most wild horses begin to eat and drink immediately and adjust rapidly to their new situation. At the short-term holding facility, a veterinarian provides recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club foot, and other severe congenital abnormalities) that was not diagnosed previously at the temporary holding corrals at the gather site would be humanely euthanized using methods acceptable to the AVMA. Wild horses in very thin condition or animals with injuries are sorted and placed in hospital pens, fed separately and/or treated for their injuries. Recently captured wild horses, generally mares, in very thin condition may have difficulty transitioning to feed. A small percentage of animals can die during this transition; however, some of these animals are in such poor condition that it is unlikely they would have survived if left on the range.

After recently captured wild horses have transitioned to their new environment, they are prepared for adoption or sale. Preparation involves freeze-marking the animals with a unique identification number, vaccination against common diseases, castration, and de-worming. During the preparation process, potential impacts to wild horses are similar to those that can occur during transport. Injury or mortality during the preparation process is low, 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% (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 die accidentally during sorting, handling, or preparation.

#### *Adoption*

Adoption applicants are required to have at least a 400 square foot corral with panels that are at least six feet tall. Applicants are required to provide adequate shelter, feed, and water. The BLM retains title to the horse for one year and the horse and facilities are inspected. After one year, the applicant may take title to the horse at which point the horse becomes the property of the applicant. Adoptions are conducted in accordance with 43 CFR § 5750.

#### *Sale with Limitation*

Buyers must fill out an application and be pre-approved before they may buy a wild horse. A sale-eligible wild horse is any animal that is more than 10 years old; or has been offered unsuccessfully for adoption at least 3 times. The application also specifies that all buyers are not to sell to slaughter buyers or anyone

who would sell the animals to a commercial processing plant. Sale of wild horses is conducted in accordance with the 1971 WFRHBA and congressional limitations.

#### *Long Term Pastures*

Since fiscal year 2008, the BLM has removed over 37,400 excess wild horses from the Western States. Most animals not immediately adopted or sold have been transported to long-term grassland pastures in the Midwest.

Potential impacts to wild horses from transport to adoption, sale or long-term grassland pastures (LTP) are similar to those previously described. One difference is that when shipping wild horses for adoption, sale or LTP, animals may be transported for up to a maximum of 24 hours. Immediately prior to transportation, and after every 24 hours of transportation, animals are offloaded and provided a minimum of 8 hours on-the-ground rest. During the rest period, each animal is provided access to unlimited amounts of clean water and two pounds of good quality hay per 100 pounds of body weight with adequate bunk space to allow all animals to eat at one time. The rest period may be waived in situations where the anticipated travel time exceeds the 24-hour limit but the stress of offloading and reloading is likely to be greater than the stress involved in the additional period of uninterrupted travel.

LTPs are designed to provide excess wild horses with humane, and in some cases, life-long care in a natural setting off the public rangelands. There, wild horses are maintained in grassland pastures large enough to allow free-roaming behavior and with the forage, water, and shelter necessary to sustain them in good condition. As of February 2012, about 31,400 wild horses that are in excess of the current adoption or sale demand (because of age or other factors such as economic recession) are currently located on private land pastures in Oklahoma, Kansas, and South Dakota. Establishment of LTPs was subject to a separate NEPA and decision-making process. Located in mid or tall grass prairie regions of the United States, these LTPs are highly productive grasslands compared to the more arid western rangelands. These pastures comprise about 256,000 acres (an average of about 10-11 acres per animal).

Mares and sterilized stallions (geldings) are segregated into separate pastures except at one facility where geldings and mares coexist. Although the animals are placed in LTP, they remain available for adoption or sale to qualified individuals; and foals born to pregnant mares in LTP are gathered and weaned when they reach about 8-12 months of age and are also made available for adoption. The LTP contracts specify the care that wild horses must receive to ensure they remain healthy and well-cared for. Handling by humans is minimized to the extent possible although regular on-the-ground observation by the LTP contractor and periodic counts of the wild horses to ascertain their well-being and safety are conducted by BLM personnel and/or veterinarians. A small percentage of the animals may be humanely euthanized if they are in very poor condition due to age or other factors. Although horses residing on LTP facilities live longer, on the average, than wild horses residing on public rangelands, natural mortality of wild horses in LTP averages approximately 8% per year, but can be higher or lower depending on the average age of the horses pastured there (GAO-09-77, Page 52).

#### *Euthanasia and Sale Without Limitation*

While euthanasia and sale without limitation has been limited by Congressional appropriations, it is allowed under the WFRHBA. Neither option is available for horses under the Department of the Interior's fiscal year 2012 budgetary appropriations. Although the appropriations restrictions could be lifted in future appropriations bills, it would be contrary to Departmental policy to euthanize or sell without limitations healthy excess wild horses.

*Wild Horses Remaining or Released into the HMA following Gather*

Under the Proposed Action, the post-gather population of wild horses would be about 40 wild horses, which is the low range of the AML for the Frisco HMA under this alternative. Reducing population size would also ensure that the remaining wild horses are healthy and vigorous, and not at risk of death or suffering from starvation due to insufficient habitat coupled with the effects of frequent drought (lack of forage and water).

The wild horses that are not captured may be temporarily disturbed and move into another area during the gather operations. With the exception of changes to herd demographics, direct population wide impacts have proven, over the last 20 years, to be temporary in nature with most if not all impacts disappearing within hours to several days of when wild horses are released back into the HMA. No observable effects associated with these impacts would be expected within one month of release, except for a heightened awareness of human presence.

As a result of lower density of wild horses across the HMA following the removal of excess horses, competition for resources would be reduced, allowing wild horses to utilize preferred, quality habitat. Confrontations between stallions would also become less frequent, as would fighting among wild horse bands at water sources. Achieving the AML and improving the overall health and fitness of wild horses could also increase foaling and foaling survival rates over the current conditions.

The primary effects to the wild horse population that would be directly related to this proposed gather would be to herd population dynamics, age structure or sex ratio, and subsequently to the growth rates and population size over time.

The remaining wild horses not captured would maintain their social structure and herd demographics (age and sex ratios). No observable effects to the remaining population associated with the gather impacts would be expected except a heightened shyness toward human contact.

Impacts to the rangeland as a result of the current overpopulation of wild horses would be reduced under the two gather and removal alternatives. Fighting among stud horses would decrease since they would protect their position at water sources less frequently; injuries and death to all age classes of animals would also be expected to be reduced as competition for limited forage and water resources is decreased.

Indirect individual impacts are those impacts which occur to individual wild horses after the initial stress event, and may include spontaneous abortions in mares, and 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 skirmish which occurs among older studs following sorting and release into the stud pen, which lasts less than two minutes and ends when one stud retreats. Traumatic injuries usually do not result from these conflicts. These injuries typically involve a bite and/or kicking with bruises which don't break the skin. Like direct individual impacts, the frequency of occurrence of these impacts among a population varies with the individual.

Spontaneous abortion events among pregnant mares following capture is also rare, though poor body condition can increase the incidence of such spontaneous abortions. Given the timing of this gather, spontaneous abortion is not considered to be an issue for the proposed gather.

A few foals may be orphaned during gathers. This may occur due to:

- The mare rejects the foal. This occurs most often with young mothers or very young foals;
- The foal and mother become separated during sorting, and cannot be matched;
- The mare dies or must be humanely euthanized during the gather;
- The foal is ill, weak, or needs immediate special care that requires removal from the mother; or
- The mother does not produce enough milk to support the foal.

Oftentimes, foals are gathered that were already orphans on the range (prior to the gather) because the mother rejected it or died. These foals are usually in poor, unthrifty condition. Orphans encountered during gathers are cared for promptly and rarely die or have to be euthanized. Nearly all foals that would be gathered would be over four months of age and some would be ready for weaning from their mothers. In private industry, domestic horses are normally weaned between four and six months of age.

Gathering the wild horses during the fall/winter reduces risk of heat stress, although this can occur during any gather, especially in older or weaker animals. Adherence to the SOPs as well and techniques used by the gather contractor help minimize the risks of heat stress. Heat stress does not occur often, but if it does, death can result.

Through the capture and sorting process, wild horses are examined for health, injury and other defects. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy. The BLM Euthanasia Policy (IM-2009-041) is used as a guide to determine if animals meet the criteria and should be euthanized (refer to SOPs Appendix 6). Animals that are euthanized for non-gather related reasons include those with old injuries (broken hip, leg) that have caused the animal to suffer from pain or which prevent them from being able to travel or maintain body condition; old animals that have lived a successful life on the range, but now have few teeth remaining, are in poor body condition, or are weak from old age; and wild horses that have congenital (genetic) or serious physical defects such as club foot, or sway back and should not be returned to the range.

**Alternative 3:HMAP with adjusted AML, gather, remove and treat with release of geldings**

Impacts from this alternative would be similar to the Proposed Action, however no sex ratios would be adjusted (50:50), and fertility control include the release of geldings into the population. AML may be achieved with the population increasing at the same rate as the proposed action, but the upper AML would be increased.

Under Alternative 3, would increase the upper AML with a breeding population (30-60 animals) and a non-breeding population of (20-40 geldings) being managed. The gelding population would be expected to form bachelor bands; this could result in concentrating use around available water, with the potential for increased utilization and trampling of soil, vegetation and riparian resources or alternatively, could result in geldings roaming further to/from water, resulting in decreased utilization of soil, vegetation and riparian resources.

Stallions selected for gelding would be between 6 months and 20 years of age and have a body condition score of 3 or above. No animals which appear to be distressed injured or in failing health or condition will be selected for gelding. Stallions will not be gelded within 36 hours of capture and no animals that were roped during capture will be gelded at the temporary holding corrals for release. The surgery would be performed at either the gather's temporary holding facility or at a BLM-managed holding center by a licensed veterinarian using appropriate anesthetic agents and surgical techniques (see Gelding SOPs in

Appendix 7). The final determination of which specific animals will be gelded will be based on the professional opinion of the attending veterinarian in consultation with the Authorized Officer.

When gelding procedures are done in the field, geldings would be released near a water source, when possible, approximately 24 to 48 hours following surgery. When the procedures are performed at a BLM-managed facility, selected stallions would be shipped to the facility, gelded, held in a separate pen to minimize risk for disease, and returned to the range within 30 to 60 days. Gelding complications (eviscerations, anesthetic reaction, injuries during handling, etc.) that result in euthanasia or mortality during and following surgery of this type is rare and would be expected to be less than five percent of the animals treated.

Gelded animals would be monitored periodically for complications for approximately 7-10 days post-surgery. This monitoring will be completed either through aerial recon if available or field observations from major roads and trails. It is not anticipated that all the geldings will be observed but the goal is to detect complications if they are occurring and determine if the horses are freely moving about the HMA. Gelded animals would be freeze marked with an identifying marker high on their hip to minimize the potential for future recapture and to facilitate post-treatment and routine field monitoring. Once released, anecdotal information indicates geldings would be expected to form bachelor bands. Post-gather monitoring would be used to document whether or not geldings form bachelor bands as expected or intermix with the breeding population. Other periodic observations of the long term outcomes of gelding would be recorded during routine resource monitoring work. Such observations would include but not limited to band size, social interactions with other geldings and harem bands, distribution within their habitat, forage utilization and activities around key water sources. Periodic population inventories and future gather statistics would assist BLM to determine if managing a portion of the herd as non-breeding animals is effective in slowing the annual population growth rate and extending the gather cycle.

Competition for forage and water between wild horses, wild life and livestock would be directly increased with additional horses on the HMA when the population is at or near the high AML. However, when the population is at or near the lower AML, competition will be reduced for a longer period of time.

**Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.**

No HMAP would be completed at this time. The HMA would be managed under the objectives of the Pinyon MFP, and current regulations and policies with no objectives specific to the management of wild horses within the Frisco HMA.

Impacts of the gather, removal and treatment of released mares with PZP would be similar to those described in Alternative 2 Proposed Action.

**Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.**

Impacts from this alternative would be similar to the Alternative 2 Proposed Action, however no sex ratios would be adjusted, and fertility control would not be applied. AML may be achieved but would exceed the high end of AML sooner than the proposed action.

**4.2.6 Public Health and Safety**

**Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal**

There would be no gather related safety concerns for BLM employees, contractors and the general public as no gather activities would occur.

**Impacts of Alternative 2-5**

Public safety as well as that of the BLM and contractor staff is always a concern during the gather operations and would be addressed through Observation Protocols that have been used in recent gathers to ensure that the public remains at a safe distance and does not get in the way of gather operations. Appropriate BLM staffing (public affair specialists and law enforcement officers) will be present to assure compliance with visitation protocols at the site. These measures minimize the risks to the health and safety of the public, BLM staff and contractors, and to the wild horses themselves during the gather operations.

**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 Frisco HMA.

**Past and Present Actions**

The Past, Present, and Reasonably Foreseeable Future Actions applicable to the assessment area are identified as the following:

Table 1. Cumulative Impact Analysis

Project --Name/Description	Status		
	Past	Present	Future
Wild Free-Roaming Horse and Burro Act of 1971	X		
<b>Wild Horse and Burro issues, issuance of Multiple use decisions AML adjustments and planning</b>	X	X	X
Frisco HMA Gather and Removals	X	X	X
Historic Livestock Grazing (1870 to 1934)	X		
Taylor Grazing Act (1934)	X		
Livestock Grazing Permit Renewals and authorizations (Beaver Lake, Crystal Peak, Frisco, Red Rock, and Wah Wah Lawson Allotments.)	X	X	X
Wildlife Management	X	X	X
Vegetation Manipulation (Manipulation of vegetation from one type (P/J) to another (shrub/grassland) through the use of machines, hand cutting, planting, burning, and other approved methods.)	X	X	X
Wildfires/Wildfire Suppression and Rehabilitation	X	X	X
Recreation	X	X	X
Energy Development (Powerlines, Pipelines, Wind Energy, etc.)	X		X
Range Improvements (Water developments, fences, seedings, etc.)	X	X	X
Land Use Plans (Pinyon Management Framework Plan and Future Land Use Plans)	X	X	X

Any future proposed projects within the Frisco HMA would be analyzed in an appropriate environmental document following site specific planning. Future project planning would also include public involvement.

Past actions include establishment of wild horse Herd Management Areas, wild horse territories, establishment of AML for wild horses, wild horse gathers, Energy Development, livestock grazing and recreational activities throughout the area. Some of these activities have increased infestations of invasive plants, noxious weeds, and pests and their associated treatments.

#### **4.3.1 Rangeland Health/Vegetation/Livestock Grazing**

Livestock grazing in the region has evolved and changed considerably since it began in the 1870s, and is one factor that has created the current environment. At the turn of the century, large herds of livestock grazed on unreserved public domain in uncontrolled open range. Eventually, the range was stocked beyond its capacity, causing changes in plant, soil and water relationships. Some speculate that the changes were permanent and irreversible, turning plant communities from grass and herbaceous species to brush and trees. Protective vegetative cover was reduced, and more runoff brought erosion, rills and gullies.

In response to these problems, livestock grazing reform began in 1934 with the passage of the Taylor Grazing Act. Subsequent laws, regulations, and policy changes have resulted in adjustments in livestock numbers, season-of-use changes, and other management changes. Given the past experiences with livestock impacts on resources on Public Lands, as well as the cumulative impacts that could occur on the larger ecosystem from grazing on various public and private lands in the region, management of livestock grazing is an important factor in ensuring the protection of Public Land resources.

Past range improvements including fences, ponds, wells etc. have been completed in the allotments. Range improvements are valuable to livestock managers, allowing permittees to control livestock distribution and limiting concentrations.

#### **4.3.2 Wildfires/Vegetative Manipulation**

Wildfires are common throughout southern Utah. Wildfire suppression activities and rehabilitation efforts are often associated with the occurrence of wildfires. Manipulation of vegetation from one type (P/J) to another (shrub/grassland) through the use of machines, hand cutting, planting, burning, and other approved methods has occurred throughout the area adjacent to the Frisco HMA. Rehabilitation of areas consumed by wildfires, and vegetative manipulation has occurred in and around the HMA. These activities have had long term beneficial impacts to the vegetative resources in the area. Ground cover and forage species have increased in the areas where these activities have occurred. The increase in forage species have been of benefit to the wild horses, wildlife and livestock that use the area.

#### **4.3.3 Wildlife**

##### PAST

Historic grazing (wild horses and wildlife) has resulted in decreased habitat values for wildlife within the Frisco HMA. In areas where the native understory vegetation has been depleted or vegetation disturbance has occurred cheatgrass has increased and in some locations has become the dominant species. Invasive species such as annual cheatgrass deplete the quality of the habitat to meet wildlife needs.

##### PRESENT

Direct impacts are expected to be minimal as a result of timing and duration of the Frisco gather. Removal of wild horses would reduce competition between big game and wild horses. Direct competition between

wild horses, BLM sensitive species, big game, upland game would continue to occur for perennial grasses, forbs, water and shelter.

Declines in migratory bird populations are becoming well documented through cooperative efforts among conservation groups, federal and state agencies and can be attributed to many factors such as habitat fragmentation (breeding and non-breeding), alteration of vegetative communities, urban expansion, natural disasters and brood parasitism.

#### **4.3.4 Wild Horses**

In 1971 Congress passed the WFRHBA which placed wild and free-roaming horses that were not claimed for individual ownership, under the protection of the secretaries of Interior and Agriculture. The act provided protection, but no appropriation for the management of wild horses. In 1976 the FLPMA gave the BLM the authority to use motorized equipment in the capture of wild free-roaming horses as well as continued authority to inventory the public lands. In 1978, the PRIA was passed which gave the BLM a direction for management as well as approved appropriation authority for management of wild and free-roaming horses on public lands.

In 1971, Herd Areas were identified as areas being occupied by wild horses. Herd Management Areas (HMAs) were established in the 1980s through the Pinyon MFP.

The CCFO has records of nine (5) wild horse gathers and removals that have occurred since 1971 within the Frisco HMA, resulting in the removal of approximately 349 wild horses from area. The average population increase in the Frisco HMA has been between 17-24% a year.

#### **4.3.5 Recreation**

Common recreational activities in the HMA include occasional ATV riding, hiking, hunting, wildlife and wild horse viewing. Cumulative impacts are not likely to impact these recreational activities. Improved wildlife habitat as a result of achieving AML in the Frisco HMA may lead to greater opportunity for viewing or hunting wildlife. Wild horse viewing may be reduced due to decreased concentrations of wild horses in areas accessible to the public.

### **4.4 Reasonably Foreseeable Future Actions (RFFA)**

#### **4.4.1 Rangeland Health/Vegetation/Livestock Grazing**

Livestock grazing is expected to continue at similar stocking rates, season of use, kind of livestock and utilization objectives as developed in recent permit renewals. Continuing to graze livestock in a manner consistent with grazing permit terms and conditions would be expected to achieve, maintain, and make significant progress towards achieving Land Health Standards.

Production, line-intercept, frequency, and utilization data would continue to be collected for future rangeland management actions. Rangeland Health Assessments for allotments associated with this area would be completed again within the next 10 years.

In the future permit renewals and livestock grazing evaluations would be completed on the Beaver Lake, Crystal Peak, Frisco, Red Rock, and Wah Wah Lawson Allotments on a 10-year cycle. Changes to the permitted livestock use on each of these allotments would be made at that time. Issuance of grazing permits would be completed through appropriate NEPA analysis.

Range improvement projects may be proposed in the future. Water developments and fences aid in distributing livestock. Water developments would provide an additional water source to wild horses. Construction of fences within Frisco HMA could inhibit the free-roaming nature of wild horses. All future range improvement projects would be analyzed through site specific NEPA analysis within a multiple-use concept.

Wildfires and wildfire rehabilitation could impact livestock grazing within the Beaver Lake, Crystal Peak, Frisco, Red Rock, and Wah Wah Lawson Allotments. Forage loss as a result of wildfires may result in temporary reductions in livestock permitted use to allow for recovery of vegetative resources. Wildfire rehabilitation activities may also result in burned areas being closed off to livestock grazing until vegetation conditions meet fire rehabilitation objectives.

#### **4.4.2 Wildlife**

Past, present and future project with regards to properly planned vegetation and wildlife habitat improvement, invasive weed treatment, and range improvements are beneficial for wildlife. These projects generally ensure the quality of habitat and forage for wildlife species.

Direct competition between wild horses, big game and other wildlife will continue to occur for perennial grasses, forbs, water and shelter.

Wild horse populations have and would continue to influence the available forage for wildlife. As wild horse populations increase the competition between wildlife and wild horses for limited resources would increase. As wild horses and wildlife are managed within the population goals and appropriate management levels (AML) this competition would be reduced.

Abundance of small bird, mammal and reptile populations can be reduced because of habitat alteration. Wild horses can reduce the vegetation cover required to support adequate prey populations for raptor species.

#### **4.4.3 Wild Horses**

In the future, the BLM CCFO would continue to inventory wild horse populations within the established Frisco HMA. Wild horses would continue to be an integral component of public lands, managed within a multiple-use concept within HMAs.

Population data collected during the Proposed Action would enable Wild Horse Specialists to monitor the herds and make management decisions to maintain genetic diversity within the Frisco HMA with historical or desirable herd characteristics, and population demographics. Future removals within the Frisco HMA would utilize this information and provide baseline data for future NEPA analysis.

Over the next 10-15 year period, reasonably foreseeable future actions include gathers about every four years to remove excess wild horses in order to manage population size within the established AML range. Cumulatively over the next 10-15 years, fewer gathers should result and less frequent disturbance to individual wild horses and the herd's social structure would occur. Individual and herd health would be maintained. Population control methods could also be implemented during future gathers. Any future wild horse management would be analyzed in appropriate environmental documents following site-specific planning with public involvement.

Other reasonably foreseeable future actions include the transport, handling, care, and disposition of the excess wild horses removed from the range. Initially wild horses would be transported from the capture/temporary holding corrals to a designated BLM short-term holding corral facility. From there, the animals would be made available for adoption or sale to individuals who can provide a good home, or to long-term holding pastures in the Midwest.

Wildfires and wildfire rehabilitation could impact wild horse habitat within the Frisco HMA. Wild horses may be displaced during wildfires and concentrate in non-burned areas until green-up occurs within the burn at which time it is not uncommon for wild horses, livestock, and wildlife to concentrate in these areas. It is not uncommon to exclude burned areas from grazing until vegetation is allowed to recover. Wild horse management decisions within the Frisco HMA regarding wildfire and wildfire rehabilitation efforts would depend on the extent of habitat loss incurred.

The removal area contains a variety of resources and supports a variety of uses. Any alternative course of wild horse management has the opportunity to affect and be affected by other authorized activities ongoing in and adjacent to the area. Future activities which would be expected to contribute to the cumulative impacts of implementing the Proposed Action include: future wild horse gathers, continuing livestock grazing in the allotments within the area, development of range improvements, continued development of mineral extraction, oil and gas exploration, new or continuing infestations of invasive plants, noxious weeds, and pests and their associated treatments, and continued native wildlife populations and recreational activities historically associated with them. The significance of cumulative effects based on past, present, proposed, and reasonably foreseeable future actions are determined based on context and intensity.

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

##### **Impacts of Alternative 1: No Action Alternative -- Continue Existing Management/No Gather and Removal**

Under the No Action Alternative, the wild horse population could exceed 500 head in four years. Increased movement outside the HMA would be expected as greater numbers of horses search for food and water. Heavy to excessive utilization of the available forage would be expected and the water available for use would become increasingly limited. Emergency removals would be expected in order to prevent individual animals from suffering or death as a result of insufficient forage and water. Cumulative impacts would result in foregoing the opportunity to improve rangeland health and to properly manage wild horses in balance with the available forage and water and other multiple uses. Attainment of site-specific vegetation management objectives and Standards for Rangeland Health would not be achieved. AML would not be achieved and the opportunity to collect the scientific data necessary to re-evaluate AML levels, in relationship to rangeland health standards, would be foregone.

##### **Impacts of Alternative 2: Proposed Action (Proposed HMAP with gather, removal and treatment)**

Cumulative effects expected when incrementally adding any of the action alternatives to the area of potential effect would include continued improvement of upland vegetation conditions, which would in turn benefit permitted livestock, native wildlife, and wild horse population as forage (habitat) quality and quantity is improved over the current level. Application of fertility control and/or 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 increased difficulty and greater costs to gather horses in the future as released horses learn to evade the helicopter.

Cumulatively, there should be more stable wild horse populations, less competition for limited forage and water resources, healthier rangelands, and wild horses, and fewer multiple use conflicts in the area over the short and long-term. Over the long term, 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.

**Alternative 3: HMAP with adjusted AML, gather, remove and treat with release of geldings**

Same as the Proposed Action.

**Alternative 4: No Action on HMAP. Gather and Removal With Fertility control.**

Same as the Proposed Action.

**Alternative 5: No Action on HMAP. Gather and Removal Without Fertility control.**

Impacts from this alternative would be similar to the Proposed Action. Not as many horses would be returned to the HMA post gather, no sex ratios would be adjusted, and fertility control would not be applied. AML may be achieved but would exceed the high end sooner than in Alternatives 2-4. This would increase the number of gathers required to maintain the wild horse population within the AML.

## **5.0 Monitoring and Mitigation Measures**

Proven measures to mitigate impacts of the gather on wild horses and on rangeland resources, along with monitoring are incorporated into the Proposed Action through SOPs, which have been developed over time. These SOPs (see Appendices 5 and 6) represent the "best methods" for reducing impacts associated with gathering, handling, and transporting wild horses and for collecting herd data. Hair samples to compare to the genetic baseline for the Frisco HMA wild horses may be collected; additional samples will be collected during future gathers (in 10-15 years) to determine trend. Should monitoring indicate genetic diversity is not being adequately maintained, 2-10 mares and/or studs from HMAs in similar environments would be added every generation (every 8-10 years) to avoid inbreeding depression/maintain acceptable genetic diversity. Ongoing resource monitoring, including climate (weather), and forage utilization, population inventory, and distribution data will continue to be collected.

## **6.0 List of Preparers**

Those responsible for completing this EA are listed as part of the Interdisciplinary Team Record (see Appendix 1).

Chad Hunter (BLM CCFO Rangeland Management/Wild Horse Specialist) – Team Leader, Vegetation, Livestock Grazing, Wild Horses

Sheri Whitfield (BLM CCFO Wildlife Biologist) – Special Status Species (T&E), Wildlife

Adam Stephans (BLM CCFO Rangeland Management Specialist) – Riparian/Wetlands, Livestock Grazing

Jessica Bulloch (BLM CCFO Natural Resource Specialist) – Rangeland Standards and Guidelines, Livestock Grazing, Invasive Species

Craig Egerton (BLM CCFO Natural Resource Specialist) – Rangeland Standards and Guidelines, soils, Forestry, Water resources

Kent Dastrup (BLM CCFO GIS Specialist) – GIS Support, Maps, Tables

## **7.0 Consultation and Coordination**

The Utah State Office initiated public involvement at a public hearing about the use of helicopters and motorized vehicles to capture and transport wild horses (or burros) on July 13, 2012 at the BLM’s Fillmore Field Office in Fillmore, Utah. This specific gather was addressed at that public meeting as well as other gathers that may occur within the state of Utah over approximately the next 12 months. This meeting was advertised in papers and radio stations statewide. The meeting was attended by 1 member of the public who submitted hers and another person’s comments at the meeting. In addition the Utah State Office received one comment by e-mail on the “Use of Helicopters, Motorized Vehicles” approximately a week after the public hearing. All the comments submitted from the public were considered during the development of the alternatives within this document. The BLM reviewed its SOPs in response to the views and issues expressed at the hearing and determined that no changes to the SOPs were warranted. However, as most of the comments received are directed more toward the policies and regulations that are used to manage wild horses and burros the comments shared with the National Program Office for Wild Horse and Burros.

Additional public involvement includes the posting of this EA on July 1, 2010 on the Utah BLM ENBB. A preliminary EA was posted on the ENBB, BLM Utah home website and the links to this document was distributed e-mail to interested parties for a 30-day comment period.

## **7.1 Persons, Groups, & Agencies Consulted**

Ronald G. Torgerson  
State of Utah School and Institutional Trust Lands Administration (SITLA)

Gus Warr  
BLM-USO-Wild Horse and Burro State Lead

Dorena Martineau  
Paiute Indian Tribe of Utah –Cultural Resources

## **8.0 Public Involvement**

The Utah State Office initiated public involvement at a public hearing about the use of helicopters and motorized vehicles to capture and transport wild horses (or burros) on July 13, 2012 at the BLM’s Fillmore Field Office in Fillmore, Utah. This specific gather was addressed at that public meeting as well as other gathers that may occur within the state of Utah over approximately the next 12 months. This meeting was advertised in papers and radio stations statewide. The meeting was attended by 1 member of the public who submitted hers and another person’s comments at the meeting. In addition the Utah State Office received one comment by e-mail on the “Use of Helicopters, Motorized Vehicles” approximately a week after the public hearing. All the comments submitted from the public were considered during the development of the alternatives within this document. The BLM reviewed its SOPs in response to the views and issues expressed at the hearing and determined that no changes to the SOPs were warranted. However, as most of the comments received are directed more toward the policies and regulations that are used to manage wild horses and burros the comments shared with the National Program Office for Wild Horse and Burros.

Additional public involvement includes the posting of this proposed action on the Utah BLM

Environmental Bulletin Board (ENBB) June 1, 2012. A preliminary Frisco Herd Management Area Plan (HMAP) and Gather Plan EA was made available to the public at the Cedar City Field Office, and on-line at [http://www.blm.gov/ut/st/en/prog/wild\\_horse\\_and\\_burro.html](http://www.blm.gov/ut/st/en/prog/wild_horse_and_burro.html) or <https://www.blm.gov/ut/enbb/> for a 30-day review/comment period beginning on August 7, 2012 and ending September 5, 2012. The comments received during this period were summarized and addressed Appendix 11.

All comments received on the preliminary Frisco Herd Management Area Plan and Gather Plan EA during the 30 day comment period were reviewed and considered prior to finalizing this EA. Letters, faxes, and e-mails were received both in support of and in opposition to the HMAP and gather plans. Numerous form letters were also received. These are letters that are generated from a singular website from a non-governmental organization, such as an animal advocacy group. Comments identified in the form letters were considered along with the rest of the comments received, but as one collective comment letter. Form letters are not counted as separate comments due to their duplicative nature. However, where individuals added their own comments to the form, the personalized comments were considered as separately submitted comments.

Although the BLM's review of public comments did not indicate that substantiative changes to the conclusions presented in the preliminary EA were warranted, they did lead to changes throughout the document to better explain and clarify BLM's analysis in response to comments, which resulted in a more comprehensive and complete document.

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USDI – BLM, EA-UT- 040-06-36 Grazing Permit Renewal for the Frisco, Bagnall, and Willow Creek Allotments

USDI – BLM, 2012. DOI-BLM-UT-C010-2011-0034-EA Ten-Year Grazing Permit Renewal: Beaver Lake and Smithson Allotments

USDI – BLM, EA-UT- 040-06-35 Grazing Permit Renewal for the Wah Wah Lawson, Bucket Ranch, and Bucket Ranch Lambing Allotments

Zoo Montana (2000) Wildlife Fertility Control: Fact and Fancy. Zoo Montana Science and Conservation Biology Program, Billings, MT.

**10.0 Appendices**

**Appendix 1**

**INTERDISCIPLINARY TEAM NEPA CHECKLIST**

**Project Title:** Frisco Wild Horse Herd Management Area Plan and Gather /Removal Plan

**NEPA Log Number:** EA #: DOI-BLM-UT-C010-2012-0018

**File/Serial Number:**

**Project Leader:** Chad Hunter

**DETERMINATION OF STAFF:** *(Choose one of the following abbreviated options for the left column)*

- NP = not present in the area impacted by the proposed or alternative actions
- NI = present, but not affected to a degree that detailed analysis is required
- PI = present with potential for relevant impact that need to be analyzed in detail in the EA
- NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

**RESOURCES AND ISSUES CONSIDERED:**

<b>Determination</b>	<b>Resource</b>	<b>Rationale for Determination</b>	<b>Signature</b>	<b>Date</b>
NI	Air Quality	Air quality in the area of the gather is either currently meeting NAAQS or the area is unclassified. Dust or fumes from the gather operations will either quickly settle or be dispersed into the atmosphere. Nothing in the proposal is likely to affect current air quality substantially.	C. Egerton	03/01/12
NP	Areas of Critical Environmental Concern	None within Field Office boundaries.	C. Hunter	03/01/12
NI	Cultural Resources	This gather will have <b>no effect</b> to significant cultural resources. The corral location will be located on an area of existing disturbance, such as road or a wash. The possibility of finding intact cultural resources in these areas is minimal to non-existent. If an existing disturbed area cannot be located for the corral area, a cultural resource inventory will take place prior to the gather. If cultural resources are located during this inventory, the corral area will be moved to another location, which does not contain cultural resources.	N. Thomas	2/15/12
NI	Greenhouse Gas Emissions	The project proposal involves burning fossil carbon based fuels access to set up traps, herd horses, haul horses, etc., and thus involves the release of greenhouse gases (ghgs). Ongoing research has identified the potential effects of ghg emissions (including CO2, methane, nitrous oxide, water vapor and several trace gases) on global climate. The release of these gases during gather activities is cumulative with other local, regional (such as operation of motor vehicles in Southwest Utah) and global releases. The lack of scientific tools to predict climate change on local or regional scales limits the ability to quantify potential future impacts as a	C. Egerton	03/01/12

<b>Determination</b>	<b>Resource</b>	<b>Rationale for Determination</b>	<b>Signature</b>	<b>Date</b>
		result of this singular project or cumulatively with other activities within the analysis area with any confidence.		
NI	Environmental Justice	No minority or economically disadvantaged groups would be affected	C. Hunter	03/01/12
NP	Farmlands (Prime or Unique)	There may be public land soils within the gather area that are capable of being prime, unique or important farmlands. However, the fact that they are not supplied with irrigation water precludes them from actually being P, U or I farmlands.	C. Egerton	03/01/12
PI	Fish and Wildlife	The project area contains crucial summer mule deer and yearlong pronghorn and elk habitat.  Substantial yearlong chukar habitat is identified in the area.	S. Whitfield	2/16/12
NP	Floodplains	There are no floodplains within the HMA based on a review of a comparison of the HMA map provided and the FEMA floodplain map of Beaver County.	C. Egerton	03/01/12
NI	Fuels/Fire Management	Wild horse populations that are within AML reduce competition on vegetation resources, especially to new seedings implemented following wildfire or to reduce fire hazard. Populations that are not within AML (no action) may have a negative impact on new seedings that are established during pro-active vegetation management or following a wildfire. Overutilization of desired grasses/forbs may have an indirect impact on vegetation and provide a competitive advantage to annual grasses, which experience fire regimes on a more frequent basis. The actions proposed would help protect the investment made by partners to implement vegetation projects that benefit a variety of wildlife and resources and would not negatively impact fire and fuels management.	V. Tyler	03/01/12
NI	Geology / Mineral Resources/Energy Production	Given the transient nature of the proposed action, no substantial impact to ongoing mineral resources exploration or development activities within the project area are foreseen.	Ed Ginouves	2/15/2012
NI	Hydrologic Conditions	Hydrologic conditions in the project area are generally good. There are localized areas of soil compaction within the HMA where the causal factor is wild horse and livestock trailing. The gather would help to reduce those impacts due to fewer horses, but the change would likely not be measurable since some level of wild horses and livestock would continue to use those trails. The No Action alternative would be least likely to affect compaction levels as opposed to most likely alternative to affect compaction, which would be the alternative that removed the most horses.	C. Egerton	03/01/12
NI	Invasive Species/Noxious Weeds	As long as there is a stipulation (as in the SOPs) of the use of weed free hay during any bait trapping, and for any feeding purposes of wild horses and/or domestic horses at the gather site or at holding areas on public land.	J. Bulloch	2/15/2012
NI	Lands/Access	Any pending or authorized lands and realty actions in the wild horse gather area would not be substantially affected by the proposed action.	B. Johnson	03/01/12

<b>Determination</b>	<b>Resource</b>	<b>Rationale for Determination</b>	<b>Signature</b>	<b>Date</b>
PI	Livestock Grazing	Livestock and wild horses compete directly for vegetative, water, and cover resources. Higher populations of wild horses mean more competition with livestock. Wild horse populations that are within AML reduce competition. When wild horse populations are above AML the livestock numbers must be reduced to not over utilize the vegetative and water resources	C. Hunter	03/01/12
NI	Migratory Birds	The migratory bird and nesting raptor season typically is between April 1 – July 30. The gather is anticipated to occur in October which should not have any impacts on nesting birds.	S. Whitfield	02/16/12
NI	Native American Religious Concerns	In accordance with the Memorandum of Understanding between the Paiute Tribe of Utah and the BLM, this project does not require formal consultation.	N. Thomas	3/5/12
NI	Paleontology	The minor surface disturbing activities associated with the proposed action do not pose any substantial impact to any paleontological resources that may be present in the proposed project area.	Ed Ginouves	2/15/2012
PI	Rangeland Health Standards	This is addressed as part of the rangeland health/vegetation section of the ea and in other resource sections such as riparian.	C. Hunter	03/01/12
NI	Recreation	Recreation in the project area is dispersed, and some displacement may occur during gather operations, however impacts will not be substantial. Coordination is necessary with the Utah Division of Wildlife Resources to notify public of operations, and to avoid conflicts during hunting season.	D. Jacobson	03/01/12
NI	Socio-Economics	The proposed action will not in its self, change the socio-economics of the area.	C. Hunter	03/01/12
NI	Soils	See hydrologic conditions	C. Egerton	03/01/12
NI	Special Status Plant Species	There are 3 candidate plant species ( <i>Eriogonum spathulatum</i> var. <i>kayeeae</i> , <i>Leipidium ostleri</i> , <i>Trifolium friscanum</i> ) occur within the project area. The gather is anticipated to occur in October which should not have impacts on the candidate plant species.  No BLM sensitive plant species have been identified to occur within the project area.	S. Whitfield	02/16/12
PI	Special Status Animal Species	Golden eagle, ferruginous hawk, Townsend big-eared bat, are identified to occur within the project area.	S. Whitfield	02/16/12
NI	Wastes (hazardous or solid)	There would not be any anticipated issues in regards to wastes with the proposal. All State and Federal regulations would apply to any storage, dispensing or disposing of either solid or hazardous wastes. No significant issues are identified within the proposal.	R. Peterson	03/01/12
NI	Water Resources/Quality (drinking/surface/ground)	The HMA does not feed into to any impaired waters on the state's 303(d) list and there are no particular water quality concerns within the HMA. Removal of individual animals	C. Egerton	03/01/12

Determination	Resource	Rationale for Determination	Signature	Date
		may have some local impact on water quality at isolated springs as a result of less animals using them (eg. lower spikes in E. coli counts, but because wild horses, elk, livestock, etc. would remain within the HMA, any localized water quality issues would remain. In general, alternatives such as Alternative 2, which may include management plans and fencing riparian areas, would be more beneficial to water quality, while No Action would be least likely to improve water quality.		
PI	Wetlands/Riparian Zones	SOPs for the gather would have limited to no impacts on riparian wetland zones. Long term impacts of management and population control of wild horse herds would improve overall functionality of riparian/wetland areas in the Frisco HMA.	A. Stephens	03/05/12
NP	Wild and Scenic Rivers	None within Field Office boundaries.	A. Stephens	03/05/12
NP	Wilderness/WSA	The proposed project area contains no wilderness study areas, or designated wilderness.	D. Jacobson	03/01/12
NI	Woodland / Forestry	There is a woodland resource within the HMA, however nothing in the proposal would impact the overall resource.	C. Egerton	03/01/12
PI	Vegetation	The proposed management and removal of excess wild horses will benefit vegetative communities.	C. Hunter	03/01/12
NI	Visual Resources	The proposed action includes only minor temporary disturbance. The actions will not measurable impact visual resources.	D. Jacobson	03/01/12
PI	Wild Horses and Burros	See proposed action and EA	C. Hunter	03/01/12
NI	Areas with Wilderness Characteristics / Designated Wild Lands	Placement of gather sites in previously disturbed areas, and along existing roads would ensure no impacts to areas which may have wilderness characteristics.	D. Jacobson	03/01/12

**FINAL REVIEW:**

Reviewer Title	Signature	Date	Comments
Environmental Coordinator		10/17/12	
Authorized Officer		10/17/12	

## **Appendix 2. Fundamentals of Rangeland Health**

The Fundamentals of Rangeland Health stated in 43 CFR 4180 are:

1. Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity and the timing and duration of flow.
2. Ecological processes, including the hydrologic cycle, nutrient cycle and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.
3. Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established Bureau of Land Management objectives such as meeting wildlife needs.
4. Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species.

The fundamentals of rangeland health combine the basic precepts of physical function and biological health with elements of law relating to water quality, and plant and animal populations and communities. They provide direction in the development and implementation of the standards for rangeland health.

**Appendix 3.**  
**Utah Standards for Rangeland Health (1997)**

**Standard 1. Upland soils exhibit permeability and infiltration rates that sustain or improve site productivity, considering the soil type, climate, and landform.**

*As indicated by:*

- a) Sufficient cover and litter to protect the soil surface from excessive water and wind erosion, promote infiltration, detain surface flow, and retard soil moisture loss by evaporation.
- b) The absence of indicators of excessive erosion such as rills, soil pedestals, and actively eroding gullies.
- c) The appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community [DPC], where identified in a land use plan, or (2) where the DPC is not identified, a community that equally sustains the desired level of productivity and properly functioning ecological conditions.

**Standard 2. Riparian and wetland areas are in properly functioning condition. Stream channel morphology and functions are appropriate to soil type, climate and landform.**

*As indicated by:*

- a) Streambank vegetation consisting of, or showing a trend toward, species with root masses capable of withstanding high streamflow events. Vegetative cover adequate to protect stream banks and dissipate streamflow energy associated with high-water flows, protect against accelerated erosion, capture sediment, and provide for groundwater recharge.
- b) Vegetation reflecting: Desired Plant Community, maintenance of riparian and wetland soil moisture characteristics, diverse age structure and composition, high vigor, large woody debris when site potential allows, and providing food, cover and other habitat needs for dependent animal species.
- c) Revegetating point bars; lateral stream movement associated with natural sinuosity; channel width, depth, pool frequency and roughness appropriate to landscape position.
- d) Active floodplain.

**Standard 3. Desired species, including native, threatened, endangered, and special-status species, are maintained at a level appropriate for the site and species involved.**

*As indicated by:*

- a) Frequency, diversity, density, age classes, and productivity of desired native species necessary to ensure reproductive capability and survival.
- b) Habitats connected at a level to enhance species survival.

c) Native species reoccupy habitat niches and voids caused by disturbances unless management objectives call for introduction or maintenance of nonnative species.

d) Appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community [DPC], where identified in a land use plan conforming to these Standards, or (2) where the DPC is identified a community that equally sustains the desired level of productivity and properly functioning ecological processes.

**Standard 4. BLM will apply and comply with water quality standards established by the State of Utah (R.317-2) and the Federal Clean Water and Safe Drinking Water Acts. Activities on BLM Lands will support the designated beneficial uses described in the Utah Water Quality Standards (R.317-2) for surface and groundwater.**<sup>1</sup>

*As indicated by:*

a) Measurement of nutrient loads, total dissolved solids, chemical constituents, fecal coliform, water temperature and other water quality parameters.

b) Macro-invertebrate communities that indicate water quality meets aquatic objectives.

<sup>1</sup> BLM will continue to coordinate monitoring water quality activities with other Federal, state and technical agencies.

**Appendix 4.**  
**Utah Guidelines for Grazing Management (1997)**

1. Grazing management practices will be implemented that:

(a) Maintain sufficient residual vegetation and litter on both upland and riparian sites to protect the soil from wind and water erosion and support ecological functions;

(b) Promote attainment or maintenance of proper functioning condition riparian/wetland areas, appropriate stream channel morphology, desired soil permeability and infiltration, and appropriate soil conditions and kinds and amounts of plants and animals to support the hydrologic cycle, nutrient cycle and energy flow;

(c) Meet the physiological requirements of desired plants and facilitate reproduction and maintenance of desired plants to the extent natural conditions allow;

(d) Maintain viable and diverse populations of plants and animals appropriate for the site;

(e) Provide or improve, within the limits of site potentials, habitat for Threatened or Endangered Species;

(f) Avoid grazing management conflicts with other species that have the potential of becoming protected or special status species;

(g) Encourage innovation, experimentation and the ultimate development of alternatives to improve rangeland management practices;

(h) Give priority to rangeland improvement projects and land treatments that offer the best opportunity for achieving the Standards.

2. Any spring or seep developments will be designed and constructed to protect ecological process and functions and improve livestock, wild horse and wildlife distribution.

3. New rangeland projects for grazing will be constructed in a manner consistent with the Standards. Considering economic circumstances and site limitations, existing rangeland projects and facilities that conflict with the achievement or maintenance of the Standards will be relocated and/or modified.

4. Livestock salt blocks and other nutritional supplements will be located away from riparian/wetland areas or other permanently located, or other natural water sources. It is recommended that the locations of these supplements be moved every year.

5. The use and perpetuation of native species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands non-intrusive, non-native plant species are appropriate for use where native species (a) are not available, (b) are not economically feasible, cannot achieve ecological objectives

as well as nonnative species, and/or (d) cannot compete with already established native species.

6. When rangeland manipulations are necessary, the best management practices, including biological processes, fire and intensive grazing, will be utilized prior to the use of chemical or mechanical manipulations.
7. When establishing grazing practices and rangeland improvements, the quality of the outdoor recreation experience is to be considered. Aesthetic and scenic values, water, campsites and opportunities for solitude are among those considerations.
8. Feeding of hay and other harvested forage (which does not refer to miscellaneous salt, protein and other supplements) for the purpose of substituting for inadequate natural forage will not be conducted on BLM lands other than in (a) emergency situations where no other resource exists and animal survival is in jeopardy, or (b) situations where the Authorized Officer determines such a practice will assist in meeting a Standard or attaining a management objective.
9. In order to eliminate, minimize or limit the spread of noxious weeds, (a) only hay cubes, hay pellets or certified weed-free hay will be fed on BLM lands, and (b) reasonable adjustments in grazing methods, methods of transport and animal husbandry practices will be applied.
10. To avoid contamination of water sources and inadvertent damage to non-target species, aerial application of pesticides will not be allowed within 100 feet of a riparian/wetland area unless the product is registered for such use by the EPA.
11. On rangelands where a standard is not being met, and conditions are moving toward meeting the standard, grazing may be allowed to continue. On lands where a standard is not being met, conditions are not improving toward meeting the standard or other management objectives, and livestock grazing is deemed responsible, administrative action with regard to livestock will be taken by the Authorized Officer pursuant to CFR 4180.2(c).
12. Where it can be determined that more than one kind of grazing animal is responsible for failure to achieve a Standard, and adjustments in management are required, those adjustments will be made to each kind of animal, based on interagency cooperation as needed, in proportion to their degree of responsibility.
13. Rangelands that have been burned, seeded or otherwise treated to alter vegetative composition will be closed to livestock grazing as follows: (1) burned rangelands, whether by wildfire or prescribed burning, will not be grazed for a minimum of one complete growing season following the burn; and (2) rangelands that have been seeded or otherwise chemically or mechanically treated will not be grazed for a minimum of two complete growing seasons.
14. Conversions in kind of livestock (such as from sheep to cattle) will be analyzed in light of Rangeland Health Standards. Where such conversions are not adverse to achieving a Standard, or they are not in conflict with BLM land use plans, the conversion will be allowed.

**Appendix 5.**  
**Standard Operating Procedures for Conducting Wild Horse Gatherers**

**(Methods for Humane Capture of Wild Horses from the Frisco HMA)**

(FLPMA – 16 USC 1338a, Wild Horse and Burro Handbook – H-4710-1, 43 CFR 4700)

The gather method employed for this capture operation requires that horses be herded to a trap of portable panels and on extremely rare occasions to ropers who, after roping the animal, will bring it to the trap or have a trailer taken to the roped animal. Gathering would be conducted by using agency personnel or contractors experienced in the humane capture and handling of wild horses. The same rules apply whether a contractor or BLM personnel are used. The following stipulations and procedures will be followed during the contract period to ensure the welfare, safety and humane treatment of the wild horses in accordance with the provisions of 43 CFR 4700.

**1. Capture Methods That May Be Used in the Performance of a Helicopter Gather**

**a. Helicopter Drive Trapping**

This capture method will involve driving horses into a pre-constructed trap using a helicopter. The trap is constructed of portable steel panels consisting of round pipe. Wings are constructed off the ends of the panel trap to aid in funneling horses into the trap. The wings are constructed of natural jute, (or similar netting which will not injure a horse), which is hung on either trees or steel T-posts. This sort of wing forms a very effective visual barrier to the horses that they typically will not run through. When the trap is ready for use, a helicopter will start moving horses toward the trap and into the wings.

In heavily wooded areas, it may be necessary to use wranglers in support of the helicopter to move the horses. The helicopter will act more as a spotter for the ground crew in this situation.

The contractor/BLM shall attempt to keep bands intact except where animal health and safety become considerations which would prevent such procedures. The contractor/BLM shall ensure that foals shall not be left behind.

At least one saddle-horse should be immediately available at the trap site to perform roping if necessary. Roping shall be done as determined by the Contracting Officer's Technical Representative (COTR) or Project Inspector (PI). Under no circumstances shall animals be tied down for more than one hour.

Domestic saddle horses may also be used to assist the helicopter pilot (on the ground) during the gather operation, by having the domestic horse act as a pilot (or "Judas") horse on the ground, leading the wild horses into the trap site. Individual ground hazers and individuals on horseback may also be used to assist in the gather.

**b. Helicopter Assisted Roping**

Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. Under no circumstances shall horses or burros be tied down for more than one hour.

Roping shall be performed in such a manner that bands will remain together. Foals shall not be left behind.

## **2. Other Non-Helicopter Capture Methods**

### **a. Water Trapping**

This method involves setting up a trap around a well used water source and employing a self-closing gate with a triggering device or finger gates. Finger gates can be used only with the prior approval and under the supervision of the COTR/PI. Water traps equipped with trip wires would be checked every 10 hours for trapped animals. Water traps may also be manually closed using a pull rope, which requires personal to be at the trap site to close the gate.

It may be necessary to exclude access to other neighboring water sources to encourage use by the target population at the trap site. All enclosures constructed for the purpose of the gather would be flagged and highly visible to the horses, wildlife, and the public. The wires, twine, and flagging would be promptly removed following completion of the trapping.

All water traps and enclosures would be constructed (whenever possible) to accommodate wildlife access points. These points would be where wildlife could get to water by going underneath the panels, such as along trails, washes or low spots.

Placement of portable corral panels would be permitted during foaling season to allow wild horses to become accustomed to them.

### **b. Bait Trapping**

Bait trapping using hay or other enticements may be used as an additional or alternative method of capture. This method would involve setting up a panel trap in an area accessible to the horses and feeding of enticements in the trap over a period of time to habituate the target animal to the bait. Once virtually all horses (or burros) in an area were coming in to the bait, they would be trapped. The principal limitation of this method is that forage must be limited or the bait must be more desirable than the surrounding forage.

### **c. Net Gunning**

The net-gunning aerial capture technique uses weighted nets to individually capture wild animals. Net gun capture is a valuable tool when specific animals are targeted for restraint, relocation or removal. The technique is not applicable when a large number of animals require capture.

When using nets, drug and electrical immobilization are rarely required. Individual animals are located, herded by the pilot as slowly as possible into an open area and then are netted from the helicopter using weighted, soft mesh net. As the horse or burro becomes tangled in the net they become somewhat disoriented and further slow down. Some animals come to a complete standstill when surrounded by the net. Others become tangled to the point where they roll onto the ground.

Immediately after netting an animal the crew members approach the animal. The horse or burro is rolled onto its side, cross-hobbled and blindfolded. A muzzle is used in cases where an animal acts aggressive. The net is then rolled away from the horse or burro and the animal can be handled for collection of biological samples. If transport is required, the hobbled, blindfolded animal is rolled into a soft canvas bag. The bag is laced closed with a strong nylon rope. The rope is attached to a hook on the belly of the helicopter and the animal is transported to the destination. Transport time to small, portable corrals is usually under 10 minutes per animal.

Once at the destination, the horse or burro is gently lowered into the small, portable corral. The ground crew unhooks the transport rope and removes the bag from around the animal. The blindfold and hobbles are removed. The horse or burro immediately gets onto their feet, appearing only slightly disoriented.

#### **d. Chemical Capture**

The chemical capture technique has similar benefits to the net gunning technique in the fact that individual animals may be captured. Chemical capture is a valuable tool when specific animals are targeted for restraint, relocation or removal. The technique is not applicable when a large number of animals require capture.

When using chemical capture a drug will be administered through the use of a dart gun and dart. The dart will be loaded with a chemical recommended by a veterinarian and approved by the BLM Authorized Officer on site. The dart is then shot out of a gun using the appropriate propellant for that gun. As the dart impacts the animal the chemical is released and the animal is subdued by the chemical. The use of this method is limited to within 100 yards or the range of the dart gun. The chemical can be administered from the ground or by air.

Once the animal is subdued by the chemical ground crews must imminently approach the animal and hobble or halter the animal. As the chemical wears off and the animal case once again move with normal function saddle horses may be used to move the animal where it can be loaded into a trailer. If the animal is already in a location where it can be loaded then the animal may be tied down for no longer than 1 hour and loaded directly into the trailer.

### **3. Stipulations for Portable Corral Traps/Exclosures**

Capture traps would be constructed in a fashion to minimize the potential for injury to wild horses or burros and BLM/contractor personnel. Gates would be wired open at all unmanned trap sites, and would be left closed only when needed to hold horses or burros inside. Trapped horses or burros would not be held inside the traps for a period exceeding 10 hours, unless provided with feed (weed free hay) and water.

The Utah Division of Wildlife Resources would be notified as soon as possible if any wildlife became injured during capture operations. Wildlife caught inside traps would be released immediately.

#### **4. Contract Helicopter, Pilot and Communications**

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.

When refueling, the helicopter shall remain a distance of at least 1,000 feet or more from animals, vehicles (other than fuel truck), and personnel not involved in refueling.

The COTR/PI shall have the means to communicate with the contractor's pilot at all times. If communications cannot be established, the Government will take steps as necessary to protect the welfare of the animals. The necessary frequencies used for this contract will be assigned by the COTR/PI when the radio is used. The contractor shall obtain the necessary FCC licenses for the radio system.

The proper operation, service and maintenance of all contractor furnished helicopters is the responsibility of the contractor. The BLM reserves the right to remove from service pilots and helicopters which, in the opinion of the Contracting Officer or COTR/PI, violate contract and FAA rules, are unsafe or otherwise unsatisfactory. In this event, the contractor will be notified in writing to furnish replacement pilots or helicopters within 48 hours of notification. All such replacements must be approved in advance of operation by the Contracting Officer or his/her representative.

All incidents/accidents occurring during the performance of any delivery order shall be immediately reported to the COTR.

#### **5. Non-Contract Helicopter Operations**

An Aircraft Safety Plan and flight hazard analysis will be appropriately approved and filed and copies distributed to the necessary individuals prior to commencing the removal operation. Daily flight plans will also be filed. If a BLM contract helicopter is used, all BLM, Aircraft Safety and Operations standards will be adhered to.

There will be daily briefings with the helicopter pilot, Authorized Officer and all personnel involved in the day's operation. The purpose of this meeting is to discuss in detail all information gathered during the familiarization flight such as hazards, location of horses, potential problems, etc. Discuss any safety hazards anticipated for the coming day's operation or any safety problems observed by the Authorized Officer or anyone else, outline the plan of action, delineate course of actions, specifically position the hazers and their responsibilities, logistics, and timing. After each flight, removal personnel will discuss any problems and suggest solutions. This may be accomplished over the radio or on the ground as the need dictates.

A flight operations plan will be filed with the Cedar City Interagency Dispatch Center. This plan will describe the area to be flown and the expected time frames of flight operations. A weather forecast will be acquired from the dispatcher. There will be no flights on days of high or gusty, erratic winds or days with poor visibility.

Two-way radio communication between the helicopter and the ground crew will be maintained at all times during the operation.

An operation or contractor's log will be maintained for all phases of the operation. The log will be as detailed as possible and will include names, dates, places and other pertinent information, as well as, observations of personnel involved.

## **6. Animal Handling and Care**

Prior to any gathering operations, the COTR/PI will provide for a pre-capture evaluation of existing conditions in the gather areas. The evaluation will include animal condition, prevailing temperatures, drought conditions, soil conditions, road conditions, and a topographic map with location of fences, other physical barriers, and acceptable trap locations in relation to animal distribution. The evaluation will determine whether the proposed activities will necessitate the presence of a veterinarian during operations. If it is determined that capture efforts necessitate the services of a veterinarian, one would be obtained before capture would proceed.

The contractor will be apprised of the all conditions and will be given instructions regarding the capture and handling of animals to ensure their health and welfare is protected.

The Authorize Officer and pilot may take a familiarization flight identifying all natural hazards (rims, canyons, winds) and man-made hazards in the area so that helicopter flight crew, ground personnel, and wild horse safety will be maximized. Aerial hazards will be recorded on the project map.

No fence modifications will be made without authorization from the Authorized Officer. The contractor/BLM shall be responsible for restoration of any fence modification which has been made.

If the route the contractor/BLM proposes to herd animals passes through a fence, opening should be large enough to allow free and safe passage. Fence material shall be rolled up and fence posts will be removed or sufficiently marked to ensure safety of the animals. The standing fence on each side of the gap will be well flagged or covered with jute or like material.

Wings shall not be constructed out of materials injurious to animals and must be approved by the Authorized Officer.

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

Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the COTR.

Branded or privately owned animals captured during gather operations will be handled in accordance with state stray laws and existing BLM policy.

Capture methods will be identified prior to issuance of delivery orders. Regardless of which methods are selected, all capture activities shall incorporate the following:

### **a. Trap Site Selection**

The Authorized Officer will make a careful determination of a boundary line to serve as an outer limit within which horses will be herded to a selected trap site. The Authorized Officer will insure that the pilot is fully aware of all natural and manmade barriers which might restrict free movement of horses. Topography, distance, and current condition of the horses are factors that will be considered to set limits to minimize stress on horses.

Gather operations will be monitored and restricted (if necessary) to assure the body condition of the horses are compatible with the distances and the terrain over which they must travel. Pregnant mares, mares with small colts, and other horses would be allowed to drop out of bands which are being gathered if required to protect the safety and health of the animals.

All trap and holding facility locations must be approved by the Authorized Officer prior to construction. The situation may require moving of the trap. All traps and holding facilities not located on public land must have prior written approval of the landowner.

Trap sites will be located to cause as little injury and stress to the animals, and as little damage to the natural resources of the area, as possible. Sites will be located on or near existing roads. Additional trap sites may be required, as determined by the Authorized Officer, to relieve stress to the animals caused by specific conditions at the time of the gather (i.e. dust, rocky terrain, temperatures, etc.).

#### **b. Trap/Facility Requirements**

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:

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.

All loading chute sides shall be fully covered with plywood (without holes) or like material. The loading chute shall also be a minimum of 6 feet high.

All runways shall be of sufficient length and height to ensure animal and wrangler safety and may 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.

If a government furnished portable chute is used to restrain, age, or to provide additional care for animals, it shall be placed in the runway in a manner as instructed by or in concurrence with the Authorized Officer.

All crowding pens including the gates leading to the runways may, if necessary to prevent injuries from escape attempts, be covered with a material which prevents the animals from seeing out (plywood, burlap, snow fence etc.) and should be covered a minimum of 1 foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses.

When holding facilities are used, and alternate pens are necessary to separate mares with small foals, animals which will be released, sick and injured animals, and estrays from the other animals or to facilitate sorting as to age, number, size, temperament, sex, and condition; they will be constructed to minimize injury due to fighting and trampling. In some cases, the Government will require that animals be restrained for determining an animal's age or for other purposes. In these instances, a portable restraining chute will be provided by the Government. Either segregation or temporary marking and later segregation will be at the discretion of the COTR.

If animals are held in the traps and/or holding facilities, a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day will be supplied. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay (certified weed free on BLM lands) at the

rate of not less than two pounds of hay per 100 pounds of estimated body weight per day.

Separate water troughs shall be provided at each pen where animals are being held. Water troughs shall be constructed of such material (e.g. rubber, rubber over metal) so as to avoid injury to animals.

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

## **7. Treatment of Injured or Sick; Disposition of Terminal Animals**

The contractor/BLM shall restrain sick or injured animals if treatment is necessary. A veterinarian may be called to make a diagnosis and final determination. Destruction shall be done by the most humane method available. Authority for humane destruction of wild horses (or burros) is provided by the Wild Free-Roaming Horse and Burro Act of 1971, Section 3(b)(2)(A), 43 CFR 4730.1, BLM Manual 4730 - Euthanasia is in accordance with BLM policy as expressed in Instructional Memorandum No. 2006-023.

Any captured horses that are found to have the following conditions may be humanely destroyed:

- a. The animal shows a hopeless prognosis for life.
- b. Suffers from a chronic or incurable disease.
- c. Requires continuous care for acute pain and suffering.
- d. Not capable of maintaining a Henneke body condition rating of one or two.
- e. Has an acute or chronic injury, physical defect or lameness that would not allow the animal to live and interact with other horses, keep up with its peers or exhibits behaviors which may be considered essential for an acceptable quality of life constantly or for the foreseeable future.
- f. Suffers from an acute or chronic infectious disease where State or Federal animal health officials order the humane destruction of the animal as a disease control measure.

The Authorized Officer will determine if injured animals must be destroyed and provide for destruction of such animals. The contractor/BLM may be required to dispose of the carcasses as directed by the Authorized Officer.

The carcasses of the animals that die or must be destroyed as a result of any infectious, contagious, or parasitic disease will be disposed of by burial to a depth of at least 3 feet.

The carcasses of the animals that must be destroyed as a result of age, injury, lameness, or non-contagious disease or illness will be disposed of by removing them from the capture site or holding corral and placing them in an inconspicuous location to minimize visual impacts. Carcasses will not be placed in a drainage regardless of drainage size or downstream destination.

## **8. Motorized Equipment**

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 Authorized Officer with a current safety inspection (less than one year old) of all tractor/stock trailers used to transport animals to final destination.

Vehicles 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.

Only stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities. Only stock trailers, or single deck trucks shall be used to haul animals from temporary holding facilities to final destination(s). Sides or stock racks of transporting vehicles shall be a minimum height of 6 feet 6 inches from the vehicle floor. Single deck trucks with trailers 40 feet or longer shall have two (2) partition gates providing three (3) compartments within the trailer to separate animals. The compartments shall be of equal size plus or minus 10 percent. Trailers less than 40 feet shall have at least one partition gate providing two (2) compartments within the trailer to separate animals. The compartments shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have at the minimum a 5 foot wide swinging gate. The use of double deck trailers is unacceptable and will not be allowed.

Vehicles used to transport animals to the final destination(s) shall be equipped with at least one (1) door at the rear end of the vehicle, which is capable of sliding either horizontally or vertically. The rear door must be capable of opening the full width of the trailer. All 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 the trailer must be strong enough, so that the animals cannot push their hooves through the sides. Final approval of vehicles to transport animals shall be held by the Authorized Officer.

Floors of vehicles, trailers, and the loading chute shall be covered and maintained with materials sufficient to prevent the animals from slipping.

Animals to be loaded and transported in any vehicle or trailer shall be as directed by the Authorized Officer and may include limitations on numbers according to age, size, sex, temperament, and animal condition. The minimum square footage per animal is as follows:

11 square feet/adult horse (1.4 linear foot in an 8 foot wide trailer)  
06 square feet/horse foal (0.75 linear foot in an 8 foot trailer)

The Authorized Officer shall consider the condition of the animals, weather conditions, type of vehicles, distance to be transported, or other factors when planning for the movement of captured animals. The Authorized Officer shall provide for any brand and/or inspection services required for the captured animals.

Communication lines will be established with personnel involved in off-loading the animals to receive feedback on how the animals arrive (condition/injury etc.). Should problems arise, gathering methods, shipping methods and/or separation of the animals will be changed in an attempt to alleviate the problems.

If the Authorized Officer determines that dust conditions are such that animals could be endangered during transportation, the contractor/BLM will be instructed to adjust speed and/or use alternate routes.

Periodic checks by the Authorized Officer will be made as animals are transported along dirt roads. If speed restrictions are in effect the Authorized Officer will at times follow and/or time trips to ensure compliance.

## **9. Special Stipulations.**

Private landowners or the proper administering agency(s) would be contacted and authorization obtained prior to setting up traps on any lands which are not administered by BLM. Wherever possible, traps would be constructed in such a manner as to not block vehicular access on existing roads.

If possible, traps would be constructed so that no riparian vegetation is contained within them. Impacts to riparian vegetation and/or running water is located within a trap (and available to horses) would be mitigated by removing horses from the trap immediately upon capture. No vehicles would be operated on riparian vegetation or on saturated soils associated with riparian/wetland areas.

Whenever possible, gathering would be conducted when soils are dry or frozen and conditions are optimal for safety and protection of the horses and wranglers. Also, whenever possible, scheduling of gathers would be done to minimize impacts with big game hunting seasons.

Gathers would not be conducted 6 weeks on either side of peak foaling season, which for this gather is April 15<sup>th</sup>, to reduce the chance of injury or stress to pregnant mares or mares with young foals.

The helicopter would avoid eagles and other raptors, and would not be flown repeatedly over any identified active raptor nests. No unnecessary flying would occur over big game on their winter ranges or active fawning/calving grounds during the period of use.

Standard operating procedures in the setting-up and construction of traps will avoid adverse impacts to wildlife species, including threatened, endangered, or sensitive species.

Weed free hay will be used for bait trapping, and feeding purposes of wild horses and/or domestic horses at trap sites. Hay feed at Temporary Holding Facilities placed on federal lands will be certified weed free hay or approved by the authorized officer on site.

## **10. Herd Health and Viability Data Collection**

The following information will be collected from each animal captured: age, sex, color, overall health, pregnancy or nursing status.

In addition, blood or hair samples may be collected from individuals within the herd. Certain other activities including immunocontraceptive research, radio collaring, respiratory disease, and freeze marking may be conducted.

### **a. Population Management Plan/Selective Addition or Removal**

Blood samples may be taken for the purposes of furthering genetic ancestry studies and incorporation into the Population Management Plans which will be developed for each HMA/complex.

On occasion, it may be necessary to enhance and maintain genetic diversity a few animals with compatible characteristics may be introduced from other HMAs. Introduced animals will be taken from areas with similar habitat.

### **b. Immunocontraceptive Research**

When the immunocontraceptive vaccine is used, delivery of the vaccine will be conducted by trained individuals, using approved delivery methods. The vaccine will be administered to the large muscle on the hip and/or as the approved delivery methods directs.

### **c. Respiratory Disease Research**

Serum and nasal samples may be taken from all saddle horses and Judas horses within 48 hours before or after the first day of each gather. Swabs would be used to collect samples of nasal discharge or of the

material drainage from the abscess from clinically ill wild horses during routine restraint. Data gathered from this research would be used in future management of wild horse during gathering and holding.

## **11. Public Participation**

Prior to conducting a gather a communications plan or similar document summarizing the procedures to follow when media or interested public request information or viewing opportunities during the gather should be prepared.

The public must adhere to guidance from the agency representative and viewing must be prearranged.

## **12. Safety**

Safety of BLM employees, contractors, members of the public, and the wild horses will be given primary consideration. The following safety measures will be used by the Authorized Officer and all others involved in the operation as the basis for evaluating safety performance and for safety discussions during the daily briefings:

A briefing between all parties involved in the gather will be conducted each morning.

All BLM personnel, contractors and volunteers will wear protective clothing suitable for work of this nature. BLM will alert observers of the requirement to dress properly (see Wild Horse and Burro Operational Hazards, BLM File 4720, UT-067). BLM will assure that members of the public are in safe observation areas. Observation protocols and ground rules will be developed the public and will be enforced to keep both public and BLM personal in a safe environment.

The handling of hazardous, or potentially hazardous materials such as liquid nitrogen and vaccination needles will be accomplished in a safe and conscientious manner by BLM personnel or the contract veterinarian.

## **13. Responsibility and Lines of Communication**

The local WH&B Specialist / Project Manager from the CCFO, have the direct responsibility to ensure the contractor's compliance with the contract stipulations.

Gather Research Coordinator (GRC) from the CCFO, will have the direct responsibility to ensure compliance with all data collection and sampling. The GRC will also ensure appropriate communication with Field Office Manager, WO260 National Research Coordinator, College of Veterinary Medicine at Texas A&M University, and Animal Plant Health Inspection Service (APHIS).

The CCFO Assistant Manager will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, State Office, Salt Lake Regional Wild Horse Corrals and Delta Wild Horse Corrals.

All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

## **14. Glossary**

Appropriate Management Level - The number of wild horses and burro which can be sustained within a designated herd management area which achieves and maintains a thriving natural ecological balance

keeping with the multiple-use management concept for the area.

**Authorized Officer** - An employee of the BLM to whom has been delegated the authority to perform the duties described in these Standard Operating Procedures. See BLM Manual 1203 for explanation of delegation of authority.

**Census** - The primary monitoring technique used to maintain a current inventory of wild horses and burros on given areas of the public lands. Census data are derived through direct visual counts of animals using a helicopter.

**Contracting Officer (CO)** - Is the individual responsible for an awarded contract, deals with claims, disputes, negotiations, modifications, payments and appoints COTRs and PIs.

**Contacting Officers Technical Representative (COTR)** - Acts as the technical representative for the CO on a contract. Ensures that all specifications and stipulations are met. Reviews the contractor's progress, advises the CO on progress, problems, costs, etc. Is responsible for review, approval, and acceptance of services.

**Evaluation** - A determination based on studies and other data that are available as to if habitat and population objectives are or are not being met and where an overpopulation of wild horses and burros exists and whether actions should be taken to remove excess animals.

**Excess Wild Horses or Burros** - Wild free-roaming horses or burros which have been removed from public lands or which must be removed to preserve and maintain a thriving ecological balance and multiple-use relationship.

**Gather Research Coordinator (GRC)**- A BLM employee that is designated by the Field Office Manager prior to each gather, who identifies potential problem areas in research data collection, determines need for additional field assistance to meet sampling requirements, ensures compliance with all data sampling, and communicants and coordinates all data gather during a gather with the Field Office Manager, WO260 National Research Coordinator, Colorado State University Center of Veterinary Epidemiology and Animal Disease and Surveillance Systems (CSU-CVEADSS), and Animal Plant Health Inspection Service (APHIS).

**Genetically Viable** - Fitness of a population as represented by its ability to maintain the long-term reproductive capacity of healthy, genetically diverse members.

**Health Assessment** - Evaluation process based on best available studies data to determine the current condition of resources in relation to potential or desired conditions.

**Healthy Resources** - Resources that meet potential or desired conditions or are improving toward meeting those potential or desired conditions.

**Herd Area** - The geographical area identified as having been used by wild horse and burro populations in 1971, at the time of passage of the Wild Free-roaming Horse and Burro Act.

**Herd Management Area** - The geographical area as identified through the land use planning process established for the long-term management of wild horse and burro populations. The boundaries of the herd management area may not be greater than the area identified as having been used by wild horse and burro populations in 1971, at the time of passage of the Wild Free-roaming Horse and Burro Act.

**Invasive Weeds** - Introduced or noxious vegetative species which negatively impact the ecological balance of a geographical area and limit the areas potential to be utilized by authorized uses.

**Metapopulation (complex)** - A population of wild horses and burros comprised of two or more smaller, interrelated populations that are linked by movement or distribution within a defined geographical area.

**Monitoring** - Inventory of habitat and population data for wild horses and burros and associated resources and other authorized rangeland uses. The purpose of such inventories is to be used during evaluations to make determinations as to if habitat and population objectives are or are not being met and where an overpopulation of wild horses and burros exists and whether actions should be taken to remove excess animals.

**Multiple Use Management** - A combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals watershed, domestic livestock, wild horses, wild burros, wildlife, and fish, along with natural, scenic, scientific, and historical values.

**Project Inspector** - Coordinates with the COTR assigned to a contract to support his/her responsibility for review, approval, and acceptance of services.

**Research** - Science based inquiry, investigation or experimentation aimed at increasing knowledge about wild horses and burros conducted by accredited universities or federal government research organizations with the active participation of BLM wild horse and burro professionals.

**Science Based Decision Making** - Issuance of decisions affecting wild horses and burros, associated resources and other authorized rangeland uses incorporating best available habitat and population data and in consultation with the public.

**Studies** - Science based investigation of specific aspects of wild horse and burro habitat or populations in supplement to established monitoring. These investigations would not be established following rigid experimental protocols and could include drawing blood on animals to study genetics, disease and general health issues and population dynamics such as reproduction and mortality rates and general behavior.

**Thriving Natural Ecological Balance** - An ecological balance requires that wild horses and burros and other associated animals be in good health and reproducing at a rate that sustains the population, the key vegetative species are able to maintain their composition, production and reproduction, the soil resources are being protected, maintained or improved, and a sufficient amount of good quality water is available to the animals.

## **Appendix 6.**

### **Standard BLM Operating Procedures for Fertility Control Treatment**

The following management and monitoring requirements are part of the proposed action:

The 22 month pelleted Porcine zona pellucida (PZP) vaccine would be administered by trained BLM personnel.

The fertility control drug would be administered with two separate injections: (1) a liquid dose of PZP is administered using an 18 gauge needle primarily by hand injection; (2) the pellets are preloaded into a 14 gauge needle. These are loaded on the end of a trocar (dry syringe with a metal rod) which is loaded into the jabstick which then pushes the pellets into the breeding mares being returned to the range. The pellets and liquid are designed to release the PZP over time similar to a time release cold capsule.

Delivery of the vaccine would be as an intramuscular injection while the mares are restrained in a working chute. 0.5 cubic centimeters (cc) of the PZP vaccine would be emulsified with 0.5 cc of adjuvant (a compound that stimulates antibody production) and loaded into the delivery system. The pellets would be loaded into the jabstick for the second injection. With each injection, the liquid and pellets would be propelled into the left hind quarters of the mare, just below the imaginary line that connects the point of the hip and the point of the buttocks.

All treated mares would be freeze-marked with two 3.5-inch letters on the left hip for treatment tracking purposes. The only exception to this requirement is that each treated mare can be clearly and specifically identified through photographs or markings. This step is to enable researchers to positively identify the animals during the research project as part of the data collection phase.

At a minimum, estimation of population growth rates using helicopter or fixed wing surveys would be conducted the year preceding any subsequent gather. During these surveys it would not be necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e. # of foals to # of mares).

Population growth rates of herds selected for intensive monitoring would be estimated every year post-treatment using helicopter or fixed wing surveys. During these surveys it would not be necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e. # of foals to # of mares). During routine HMA field monitoring (on-the-ground), if data on mare to foal ratios can be collected, these data should also be shared with the NPO for possible analysis by the USGS.

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

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

## **Appendix 7**

### **Standard Operating Procedures for Field Castration (Gelding) of Wild Horse Stallions**

Gelding will be performed with general anesthesia and by a veterinarian. The combination of pharmaceutical compounds used for anesthesia, method of physical restraint, and the specific surgical technique used will be at the discretion of the attending veterinarian with the approval of the authorized officer (I.M. 2009-063).

#### **Pre-surgery Animal Selection, Handling and Care**

1. Stallions selected for gelding will be greater than 6 months of age and less than 20 years of age.
2. All stallions selected for gelding will have a Henneke body condition score of 3 or greater. No animals which appear distressed, injured or in failing health or condition will be selected for gelding.
3. Stallions will not be gelded within 36 hours of capture and no animals that were roped during capture will be gelded at the temporary holding corrals for rerelease.
4. Whenever possible, a separate holding corral system will be constructed on site to accommodate the stallions that will be gelded. These gelding pens will include a minimum of 3 pens to serve as a working pen, recovery pen(s), and holding pen(s). An alley and squeeze chute built to the same specifications as the alley and squeeze chutes used in temporary holding corrals (solid sides in alley, minimum 30 feet in length, squeeze chute with non-slip floor) will be connected to the gelding pens.
5. When possible, stallions selected for gelding will be separated from the general population in the temporary holding corral into the gelding pens, prior to castration.
6. When it is not possible or practical to build a separate set of pens for gelding, the gelding operation will only proceed when adequate space is available to allow segregation of gelded animals from the general population of stallions following surgery. At no time will recently anesthetized animals be returned to the general population in a holding corral before they are fully recovered from anesthesia.
7. All animals in holding pens will have free access to water at all times. Water troughs will be removed from working and recovery pens prior to use.
8. Prior to surgery, animals in holding pens may be held off feed for a period of time (typically 12-24 hours) at the recommendation and direction of the attending veterinarian.
9. The final determination of which specific animals will be gelded will be based on the professional opinion of the attending veterinarian in consultation with the Authorized Officer.
10. Whether the procedure will proceed on a given day will be based on the discretion of the attending veterinarian in consultation with the Authorized Officer taking into consideration the prevailing weather, temperature, ground conditions and pen set up. If these field situations can't be remedied, the procedure will be delayed until they can be, the stallions will be transferred to a prep facility, gelded, and later returned, or they will be released to back to the range as intact stallions.

#### **Gelding Procedure**

1. All gelding operations will be performed under a general anesthetic administered by a qualified and experienced veterinarian. Stallions will be restrained in a portable squeeze chute to allow the veterinarian to administer the anesthesia.
2. The anesthetics used will be based on a xylazine/ketamine combination protocol. Drug dosages and combinations of additional drugs will be at the discretion of the attending veterinarian.
3. Animals may be held in the squeeze chute until the anesthetic takes effect or may be released into the working pen to allow the anesthesia to take effect. If recumbency and adequate anesthesia is not achieved following the initial dose of anesthetics, the animal will either be redosed or the surgery will not be performed on that animal at the discretion of the attending veterinarian.
4. Once recumbent, rope restraints or hobbles will be applied for the safety of the animal, the handlers and the veterinarian.
5. The specific surgical technique used will be at the discretion of the attending veterinarian.
6. Flunixin meglumine or an alternative analgesic medication will be administered prior to recovery from anesthesia at the professional discretion of the attending veterinarian.
7. Tetanus prophylaxis will be administered at the time of surgery.
8. Other medications may also be administered at the time of surgery at the professional discretion of the attending veterinarian.

9. All geldings will be allowed to recover from anesthesia within the working pen or the adjacent recovery pen. Once, fully recovered each gelding will be transferred to the gelding holding pen(s). Animals will remain segregated from intact stallions for at least 24 hours following surgery or until their release.
10. Any stallions determined or believed to be a cryptorchid will be allowed to recover from the anesthesia, marked for later recognition, and shipped to a BLM prep facility for appropriate surgery or euthanasia if it is determined that they cannot be fully castrated. At no time will a partial castration be performed. Because cryptorchidism is an inherited condition, cryptorchid stallions should never be released back into an HMA.
11. Gelded animals will be freeze marked on their left hip with an identifying mark to minimize the potential for future recapture and to facilitate post-treatment monitoring. Each State will establish its own marking system in compliance with their State Brand Board. For example, Nevada BLM will utilize the identifying freeze mark on the hip (to be determined) as well as a 2 inch "F" freeze mark on the left side of the neck per agreement with the NV Brand Board.

**Post-operative handling, care and monitoring**

1. All animals that have fully recovered from anesthesia will have free access to water and hay prior to subsequent release.
2. All geldings will be held at least overnight for observation. Animals will not be left unattended for at least 3 hours following the procedure.
3. The attending veterinarian will observe all animals 12-24 hours after the procedure or again prior to release. Geldings will be released no later than 48 hours following surgery near a water source in their home range when possible.
4. Any gelding observed have complications will be held at the gather site until his condition improves or be shipped to a holding facility until he is able to be returned to the range.
5. Gelded animals would be monitored periodically for complications for approximately 7-10 days post-surgery. This monitoring will be completed either through aerial recon if available or field observations from major roads and trails. It is not anticipated that all the geldings will be observed but the goal is to detect complications if they are occurring and determine if the horses are freely moving about the HMA.
6. Animals found on the range with serious gelding complications will either be recaptured for treatment, if possible or euthanized as an act of mercy if necessary.
7. Observations of the long term outcomes of gelding will be recorded during routine resource monitoring work. Such observations will include but may not limited to band size, social interactions with other geldings and harem bands, distribution within their habitat, forage utilization and activities around key water sources.

**Appendix 8**  
**Population Model**  
**Frisco 2012 Population Modeling**

To complete the population modeling for the Frisco Herd Management Area, version 1.40 of the WinEquus program, created April 2, 2002, was utilized.

**Objectives of Population Modeling**

Review of the data output for each of the simulations provided many use full comparisons of the possible outcomes for each alternative. Some of the questions that need to be answered through the modeling include:

- Do any of the Alternatives “crash” the population?
- What effect does fertility control have on population growth rate?
- What effects do the different alternatives have on the average population size?
- What effects do the different alternatives have on the genetic health of the herd?

**Population Data, Criteria, and Parameters utilized for Population Modeling**

All simulations used the survival probabilities, foaling rates, and sex ratio at birth that was supplied with the Winn Equus population for the Garfield HMA.

Sex ratio at Birth:

43% Females

57% Males

The following percent effectiveness of fertility control was utilized in the population modeling for Alternative I:

Year 1: 94%, Year 2: 82%, Year 3: 68%

The following table displays the contraception parameters utilized in the population model for Alternative 2-4:

Contraception Criteria

Age	Percentages for Fertility Treatment
1	0%
2	100%
3	100%
4	100%
5	100%
6	100%
7	100%
8	100%
9	100%
10-14	100%
15-19	100%
20+	0%

### Population Modeling Criteria

The following summarizes the population modeling criteria that are common to the Proposed Action and all alternatives:

- Starting year: 2012
- Initial Gather Year: 2012
- Gather interval: regular interval of three years
- Gather for fertility treatment regardless of population size: No
- Continue to gather after reduction to treat females: Yes
- Sex ratio at birth: 57% males
- Percent of the population that can be gathered: 80%
- Minimum age for long term holding facility horses: Not Applicable
- Foals are included in the AML
- Simulations were run for 10 years with 100 trials each

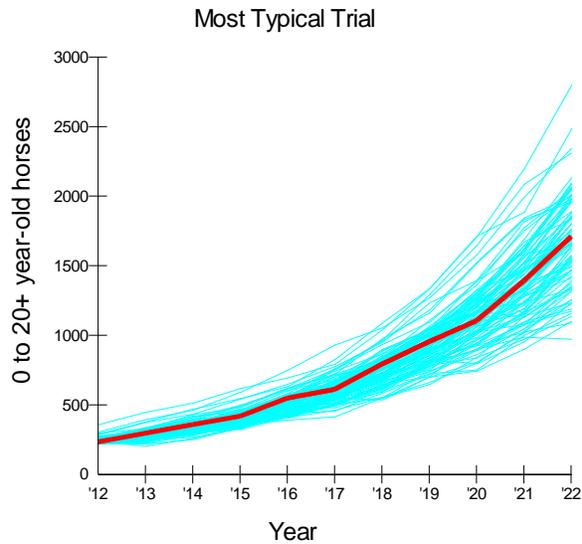
The following table displays the population modeling parameters utilized in the model:

<b>Population Modeling Parameters Modeling Parameter</b>	<b>Alternative 1: No Action – Continue Existing Management. No Gather and Removal</b>	<b>Alternative 2: Proposed Action – Implement HMAP. Gather and Removal (Remove to Low point of AML, Adjust sex ratio 60/40 male to female ratio &amp; Fertility Control on mare returned to HMA).</b>	<b>Alternative 3: Implement HMAP. Adjustment of AML and gather/removal of excess wild horses, apply fertility control including release of geldings as part of the male population.</b>	<b>Alternative 4: No Action on HMAP. Gather and Removal with Fertility control.</b>	<b>Alternative 5: No Action on HMAP. Gather and Removal without fertility control.</b>
<b>Management by removal, 60:40 adjustment in sex ratio, and fertility control</b>	No	Yes	Yes	No	No
<b>Management by removal only</b>	No	No	No	No	Yes
<b>Threshold Population Size Following Gathers</b>	N/A	60	100	60	60
<b>Target Population Size Following gather</b>	N/A	30	50	30	40
<b>Gather for fertility control regardless of population size</b>	N/A	No	No	No	No
<b>Gather continue after removals to treat additional females</b>	N/A	Yes	Yes	Yes	No
<b>Effectiveness of Fertility Control: Year 1</b>	N/A	94%	94%	94%	N/A
<b>Effectiveness of Fertility Control: Year 2</b>	N/A	82%	82%	82%	N/A
<b>Effectiveness of Fertility Control: Year 3</b>	N/A	68%	68%	68%	N/A

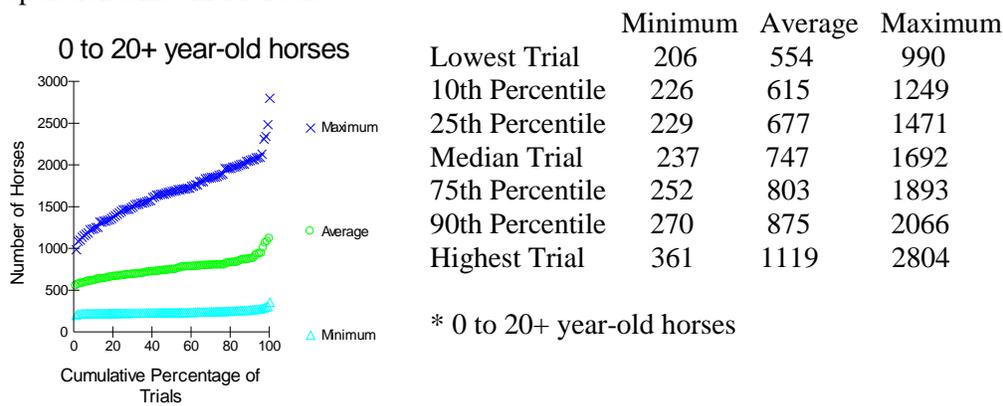
## Results Alternative 1: No Action – Continue Existing Management. No Gather and Removal

### Results - No Action

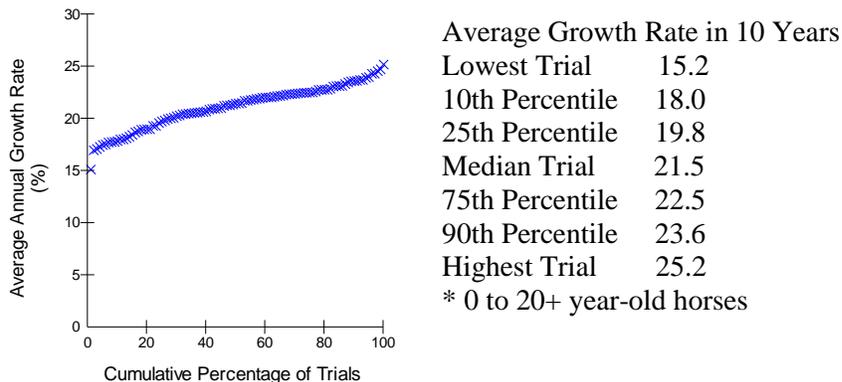
#### Population Size



#### Population Sizes in 11 Years\*

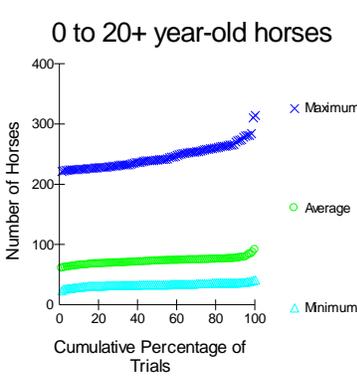
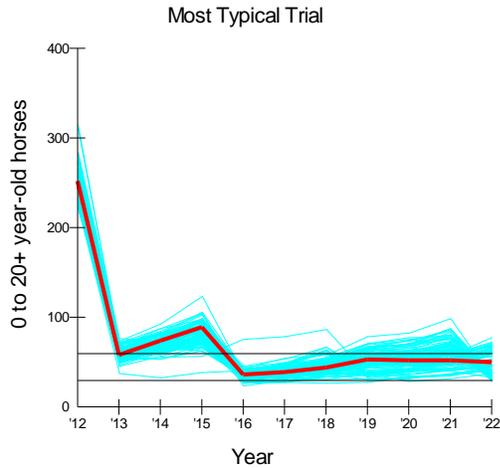


In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 206 and the highest was 2804. In half the trials, the minimum population size in 11 years was less than 237 and the maximum was less than 1692. The average population size across 11 years ranged from 554 to 1119.



**Results Alternative 2: Proposed Action – Implement HMAP. Gather and Removal (Remove to Low point of AML, Adjust sex ratio 60/40 male to female ratio & Fertility Control on mare returned to HMA).**

**Population Size**

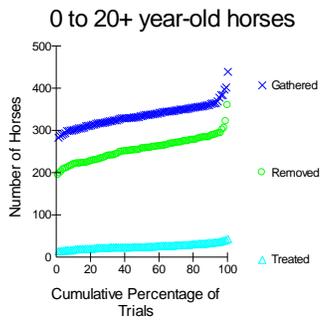


**Population Sizes in 11 Years\***

	Minimum	Average	Maximum
Lowest Trial	24	61	222
10th Percentile	30	66	226
25th Percentile	33	69	230
Median Trial	34	73	242
75th Percentile	36	75	259
90th Percentile	37	77	272
Highest Trial	42	92	315

\* 0 to 20+ year-old horses

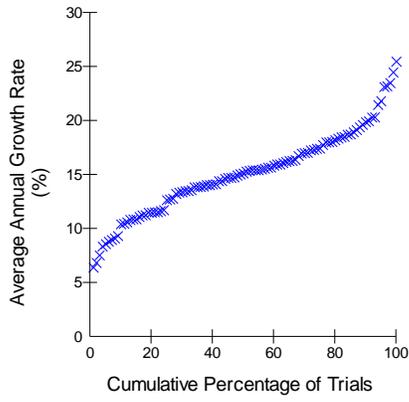
In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 24 and the highest was 315. In half the trials, the minimum population size in 11 years was less than 34 and the maximum was less than 242. The average population size across 11 years ranged from 61 to 92.



**Totals in 11 Years\***

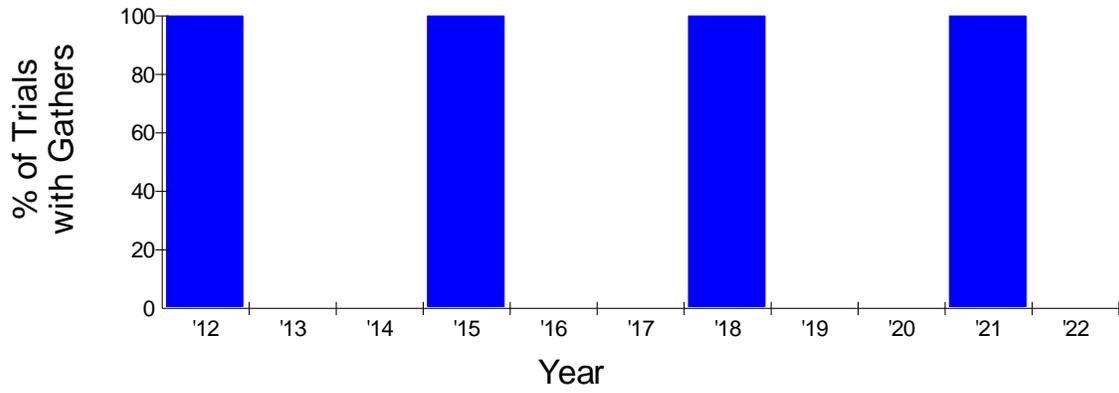
	Gathered	Removed	Treated
Lowest Trial	284	195	15
10th Percentile	302	220	19
25th Percentile	318	233	23
Median Trial	336	258	25
75th Percentile	352	275	30
90th Percentile	364	288	35
Highest Trial	440	360	44

\* 0 to 20+ year-old horses



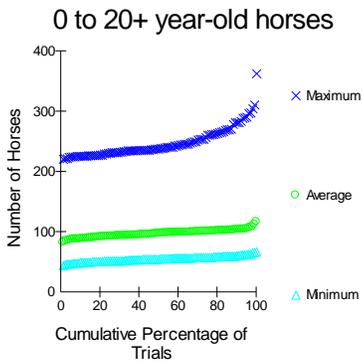
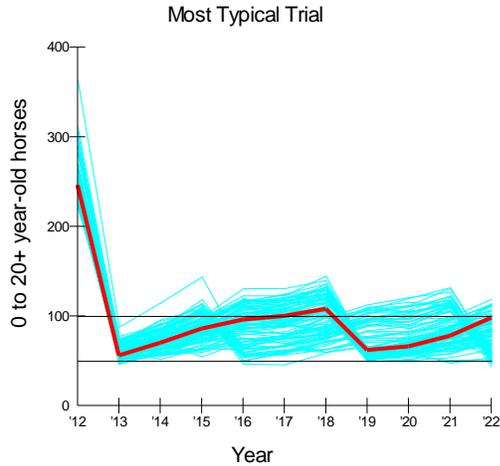
Average Growth Rate in 10 Years

Lowest Trial	6.4
10th Percentile	10.5
25th Percentile	12.7
Median Trial	15.2
75th Percentile	17.6
90th Percentile	19.9
Highest Trial	25.5



**Results Alternative 3: Implement HMAP. Adjustment of AML to 50 to 100 and gather/removal of excess wild horses, apply fertility control including release of geldings as part of the male population.**

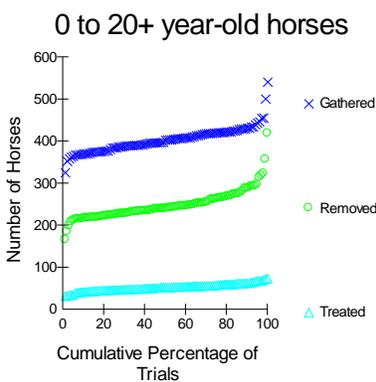
**Population Size**



	Minimum	Average	Maximum
Lowest Trial	44	82	220
10th Percentile	50	89	226
25th Percentile	52	93	232
Median Trial	56	98	238
75th Percentile	58	101	261
90th Percentile	61	104	282
Highest Trial	67	117	363

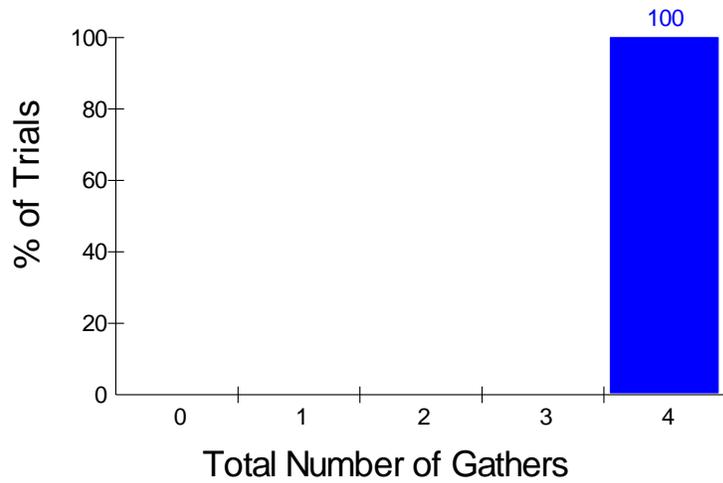
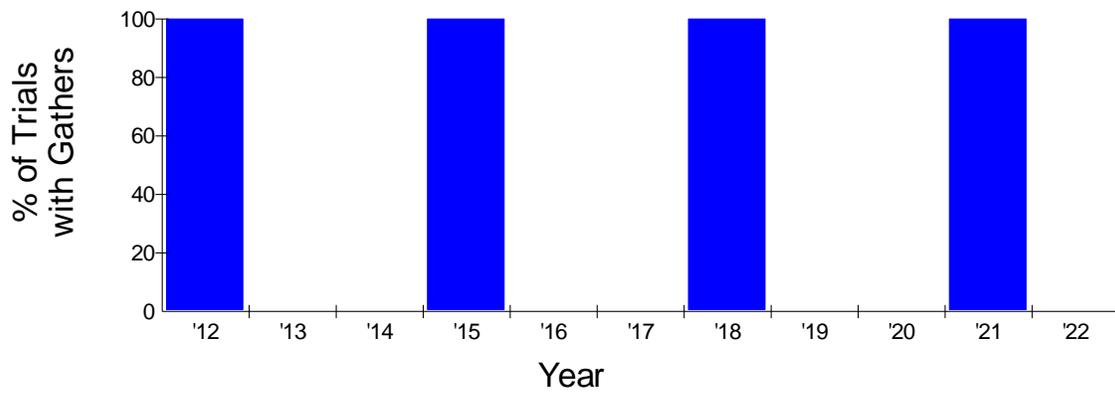
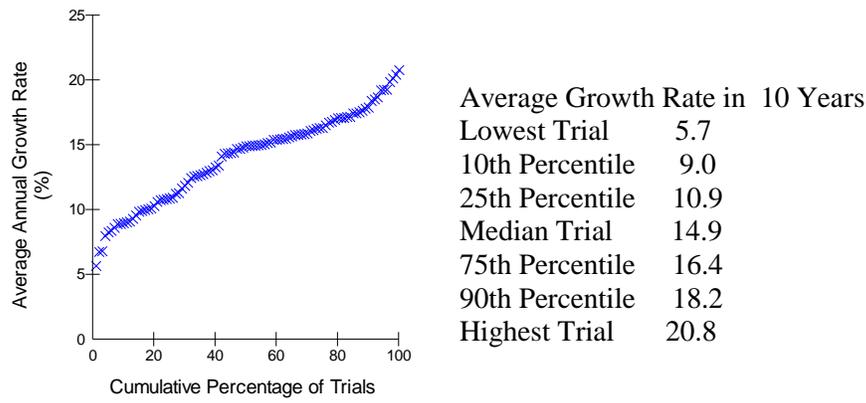
\* 0 to 20+ year-old horses

In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 44 and the highest was 363. In half the trials, the minimum population size in 11 years was less than 56 and the maximum was less than 238. The average population size across 11 years ranged from 82 to 117.



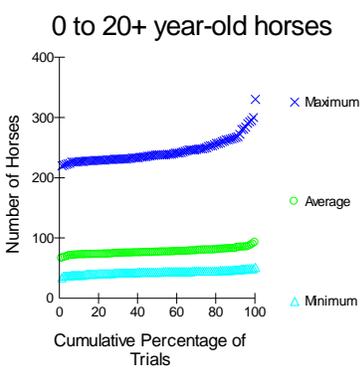
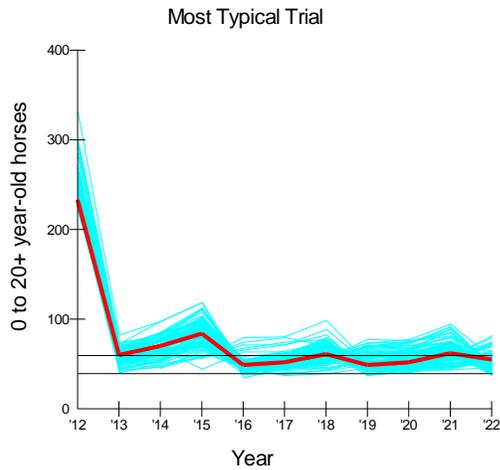
	Gathered	Removed	Treated
Lowest Trial	326	166	32
10th Percentile	371	218	42
25th Percentile	385	226	47
Median Trial	404	240	53
75th Percentile	420	264	58
90th Percentile	432	288	63
Highest Trial	541	419	74

\* 0 to 20+ year-old horses



**Results Alternative 4: No Action on HMAP. Gather and Removal with Fertility control.**

**Population Size**

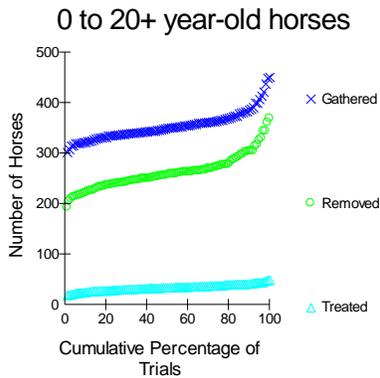


Population Sizes in 11 Years\*

	Minimum	Average	Maximum
Lowest Trial	35	67	220
10th Percentile	39	72	228
25th Percentile	42	74	231
Median Trial	44	77	239
75th Percentile	46	80	252
90th Percentile	48	84	268
Highest Trial	52	93	331

\* 0 to 20+ year-old horses

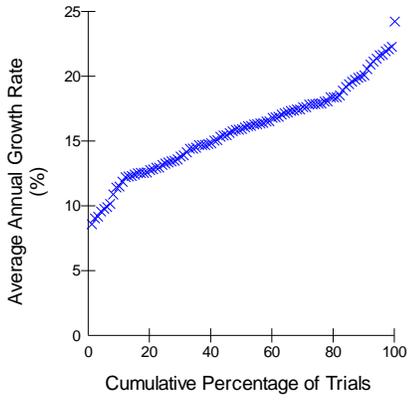
In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 35 and the highest was 331. In half the trials, the minimum population size in 11 years was less than 44 and the maximum was less than 239. The average population size across 11 years ranged from 67 to 93.



Totals in 11 Years\*

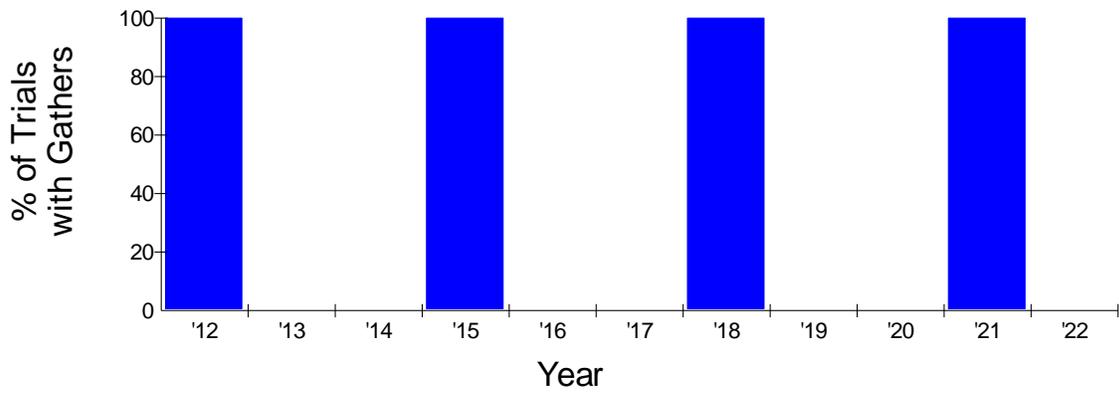
	Gathered	Removed	Treated
Lowest Trial	302	193	19
10th Percentile	323	222	26
25th Percentile	336	240	30
Median Trial	350	258	34
75th Percentile	366	274	38
90th Percentile	387	304	42
Highest Trial	451	369	49

\* 0 to 20+ year-old horses



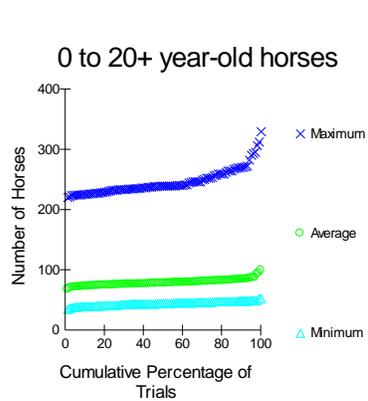
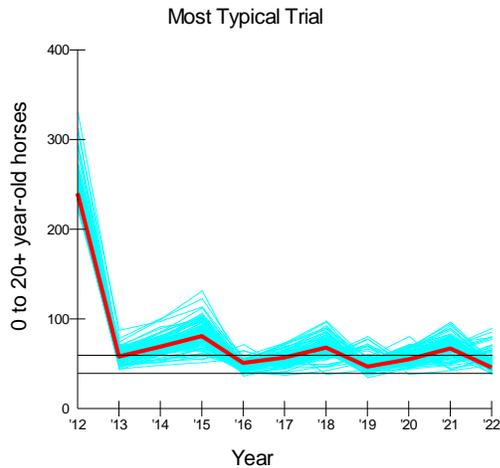
Average Growth Rate in 10 Years

Lowest Trial	8.6
10th Percentile	11.7
25th Percentile	13.4
Median Trial	16.0
75th Percentile	17.9
90th Percentile	20.4
Highest Trial	24.3



**Results Alternative 5: No Action on HMAP. Gather and Removal without fertility control.**

**Population Size**



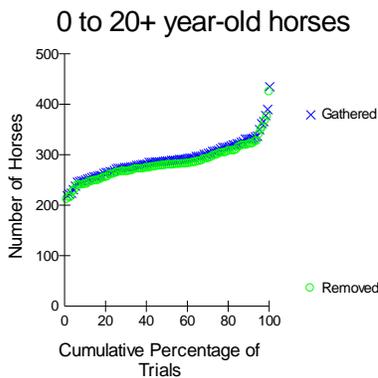
Population Sizes in 11 Years\*

	Minimum	Average	Maximum
Lowest Trial	35	68	220
10th Percentile	40	73	226
25th Percentile	42	76	233
Median Trial	45	78	240
75th Percentile	48	82	256
90th Percentile	49	84	271
Highest Trial	53	99	330

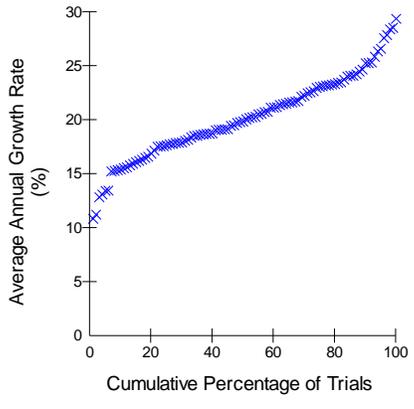
\* 0 to 20+ year-old horses

In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 38 and the highest was 346. In half the trials, the minimum population size in 11 years was less than 44 and the maximum was less than 270. The average population size across 11 years ranged from 74 to 91.

**Totals in 11 Years\***

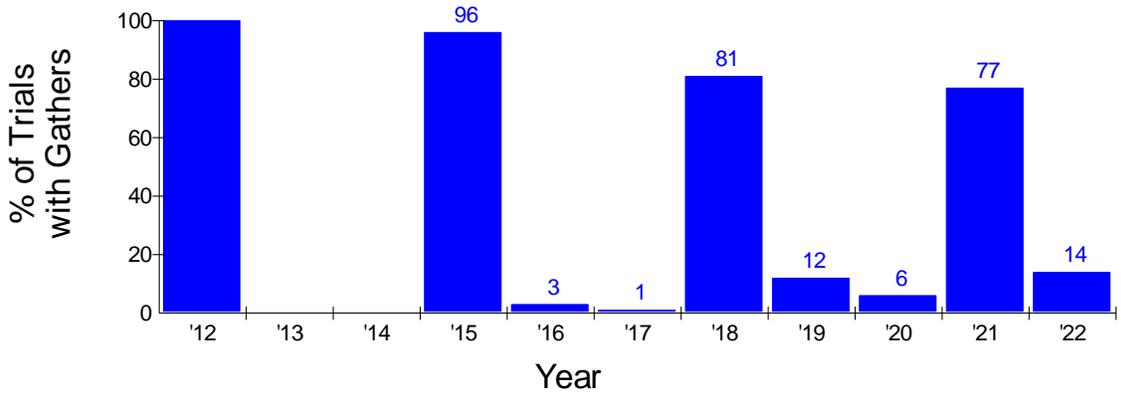


	Gathered	Removed
Lowest Trial	220	212
10th Percentile	252	242
25th Percentile	274	264
Median Trial	289	280
75th Percentile	312	302
90th Percentile	332	322
Highest Trial	436	425* 0 to 20+ year-old horses



Average Growth Rate in 10 Years

Lowest Trial	10.9
10th Percentile	15.5
25th Percentile	17.7
Median Trial	20.0
75th Percentile	23.1
90th Percentile	25.3
Highest Trial	29.4





Appendix 9  
United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Color Country Field Office  
Cedar City Field Office  
176 East DL Sargent Drive  
Cedar City, UT 84721  
Telephone (435) 586-2401  
[www.blm.gov/ut/st/en/fo/cedar\\_city.html](http://www.blm.gov/ut/st/en/fo/cedar_city.html)



**In Reply Refer To:**  
UTC012  
4710

May 10, 2012

MEMORANDUM

To: Wild Horse Files (UT-445)

From: Chad Hunter (CCFO Wild Horse/Range Mgt. Specialist)

Subject: Wild Horse helicopter inventory of the Frisco HMA

This memorandum outlines the findings of a helicopter population inventory of wild horses on the Frisco HMA. The flight was done on **April 16-17, 2012**. A MD 500 helicopter from Sky-Hawk helicopters in St. George, Utah was used. Josh Fitts was the pilot while I acted as the BLM helicopter crew member, flight manager and photographer. Dave Jacobson and Dan Fletcher also acted as helicopter crew members recording numbers, locations, body conditions, yearling numbers and colors of the horses observed during the flight. Mary Hayes of the Cedar City air center completed the safety plan. Ben Seric acted as Helicopter Managers and card checks, arranged flight following and other helicopter checks and paperwork. Color Country Dispatch coordinated the use of air space in the Sevier MOA that occurs to the north of the Frisco HMA. Agnav was used to record the flight path of the helicopter and a Trimble GeoXM was used to record the location of horses without complications. The flight path is shown on Map 2.

Both days the flights originated at Cedar City Airport, Utah at approximately 0800. The Helicopter Manager reviewed the cards for the helicopter and pilot. A safety briefing was given and flight plans for the day were reviewed.

A mobile Skyhawk fuel truck provided fuel for the population inventory and was sent from the base at Cedar City to fueling location at the Frisco Summit. Ferry time from Cedar City to the HMA was approximately ½ hours. Approximately 14 hours were spent on the Frisco HMA population inventory. Total flight time for each day was approximately 6.5 hours at \$890 an hour. Cost for the population inventory flight was approximately \$14,000 (\$856 per hour + fuel truck + extended hours).

The objective was to do a wild horse population inventory on the Frisco HMA. The Mark-Resight method was used to inventory the horses. The HMA was flown in transects 6 times in slightly different directions. Photos of each band of horses that was seen during each transects were taken. The week following the flight the photos were compared to each other and each

individual band was identified. A direct count of horses was taken from the photos of each horse identified in the bands. The data was then sent to a statistician to figure a range of the population with a confidence interval. That data will be incorporated in to this document when received.

Most horses were in Henneke Body Class 5 (Moderate) to 4 (Moderately thin), but look like they were putting on weight from the green up of the cheatgrass and some of the perennial grasses. Twelve (12) young colts (under 6 months) were observed during the flight.

Several head of elk and pronghorn antelope were counted on and just outside the north part of the HMA. Approximately 45 head of elk were counted. Approximately 90 pronghorn were counted in several herds.

On the Frisco HMA a total of **212** head of wild horses were counted. A good portion of the horses were located on the Frisco Fire ESR project that was completed in 2007. This HMA does not see much interchange from horses from other HMAs, but horses from other wild horse HMAs have been introduced to the HMA in the past. However no new horses have been introduced to the HMA since the last population inventory. It is unknown if any domestic horses have been turned out on the HMA.

**The total for the Frisco HMA is 212 (including 31 horses that were yearlings and 14 foals born in 2012) were counted in 47 bands.**

Frisco HMA population increase this last year was **16%**.  $31(f) \div 198(a) \times 100 = 16\%$

### **Estimated Population 212 head**

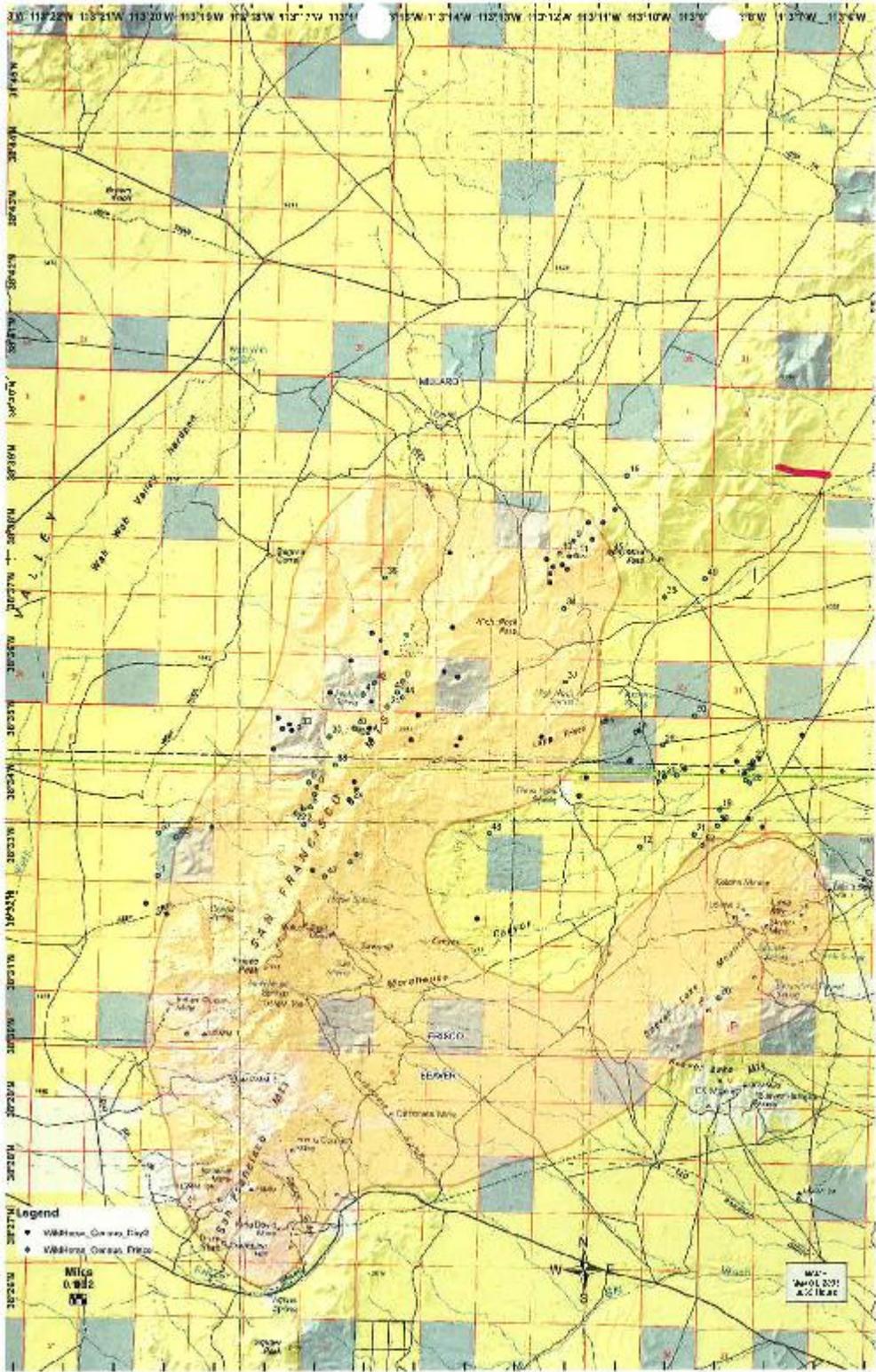
Key points to note with FY 2012 Population inventory.

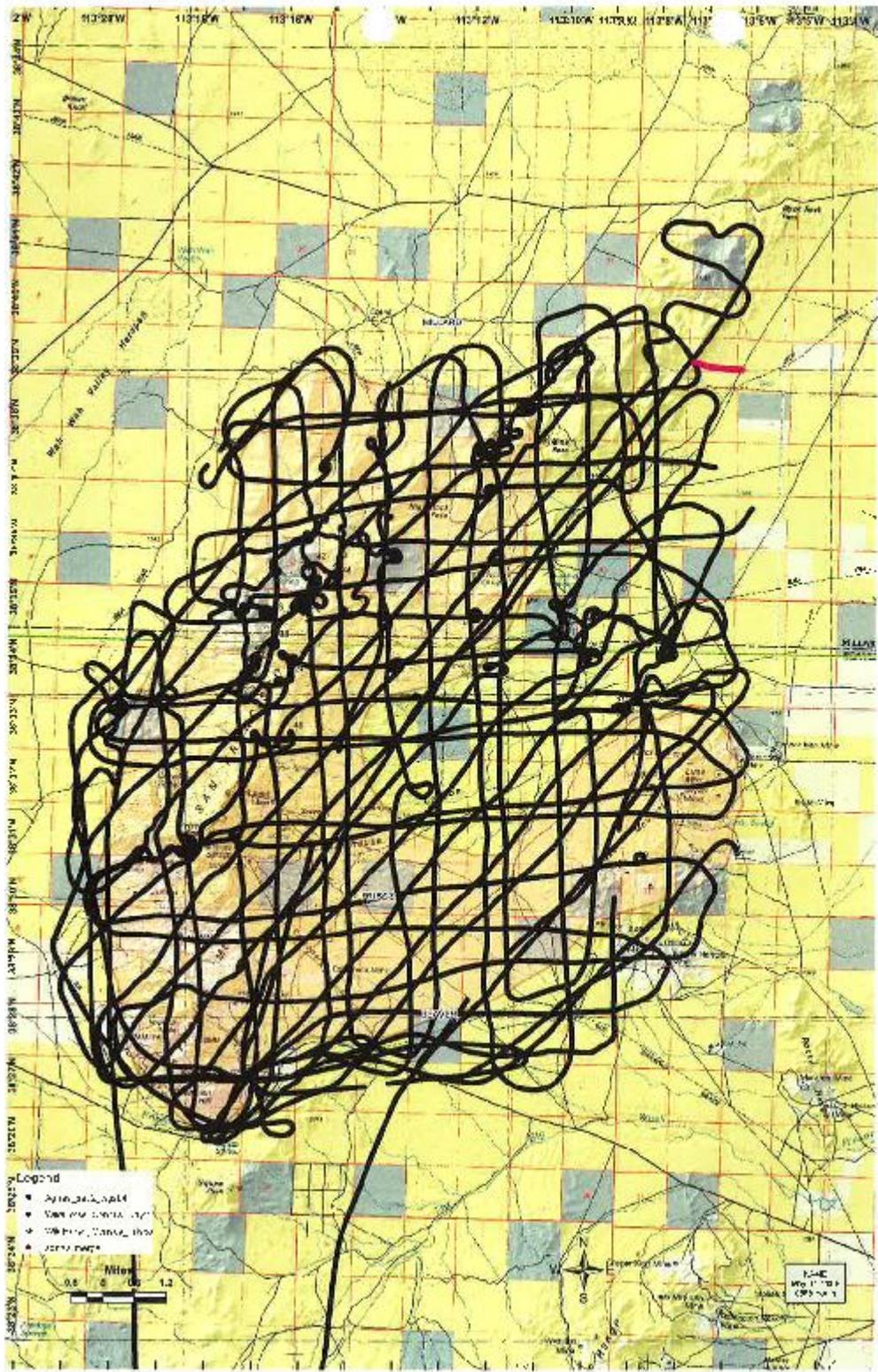
- New Mark-Resight method used
- Photo comparison of horses from 6 transects gave a direct count for the estimated population.
- The last two population inventories have increased the population estimate as the method for the inventories have improved.
- Reproduction rate is less than 20% which is normally used to estimate population growth on this HMA
- Horses were in good condition despite little spring green up or growth on perennial plants.
- It is believed some domestic horses have been released into the HMAs.
- Elk use of this HMA has increased in the last 15 years.

/Chad Hunter

### Attachments

1. Aerial Population inventory Spread Sheet (includes Frisco population inventory).
2. Map 1 of Aerial Population Inventory
3. Map 2 Flight Path of Population Inventory
4. Statistical analysis of April 16-17 Frisco HMA horse survey





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## MEMORANDUM

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To: Chad Hunter, BLM  
CC: Jeff Manning, BLM  
From: Bruce Lubow  
Date: 10/11/2012  
RE: Statistical analysis of April 16-17 Frisco HMA horse survey

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I analyzed data provided to me by Chad Hunter from a photographic mark-resight aerial survey of horses in the Frisco HMA collected on April 16-17, 2012 following the field methods recommended by Lubow and Ranson (2009 JWM 73:1420-1429). A Hughes MD 500 helicopter was flown by Josh Fitts of Skyhawk Helicopter Service. Chad Hunter photographed horse groups using a Nikon D80, 10 megapixel camera with image stabilization and a 70-300 mm zoom lens. Three of the survey passes were flown on the first day and the remaining 3 on the second day, using 5.5 hours of flight time each day. Transects were spaced 1 mile apart and oriented and aligned differently for each pass. Conditions were sunny with no clouds on the first day and overcast with occasional light rain on the second day. Winds were light (5-10mph). Most of the HMA has difficult and highly variable sighting with pinyon-juniper vegetation, rocks, and canyons interspersed with burned areas and open valley bottoms.

The observers collaborated to locate, count, and photograph horse groups during 6 independent passes over the survey area, each flown on different transects to obtain 6 independent random samples of the horse groups present. During the course of the 6 survey passes, observers identified 47 unique groups of horses containing a total of 212 horses. The fewest groups (16) and horses (80) were seen on the second pass, and the most (27 groups and 131 horses) were seen on the fourth pass (first pass on day 2). These observations on individual passes represent a range of 34.0% -- 57.4% of the total groups seen on all passes. Including resightings, horse groups were seen 115 times and individual horses were seen 582 times. Group sizes ranged from 1 – 11 horses with a relatively normal distribution (Figure 1).

I fit models for Huggins closed captures with full heterogeneity in Program Mark. This class of models allows sighting probabilities to be modeled as a mixture of multiple heterogeneous groups and also enables modeling parameters as a function of individual covariates. Only covariates that remain constant for each group across occasions are available for consideration, thus group size was the only covariate I considered. I fit mixture models with 2 group types and 12 alternative structures:  $M_0$ ,  $M_h$ ,  $M_b$ ,  $M_t$ ,  $M_{tb}$ ,  $M_{t+b}$ ,  $M_{th}$ ,  $M_{t+h}$ ,  $M_{bh}$ ,  $M_{b+h}$ ,  $M_{t+b+h}$ , and  $M_{t+b \times h}$  (Table 1). These models represent combinations of effects of time,  $t$  (i.e., survey occasion or pass), behavioral response of the horses to first capture,  $b$ , and heterogeneity of sighting probabilities,  $h$ . Model  $M_0$  contains none of these effects and assumes a single constant sighting probability. For each of these model structures, I considered up to 4 combinations of individual covariates: (1) no covariate, (2) an additive group size covariate effect on the mixture probability,  $\beta_\pi$ , (3) an additive group size effect on both sighting and resighting probabilities,  $\beta_{pc}$ , and (4) both of the previous 2 effects, combined. The covariate effects in alternatives 2 and 4 only apply to the 7 model structures that include heterogeneity  $M_h$ ,  $M_{th}$ ,  $M_{t+h}$ ,  $M_{bh}$ ,  $M_{b+h}$ ,  $M_{t+b+h}$ , and  $M_{t+b \times h}$ ; thus there are  $7 \times 4 + 5 \times 2 = 38$  models.

The most strongly supported model based on  $AIC_c$  (46.1% of model weight) was  $M_{t+b \times h} + \beta_\pi$ , which accounts for effects of temporal variation, behavioral response, heterogeneity among groups, and an effect of group size on the mixture probability (Figure 2). The evidence ratio supporting a heterogeneity effect was an overwhelming  $2.4 \times 10^6$ . The next most strongly supported effect was the effect of group size on the mixture probability,  $\beta_\pi$ , with a very high evidence ratio of 61.9. Temporal effects were supported by a similar ratio of 48.7. Behavioral effects were supported by a modest ratio of 7.5. The best model was preferred over one with group size effect on sighting probability by an evidence ratio of only 2.7, indicating only weak evidence against a direct group size effect on sighting probability,  $\beta_{pc}$ . The second most supported model ( $M_{t+b \times h} + \beta_\pi + \beta_{pc}$ ; model weight 17.4%) did include this effect. Despite the modest support for the direct effect of group size on sighting probability, the strong support for the  $\beta_\pi$  effect already captures a group size effect on sighting probability because larger groups are predicted to be in the more easily sighted subpopulation than smaller groups.

Using the model weighted average across all 38 models, I estimated that  $49.3 \pm 3.9$  SE groups were actually present during the survey. I also estimated the number of groups of each size missed during the survey using the most strongly supported model and used this to compute the mean group size of  $3.56 \pm 0.26$  SE for those missed groups. This is smaller than the mean size of groups seen ( $4.51 \pm 0.33$  SE) because the model predicts that smaller groups will be missed more often. Combining these 2 estimates results in an **estimated number of horses present of 220  $\pm$  14.0 SE**. Thus the 212 horses seen during the survey represent 96.3% of the total estimated number actually present. A 95% log-normal confidence interval computed for the missed horses puts the estimated **95% CI for the estimate at [212, 294] horses**.

Sighting probabilities are clearly heterogeneous in this population, so the use of the photographic mark-resight method is strongly justified. It is not surprising to find heterogeneous sighting probabilities in the difficult and highly varied sighting conditions described for this survey area. We also found a behavioral response of the horses that indicated they were less visible after the first sighting, possibly due to avoiding the approaching helicopter after having experienced a close approach during photographing the first time they were located. There was also strong evidence for variation in the sighting probabilities among survey passes. This is not surprising because each pass was flown along different transects to obtain independent random samples of the population and some orientations of the transects undoubtedly produced better sighting conditions than others. All of these effects were successfully measured and accounted for to produce the corrected population estimate.

The most critical assumption of this method is that all groups can be identified correctly in the photographs and recognized each time they are seen. In this small population, this assumption is plausible and no problems in identification were reported by the observers. It is also important that group sizes are not excessively skewed (i.e., they should be normally distributed) for the calculated estimate of variance for the estimated number of horses to be valid. This assumption was not violated. The proportion of the estimated population seen on each pass provided a good dataset for estimation. This combined with the estimate that 96.3% of horses were seen during the survey indicates that the amount of survey effort (flying time) is adequate.

Figure 1. Distribution of group sizes for survey of horses in Frisco HMA, April 2012. Black bars are raw observations; grey bars represent estimated actual numbers present after correcting for the effect of group size on sighting probability.

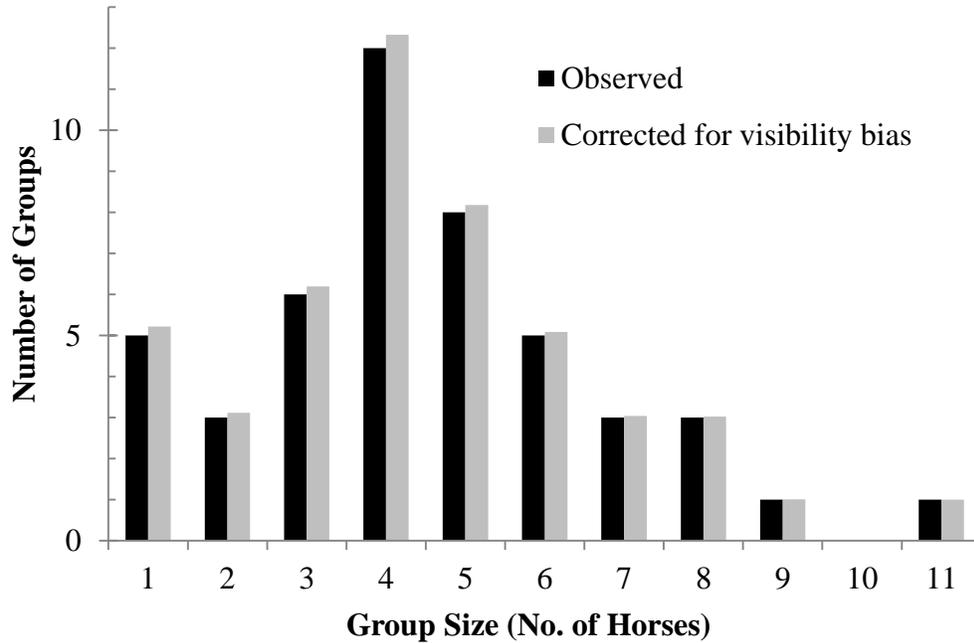


Figure 2. Sighting and resighting probability estimates for each of the 6 survey occasions (passes) from the most strongly supported model for survey of horses in Frisco HMA, April 2012. Estimates are averages of 2 mixture models weighted by the mixture probability and based on the mean group size.

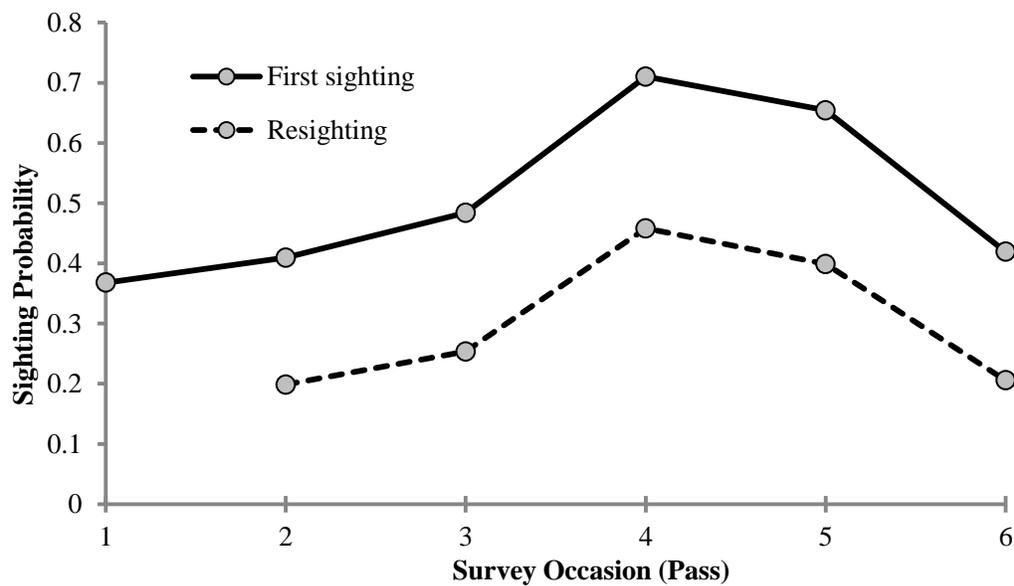


Table 1. Model fitting results for survey of horses in Frisco HMA, April 2012.

No.	Model	AICc	Delta AICc	AICc Weights	Model Likelihood	Num. Par	Deviance	Estimated No. of Groups	Standard Error
1	$M_{t+b \times h} + \beta_{\pi}$	350.096	0	0.46114	1	10	329.3	48.2	1.7
2	$M_{t+b \times h} + \beta_{\pi} + \beta_{pc}$	352.051	1.955	0.17354	0.37633	11	329.1	48.2	1.6
3	$M_{t+b+h} + \beta_{\pi}$	352.714	2.618	0.12456	0.27010	10	331.9	48.2	1.7
4	$M_{t+h} + \beta_{\pi}$	354.113	4.017	0.06188	0.13420	9	335.5	55.1	4.5
5	$M_{t+b+h} + \beta_{\pi} + \beta_{pc}$	354.595	4.499	0.04863	0.10546	11	331.6	48.1	1.5
6	$M_{t+b+h} + \beta_{pc}$	355.665	5.569	0.02848	0.06176	10	334.9	49.9	3.5
7	$M_{t+h} + \beta_{\pi} + \beta_{pc}$	356.263	6.166	0.02113	0.04581	10	335.5	55.0	4.6
8	$M_{t+b \times h} + \beta_{pc}$	357.421	7.325	0.01184	0.02567	11	334.4	49.5	3.0
9	$M_{th} + \beta_{\pi}$	357.809	7.713	0.00975	0.02114	13	330.5	54.8	4.3
10	$M_{bh} + \beta_{\pi}$	357.868	7.772	0.00947	0.02053	6	345.6	54.2	6.3
11	$M_{t+h} + \beta_{pc}$	358.051	7.955	0.00864	0.01873	9	339.4	58.7	19.5
12	$M_{t+b \times h}$	358.349	8.253	0.00744	0.01614	9	339.7	48.3	1.8
13	$M_{b+h} + \beta_{\pi}$	358.349	8.253	0.00744	0.01614	5	348.1	52.4	4.5
14	$M_{th} + \beta_{\pi} + \beta_{pc}$	358.665	8.569	0.00635	0.01378	13	331.3	54.5	4.1
15	$M_h + \beta_{\pi}$	359.077	8.981	0.00517	0.01121	5	348.9	55.8	4.8
16	$M_{th} + \beta_{pc}$	359.775	9.678	0.00365	0.00791	11	336.8	53.7	3.9
17	$M_h + \beta_{pc}$	360.537	10.441	0.00249	0.00541	4	352.4	55.5	8.9
18	$M_{b+h} + \beta_{pc}$	361.648	11.552	0.00143	0.00310	5	351.4	55.3	9.1
19	$M_{t+h}$	361.729	11.633	0.00137	0.00298	8	345.2	53.9	4.0
20	$M_h + \beta_{\pi} + \beta_{pc}$	361.957	11.861	0.00123	0.00266	5	351.7	62.6	10.0
21	$M_{t+b+h}$	362.828	12.732	0.00079	0.00172	10	342.0	48.2	1.7
22	$M_{b+h} + \beta_{\pi} + \beta_{pc}$	363.045	12.949	0.00071	0.00154	6	350.7	57.3	7.9
23	$M_{th}$	363.621	13.524	0.00053	0.00116	11	340.6	54.3	4.0
24	$M_{bh} + \beta_{pc}$	363.667	13.571	0.00052	0.00113	6	351.4	54.3	9.4
25	$M_t + \beta_{pc}$	364.226	14.130	0.00039	0.00085	7	349.8	51.6	2.9
26	$M_{bh} + \beta_{\pi} + \beta_{pc}$	364.578	14.482	0.00033	0.00072	7	350.2	55.7	6.8
27	$M_h$	364.674	14.578	0.00031	0.00068	3	358.6	54.5	4.2
28	$M_{bh}$	365.740	15.644	0.00018	0.00040	5	355.5	53.5	5.7
29	$M_0 + \beta_{pc}$	365.764	15.668	0.00018	0.00040	2	361.7	51.9	3.1
30	$M_{t+b} + \beta_{pc}$	365.971	15.875	0.00016	0.00036	8	349.4	49.8	3.1
31	$M_{b+h}$	366.120	16.024	0.00015	0.00033	4	358.0	51.9	4.0
32	$M_b + \beta_{pc}$	367.699	17.603	6.9E-05	0.00015	3	361.6	51.2	3.4
33	$M_{tb} + \beta_{pc}$	371.230	21.134	1.2E-05	2.6E-05	12	346.1	47.6	3.5
34	$M_t$	377.535	27.438	5.1E-07	1.1E-06	6	365.2	49.4	1.8
35	$M_0$	378.691	28.595	2.8E-07	6.2E-07	1	376.7	49.7	1.9
36	$M_{t+b}$	379.472	29.376	1.9E-07	4.2E-07	7	365.1	50.6	4.3
37	$M_b$	380.651	30.555	1.1E-07	2.3E-07	2	376.6	50.1	2.7
38	$M_{tb}$	382.829	32.733	3.6E-08	7.8E-08	10	362.0	49.2	1076.7
Weighted Average								49.3	2.3
Unconditional SE									3.9

## Appendix 10

### Observation Protocol and Ground Rules

**These rules were created to ensure the safety of both the humans and the animals at the gather site(s).**

A scheduled public observation day provides a more structured mechanism for interested members of the public to see the wild horse gather activities at a given site. The BLM attempts to allow the public to get an overall sense of the gather process and has available staff who can answer questions that the public may have. The public rendezvous at a designated place and are escorted by BLM representatives to and from the gather site.

- The Bureau of Land Management (BLM) will schedule observation days to provide the media and public opportunities to view activities during the wild horse gather.
- To provide a safe environment for the animals, BLM staff, contractors and members of the public/media, requests will be accepted on a first come, first served basis and be limited to **10 people** per observation day unless otherwise approved by authorized BLM official over the gather. The BLM recommends all appointments be made as far in advance as possible in order to help us schedule and confirm your request, and will make every reasonable effort to accommodate the public.
- Observation days and gather operations may be suspended if bad weather conditions create unsafe flying conditions.
- The BLM will notify observers as soon as possible if an observation day is canceled due to bad weather.
- Observers must provide their own 4-wheel drive high clearance vehicle, appropriate shoes, clothing and food.
- Observers are prohibited from riding in government and contractor vehicles and equipment.
- Visitors arriving at the rendezvous site without an appointment will not be allowed to participate in the observation day.
- BLM representatives will escort visitors to and from the gather and/or temporary holding facility.
- Visitors will be assigned to a BLM representative and must stay with that person at all times.
- Visitors are **NOT** permitted to walk around the gather site unaccompanied by a BLM representative.
- The BLM will clearly identify observation areas and visitors **must** stay within these designated areas.
- Observers are prohibited from climbing/trespassing onto or in the trucks, equipment or corrals, which is the private property of the contractor.
- Visitors must direct their questions/comments to either a designated BLM representative or the BLM spokesperson on site, and not engage other BLM/contractor staff and disrupt their gather duties/responsibilities.
- BLM may make the BLM/contractor staff available during down times for a Q&A session.
- When given the signal that the helicopter is close to the gather site bringing horses in, visitors must sit down in areas specified by BLM representatives and must not move or talk as the horses are guided into the corral.

Observers will be polite, professional and respectful to BLM managers and staff and the contractor/employees.

Visitors who do not cooperate and follow the rules will be escorted off the gather site by BLM law enforcement personnel, and will be prohibited in participating in any subsequent observation days.

### Non- Scheduled Observation day Protocol and Ground Rules

Non-scheduled observation days are days when the public is welcome to attend a gather on public land, or

on specified private lands where permission was granted. The public is responsible for their own safety and health in their travels to and from the gather site.

- BLM staff may be limited on these days to answer questions.
- Visitors must direct their questions/comments to either a designated BLM representative or the BLM spokesperson on site, and not engage other BLM/contractor staff and disrupt their gather duties/responsibilities.
- The public will be expected to remain in designated observation areas.
- Visitors are **NOT** permitted to walk around the gather site unaccompanied by a BLM representative.
- The BLM will clearly identify observation areas and visitors **must** stay within these designated areas.
- Observers are prohibited from climbing/trespassing onto or in the trucks, equipment or corrals, which is the private property of the contractor.
- Observers must provide their own 4-wheel drive high clearance vehicle, appropriate shoes, clothing and food.
- When given the signal that the helicopter is close to the gather site bringing horses in, visitors must sit down in areas specified by BLM representatives and must not move or talk as the horses are guided into the corral.
- Gather operations may be suspended if bad weather conditions create unsafe flying conditions. Notification of suspension of gather operations will be made to the public that is present as soon as possible.
- Visitors must direct their questions/comments to either a designated BLM representative or the BLM spokesperson on site, and not engage other BLM/contractor staff and disrupt their gather duties/responsibilities.
- BLM may make the BLM/contractor staff available during down times for a Q&A session.

Observers will be polite, professional and respectful to BLM managers and staff and the contractor/employees.

Visitors who do not cooperate and follow the rules will be escorted off the gather site by BLM law enforcement personnel, and will be prohibited in participating in any subsequent observation days.

**Appendix 11**  
**Comments and Responses**

A preliminary environmental assessment was made available to interested individuals, agencies and groups for a 30 day public review and comment period that opened on August 7, 2011 and closed on September 5, 2012. Written comments were received from 12 individuals by mail or fax. E-mail comments and form letters were received from 4,275 individuals. Comments received after September 5, 2012 were not accepted. Many of these comments contained overlapping issues/concerns which were consolidated into 229 comments and 21 distinct topics. Below is a detailed summary of the comments received and how BLM used these comments in preparing the final environmental assessment.

No.	Commenter	Comment	BLM Response
<b>Opposed to the Gather</b>			
1.	Individuals	I oppose the Interior Department's proposal to round up and remove 104 to 170 wild horses from within and around the Frisco Herd Management Area (HMA) in Utah.	Comment Noted
2.	American Wild Horse Preservation Campaign (AWHPC).	The AWHPC has called for a moratorium on all wild horse roundups pending the outcome of the scientific review of the Bureau of Land Management (BLM) wild horse program currently underway by the National Academy of Sciences. We are specifically opposed to all removals of wild horses from the range, given the current situation faced by BLM with approximately 50,000 wild horses warehoused in holding facilities versus just 31,500 remaining in the wild.	Comment Noted
3.	The Cloud Foundation	We advise you to cancel the 2012 roundup.	Comment Noted
<b>Opposed to Increase of AML</b>			
4.	Individual	I am angry and disgusted at any idea of increasing the lower appropriate management level of the Frisco Wild Horse Herd or any wild horse herd. I have seen horses from the Frisco Herd on the west side of Wah Wah Valley and in the bottom of Wah Wah Valley where they are not permitted to be. The BLM has not kept their horse herds at AML level at the upper end or on the lower end and it is time for the BLM to do so. By increasing the lower AML there will be and eventual increase in the upper AML.	Comment Noted.  The current lower AML has not been reached since 1971 (the passage of the Wild Free-Roaming Horses and Burros Act). Only 3 years since that time has the estimated population been below 25 head of wild horses on the HMA. However, in 20 of the 41 years since the act has been passed the estimated population has been between 25-60 head of wild horse. It is reasonable to believe that the population on the Frisco HMA can be managed within this range.
<b>Support of the Gather</b>			
5.	Individual	I am excited to see that the Bureau is going to try to achieve the AML for this herd. It is extremely critical for the forage and for the health of the range in general that wild horse	Comment Noted.

		population is kept at AML.	
6.	Pearson Ranch	The excess horses need to be removed and most of the others need to be sterilized. I have to follow AUM recommendations on my permits.....historically Pearson Ranch has always undergrazed our permits.	Comment Noted Refer to sections 2.2.1 and 3.2.3 where these are addressed.
<b>Gather Methods Helicopter vs Water/Bait</b>			
7.	Individual	The agency must humanely manage this small herd on the range by utilizing water and/or bait trapping, from late October through February, in order to effectively apply the PZP fertility-control vaccine.	Refer to section 2.2.1 Alternative 2: Proposed Action and section 2.3.2 Bait or Water Trap Only  The project area is too large to effectively use this gather method. Road access for vehicles to potential trapping locations necessary to get equipment in/out as well as safely transport gathered wild horses is limited. The presence of scattered water sources on both private, state and public lands inside and outside the HMAs specifically in the fall, winter, and spring would make it almost impossible to restrict wild horse access to the extent necessary to effectively gather and remove the excess animals through bait and/or water trapping to achieve management goals.
8.	Individual	Reform roundup procedures by abolishing the helicopter-stampede method and instead, employing bait trapping. These corrective actions should eliminate the conflicts of interest.	See response to comment #8.  Wild horses are moved during gather operations by herding and are not stampeded. The WFRHBA mandates the gather and removal of excess wild horses and specifically authorizes the use of helicopter in Section 9 of the Act. — <i>In administering this Act, the Secretary may use or contract for the use of helicopters or, for the purpose of transporting captured animals, motor vehicles. Such use shall be undertaken only after a public hearing and under the direct supervision of the Secretary or of a duly authorized official or employee of the Department</i> ” [emphasis added]. The Public Rangelands Improvement Act (PRIA) of 1978 (Pub. L. 95-514, Sec. 4, Oct. 25, 1978, 92 Stat. 1805.) also addresses this issue with the direction to “ <i>continue the policy of protecting wild free-roaming horses and burros from capture, branding, harassment, or death, while at the same time facilitating the removal and disposal of excess wild free-roaming horses and burros which pose a threat to themselves and their habitat and to other rangeland values</i> ” [emphasis

			added].
9.	Individual	Utilize bait and/or water trapping as an alternative to helicopter roundups for administration of fertility control;	See response to comment #8 and 9.
10.	Individual	Helicopter-style roundups must be abolished. BLM should institute the kind, bait-trapping approach to gathering wild horses -- when truly necessary, which they are not at this time in regard to the Frisco herd.	See response to comment #8 and 9.
11.	Individual	Use bait trapping exclusively. The goal is for bait-trapping to replace helicopter roundups. Bait-trapping should not be just another method of gathering horses but the method. I note that the National office announced its intent to enter into contracts for bait-trapping services starting July 1, 2012. Evidently, BLM was fast-tracking this reform. I urge CCFO to be among the first to transition to the superior bait-trapping approach.	See response to comment #8 and 9.
12.	The Cloud Foundation	If there must be a gather, we recommend the bait or water trapping method.	See response to comment #8.
13.	Individual	Utilize water/bait trapping by family band to apply PZP to mares (Nov-Feb); .....releases back to the range not based on family band structures—all actions that render the bands/herds dysfunctional.	See response to comment #8.  Bands and specific individuals with a band cannot be pre-identified due to many factors including but not limited to the access and approachability of the wild horses and the numbers of wild horses concerned. Nor would it be desirable to cause additional disturbance to the wild horses on the range by attempting to gather individual bands. Once released to the range, the post gather population of 247 wild horses would be able to re-group into bands if they chose.
14.	Individual	Helicopters are a dangerous and inhumane method of rounding up horses- animals which have evolved to run as fast as possible from danger- and your own agency's records are replete with many incidents of injuries and fatalities from previous roundups using helicopters.	See response to comment #8 and 9.
15.	Individual	I support an alternative for incorporating standard operating procedures (SOP) that implement HUMANE standards for Catch Treat and Release (CTR) operations followed by the release of ALL captured mustangs back to their rightful range, after properly administering fertility control. Preferably, this	See response to comment #8, 9 and 14. Refer to Appendix 5, 6, and 7, which address standard operating procedures for Conducting Wild Horse Gathers, and for Fertility Control.

		action would be conducted by the far more humane water/bait trapping method.	
16.	Individual	You need to gather these horses the cheapest and fastest way possible.	<p>Comment Noted.</p> <p>Over the 40 years of managing wild horses the BLM have found that the use of helicopters to gather wild horses is one of the most efficient, safest, and least stressful to the wild horses. By working with individuals like Temple Grandin and Velma Johnston the BLM has refined it helicopter gather methods to reduce stress to the wild horses, improve efficiency, and safety.</p>
<b>EA Analysis</b>			
17.	Individual	Since environmental conditions change over time, the National Environmental Policy Act requires additional environmental analysis of and public comment on future roundups that may occur under the auspices of the HMAP. I am one of thousands of concerned citizens who want and expect an opportunity to comment on the environmental impacts of all roundups that will occur in the Frisco HMA over the next 10-20 years.	<p>Refer to section 2.2.1</p> <p>The NEPA process will be followed. This is the public's opportunity for comment on this proposed action and alternatives.</p> <p>The gather strategy for Alternatives 2-4 require a gather period for 6 to 10 years with gather operations occurring 2-4 times in that period. Alternative 5 may require more than one gather within a 10 year period to meet objectives including the population reaching or nearing the lower AML. None of the alternatives propose gather operations beyond a 10 year period.</p> <p>The CCFO is in the process of developing a new Resource Management Plan (RMP) or Land Use Plan (LUP). When this plan is completed any new wild horses gathers after that would require a new NEPA process to make sure the action was in conformance with the new RMP.</p>
18.	Individual	Considering that environmental conditions change over a period of time, the National Environmental Policy Act (NEPA) requires additional environmental analysis of ALL roundups proposed for the future that may occur under the auspices of the HMAP. This includes the public's right to comment on the impacts of ALL such roundups of the wild horses of the Frisco HMA that might be proposed by the Interior Department, per the proposed long-term plan for the HMA that would occur over the next 10-20 years.	
19.	Individual	Since environmental conditions change over time, the National Environmental Policy Act requires additional environmental analysis of and public comment on future roundups that may occur under the auspices of the HMAP.	<p>If alternative 2 or 3 was selected the HMAP and the objectives for the management of the Frisco HMA would be expected to continue for a 10-20 period before major changes would be needed to the plan. However, if policies, regulations, laws or LUP change before the 10-20 year period the HMAP would need to be updated and NEPA completed on the changes. Because this did not seem to be clear in the preliminary EA the 10-20 year statement was removed and replaced with "under the HMAP objectives and goals with updates and revisions of the plan occurring when policies, regulations, laws or LUP change</p>

			substantially?'. Refer to section 1.4 Land Use Plan Conformance and section 1.5 Relationship to Laws, Regulations, and Other Plans.
20.	Individual	The EA itself is inadequate because it fails to take a hard look at alternatives that would protect and manage the wild horse herd and fulfill the agency's multiple use mandate.	
21.	Individual	A reasonable range of alternative actions to the capture of any wild horses such as on-the-range management of wild horses.	Refer to section 2.2.1 Proposed Action and Alternatives where 5 such alternatives are in compliance with the multiple use mandate. The proposed action and the alternatives are in conformance with the Pinyon Management Framework Plan and 43 CFR 4700 regulations, which address the protection and management of wild horses in relation to the agency's multiple use mandate.  The purpose of the EA is to assess the potential site-specific direct, indirect and cumulative impacts of an action. The EA does include discussions under the Affected Environment Sections of the various resources which may be affected by the proposed gather.  NEPA directs the BLM to —Study develop, and describe appropriate alternatives to recommended courses of action in any proposal that involve unresolved conflicts concerning alternative uses of available resources... (NEPA Handbook 1790-1 page 49). BLM believes that it has included a reasonable range of alternatives (CEQ, Forty Most Asked Questions Concerning CEQ's NEPA Regulations, March 23, 1981), and considered all viable alternatives which would meet the purpose and need, as well as being the most responsible way to ensure the welfare of the wild horses and their habitat.
22.	Individual	Errors were noted in the chart on pdf-page 99 as follows Alternative 1 is said not to involve management by removal. But it does. Not in 2012, but in subsequent years, as described in the PEA. Further, Alternative 1 does have a [maximum] threshold of 60, and a target population of 12. The chart says it has neither.	There was not an error, but the purpose of the table was misunderstood.  The chart the commenter is referring to outlines the parameters utilized in the WinEquus modeling program which is used to determine if any of the alternatives may cause a "crash" in the population. It also may give possible ranges of growth rates, average population sizes and genetic health. Although there are several management strategies that can be modeled not all the alternatives can be modeled exactly.

			<p>The WinEquus Feral Horse Population Model, developed by Dr. Steven Jenkins at the University of Nevada at Reno was designed to assist WH&amp;B specialists evaluate various management plans and possible outcomes for management of wild horses that might be considered for a particular area.</p> <p>The model uses average survival probabilities and foaling rates of wild horses to simulate population growth for up to 20 years. The model accounts for year-to-year variation in these demographic parameters by using a randomization process to select survival probabilities and foaling rates for each age class from a distribution of values based on these averages. This aspect of population dynamics is called environmental stochasticity, and reflects the fact that future environmental conditions that may affect horse populations cannot be known in advance. Therefore, each trial with the model will give a different pattern of population growth. Some trials may include mostly —good years, when the population grows rapidly; other trials may include a series of several —bad years in succession. The stochastic approach to population modeling uses repeated trials to project a range of possible population trajectories over a period of years, which is more realistic than predicting a single specific trajectory.</p> <p>The model incorporates both selective removal and fertility control treatment as management strategies. A simulation may include no management, selective removal, fertility control treatment, or both removal and fertility control treatment. Wild Horse and Burro Specialists can specify many different options for these management strategies such as the schedule of gathers for removal or fertility control treatment, the threshold population size which triggers a gather, the target population size following a removal, the ages and sexes of horses to be removed, and the effectiveness of fertility control treatment.</p> <p>When modeling the Alternative 1 the No Action Alternative the no management of no gather, removal, or fertility control was used in</p>
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			the model parameters, which is displayed in the table the commenter was referring to.
23.	Individual	Errors were noted in the chart on pdf-page 99 as follows Alternative 2 is said to have a target population following gather of 40; but the PEA says future gathers would remove to the low bound of the AML, which for this alternative is 30.	See response to comment #21 and #22.  For the modeling of Alternative 2 the management strategy of Gather, Removal, Treat and Released was used. There was an error in the preliminary EA's modeling, where 40 was used as the lower AML or in the model it is referred to as the target population. This was changed to 30 and the model was run again with little change to the outputs, but the corrections were made in this document.
24.	Individual	Errors were noted in the chart on pdf-page 99 as follows Alternative 3 does not include sex ratios. The chart indicates that it does. Further, the chart states that the target population following gather would be 50, which agrees with the PEA. But the PEA also says that management would be to mid-point AML, or 75.	See response to comment #21 and 22.  When reviewed no errors were noted.  The WinEquus Model does not have a specific management strategy to that includes only a portion of the population being gelded. The parameters the most closely modeled a reduced number of females that would be breeding was used.
25.	Individual	Errors were noted in the chart on pdf-page 99 as follows Alternative 4 indicates that the target population post-gather would be 40; but the PEA says future gathers would reduce the herd to the low end of the AML, which for this alternative is 12.	See response to comment #21 and 22.
26.	Individual	Errors were noted in the chart on pdf-page 99 as follows Alternative 5 also indicates that the target population following gather would be 40; but as above, the PEA states that future gathers would bring the herd to the low bound of the AML: 12.	Refer to section 2.2.1 Proposed Action and Alternatives.  When reviewed no errors were noted.  In Alternative 5 no HMAP would be initiated at this time. The AML of 12-60 would remain. However, the population would only be reduce the population down to 40 head and not 12 head under this alternative. Approximately, 85% of the population would need to be gather to achieve this goal, which although possible is highly unlikely based on previous gathers of the HMA.
27.	Individual	A wild horse's post-gastric digestive system reseeds the range and assists greatly in building nutrient-rich humus which leads to healthy soils. They also break frozen water, which in turn allows pronghorn, deer, birds and other small mammals to drink. While cattle ruminant near riparian areas where they defecate, mobile	Comment Noted. This is outside of the scope of the analysis.

		wild horses continue to move 5-10 miles a day aiding digestion.	
28.	Individual	It appears that once again the BLM is proposing to authorize itself a future, ten to twenty year “blank check” to capture, treat with contraceptives and remove wild horses – this time on the Frisco Herd Management Area.	<p>See response to comment #18 - 20.</p> <p>The EA clearly states that in the HMAP “Excess animals would be removed to the low-range of the AML upon determination that excess animals are present.” And that the HMAP may be in effect for 10-20 years.</p> <p>To achieve AML from the current population it is anticipated that two to four follow-up gather operations over a period of six to ten years would be needed to achieve the low end of AML for the HMA based on current population estimates, projected rates of increase, and projected scheduling of future gathers. Once the population is within AML any additional gathers may require new NEPA.</p> <p>If the Cedar City Field Office Resource Management Plan is completed before this population objective is met, it takes longer than 10 year to meet the objective, or there are major changes to policies or regulations that govern wild horse management a new analysis may need to be done for the gather operations. This may include updates or changes to the HMAP as the RMP is completed, and we work with stakeholders on the management of wild horses in this HMA.</p>
<b>Perceived Inequality of Wild Horses vs Livestock, Livestock Numbers, Reduce Livestock</b>			
29.	Individual	Reduce livestock grazing in the HMA (which continues to fulfill the BLM's multiple use mandate), pursuant to 3 C.F.R. 4710.3-2 and 43 C.F.R. 4710.5(a), in order to accommodate the current wild horse population level until fertility control application reduces the herd population to the newly proposed AML;	<p>Outside the scope of the document.</p> <p>See response to comment #18 -20.</p> <p>Refer to section 2.3.2 Alternatives Considered But Eliminated From Further Analysis, Gather and Removals.</p>
30.	Individual	Accommodate the current population with the temporary reduction of livestock grazing in the HMA and forgo the removal of any horses;	Refer to section 2.3.1 Rangeland and Vegetation. Most sagebrush and grasslands in semi-desert rangelands require 15-60 acres on an average year to produce a year of forage for one large herbivore. The carrying capacity for the Frisco HMA is approximately 111 animals.
31.	Individual	How is BLM able to keep a straight face by implying that a 60,000 acre herd management area can only "support 12 to 60 Horses"? Even if it took five (5) acres to support one (1) animal (which in some desert areas of the US, it does) - YOU do the math and see for yourself how many horses this range could support! I'd like to know how many cattle and sheep are	Once the current wild life species (elk, deer, pronghorn antelope) are subtracted from the total, this leaves approximately 61 large herbivore type animals that can occur within

		"allowed" on this 60,000 acres? How much does it cost to graze each cow or sheep?	the Frisco HMA.
32.	Individual	Remove cattle from BLM Lands.	<p>The majority of the HMA is dense Pinyon-Juniper woodland that produces virtually no forage and as a result is considered unsuitable for grazing by any large ungulate. Only approximately 3% of the HMA has good forage production capability, with another 9% with low forage production capability.</p> <p>The Frisco HMA is very limiting to livestock due to steep terrain and thick Pinyon-Juniper woodlands. Livestock use the outer portions of the HMA that are within a pasture of the allotment, but rarely do livestock use the inner parts of the HMA. Most livestock and wild horses conflicts occur when wild horses range along the edges of the HMA and outside of the HMA. The livestock use occurs in areas of the pasture or allotment outside the HMA.</p> <p>The cost of livestock use on public lands is outside the scope of the document.</p> <p>In section 3.2.3, a table was added with percent of livestock use within the pasture or allotment in the Frisco HMA. The table shows the 6 year average use of AUMs within the pasture or allotment connected to the HMA. Then only portions of these pastures or allotments are within the Frisco HMA. Due to the terrain and distance from water movement and salt, livestock use within the HMA is even further reduced. However, wild horses range far outside the HMA boundaries to areas within these pastures and allotments.</p> <p>Neither the WFRHBA nor FLMPA require the equal allocation of wild horses and livestock on public lands. It is not a matter of choosing to manage wild horses and burros rather than domestic livestock or native wildlife. By law, BLM is required to manage wild horses in a thriving natural ecological balance and multiple use relationship on the public lands and to remove excess wild horses immediately upon a determination that excess wild horses exist. Excess wild horses are being removed as required by the WFRHBA in order to maintain healthy herds of wild horses on</p>
33.	Individual	I feel that you honor cattle ranchers' requests to the detriment of all other BLM land applications.	
34.	Individual	If the lower level (AML) is increased then the livestock should be increased the same percentage.	
35.	Individual	Leave the wild horses on the range AND reinstate the livestock -- at levels up to four times higher than previously set. This solution will restore the range and increase the effectiveness of the area's rainfall, promoting spring and stream vitality.	
36.	American Wild Horse Preservation Campaign (AWHPC).	Alleged range damage is caused by wild horses as opposed to the far larger numbers of livestock grazing in the area and the history livestock damage caused in the HMA.	
37.	American Wild Horse Preservation Campaign (AWHPC).	There is an appropriate and fair distribution of resources between livestock, wild horses and other wildlife species in these federally-designated HMAs.	
38.	American Wild Horse Preservation Campaign (AWHPC).	The BLM must decrease or eliminate livestock grazing in affected HMAs pursuant to 43 C.F.R. 4710.5(a); and	
39.	American Wild Horse Preservation Campaign (AWHPC).	Reduce livestock grazing to accommodate wild horse population levels.	
40.	Individual	What is "balanced" when you have 2175 sheep, 1238 cattle, how many elk... I'm sure more than 12?	
41.	The Cloud Foundation	If BLM firmly believed that there were too many animals on the range, it would surely focus on reducing the number of livestock rather than the number of wild horses in this legal Wild Horse HMA.	
42.	Individual	In any Environmental Assessment please list GRAZING ALLOTMENTS All authorized and unauthorized usage of grazing allotments within the HMA Please provide a clear and accurate comparison of livestock versus WH&B AUMS Please provide maps	
43.	Individual	In any Environmental Assessment please list	

		RESOURCE ALLOCATIONS Please give comparisons of range/forage/water usage of Wild Horses to other wildlife and livestock that also inhabit the Frisco HMA.	public lands, not for the benefit of livestock.
44.	Individual	Reduce numbers of privately owned livestock grazing and freeloading on our public lands before you can even mention numbers of wild horses or for that matter any other endemic species. Retiring grazing permits would cost tax cost tax payers exactly nothing, would improve the environmental quality of our public rangelands, and would remove an unfair subsidy to one small subset of permit-holding ranchers to the detriment of all other American farmers and ranchers.	Removal of livestock would not be in conformance with the existing Land Use Plan and is contrary to the BLM's multiple-use mission as outlined in the 1976 Federal Land Management and Policy Act (FLPMA) and PRIA, and would be inconsistent with the WFRHBA, which directs the Secretary to immediately remove excess wild horses. Additionally this would only be effective for the very short term as the horse population would continue to increase. Eventually the HMA and adjacent lands would no longer be capable of supporting the horse populations.
45.	Pearson Ranch	Our allotment has carried a heavy burden with the excess horses. We have seen overgrazing in our upper allotment.....and especially through these drought years, and the cattle have not even been in that pasture for several years.	Livestock adjustments have been made through other actions and documents. The purpose of the EA is not to adjust livestock use. There is no requirement of the WFRHBA or the regulations to reduce or eliminate livestock as a means to restore TNEB.
46.	Individual	My concern with this round up is that the RMP may be fatally flawed by the lack of multiple use balance in the stated numbers of grazers; estimated 221 horses compared to 1258.9 cattle on the Beaver Lake, Frisco and Wah Wah Lawson allotments, 4390.7 Sheep on the Frisco, Crystal Peak and Red Rock allotments.	Administration of Livestock grazing on public lands fall under 43 CFR Subpart D, Group 4100. Livestock grazing on public lands is also provided for in the Taylor Grazing act of 1934.
47.	Individual	Can you provide data that these livestock AML's meet the rangeland health standards? How much impact does livestock grazing have on this area's particular resources that are also mandated for other wildlife needs, particularly in drought years?	
48.	Individual	Any concerns the BLM has about a potential battle over available forage between wild horses and cattle could be easily rectified by allocating a FAIR SHARE of the range to our wild equine herds instead of ALWAYS putting cattle first. This would be a step in the right direction. Another, would be to consider actually removing cattle once in a while, considering they outnumber wild horses by 150-1 and are far more destructive to the environment while wild equines actually benefit the ecosystem.	
49.	Individual	BLM persistently cites range degradation or lack of water as an excuse to conduct wild equine roundups and removals yet the agency never suggests that destructive overpopulated livestock should be removed.	

50.	Individual	The “no capture/ no removal” of wild horses alternative must be addressed using the complete and/or partial removal of livestock AUM authorization alternative.	
51.	Individual	...the agency arbitrarily opts to only consider management methods that are detrimental to the wild horses, such as the permanent removal of 104-170 animals (the proposed action), the use of unsafe fertility drugs, skewing of sex ratios in favor of stallions, horrific permanent sterilization and the no alternative action as opposed to humane alternatives that benefit the wild horses including the elimination of destructive, overpopulated cattle to accommodate the current wild horse population, not removing any wild horses at all, administering safe, reversible fertility control to suppress growth, not unnaturally skewing sex ratios and using bait/water trapping to dart mares instead of relying on dangerous helicopter stampedes which terrorize, stress and sometimes kill the wild horses and shatter family structures.	
52.	The Cloud Foundation	However, the alternative of reducing livestock grazing was eliminated from detailed analysis. The EA claimed that doing so would require an amendment to the Pinyon Management Framework Plan (1983). We understand that Cedar City Field Office is drafting a new resource management plan (RMP). We recommend that the unfair allocation of AUMs within the Frisco HMA be rectified in the new RMP.	<p>Outside the scope of this document, but comment noted and passed on to RMP team.</p> <p>See response to comment #29 – 51.</p> <p>In the Final EA section 2.3.2 Alternatives Considered But Eliminated From Further Analysis, Gather and Removals was corrected. The elimination of grazing requires a land use plan amendment. Adjustment in livestock grazing follow the process outlined in the regulations found at 43 CFR Part 4100. Several reductions and changes have been made to livestock grazing within allotments associated to the Frisco HMA through this process.</p> <p>It is unreasonable to hold up all actions on the BLM until the new RMP is completed. If the RMP changes the status of the wild horse management within the Frisco HMA the HMAP would be updated.</p>
53.	Individual	CCFO should send staff members that deal in range management to the next Holistic Management workshop sponsored by the Savory Institute. By learning this range-management approach and then implementing it, BLM could very well succeed in achieving	Outside the scope of this document.

		<p>harmony and cooperation among the various grazing animals and their stakeholders ...</p> <ul style="list-style-type: none"> <li>• Livestock -- permit-holders,</li> <li>• Wildlife -- ecologists, and</li> <li>• Wild horses -- advocates</li> </ul>	
<b>Genetic Health/Herd to Small/AML</b>			
54.	Individual	Re-set the AML in order to support a self-sustaining population, which is a minimum of 150 animals, in order to maintain the genetic health of the herd;	Refer to section 3.2.5 and 2.2.1
55.	Individual	CCFO needs to ensure an optimal number of horses to keep the Frisco herd genetically viable.	As part of the proposed action and alternative 3, every 4-5 years 1-3 studs or mares from a different HMA, with similar or desired characteristics of the horses within the Frisco HMA will be released to maintain the genetic diversity on the HMA.
56.	Individual	It is herein proposed that herd sizes be determined per "proper population parameters" -- PPP or P <sup>3</sup> -- "P-Three." Each P <sup>3</sup> would have a baseline -- a starting point -- of at least 500 or 2,500 horses. Where do these numbers -- 500 and 2,500 -- originate? They are the recommendations of the International Union for Conservation of Nature (IUCN), the world's oldest and largest global environmental organization. The IUCN is a neutral forum for practical solutions to conservation challenges and a leading authority on the preservation of genetic diversity in wild equids, including feral horses and burros.	The overriding limiting factor for the carrying capacity of wild horses in the HMA is not the available forage, although this is a concern, but is the supply of reliable water during the summer months. During drought conditions water has been hauled and troughs have been turned on outside the HMA during summer to sustain the population of wild horses near and above 100 head. Past experience has taught us that between 60 to 100 head of wild horses in the upper limits of the AML. These two upper AMLs are presented in Alternative 2 and 3.
57.	Individual	Aim to implement an HMAP that raises the wild horse proper population parameter to 500 for the Frisco herd, choosing to adopt the strict management approach. Remove no horses. Contracept no mares.	Monitoring continues to produce data that can refine the upper AML somewhere in that range.
58.	Individual	The current appropriate management level, set many years ago, has been invalidated by subsequent scientific studies. Herd size must increase significantly over the current AML. Genetic diversity is more likely to result from an optimal population level rather than a minimal one. The P <sup>3</sup> approach will comply with the Act and the CFR et al. regarding thriving, self-sustaining herds.	
59.	American Wild Horse Preservation Campaign (AWHPC).	The EA has failed to establish that the low AML's (including the HMAP) are appropriate and sufficient to maintain genetic viability of these herds or that sufficient intermingling of horses exists to ensure genetic viability.	
60.	American Wild Horse Preservation Campaign	The BLM must re-evaluate and increase wild horse AMLs to no fewer than 150 horses by reassessing and amending plans under BLM's Adaptive Management Policy (established by	

	(AWHPC).	Interior Secretary Order NO. 3270, March 9, 2007);
61.	Individual	Dr. Gus Cothran, the retained geneticist by the BLM, says a minimum of 100 breeding age adults is necessary to maintain the variability and continued viability of the herd. When numbers are below 100, loss of fecundity, inbreeding, foal deformities, and other physical defects develop. These developments are NOT HEALTHY HORSES.
62.	Individual	It is recommended that the AML be raised to 100-149 for Frisco. In that way animals at the lower AML will maintain their health and animals at the upper AML will be ready to be gathered again for removal and repeated PZP treatment at the third year period given an annual growth rate of 20% and adjustments for the use of the PZP.
63.	The Cloud Foundation	We urge implementation of an HMAP for the Frisco herd that immediately provides for an AML range of 200 to 300 adult wild horses. A breeding herd of that size would be in accordance= with current= scientific guidelines with regard to a minimum viable population.
64.	The Cloud Foundation	We recommend an AML range of 200 to 300 wild horses, with a stud book maintained and careful genetic oversight. Further, the goal should not be to managed own to the minimum but rather up from it. The goal is not to keep the wild horse population as low as possible but as high as possible.
65.	Individual	Include an alternative to amend the RMP, or use this current EA process, to raise the AML so that the current herd size in Frisco is maintained.
66.	Individual	The AML for this Herd is far too low for genetic viability and should be raised. Manage the herds first & foremost for genetic diversity for long-term survival in the wild (minimum 150 animals/herd or more) & as wild animals, not as livestock.
67.	Individual	In any Environmental Assessment please list: All steps that have been taken to maintain the genetic viability of the Frisco Herd Management Areas in order to correct the dangerously low genetic viability levels, thereby establishing a viable and vibrant Wild Horse population.
68.	Individual	An AML of 12/60 (average 36) wild horses will not support genetic diversity of the herds

		or self-sustaining herds. The AML must be revisited.	
69.	Individual	Experts agree that no AML should ever be set at less 150 breeding animals.	
70.	Individual	Increase the AUM to over 80 up to 120 for genetic diversity.	
71.	Individual	Provide evidence that after the proposed 2012 capture, treat release, removal and subsequent trapping there will always remain a genetically healthy population of no less than the AML number (110 - 165) of Wild Horses on this HMA and that these horses are able to reasonably physically intermingle for genetic viability. In addition to post-helicopter removal, this evidence must be provided for next ten to twenty year continued trapping plan.	
72.	The Cloud Foundation	<p>The idea of translocating horses from a different HMA if Frisco's herd became inbred is not an acceptable—or legal—option. The herd must be of sufficient size to be self--sustaining.</p> <p>Evidently, the Frisco herd has never undergone genetic analysis. We recommend that the entire herd be tested for genetic variability before any management decisions are made.</p>	<p>In the WFRHBA “where found” doesn’t refer to specific animals, but instead to wild horses in general.</p> <p>The movement of wild horses from one HMA to another HMA is management to maintain health and genetic diversity within the herd (avoid inbreeding depression). Wild horses that interchange between HMAs maintain a better genetic diversity than HMAs that don’t have that interchange. The Frisco HMA is somewhat isolated so that interchange must occur through management action. It will be done at the minimum level necessary to attain the objective of no additional loss (&gt;10%) of genetic diversity (Ho) over the next twenty years. When CCFO receives the genetic reports from Dr. Gus Cothran it will use that baseline information to determine if horses from outside the HMA will need to be released every three years or not at all.</p>
73.	Individual	The law says the animals are to be “where found.” Bringing in horses from other areas to maintain diversity and viability is arguably against the law.	
74.	The Cloud Foundation	We have concerns regarding the preference that would be given to larger horses over smaller ones when selecting which to release and which to remove. The EA states that size would have greater weight than coat color. However, color variety in a herd reflects genetic diversity. Therefore, we recommend giving priority to Color over size.	<p>Comment Noted.</p> <p>The statement referred to is the current management objective on the Frisco HMA under the No Action Alternative. Under Alternatives 2 and 3, size would be a secondary consideration when selecting horses to be released back to the HMA. Alternative 2 was edited to clarify this point.</p>
75.	Individual	It is obvious that reform is called for in this regard. The correct order is to test first, then --	See response to comment #53.

		<p>supplied with the necessary stud-book data -- make informed decisions.</p> <p>Recommendations: CCFO needs to conduct a 100-percent evaluation of the Frisco herd's genetic health before taking any further action on removals or contraception. Armed with those results and guidance from the Equine Genetics Lab, CCFO must then develop management actions to maintain gene-pool diversity and herd viability.</p>	<p>This is unreasonable. In order to conduct a 100-percent evaluation of the genetic health of the wild horses within the Frisco HMA, every horse would have to be gathered. As several wild horses gathers within this HMA have shown a gather of 80% of the horses on the HMA is very, very, difficult due to the terrain and tree cover. This would also be much more disruptive to the wild horses on the HMA than any of the alternatives.</p> <p>The alternatives 2 and 3 address how to add genetic diversity to the HMA.</p> <p>In section 3.2.5 it is explained that genetic samples have been taken from the wild horses on the Frisco HMA, but those results have not yet been received by the CCFO.</p>
76.	Individual	<p>This plan is to leave only 12-60 horses on over 60,000 acres. At high AML, that is 1 horse every 1,000 acres, and at low AML that will be only 1 horse every 5,000 acres.</p>	<p>Refer to section 3.2.1, 3.2.2, and 3.2.5 See response to comment #54, 18 and 30.</p> <p>AMLs are based on analysis of water, climate, trend, actual use, utilization, vegetative condition, vegetation production, rangeland health, wild horse inventories, wildlife population goals and populations, and other data, not a strait calculation of acres per horse. In some areas of the HMA, 5,000 acres would not sustain a single horse while in other it may only take 100 acres to sustain the horse for a year.</p>
77.	Individual	<p>It seems that a genetic analysis on the viability of the Frisco Wild Horse herd has never been done by Dr. Gus Cothran of the Frisco HMA, unless it has been done very recently.</p>	<p>See response to comment #18, 30 and 66.</p> <p>Blood samples for genetic testing were taken in 2006 to create a baseline for the wild horses that occur within the Frisco HMA. These samples were sent to Dr. Gus Cothran and Texas A&amp;M, but the results have not yet been received by the BLM.</p>
78.	Individual	<p>All genetic sampling data and analysis of the horses in the HMA done within the past ten years and if no research was done then the reasoning behind that decision including BLM's presumption that there was not a need for such research.</p>	
79.	The Cloud Foundation	<p>Foals of the year should not be included in the AML.</p>	
80.	Individual	<p>The appropriate management level is not supposed to include foals.</p>	<p>Per the BLM Wild Horses and Burros management Handbook 47000-1, AML applies to the number of adult wild horses or burros to be managed within the population and does not include current year's foals. All WH&amp;Bs one year of age and older are considered adults (a foal is considered one year of age on January 1 of the year following its birth). The EA does not imply that foals are included within the</p>

			AML. The number of foals observed during inventory flights is recorded to determine the percent foals represented in the population over time, and provided in the EA for the reader's interest. It is important to note that the majority of foals will be weaned by their mothers prior to the gather operation thus would count towards AML. The lower AML refers to the <i>adult population</i> of wild horses remaining on the range.
81.	Individual	I/we feel that it is necessary that the wild horses be controlled to the grazing plan which is twelve (12) head on the north side of the highway. There is not supposed to be any wild horses on the south side of highway.  Presently the number of wild horses on the Frisco exceeds the plan number.	Comment Noted. Refer to section 2.2.1 As stated in the no action alternative The BLM schedule gathers to remove excess wild horses when the total wild horse population exceeds the AML for the HMA (about every 3-4 years), when animals permanently reside on lands outside the Frisco HMA boundaries (i.e. use is more than seasonal drift), or whenever animal health/condition is at risk.
82.	Individual	I support nature managing the horses at Frisco in a healthy ecosystem with these native species. The genetic health of the herd should not be compromised and with such low herd numbers efforts should be made to make corridors to other HMAs.	Comment noted.  As per the WFRHBA wild horses are managed "at the minimal feasible level....in order to protect the natural ecological balance"  There are no HMAs within 20 miles of this HMA with state highways in between. It would not be reasonable to have corridors across state Highways and for that distance for the safety of the horses and public. However, on <b>rare</b> occasion horses do cross between those HMAs that are 20 miles away.
<b>Fertility Control</b>			
83.	Individual	Utilize PZP fertility control to suppress population growth – specifically, application of PZP should take place from late Oct. through Feb. to prevent mares from being separated from their families and warehoused for months at BLM facilities;	Refer to Alternatives 2-4 in section 2.2.1. This is part of three of the alternatives.
84.	Individual	Suspend PZP until the Frisco Herd Reaches Robust Size	Refer to section 1.2 Background, 1.7.1.4 Wild Horses and Burros, 3.2.5 Affected Environment, Wild Horses and Burros and 4.2.5 Impacts of Alternatives, Wild Horses.  The population of wild horses on the Frisco HMA is over the AML. The water resources and forage within the HMA can't support the current number of wild horses. The use of

			PZP would slow the growth rate slightly reducing the number of horses that needed to be removed from the HMA.
85.	The Cloud Foundation	Referring to adjustment of sex ratios in the HMA population and use of PZP or other contraceptive methods... “None of these measures is appropriate given the Frisco herd's inadequate breeding population. PZP should be used only in herds that are large enough to remain genetically viable.” All of these population control methods, individually and collectively, would have a negative impact on genetic viability and herd dynamics. We advise against them.	Comment Noted.
86.	The Cloud Foundation	.....we recommend that the one---year PZP formulation be used in the Frisco HMA. It is less expensive than PZP---22 and offers an additional advantage: it can be administered remotely by dart.	The use of the one year PZP would require additional gathers and impacts to wild horses similar to alternatives considered but eliminated from further analysis in section 2.3.2. fertility control treatment only including bait/water trapping to dart mares with PZP remotely.
87.	Individual	IF fertility control is scientifically found to be necessary to manage this population, only the humane and minimally intrusive method of applying proper use of the safe one-year reversible, field-dartable, non-hormonal fertility drugs such as EPA-approved PZP (as opposed to risky experimental PZP-22) should be used in a way that will minimize trauma and stress to the animals while leaving families and social groups intact.	Remote darting has been shown to be ineffective on wild horse herds in Utah. A study by HSUS on the Cedar Mountain HMA in Utah has shown that after two years of trying to administer PZP through remote darting, not one horse has been darted. The wild horses in Utah (excluding the Onaqui HMA horses) are not use to the presence of people and are very wary. It is extremely difficult to get within the 50 yards of the wild horses in the Frisco HMA in order to dart them.
88.	The Cloud Foundation	With PZP in use, there were more of these abnormal breeding events in the Pryor Herd in 2012 than in any other year on record. This spike in two---year---old fillies giving birth is unprecedented. For this reason, whenever PZP is in use, we now recommend that all fillies one year and older receive the native PZP vaccine (the one---year formulation) to prevent their conceiving as yearlings and giving birth as two---year---olds.	Younger mares would most likely be removed. All mares released back into the HMA would be treated with PZP.
89.	Individual	Use fertility control on the younger fillies, so they can grow up to their full potential to be an asset of genetics to the herd later after they are 6 years old up to 12 years old. Then be merciful and use fertility control on the older mares, between 13 and upwards, so that they	

		can live out their lives without a foal dragging down their limited strength.	
<b>Adjusting Sex Ratios</b>			
90.	Individual	Maintain natural sex ratios on the range and minimize stress to the herd by respecting herd dynamics and social band structures during capture and PZP fertility-control operations;	The adjustment to a 60 males/40 female sex ration is not a wide deviation from what has been seen in wild horse populations throughout the west so the level of potential disruption should not negatively impact the horses in the HMA. BLM is unaware of any conclusive research showing a negative impact from this type of adjustment to the sex ratios.
91.	Individual	Prohibit any sex ratio skewing due to the documented adverse impact these actions have on natural wild horse behaviors and herd dynamics as well as the lack of scientific data supporting such actions.	Normal sex ratios experienced through independent research and gathers conducted by the BLM over the past 35 years show that sex ratios in normal populations can vary. It is common to see sex ratio with 40% males: 60% female to 60% male: 40% female. The EA states in section 4.2.5: <i>“the adjustment of sex ratios to favor stallions would be expected to have relatively minor impacts to overall population dynamics. . . . the effects would be slight, as the proposed sex ratio is not an extreme departure from normal sex ratio ranges.”</i>  The Proposed Action does not represent a population heavily skewed towards males as could happen with catastrophic die-off events expected under a “let nature take its course” approach. The emergency conditions, starvation and suffering that would be experienced under such an approach would obviously have negative impacts to the populations in many ways. A sex ratio of 60% male to 40% female is a tool to help reduce population growth rates slightly and thus help to increase the health of both the wild horses and their habitat.
92.	Individual	Adequately assess the negative impacts of sex ratio skewing on the health and behavior of the wild herds.	
93.	American Wild Horse Preservation Campaign (AWHPC).	The EA fails to provide scientific justification for the plan to return horses to the range in a 60-40 male/female sex ratio – including analysis of the impacts on wild horse behavior, welfare and reproduction.	
94.	Individual	Altering the natural sex ratios of wild herds cannot be considered as an option without scientific understanding of how this could affect the genetic viable of herd.	
95.	Individual	It is also recommended, given such a low number of horses, no sex ratioing or geldings be done as a part of maintaining appropriate numbers; rather PZP and ongoing small removals through bait or water trapping be done , if possible, given the terrain.	
96.	The Cloud Foundation	Having significantly more males than females in a herd is a recipe for increased fights among stallions.	
97.	Individual	Keep the sex ratio of each wild reproducing herd to the more natural 50:50 balance without the introduction of geldings which will upset the herd social structures/behaviors.	
98.	Individual	Altering the natural sex ratios of wild herds cannot be considered as an option without scientific proof how this removal may affect the genetics of the herd.	
99.	Individual	The agency must maintain natural sex ratios. There must be no skewing of sex ratios in favor of stallions (60:40 male/female or worse), an action that inevitably causes social disruption and injuries putting mares at risk.	

100.	Individual	The EA is entirely inadequate because it fails to adequately assess the negative impacts of the plan to skew the sex ratio of herds allowed to remain on the range to 60 percent stallions verses 40 percent mares.	
101.	Individual	I oppose the use of sex ratio skewing and/or permanent sterilization.	

**Gelding/Non-reproducing Component**

102.	Individual	Prohibit any permanent sterilization (either chemical or surgical).	Comment Noted.
103.	The Cloud Foundation	We wish to go on record as advising against the use of any contraceptive formulation or method whose possible side effects may include the permanent sterilization of Frisco's wild horses.	Alternative 3 is the only one that considers gelding.
104.	The Cloud Foundation	We recommend that the gelding alternative be eliminated from consideration now and in the future for the Frisco herd.	The gelding and release of wild horse geldings has been identified in approved gather documents and completed in Oregon by the BLM. Gelding of male horses (and other animals) is an accepted practice that has been implemented historically all over the world.
105.	Individual	I think that you should castrate all excess stallions and spay all the excess mares. This will work, but your current method of sterilization is not working.	The gelding of wild horses is a well-established practice with low impacts and a low complication rate of less than 5%. The BLM is working with NAS in order to obtain additional information, knowledge and potential management tools. Alternative 2 does not involve the release of geldings to the range. The BLM has used the best available information to assess the potential impacts of Alternative 3.
106.	Individual	I oppose in the strongest terms possible any invasive actions which would permanently sterilize wild horses. Such actions are extremely unsafe from a veterinary perspective and must never be used.	It is well established that castrated animals, including horses are often stronger, healthier and more robust than their intact counterparts due in part to the reduced energy demands placed on them. It is anticipated that the geldings would be engaged in less fighting as well, further improving their outlook on the range. It is also expected that their life expectancy will increase as a result of these factors, and their ability to survive on the range will not be diminished at all. Though not all of the geldings will exhibit stallion behavior, some will. The animals will retain a certain degree of psychological memory. The proposal will not eliminate their social or biological characteristics of the herd

**Data/Justification for Removal**

107.	Individual	Provide required monitoring data and information that clearly delineates wild horse impacts on the range from livestock impacts –	Refer to sections 1.3, 1.4, 1.5, 3.2, 3.2.1, 3.2.2, 3.2.3, 3.2.5, 4.2.1, 4.2.2, 4.2.3, 4.2.4, and 4.2.5.
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		both historic and current. Rangeland health assessments and an explanation of the methodology used for conducting assessments of the impacts for both wild horses and livestock must also be included.	The BLM is not proposing to remove wild horses simply because the population is over AML. Refer to Section 1.3. Through monitoring, and review of other relevant factors, we have determined that excess wild horses are present and need to be removed not only to prevent degradation of the range, but to curtail existing impacts by wild horses and ensure wild horse health and welfare, as well as improvement and health of the habitat.
108.	Individual	There has never been reason with any validity, nothing has proven there is any need to remove any Wild Mustangs from any of the Land that belongs to them, given them in 1971..... there is no need to remove any of the Mustangs, your cruel inhumane removals are disgusting, you need to start Protecting the Mustangs like you are paid by the American taxpayer to do, you are not above the law..... 80 % of the American people are against the dissemination of our Icons ,any only living legends ,,,,,,,, THE Great American Wild Mustangs	The CCFO has extensive vegetative trend, utilization, precipitation, actual use, riparian, and rangeland health studies are contained in the HMA and allotment monitoring files (4120 and 4710 files). Only the most current pertinent information has been summarized within this EA to show that excess wild horses occur within and outside, but adjacent to the HMA.
109.	American Wild Horse Preservation Campaign (AWHPC).	The EA has failed to establish that the removal of horses is necessary and range management goals cannot be accomplished through on-the-range management of wild horses.	In the Riparian section it states “Livestock, wild horses, and wildlife were also noted as causal factors for portions of the streams not rating at PFC. Wild horses, wildlife, and livestock graze riparian areas due to the presence of water, shade, and succulent vegetation.” While this referred to the riparian areas in the Frisco HMA in general, there are riparian area that don’t receive use by livestock and those show negative impact by wild horse and wildlife. Photos of Armstrong Spring were added to section 3.2.2 to show the impacts of a few elk and the excess wild horses.
110.	American Wild Horse Preservation Campaign (AWHPC).	The EA is lacking in hard monitoring data, including data that support the claim that horses are overpopulating the range and/or causing damage for the range. The EA is deficient of monitoring data that clearly separates the impacts of livestock and wild horse use.	
111.	American Wild Horse Preservation Campaign (AWHPC).	The EA fails to consider the fact that horses utilize the environment, including stream riparian areas, very differently from cattle.	
112.	Individual	Show how this herd is ‘In balance with other uses’ which is how the BLM claims it is managing the herds & the public lands.	The commenter is referring to statements included in IBLA decisions regarding wild horse gathers proposed by the BLM. The correct statement from
113.	Individual	The Frisco wild horse herd excess needs to be gathered. There are way too many horses for the range resource and they are destroying the range and there is not enough feed for them in this drought.  There are so many of these horses that they migrate into all the surrounding allotments that are not supposed to have any wild horses them because they have been no AUM’s allocated	IBLA decision 135 IBLA 9 states “A <i>determination that removal is warranted must be based on research and analysis, and on monitoring programs which include studies of grazing utilization, trends in range condition, actual use, and climatic factors. BLM may take preventative action, and is not required to wait until the range is damaged before removing wild horses. Proper range management</i>

		for horses.	<i>dictates herd reduction before it causes damage to the range land. If the record establishes current resource damage or a significant threat of resource damage, removal is warranted.</i> " (118 IBLA 75).
114.	Individual	The EA is entirely inadequate because it fails to provide required monitoring data and information that clearly delineates wild horse impacts from livestock impacts – both historic and current. The final EA should provide all rangeland health assessments and methodology for conducting assessments of the impacts for both wild horses and livestock.	The BLM utilizes well established scientific methods in the field of range monitoring, inventory and carrying capacity allocations, following approved methods outlined in official technical references and BLM handbooks and manuals.
115.	Individual	The EA is entirely inadequate because it fails to provide to the public and the decision makers current utilization monitoring reports proving that it is Wild Horses and not livestock or wildlife that have caused the "moderate to heavy utilization" of the HMA resources. Just saying this is not proof of a scientific study. This proof must include studies of livestock utilization and wildlife utilization as well as Wild Horse utilization.	The following was added to section 3.2.1 "Rangeland Health Studies have been completed on all of the livestock grazing allotments that are or have a portion of the allotment within the Frisco HMA. These studies can be found within the allotment files.
116.	Individual	There is no evidence that BLM has engaged in any current range assessments adequate to allow BLM to conclude that removing only the proposed number of Wild Horses from this HMA would achieve that optimum number and return and maintain the range to its natural ecological balance.	The methodology of each study was completed using technical reference 1734-6." And "Utilization studies completed on the Beaver Lake Allotment at the end of June, 2012 showed that in a pasture used only by cattle the utilization on Indian Ricegrass was Slight (13%), while the two adjacent pastures that received use by cattle and wild horses was Moderate to Heavy use (41%-65%)."
117.	Individual	A complete and detailed breakdown of range data, including data distinguishing wild horse from livestock and wildlife impacts.	
118.	Individual	Reasoning behind the appropriate management level of the wild horses on this HMA such as climate, water availability, number of livestock permitted (currently use or not) and range studies that support this AML and date of decision (RMP and otherwise).	Some monitoring is limited by personal and budget. Both GPS and Satellite methods to track wild horses would be cost prohibitive if the technology existed and could be used on wild horses, but BLM is continually looking for partnerships with Universities and other organizations to complete such work. The purpose of the EA is to document the potential impacts associated with the Proposed Action and Alternatives, not to reproduce hundreds of pages of data and reports.
119.	The Cloud Foundation	BLM should focus on the beneficial impacts of wild horses.	
120.	Individual	If CCFO intends to continue using WinEquus, then it must adhere to the program's instructions explicitly. Input data needs to be on known individual horses, as the program advises, not on a "snapshot" based on an unreliable aerial census, which is then extrapolated using unverified assumptions. BLM should require that WinEquus be updated with timely information obtained on each particular herd per field studies conducted at least every five years. The assumptions programmed into the default settings must reflect current management	In the instruction Manual for WinEquus it states, "You may not have all these pieces of information for your population, in which case you will have to use values for another population and assume yours is similar... This is a perfectly reasonable procedure as long as you don't assume that the output of the model is exactly what will happen in your population." The WinEquus model was used

		methods and the true effects of fertility control. The standard must be to base management decisions on proof, not projections.	only to see if any of the alternatives would produce a “crash” in the population and give <b>general</b> ranges of growth rates, population, removal, treatment, and capture numbers. The most current information for the Frisco HMA was used in the program and it was never assumed that the output modeled the Frisco HMA exactly.
121.	Individual	There is to be a “thriving natural ecological balance.” What is “thriving” when horses in an HMA can’t survive without horses being brought in from the outside of the HMA. What is “natural” given gelding, sex rationing, PZPing, bringing in horses from the outside, non-random selecting.	As defined in the 4710-1 Wild Horses and Burros Management Handbook: <i>Thriving Natural Ecological Balance -- WH&amp;B are managed in a manner that assures significant progress is made toward achieving the Land Health Standards for upland vegetation and riparian plant communities, watershed function, and habitat quality for animal populations, as well as other site-specific or landscape-level objectives, including those necessary to protect and manage Threatened, Endangered, and Sensitive Species.</i>  In 4710-1 Wild Horses and Burros Management Handbook it states: “If the recommended minimum wild horse herd size cannot be maintained due to habitat limitations (e.g., insufficient forage, water, cover and/or space) or other resource management considerations (e.g., T&E species), a number of options may be considered as part of an appropriate site-specific NEPA analysis to mitigate genetic concerns: • Maximize the number of breeding age wild horses (6-10 years) within the herd. • Adjust the sex ratio in favor of males to increase the number of harems and effective breeding males. • Introduce 1-2 young mares every generation (about 10 years), from other herds living in similar environments.”  Due to the limited amount of water and forage within the Frisco HMA (see responses to sections above) two of the three management alternatives from Handbook 4710-1 have been incorporated in to the alternatives considered in the document.
122.	Individual	Show how there is any semblance of ‘natural’ in the current way of managing this herd to achieve a "thriving 'natural' ecological balance".	
<b>Gather Cost</b>			
123.	Individual	Analyze the socio-economic impacts of the various proposed actions and the ongoing cost to American taxpayers of livestock grazing on	Analyzing socio-economics of livestock grazing is outside the scope of this document.

		public lands, as well as the cost of removing and warehousing wild horses and burros from this area. Therefore, as required by NEPA, the final EA must include an economic analysis of any proposed wild horse and/or burro removal plan that discloses all the costs associated with the capture operation itself, as well as the costs for short- and long-term holding and adoption preparation for the animals removed from the range.	Refer to checklist in appendix A.  It is not required by NEPA to include an socio-economic analysis of any proposal.  The BLM has brought forward what we believe to be the most viable options for managing this HMA, and the most responsible way to ensure the welfare of the wild horses and protection of the habitat. The Wild Free Roaming Horses and Burros Act (WFRHBA) does not authorize a cost-based decision-making process if excess horses are present. <i>“Proper range management dictates removal of horses before the herd size causes damage to the range land.”</i> (118 IBLA 75). With regard to public opposition of wild horse gathers, comments received from the public are used as a means to improve management and ensure that issues have been identified and addressed. It is not a means to tally votes on the most popular form of management. BLM has a responsibility per the WFRHBA to remove excess wild horses, ensuring the health of wild horses and of the rangeland.
124.	American Wild Horse Preservation Campaign (AWHPC).	Economic & Social Impacts of Proposed Action Not Analyzed	
125.	Individual	Analyze the costs to the taxpayer of possible roundup, removal, warehousing & adoptions of WH&B from this herd area as opposed to the savings of leaving them on the range, managing them in family bands & applying PZP to mares (Nov-Feb), implementing range improvements and range expansion, and the economic benefits of promoting ecotourism and public education around this herd left in the wild. Take advantage of these natural & cultural resources; don't remove them.	
126.	Individual	An economic analysis of all proposed alternatives, including disclosure of all costs associated with the roundup (capture operation, short and long-term holding, and adoption preparation) as well as costs associated with the proposed fertility control program.	
127.	Individual	An economic analysis of all alternatives proposed for the upcoming ten to twenty year capture, trap, removal, contraception application plans.	
<b>Predator and Wildlife Control and Management</b>			
128.	Individual	Fully disclose all information regarding mountain lions in order to adequately understand the impact of lion predation on wild horses. Annual figures for numbers of mountain lions killed through hunting, predator control or other activities within and around the HMA for the last ten years must be provided.	Wildlife is managed under the Utah Division of Wildlife Resources and not the BLM. BLM is not required and does not maintain records of wildlife hunting.  There is not requirement for the BLM to maintain or provide records of mountain lions or their management within the analysis of wild horse management.
129.	Individual	CCFO should concentrate on promoting and then protecting native predators to enable natural control of the wild horse population on the range. A puma, bear, and wolf protection program would actually tend to strengthen the	Over the past 21 years an average of 6 cougars have been taken in the Southwest Desert

		wild-horse herd and would save costs. CCFO should work with the Utah Department of Natural Resources to prohibit hunting of predators in the HMA. Concerned livestock operators should be encouraged to use guardian dogs to protect their animals. There are several specialty breeds that have been developed just for this purpose, and they are reportedly effective. BLM might even consider buying a number of trained guardian dogs, which could be placed, upon permittee request, with herds or flocks experiencing attacks.	wildlife unit (3,338,921 acres), of which the Frisco HMA (60,367 acres) makes up only 2%. The BLM does not have any known recorded evidence, sign, or sightings of any cougars within the Frisco HMA or near that part of the Southwest Desert wildlife unit.  Wildlife is monitored through The Utah Division of Wildlife Resources and not the BLM. The annual cougar reports can be found at: <a href="http://wildlife.utah.gov/dwr/hunting/319-cougars.html">http://wildlife.utah.gov/dwr/hunting/319-cougars.html</a>
130.	The Cloud Foundation	We advocate using native predators. Mountain lions (cougars) are natural predators of wild horses, primarily of foals. Unfortunately, BLM has a history of eliminating predators for the convenience of farming, ranching, and hunting interests. Eradicating predators is no longer acceptable.	Information on other wildlife species can be found at the Utah Division of Wildlife Resources at: <a href="http://wildlife.utah.gov/dwr/">http://wildlife.utah.gov/dwr/</a>
131.	Individual	In any Environmental Assessment please list PREDATORS Please list all predator-killing activities within and around the HMAs.	
132.	Individual	Utilize reserve design & natural predation for population control in as many herd areas as possible.	
133.	Individual	Predator-killing activities within and around the complex (numbers, location and details including agency or private killing and reasoning). Links to Dept. of Wildlife are acceptable.	
134.	Individual	Detailed information on population numbers for wildlife species that are hunted in the HMA within the past ten years.	
135.	Individual	Detailed and historical information of population numbers and type of wildlife species that are hunted in the HMA as well as estimated numbers of these wildlife species and the impact of hunting of wildlife on this HMA.	
136.	Individual	In any Environmental Assessment please list RECREATION Including hunting of sage grouse	
137.	Individual	To remove any animals due to drought when viable alternatives are available is unacceptable and violates the intent of ensuring sufficient habitat for any candidate that qualifies as a candidate for special status species at risk .	Wild Horses are managed under the WFRHBA not the Endangered Species Act.  Sections 3.2.4 and 4.2.4 address special status species that occur in or near the Frisco HMA.
<b>General</b>			
138.	Individual	Please reconsider any policies that you have regarding killing and harassing these horses. I want you to adopt a compassionate universal	The setting of policies is outside the scope of this document. However, the safety and care of the wild horses both on and off the HMA

		policy regarding our horses that puts a premium on their well-being.	are of the utmost priority to the BLM.
139.	Individual	My biggest question is how will the public know if the trapped wild horses are sold directly from the range to auction or kill buyers or others?	The Department of the Interior and the Bureau of Land Management care deeply about the well-being of wild horses, both on and off the range, and the BLM does not and has not sold or sent horses or burros to slaughter. Consequently, as the Government Accountability Office noted in a report issued in October 2008, the BLM is not in compliance with a December 2004 amendment (the so-called Burns Amendment to the 1971 Wild Free-Roaming Horses and Burros Act) that directs the Bureau to sell excess horses or burros "without limitation" to any willing buyer.  The Wild Free-Roaming Horses and Burros Act does not give the BLM authority to sell the excess horses for slaughter. However it is stated in the Wild Free-Roaming Horses and Burros Act: "...determine whether appropriate management levels should be achieved by the removal or destruction of excess animals, or other options (such as sterilization, or natural controls on population levels)." And "The Secretary shall cause additional excess wild free-roaming horses and burros for which an adoption demand by qualified individuals does not exist to be destroyed in the most humane and cost efficient manner possible." Current BLM policies prohibit the euthanasia of excess wild horses that are healthy.
140.	Individual	Any plan that results in selling or giving horses to slaughter houses is not humane and should not be approved.	
141.	Individual	The original Wild Horse and Burro Act gives authority to sell these excess horses for slaughter and this needs to be done.	
142.	Individual	Please manage the wild horses on their own land, they do not need to be removed. Corral, medicate and castrate.	Refer to section 1.3 Purpose and Need
143.	Individual	We the American tax payers know that BLM and the Interior, per Ken Salazar have taken nineteen million acres of wild horse land, if this land were to be given back, as we tax payers wish, then there would be plenty of land for our wild horses.	Outside the scope of this document.
144.	Individual	Cultivate partnerships with wild horse advocates. Implement coordinated resource management (CRM) with regard to your wild horse stakeholders -- cooperating, consulting, and coordinating with them, just as CCFO does with its grazing permittees. The CRM approach will result in consensus-based	Some of the activities suggested by these commenters can't be performed by volunteers or outside groups due to the required training and liability issues. However, the CCFO BLM believes the intent of the suggestion was worth adding to Alternative 2 as part of the proposed HMAP. The following objective was added as

		decisions and the development of best management practices concerning wild horses.	section J: “J. Partnerships Objective 1: <i>“Involve stakeholders, organizations, other agencies, universities, adjacent land owners, and public in achieving the objectives of the HMAP.”</i>
145.	Individual	Form partnerships with volunteer advocacy groups & others to help manage the WH&B on the range, to water/bait trap, identify & catalog each band/animal, apply/track PZP treatment, census, check fencing & water access, monitor range & aquatic conditions, ensure herd connectivity & summer/winter migration patterns, reseed the land, develop water improvements, track all animals through the system via video monitoring & digital photos, etc.	As the HMAP is implemented and updated in the future this objective can become more specific.
146.	Individual	The Pinyon Management Framework Plan of 1983 allowing 12-60 horses in Frisco appears outdated.	Outside the scope of this document, but the CCFO is currently working on a New Resource Management Plan.
147.	Individual	Show in detail the other ‘multiple uses’ of the lands in & around the HMA which may present conflicts with the WH&B and require proper financial & other mitigation, i.e. projects such as mining, oil and gas, solar, wind, geothermal, pipelines, etc, some of which take MILLIONS of gallons of water from our public lands. Require these types of projects to fund water improvements & reseeding the land to support genetically-viable numbers of WH&B on the HMA, to fund temporary relocation & return of the animals to their affected homelands, & if absolutely necessary, to fund their permanent relocation to other public lands or original HAS if their HMA is adversely affected by the project(s). Roundup/removal/warehousing on the taxpayers’ dime is NOT an option to benefit other for-profit users of the public lands.	This comment is outside of the scope of the analysis.  See section 1.1 and Appendix 1 Interdisciplinary Team NEPA Checklist and section 4.3 Cumulative Effects for All Alternatives.  The purpose of the EA is to assess the potential site-specific direct, indirect and cumulative impacts of an action. The EA does include discussions under the Affected Environment Sections of the various resources which may be affected by the proposed gather. There are some historic mines in the Frisco HMA and some current mining claims, but there are not any active oil, gas, wind, geothermal, mining or pipelines operations within the Frisco HMA at this time.
148.	Individual	Types and extent of normal public recreation on HMA such as off-road vehicle usage and hunting.	
149.	Individual	Current and proposed “other” usage of the HMA land such as gas/oil extraction/exploration, wind/solar/geothermal power plants and all mining.	
150.	Individual	In any Environmental Assessment please list REALTY ACTIONS All land leases, land sales and/or exchanges that have or would alter or affect the Frisco HMA Total Acres managed for Wild Horses in 1971 Total Acres managed for Wild Horses as of the present date which is September 5 of 2012 List reasons for any reduction in Acres managed for Wild Horses and Burros.	

151.	Protect Mustangs	We request you provide us with a list of ALL the energy, mining and water permittees on the HMAP as well as those pending approval.	
152.	Individual	In any Environmental Assessment please list MULTIPLE-USE PROJECTS All current and proposed multiple-use projects that are within the Frisco HMA Energy projects Recreation Hunting	
153.	Individual	Establish that this herd is a Cultural Resource, not just a Natural Resource, as mandated by the 1971 Act: “. . . Congress finds and declares that wild free-roaming horses and burros are living symbols of the historic and pioneer spirit of the West; that they contribute to the diversity of life forms within the Nation and enrich the lives of the American people.” These previous words describe American cultural values & as such, all herds in the West should be given preference because of this important designation.	Outside the scope of this document. This action would require action from Congress.
154.	Individual	Develop & implement truly humane treatment standards & natural horsemanship techniques for all phases of on-the-range & off-the-range WH&B handling.	Refer to Appendixes 5-7. The BLM is continually updating, refining, and implementing its care and handling techniques. If BLM policies or guidelines are updated before the gather operations occur then those new policies would be followed.
155.	Individual	Retain a few herds in the wild that have not been rendered dysfunctional from traumatizing roundups, massive removals, & random selective releases & whose populations have been controlled by natural predation. This way true, nonmanipulated, natural, functional, healthy herd behaviors & social structures can be scientifically observed, studied, recorded, analyzed & reported in professional publications. The Montgomery Pass Herd in CA/NV & the Massacre Lakes Herd in NE CA are two such herds.	Outside the scope of this document.
156.	Individual	Refer to the successful model management programs already in place for the Assateague, Chincoteague & Corolla wild horses on the East Coast; BLM’s McCullough Peaks, Pryors, Little Bookcliffs & Spring Mtn HMAs & ISPMB’s WH&B Conservation Plan.	Some of these plans were reviewed and portions of them were incorporated into the alternatives for this document.
157.	Pearson Ranch	I own private property (Pearson Ranch) and I own BLM permits on the Frisco Range. I drive that range on a daily basis, year-round. I have seen the Frisco Horse herd grow unmanaged for 10 years. The herd exceeds recommended populations and have grown	Comment Noted

		beyond all of the recommended boundaries, recognized by the BLM. I know that the herd also extends to the range on the west of Frisco and my family have seen over 100 head of horses there too.	
158.	Pearson Ranch	I don't mind a few horses, but this is ridiculous. These horses chase the cows and other wildlife off the water troughs and the range. Pearson Ranch hauls (trucks) water for at least 9 months, through the fall, winter and spring months; because the springs cannot keep up with the wildlife, horses and cattle. I also haul salt, mineral and protein to help supplement the feed for the wildlife, horses and cattle. We receive no compensation or even acknowledgement for this.	Comment Noted Refer to section 3.2.3
159.	Individual	Long term holding corrals have to be packed to the gills by now.	Refer to section 4.2.5
160.	Individual	I am looking for the specific management objectives for this herd with details that ensure continuity of viability of a healthy herd and other applicable laws.	Refer to section 2.2.1 Alternatives 2 and 3 Management Objective F.
161.	Individual	Many understand that sometimes round ups are necessary. But please be sure to explore other options and have the facts before wasting more of our tax dollars and removing more of our wild herds. Please consider this alternative; conduct the research necessary to understand what these wild horses need to survive and take action to ensure them a place on our lands for decades and centuries to come.	Comment noted. Refer to section 2.3.2 Alternatives Considered But Eliminated From Further Analysis.
162.	Individual	There are too many domestic, well bred horses winding up at auctions for many to be interested in taking on a wild horse from the range. There are too many wild mustangs currently IN captivity to make it sensible to remove even more from the range. With fuel prices soaring, and feed prices soaring...it makes no sense to aggravate the matter even more by removing more wild horses. While I'm not a 100% proponent of the "birth control" catch and release program, it's far and away better than breaking up family bands of mustangs.	Comment noted. Refer to sections 1.2, 2.3.2, 3.2.5, and 4.2.5.
163.	Individual	.....prohibit roundups and stampedes in extreme temperatures, such as below freezing weather or in weather hotter than 85 degrees F.	Comment noted. No specific temperatures a given as animal condition, animal location, topography, and other factors may require more or less restrictions then suggested by the commenter.

			<p>Refer to Appendix 5 section 6 Animal Handling and Care part “a” Trap Site Selection it states: <i>“The Authorized Officer will make a careful determination of a boundary line to serve as an outer limit within which horses will be herded to a selected trap site. The Authorized Officer will insure that the pilot is fully aware of all natural and manmade barriers which might restrict free movement of horses. Topography, distance, and current condition of the horses are factors that will be considered to set limits to minimize stress on horses.</i></p> <p><i>Gather operations will be monitored and restricted (if necessary) to assure the body condition of the horses are compatible with the distances and the terrain over which they must travel. Pregnant mares, mares with small colts, and other horses would be allowed to drop out of bands which are being gathered if required to protect the safety and health of the animals.</i></p> <p><i>All trap and holding facility locations must be approved by the Authorized Officer prior to construction. The situation may require moving of the trap. All traps and holding facilities not located on public land must have prior written approval of the landowner.</i></p> <p><i>Trap sites will be located to cause as little injury and stress to the animals, and as little damage to the natural resources of the area, as possible. Sites will be located on or near existing roads. Additional trap sites may be required, as determined by the Authorized Officer, to relieve stress to the animals caused by specific conditions at the time of the gather (i.e. dust, rocky terrain, temperatures, etc.).”</i></p>
164.	Individual	I call on the agency to create a Standard of Humane Care Policy to ensure the humane treatment and health of wild equines during every aspect of capture operations, as well as in government holding facilities.	<p>Outside the scope of this document. However, BLM is always updating and improving it policies, handbooks, and training to provide the best care and handling procedures for wild horses are used.</p>
165.	Individual	With regard to tracking and locating wild horses, BLM should employ inconspicuous electronic devices, such as telemetry collars. The use of disfiguring freeze-marks must be prohibited. It should be noted that electronic	<p>Refer to section Alternative 2 and 3 Monitoring Objective H</p> <p>The use of freeze branding for identification of wild horses is a national policy outside the</p>

		tracking can also provide a record of each mustang's personal data for longitudinal studies. It is time for BLM to use modern methods instead of destroying the beauty of these animals.	scope of this document. Refer to section 3.2.5 The following has been added to the section.
166.	Individual	We need to complete proper research of the herd's migration patterns to determine if any action is needed. Flying over the area every few years does not result in scientific research. As these Wild Horses are legally an integral part of the land, you should not remove them without completing true, factual, unbiased research.	<i>"Since the passage of the Wild Free-Roaming Horses and Burros Act of 1971 (WFRHBA) over 40 years ago, field observations, herd health monitoring and population inventories have recorded locations in and around the HMA where wild horses have occurred. Horses normally do not move outside the HMA (excluding the valley between the San Francisco Mountains and the Beaver Lake Mountains) unless the population is above AML and/or there are drought conditions."</i>
167.	Individual	We need to complete proper research of the herd's migration patterns to determine if any action is needed.	
168.	Individual	Roundups Spread Weeds, Raise Fire Risk. Motorized vehicles can be a source of new infestations.	The CCFO has a weed program that identifies, records, treats, and monitors invasive and noxious weeds that is separate from the proposed action and alternatives identified in this document.
169.	The Cloud Foundation	We recommend the following Treat noxious and invasive weeds.	Refer to Appendix 1 Interdisciplinary Team NEPA Checklist Resource Invasive Species/Noxious Weeds. And Refer to Appendix 5 section 9 Animal Special Stipulations
170.	American Wild Horse Preservation Campaign (AWHPC).	EA Omits Discussion of Adaptive Management Strategy. The BLM must amend plans under BLM's Adaptive Management Strategy.	The WFRHBA requires that the BLM remove excess wild horses immediately thus adaptive management is not appropriate for the gather, removal and treatment portions of the alternatives. Future management strategies will be identified during the development of the new CCFO RMP.
171.	The Cloud Foundation	We urge BLM field offices to implement Adaptive Management per the Department of the Interior's initiative. The Adaptive Management model focuses on learning and adapting, through partnerships of managers, scientists, and other stakeholders.	In alternatives 2 and 3 the HMAP has incorporated adaptive management. Management objectives are identified with monitoring to measure how the objectives are being achieved. Implementation Objectives outline specific actions that can be done now under current laws, regulations, and policies to active or move toward achieving the Management Objectives. The HMAP can be updated or revised at anytime according to changes in laws, regulation, policies and practices.  Adaptive management is defined as a systematic process for continually improving

			management policies and practices by learning from the outcomes of actions over time. It employs management programs that are designed to continually compare selected policies or practices and is an integrated method for addressing uncertainty that focuses on implementing actions, thoroughly monitoring results, and modifying actions when warranted. It recognizes that the complex interrelationships of physical, biological, and social components of the ecosystem and how they would react to land management practices are often not fully understood when land-use management plans are developed.
172.	The Cloud Foundation	Age skewing is another way the Frisco herd would have its social order disrupted. We recommend that you allow elderly horses to die a natural death on their home range.	Refer to section 2.2.1 Alternative 2 states: <i>All horses identified to remain in the HMA population would be selected to maintain a diverse age structure, herd characteristics and body type (conformation).</i> ” Under alternative 2 the release horses would be identified according to several factors including age structure. This allows for animals of breeding age and animals with good confirmation to be released as well as the older animals.
173.	Individual	All of the oldest Wild Horses captured should be immediately returned to their range without delay. This would be all Wild Horses over the approximate age of fifteen.	Under alternative 3 it identifies a priority list of how the animals would be identified for removal based on age. The last horses to be removed under this alternative would be the horses 20 years and older.
174.	Individual	Fire management plan for Wild Horses to escape if/when a wildfire occurs on these HMAs. Note recent Twin Peaks Wild Horses trapped by interior livestock fencing during fire storm.	Outside the scope of this document.
<b>Outside HMA/HMA Boundaries</b>			
175.	Individual	Management should first encourage the outsiders to return to their proper place, then address those factors that caused the animals to leave home. Do fences need repair? Do gates need to be checked frequently and closed? Would palatable plantings draw the wild horses to the areas BLM wants them to use? What about siting mineral licks inside the HMA? Have guzzlers been installed to provide water sources within the boundaries? BLM should specify preventive measures in this regard as part of its management approach. Return outsiders to the HMA. Fence HMA perimeters	Action to prevent horses from leaving the HMA boundaries is outside of the scope of the analysis. Wild horses typically move outside of HMA boundaries as the populations increase which results from increased competition for resources. Monitoring and inventory data indicates that when these areas are not overpopulated, then fewer horses leave the HMA.  The WFRHBA does not require that horses only be removed from outside the HMA. It is desirable to return horses to the range that

		-- after expanding them to correct all boundary-line discrepancies, migration routes, and any herd-area land previously taken away.	they were captured from within the HMA in order to meet the post gather target rather than those that have potentially established permanent residency outside a designated HMA. During inventory flights completed of the proposed gather area in April 2012, over 40 wild horses were observed outside of the northeast portion of the Frisco HMA. These horses have moved outside the HMA due to the overpopulation within the HMA. Moving the horses back into an HMA would not solve the inherent problem of wild horse overpopulation in relation to the available resources in the area.
176.	Individual	Horses that have wandered off of the HMA should be returned to the HMA.	<p>The proposed gather is in conformance with the WFRHBA</p> <p>Refer also to Response 30-52.</p>
177.	American Wild Horse Preservation Campaign (AWHPC).	The BLM must designate such areas to be managed principally for wild horse herds under 43 C.F.R. 4710.3-2.	<p>Refer to response 176.</p> <p>This action to Designate the Frisco HMA as a —Wild Horse and Burro Range “<i>under 43 CFR 4710.3-2</i>” would require an amendment of the land use plan, which is outside the scope of this EA. Only the BLM Director or Assistant Director (as per BLM Manual 1203: Delegation of Authority), may establish a Wild Horse and Burro Range after a full assessment of the impact on other resources through the land-use planning process.</p> <p>Neglecting to manage the HMA as multiple use area would not be in conformance with the existing land use plan and is contrary to the BLM’s multiple-use mission as outlined in FLPMA, and also would be inconsistent with the WFRHBA and PRIA. It was Congress’ intent to manage wild horses as one of the many uses of the public lands, not a single use. Therefore, the BLM is required to manage wild horses and burros in a manner designed to achieve a thriving natural ecological balance between wild horse and burro populations, wildlife, domestic livestock, vegetation and other uses.</p> <p>Information about the Congress’ intent is found in the Senate Conference Report (92-</p>

			242) which accompanies the 1971 WFRHBA (Senate Bill 1116): “ <i>The principal goal of this legislation is to provide for the protection of the animals from man and not the single use management of areas for the benefit of wild free-roaming horses and burros [emphasis added]. It is the intent of the committee that the wild free-roaming horses and burros be specifically incorporated as a component of the multiple-use plans governing the use of the public lands.</i> ”
178.	Individual	BLM needs to investigate how the boundary lines of the Frisco HMA were first set and promptly correct any errors and omissions. The HMA boundaries must conform to their proper configuration and must provide corridors for the horses' seasonal migrations.	Refer to response 175 above.  Wild Horse and Burro Herd Management Areas (HMA) and Ranges are identified through the land use planning process beyond the scope of this EA. The CCFO is currently in the process of developing a new RMP and the Herd Area (HA) and HMA boundaries are being reviewed in that process.
179.	Individual	List the livestock & ‘other wildlife’ usage of forage & water in the HMA & change those to accommodate #1 above. Note 'other wildlife' have access to 650 million Federal land acres, State lands & private lands. The wild horses do not. They are severely limited as to where they can be.	Refer to responses 148 – 152 and 129 – 137.  Refer to sections 3.2.3 and 3.2.4.
<b>Population Inventory Data/ Excess Wild Horses</b>			
180.	Individual	CCFO should contract the census-taking function to independent experts, ideally ones associated with a university that has a strong animal sciences program. CCFO should research new technologies for remotely tracking wild horses and then procure the telemetry system that best serves the purpose. There might even be a way to link the tracking devices to a data-base that would store comprehensive information on each animal. By employing technological approaches to tracking, BLM will secure accurate, reliable data for management purposes, including a complete demographic breakdown of the wild horses in the HMA along with every equid's genetic profile and personal history.	Refer to responses 129 - 137, 107 – 123, and 175 – 179.  Refer to appendix 9.  The BLM is continually improving its methods and procedures in managing wild horses. New methods of population inventory have been approved for use by the BLM since 2006. The Mark-Resight method allowed for multiple photos of each horse to be taken during the 2012 population inventory. The most current population inventory is used to estimate the current population within the HMA.  The BLM has historically utilized the direct count method for inventory flights, which is one of the standards used throughout the world for wildlife counts. The CCFO has consistently utilized the best management practices when conducting helicopter inventory flights to insure the highest accuracy.
181.	Individual	Reform census methods as earlier advised.	
182.	American Wild Horse Preservation Campaign (AWHPC).	The EA has failed to establish that an overpopulation of wild horses exists and that removal is necessary.	

183.	Individual	An accurate/current census using the most up-to-date technology. Please include data from your last post-gather report: Aerial and on-ground reports should include MAPS PHOTOGRAPHS LOCATIONS of WH&B sited outside of HMA (if any) AND an alternative to move WH&B back inside the boundaries of the HMA.	<p>It has become well accepted that this method results in observers not seeing and therefore counting all of the horses, due to tree cover, terrain, and overall visibility factors. Without a statistical/scientific way to determine the number of —missed horses, however it can be estimated on the Frisco HMA based on years of counting and removals that 20% to 40% more horses occur within the HMA than are counted using the direct count. In the past population inventories a percentage of horses missed (between 20% -40%) has been added to the estimated population number. The flight and gather data has continually shown that direct count flights undercount wild horses on the range. The GAO concluded through their review that “<i>research and experience have shown that BLM’s on-the-range population estimates are too low</i>”, and stated that “<i>regardless of which method is used, counting wild horses and burros can be challenging, particularly when the animals are obscured by trees or when the rangeland is covered with snow</i>” (GAO 09-77).</p> <p>In order to improve inventory methods and results, the USGS has been working with BLM for many years to study existing and potential methods that could be implemented. The BLM is currently implementing some of the methods developed by USGS. Specifically, the CCFO in 2012 began using the Mark-Resight technique. The HMA was flown a number of times in transects that were approximately 1-2 mile apart and in different directions. Photos of each band of horses are taken during each transect along with additional data. The results are analyzed by a statistician using multiple parameters that affect the sightability of the horses, and sighting accuracy of the observers. This method gives a direct count of the observed horses as well as the estimated population range. You can read more about the work of USGS and these methods at this website.  <a href="http://www.fort.usgs.gov/WildHorsePopulations/Counting.asp">http://www.fort.usgs.gov/WildHorsePopulations/Counting.asp</a></p> <p>Direct count methods underestimate wild horses present. During the direct count and</p>
184.	Individual	In 2006 the BLM estimated a wild horse population of only 54 animals, and a sex ratio of 50/50. (36 were removed returned 7 were returned after fertility control treatments.) The BLM is now saying, a recent review of the estimate taken 6 years ago suggests the guess was too low. (or maybe it was too high?) How could that be determined, leave alone proven as fact? Again, demonstrating that real scientific research should be required before any decisions are made or actions are taken!	
185.	Individual	Current and historical documentation including photographic proof of herd population count/census numbers and a complete demographic breakdown of the wild horses (number of bands, stallion/mare ratio, number of foals, yearlings and three year olds).	
186.	Individual	Current and ten year historical documentation of herd population count/census numbers and a complete demographic breakdown of the Frisco wild horse populations (number of bands, stallion/mare ratio, number of foals, yearlings, two year olds and aged horses) including application, impact and results of past contraceptive use on the Wild Horses.	
187.	Individual	Maps and photos and reports and titles of participating observers of most current aerial and land population census methods and results for wild horses and wildlife species.	
188.	Individual	Scientific research and reports that support the premise that there are currently “excess” wild horses on the HMA.	
189.	Individual	BLM should have documentation of Herd population numbers: Bands Stallion/Mare ratios Foals/yearlings/3 year olds.	

			<p>now the Mark-Resight Count methods, the BLM maintains Best Management Practices to ensure the highest quality data and most accurate inventory. On CCFO flights, two experienced BLM observers participate, in addition to the pilot, who is also very skilled at completing wild horse inventory. The helicopter pilot and back seat observer records the location of the horses with an onboard GPS units, which also records the flight path. The flight area boundaries are also viewed by the pilot on the onboard computer screen to ensure the entire area is covered. BLM staff download these GPS points and produce maps that show the locations of wild horses on the produced maps, and the number and description of bands observed are recorded on data sheets. Using the Mark-Resight method allows for multiple photos to be taken of each band of horses then compared. Bands that are seen more than once are verified and recorded that way. This is all part of the method. The end result is a population estimate corrected for any undercount in the raw observations.</p>
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**Growth Rates/Social Structure**

190.	Individual	<p>The results of the modeling show little difference among alternatives.</p> <p>All the proffered interventions do not seem to provide much impact. The expense involved in conducting a helicopter roundups and instituting fertility-control measures, plus the ongoing costs of short and long-term holding, do not seem to be justified.</p>	Refer to responses 22 -26.
191.	Individual	<p>In reviewing the data, of particular concern was the reported maximum population modeled for the "No Action" alternative. At the end of ten years, the projections indicated that 2,804 horses could be present in the Frisco HMA. There must be something wrong here. Starting with a herd of 221, even with no management for 10 years, there is no way the population could grow that much. The projected maximum is particularly suspect, given that gathers to the low bound of the AML would occur every three years, as the PEA says they would.</p>	<p>Refer to responses 23 – 26 and 107 - 128.</p> <p>The WinEquis model was used only to see if any of the alternatives would produce a “crash” in the population and give general ranges of growth rates, population, removal, treatment, and capture numbers. The most current information for the Frisco HMA was used in the program and it was never assumed that the output modeled the Frisco HMA exactly.</p>
192.	Individual	Manage the herds based on their	Refer to section 4.0 Environmental

		behavioral/social structures, i.e., keep family bands intact as natural, functional units throughout all management activities. This maintains the critical educational system of each band (older band members pass down their long-time knowledge to younger animals) & their unification for safety & survival purposes.	Consequences which details the anticipated impacts to wild horses of implementation of the Proposed Action and Alternatives.  Once released to the range, the post gather population would be able to re-group into family bands if they chose.
193.	Individual	Any capture or CTR operations must be conducted in a manner that preserves band structures and minimizes trauma and stress to the animals by leaving families and social groups intact.	
<b>Range Improvements</b>			
194.	Individual	<p>Rain and snow catchment devices, commonly referred to as "guzzlers," should be strategically installed throughout the HMA. Guzzlers capture, conserve, and release water, much like cisterns. Such systems are long-lived and require little maintenance, especially if constructed of cement. Their covers reduce evaporation -- a beneficial feature that provides an advantage over open reservoirs. The covers also prevent small creatures from falling in and becoming trapped. Guzzlers also reduce the need to haul water into wilderness areas, should there be a severe drought.</p> <p>Guzzlers come in all sizes and configurations. Those with a 10,000-gallon storage tank can support herds of big game animals -- and wild horse bands. Such large guzzlers can be buried underground, thus preserving wilderness vistas. Construction materials can be hauled into remote areas by helicopter, which will be a "constructive" use of the aircraft services contract. Below are the links to websites for more information on guzzler use by all sizes of animals. Guzzlers can even be used by humans.</p>	<p>Refer to section 2.2.1 Proposed Action and Alternatives. It is outlined in Alternatives 2 and 3 Management (Implementation Objectives G and H) that water developments would be reconstructed and that new ones would be developed. The specifics of the new water developments are outside the scope of this document and would presented and analyzed through other NEPA documents.</p> <p>Guzzlers may be a new water development considered. However, due to the terrain within the HMA and the access the development of guzzlers within the HMA is somewhat limited.</p> <p>Refer to sections 3.2.2, 3.2.5, 4.2.2 and 4.2.5 of the EA where the water sources are described and the availability of those waters to horses are described.</p> <p>All springs that have been developed have troughs at the source for wildlife and wild horses. Pipelines that extend farther than the source provide at least one additional trough for wild horse, wildlife and livestock use within the HMA boundary.</p>
195.	American Wild Horse Preservation Campaign (AWHPC).	The EA fails to provide adequate information about water sources on the range, including how fencing and engineering of wells and springs for livestock grazing has impacted water availability for wild horses and other wildlife species.	<p>Commenter states: <i>"It makes no sense to phase out water sources."</i> Comment noted. This is why in Alternative 2 and 3 this is addressed. The no action alternative must be analyzed to give a full range of alternatives and so that without a HMAP there is the possibility of the water sources within the HMA being reduced.</p>
196.	The Cloud Foundation	We recommend the following Make constructing new water developments and maintaining existing ones part of every alternative. It makes no sense to phase out	

		water sources. When their useful life has ended, they must be replaced.	
197.	The Cloud Foundation	We recommend the following Include water catchments when developing those new water resources. Their covers reduce evaporation and prevent little animals from falling into them, becoming trapped, and polluting the water.	
198.	Individual	A list of all range improvements done to manage and protect Wild Horses should be outlined - including, but not limited to, a list of all water sources and the year round availability to the wild horses of these water sources during and after any past or future proposed riparian fencing and piping projects are completed.	
199.	Individual	Am very impressed that you have considered in your EA to develop, maintain, and reconstruct water developments. You should encourage other districts to do as well.	Comment Noted.
200.	The Cloud Foundation	We recommend the following Re---seed rangelands where damage has occurred.	The commenters suggestion is included in section H of Alternative 2 and 3 statement:
201.	Individual	Do everything you can to improve the meadows grasses and water, also consider the amount of grazing allowed by cattle and sheep. Diversity of species is good for the forage, and all species should be considered to balance the beneficial qualities of each species to the land. Proposal Alternative 2 seems to be the closest strategy.	<p><i>“Construct new water developments and vegetative treatments that provide increased water and forage availability.”</i></p> <p>However, the following was added to Implementation Actions section H of Alternative 2 and 3 to clarify the actions of the vegetative treatments.</p> <p><i>“Increase and maintain forage production within the HMA through vegetation manipulation including mechanical treatments, seeding, prescribed burns and fuels reduction. Rehab fires that occur within in the HMA with forage species that stabilize the soil and compete with invasive and noxious weed species”.</i></p>
202.	Individual	The EA states that fences have been damaged by Wild Horses looking for water and that they are necessary for the management of grazing livestock. Please give an explanation for this.	These comments are outside of the scope of the analysis.
203.	Individual	Any and all cattle guards should be either removed or fitted with Wild Horse Annie cattle guards which are specifically designed so as to be safe for Horses and Burros to cross.	Fences and cattle guards are necessary to ensure proper management of the public lands. There are fences outside of the HMA that have the ends of the fence come into the HMA, drift fences within the HMA and some riparian areas in the HMA are fenced. The fences are to control livestock use and protect riparian areas from grazing animals. The riparian areas have water sources outside the fenced area to
204.	Individual	Estimated number of feet (or miles) of interior fencing currently on the HMA and number of designated (fenced or partially fenced) “pastures” (enclosures) within the interior of	

		the HMA and the reason for this fencing and pastures – such as livestock allotment boundary and detailed and accurate maps of this interior fencing.	continue to provide water to wild horses and wildlife, but on occasion these animals will try to enter the riparian area and damage the fences when doing so. The drift fences help control livestock, but wild horses can move around the fence on the ends. There is only one drift fence longer than 300 feet and the horses can go around the ends of all the fences within the HMA. When livestock are not in those pastures the gates are left open to allow more freedom of movement for the wild horses. Fences that are on the exterior of the HMA only have the ends of the fence come into the very edge of the HMA. Horses can easily go around these fences. Wild horses when looking for water have damage riparian fence and fences outside of the HMA by going over or through the fences pushing down or breaking wires.
205.	Individual	In addition, status, explanation and justification of other range management techniques such as the status of all cattle guards that might remain on public land. They must be removed or fitted with “Wild Horse Annie” cattle guards (specifically designed to be safe for horses and burros to safely cross) to allow horses to cross them without danger. All old and unused barbed wire must be removed from public land. This barbed wire is a major danger for the WH&B in addition to wildlife and livestock and yet it can be seen abandoned and lying all over public lands.	
206.	Individual	The removal of all interior fencing on the complex must be included in the alternatives in addition to the current status of all fencing; its location, purpose, length and effect on wild horses for their access to forage, water and intermingling for genetic viability. A detailed map would be sufficient if it was accurate and current.	Cattle guards (2) and fences on public lands within HMA are very limited. In many cases, fences with cattle guards make up the HMA boundary, in which case “crossable” cattle guards would be counterproductive. Old and unused barbed wire is not frequently encountered within the proposed gather area. Dilapidated fences that have become hazards are repaired or removed when identified.  A map that includes water sources and fences has been added to the EA.
207.	Pearson Ranch	The horses have mutilated the 3 Kilns spring head on our private property. They have also trampled the spring heads on Moorehouse, Diaper and Hidden Spring. Our family operation has spent years and a lot of money trying to protect these precious water sources and riparian areas. We have completed GIP projects on the Hidden Spring (state section) and Diaper Spring (BLM). We constructed permanent steel panels that fenced off the spring heads, we laid new pipe and installed a ring tank at Hidden Spring and re-established water into an existing tank on Diaper Spring. We maintain (at our own expense) all fencing and water lines and troughs on this range.	Comment Noted Refer to section 3.2.3
208.	The Cloud Foundation	We recommend the following Reduce fencing to allow free roaming and seasonal migration of wild horses.	The following was added to Implementation Actions section H of Alternative 2 and 3.  <i>“Do not allow additional fencing (except</i>

			<i>around riparian area) within the HMA. Eliminate fencing within the HMA whenever possible.”</i>
<b>Public View/Eco-tourism</b>			
209.	Individual	A herd needs reproductive capacity in order to have foals for the public's wild-horse viewing pleasure. BLM must ensure that the Frisco herd is self-sustaining. By increasing the number of horses present, recreation will be enhanced. Build the herd, and the visitors will come.	Be assured that there will be many wild horses to view within the Cedar City Field Office(CCFO). With completion of the proposed action or one of the alternatives the wild horse population on the Frisco HMA will still be at least 30 head. Within the CCFO there will still be approximately 1,000 head of wild horses, which will increase after spring foaling and each year thereafter until additional gathers are completed. There is a number of HMAs in nearby Field Offices in which to view wild horses. The public will continue to enjoy viewing wild horses in these areas, and even more so when both the animals and the habitat are healthy and thriving.
210.	American Wild Horse Preservation Campaign (AWHPC).	The EA has failed to establish that recreational users of these public lands, specifically those who enjoy wild horse photography and viewing, will not be negatively impacted by the Proposed Action.	The BLM has conducted many gathers of the Frisco HMA in the past (since 1975) and wild horses have always been present for viewing opportunities after the gathers.  Within Utah and eastern Nevada viewing and recreational opportunities abound. If you need information about these opportunities, please contact the Cedar City, Fillmore, and Schell Field Offices.
211.	Individual	Promote & market the iconic herds worldwide for tourism viewing & photographing to create jobs & boost local economies in the West.	
212.	Individual	I believe a golden opportunity is being missed to bring in tourist dollars by opting to remove these iconic animals instead of promoting eco-tourism opportunities in Utah.	
213.	Individual	Install real-time video cameras -- "caval-cams" -- at the trap sites and corrals Live-stream the video on your website. That way, any member of the public can monitor a gather online. Think of the public-relations advantages of video-cams over the current practice of keeping observers unhappily far away from the site. Of course, there may still be some observers that prefer to visit the traps and corrals. That option should still be available. However, it will no longer be a contentious matter. Bait trapping is a gentle process, so most of the safety precautions currently necessary due to the dangers of low-flying helicopters chasing stampeding horses will be eliminated.	Refer to section 3.2.6 and 4.2.6 Public Safety and appendix 10. Public observation of the gather activities and temporary holding facilities on public lands will be allowed with some provisions to protect the public, those working on the project, and wild horses. The provisions are necessary to reduce the injuries and possible death of wild horses, persons working on the project, and the public. The CCFO has always tried to provide the public with the best viewing opportunities while providing for safety of all and the wild horses.  There are currently no requirements in the contract for the gather contractor to provide real-time camera services. Use of real-time cameras may cause additional distractions during the operation that would endanger the crews and wild horses. Even if possible, the remoteness and lack of service in the proposed gather location may preclude the ability to
214.	American Wild Horse Preservation Campaign (AWHPC).	Real-time cameras with GPS should be installed on all helicopters used in roundup operations and video should be live streamed on the Internet. This will improve the transparency of roundup operations and enable the BLM and public to monitor the direct	

		impact motorized vehicle usage has on wild horses and the environment.	transmit video in real-time. Photos and video will be posted on You Tube and Flickr. The public is welcome to attend the gather as long as visitation protocol is followed.
215.	American Wild Horse Preservation Campaign (AWHPC).	Real-time cameras should be installed on the trap, the corral and temporary holding pens, again, so that BLM personnel, public and media can monitor the entire roundup operation and treatment of the horses/burros.	
216.	Individual	Real time video from trap sites must be available so that the concerned public has the opportunity to closely monitor such government operations to ensure that the welfare of our wild herds is not being dismissed and is given top priority.	
217.	Individual	I sincerely hope you will endorse the use of live telecast cameras mounted on the helicopters for complete transparency. This would be in the public interest as well as BLM's in monitoring their contractors.	
218.	Individual	Transparency is imperative! I want to see the roundups, clearly and close up, I want unlimited access to all holding facilities, and I want to see what my tax dollars are being used for and know I can trust the BLM to proceed with the best interests of the wild ones! When the BLM fights transparency, (especially after seeing so much cruelty and suffering inflicted when they know we are right there watching and documenting!), my distrust of the BLM becomes validated, without question! Transparency is imperative!	
219.	Individual	I want to see the roundups, clearly and close up, I want unlimited access to all holding facilities, and I want to see how my tax dollars are being used. When the BLM fights transparency, (especially after seeing so much cruelty and suffering inflicted when they know we are right there watching and documenting), my distrust of the BLM becomes validated, without question! Transparency is imperative!	
220.	Individual	There should be unlimited access to all holding facilities.	
221.	Individual	The public, including myself, have the right to monitor any government operation that involves the eradication of our American wild horses on our public lands -- whose fate and welfare is of great concern to the American people and personally affects us all. Truth and transparency from this agency is a must!	
222.	American Wild Horse	Trap sites should be located on public lands to allow public observation of roundup activities.	

	Preservation Campaign (AWHPC).	No trap site shall be located on private lands for which the owners will not give permission for public observation of roundup activities.	The BLM generally tries to locate trap sites on public lands. However, in some cases with private or state permission, we will use non-federal lands. Trap sites are selected with the wellbeing of the wild horses in mind and not if the location is on private or public ground as described in the SOPs trap sites <i>“will be located to cause as little injury and stress to the animals, and as little damage to the natural resources of the area, as possible.”</i>
223.	Individual	Although logical that persons inexperienced with wild horses and/or bait trapping would not be allowed to wander unescorted in the area of the trap, the EA fails to discuss and implies that no members of the public will be allowed to ever view any of the trapping procedure at any time for the next ten to twenty years.	Refer to responses 18-20 and 28. Alternative 2 outlines the capture, treat, remove, and release process that would occur two to four times within in the next 10 year period or until the population is within the AML. Once the population is within AML any additional gathers would require a new EA. Also if law, regulations, or policies substantially change that directly impact wild horse management or gathers a new EA may be required.
224.	Individual	Zero Accountability During Future Capture and Trapping and Contraceptive Application to Wild Horses.	Public notifications would be sent out to the press and public and would be posted on the Utah BLM webpage before gather operations would occur. These public notifications would inform the public of viewing opportunities and where information on the gather operations can be found.
<b>Gather Impacts to Wild Horses</b>			
225.	American Wild Horse Preservation Campaign (AWHPC).	The EA has failed to establish that the proposed action will not have harmful effects on individual wild horses, wild horse herds or the environment;	Refer to appendixes 5-7. If BLM policies or guidelines are updated before the gather operations occur then those new policies would be followed.
226.	The Cloud Foundation	The EA advises that a helicopter-- drive roundup would be held in October 2012. The timing is good because fall is the least dangerous time for such a roundup. Foals might be better able to withstand long runs, most mares would not be heavy with foal and temperatures should be cooler. Nevertheless, we do not support the use of the helicopter--drive method.  If this method is used in spite of our objection to it, we ask that the Contracting Officer’s Technical Representative specify limits on how far the wild horses are forced to run. We also ask that the COTR set and enforce temperature	The Environmental Consequences portion of Section 4.0 describes the potential impacts of the Proposed Action in detail. Please also refer to section 4.2.5 which analyzes impacts wild horses including individual wild horses. In Section 5.0 which summarizes mitigation measures that would be used to ensure that potential impacts are minimized or avoided completely. Appendixes 5 and 6, also details Standard Operating Procedures developed over the past 35 years to ensure the well-being of wild horses during gathers and maintain human safety.  Following the annual helicopter hearings, the

		minimums and maximums.	<p>BLM reviews SOPs for adequacy. Nothing was proposed during the 2012 hearing that would warrant change. Recently various professionals of the veterinary and equine community have observed gathers and holding facilities, and followed up with reports of their findings and recommendations to BLM. For the most part, the team members found that wild horse and burro gathers are necessary, and conducted humanely. Many of the recommendations have already been implemented by BLM and the gather contractors. These reports can be viewed at these locations:</p> <p>Office of Inspector General (OIG)report on the WHB program:  <a href="http://www.doioig.gov/images/stories/reports/pdf/BLM%20Wild%20Horse%20and%20Burro%20Program%20Public.pdf">http://www.doioig.gov/images/stories/reports/pdf/BLM%20Wild%20Horse%20and%20Burro%20Program%20Public.pdf</a></p> <p>American Horse Protection Association Independent Report:  <a href="http://www.blm.gov/wo/st/en/info/newsroom/2010/december/NR_12_03_2010A.html">http://www.blm.gov/wo/st/en/info/newsroom/2010/december/NR_12_03_2010A.html</a></p> <p>American Association of Equine Practitioners Report:  <a href="http://www.aaep.org/images/files/AAEP%20Report%20on%20the%20BLM%20Wild%20Horse%20&amp;%20Burro%20Program%20Final.pdf">http://www.aaep.org/images/files/AAEP%20Report%20on%20the%20BLM%20Wild%20Horse%20&amp;%20Burro%20Program%20Final.pdf</a></p>
227.	Individual	Show updated, current humane & safe handling guidelines/protocols.	
228.	Individual	When forced to endure the stress and trauma..... heavily pregnant mares will suffer gather-related spontaneous abortions....	
<b>An EIS is Necessary</b>			
229.	American Wild Horse Preservation Campaign (AWHPC).	An EIS is Required Before Castrated Stallions (Alternative 3) Can Be Released Or Before Experimental Fertility-Control Can Be Implemented	<p>The proposal identified under Alternative 3 is not a significant action that would warrant completion of an EIS. We do not feel that the associated impacts would be significant. The proposal is not precedent setting or the first of it's kind. Nor are effects of gelding horses highly uncertain or involve unique or unknown risks. Gelding and release of geldings to the range has been identified in approved gather decisions and implemented by Oregon BLM and identified in gather EAs and Decisions completed for Nevada gathers. Though some members of the public oppose the proposal, it is a well-accepted practice of animal husbandry for thousands of years, and an established veterinary practice. Under Alternative 3, the geldings would be released in addition to the target breeding</p>

			<p>population of wild horses identified under the alternative. Under the Proposed Action, these stallions would be removed from the range and may be identified for Long Term Holding Pastures, Sale or training programs in which they may be gelded before-hand. In fact it is likely, that any stallion removed from the range would be gelded. Under Alternative 3, the geldings would benefit from not being removed from the range, and would be released to continue to enjoy their freedom, avoiding any additional stress of handling, transportation, and vaccination.</p> <p>There is no information to suggest that the proposal to geld wild horses would impede on their wild or free-roaming status, or that the proposal would cause significant degradation of the environment, or significant impacts to the individual horses or the population.</p> <p>The proposal to geld a portion of the release population as identified in Alternative 3, is in conformance with Sec. 3(b)(1) of the WFRHBA. There is no information to suggest that his proposal would interfere with the protection or preservation of wild horses, to manage them as an integral part of the public lands or within thriving natural ecological balance.</p>
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