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October 2011

**Stone Cabin Complex
Wild Horse Gather Plan and Preliminary Environmental Assessment
Nye County Nevada**



**Stone Cabin Complex
Wild Horse Gather Environmental Assessment**

**Stone Cabin and Saulsbury HMA Gather Environmental Assessment
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DOI-BLM-NV-B020-2011-0106-EA**

1. Introduction

The Bureau of Land Management (BLM) Tonopah Field Office (TFO) is proposing to conduct a wild horse gather to remove excess wild horses from the Stone Cabin and Saulsbury Herd Management Areas (HMAs), also referred to as the Stone Cabin Complex. The proposal includes the capture of approximately 524 wild horses and removal of 334 excess wild horses from the Stone Cabin HMA. Approximately 190 wild horses would be returned to the Stone Cabin HMA to result in a post-gather population of 218 wild horses. The proposal also includes the capture of approximately 190 wild horses and removal of 171 excess wild horses from inside and outside of the boundaries of the Saulsbury HMA. Approximately 19 wild horses would be returned to the Saulsbury HMA to result in a post-gather population of 29 wild horses. Fertility control and/or sex ratio adjustment would be applied to released animals in order to slow population growth rates and assist in maintaining wild horse population levels consistent with the established Appropriate Management Level (AML). The gather area includes the Stone Cabin, Ralston, Hunts Canyon and portions of the Monitor and Reveille grazing allotments. The proposed gather would occur in February 2012 and would be conducted in accordance with the Gather Plan and Standard Operating Procedures (SOPs) located in Appendix A. Refer to figures 1, 2, and 3 which display the proposed gather area in relation to the involved HMAs and associated grazing allotments and Wild Horse Territories administered by U.S. Forest Service.

An Environmental Assessment (EA) is a “concise public document” that is designed to “briefly provide sufficient information and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).”¹ This EA ensures compliance with the National Environmental Policy Act (NEPA) by providing site-specific analysis of potential direct, indirect, and cumulative effects to the human environment associated with completion of a gather and removal of excess wild horses in the Stone Cabin Complex. Should a determination be made that implementation of the Proposed Action or alternative actions would not result in “significant environmental impacts” a FONSI would be prepared to document that determination, and a Decision Record issued providing the rationale for approving the chosen alternative.

Since the passage of the Wild Free-Roaming Horses and Burros Act (WFRHBA) of 1971, management knowledge regarding wild horse population levels has increased. By law, BLM is required to remove excess animals once a determination has been made that excess animals are present and removal is necessary. In the past two decades, program goals have shifted beyond establishing a “*thriving natural ecological balance*” (i.e. establishing AML for individual herds) and conducting gathers to achieving and maintaining wild horse populations within the established AML so as to manage for a healthy wild horse populations and healthy rangelands. Management actions resulting from shifting the program emphasis include increasing fertility control and adjusting sex ratios to reduce population growth rates and increase gather intervals, improving the accuracy of population

1. 40 CFR Sec. 1508.9.

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inventories and collecting genetic baseline data to support genetic health assessments. Decreasing removal numbers while reducing population growth rates and ensuring the welfare of wild horses on the range is pertinent to these program goals and consistent with findings and recommendations from the American Horse Protection Association (AHPA), the American Association of Equine Practitioners (AAEP), Humane Society of the United States (HSUS), Government Accountability Office (GAO), Office of Inspector General (OIG) and new BLM strategy. BLM's management of wild horses must also be consistent with Standards and Guidelines for Rangeland Health and for Healthy Wild Horse Populations developed by the Mojave-Southern Great Basin Resource Advisory Council (RAC).

To further implement this strategy of increasing population controls as a management tool, the 2011 and 2012 BLM wild horse gather schedule increased emphasis to apply fertility control to reduce growth rates and thus the number of horses that must ultimately be removed from the range and either found adoptive homes or kept in long-term holding pastures. This strategy's expected result is the removal of only limited numbers of excess wild horses for which there is the greatest adoption demand.

1.1 Background

The proposed gather area includes the Stone Cabin HMA, the Saulsbury HMA and areas outside of HMA boundaries in the Ralston, Hunts Canyon and Reveille grazing allotments. The Stone Cabin HMA is located approximately 30 miles east of Tonopah in Nye County, Nevada, and primarily includes Stone Cabin Valley, both north and south of Nevada State Highway 6, bordering the Nevada Test and Training Range and the Nevada Wild Horse Range to the south. The Saulsbury HMA is divided into 2 parcels. The southern unit of the HMA is located immediately west of the Stone Cabin HMA, south of Highway 6. This southern portion is bordered to the east by the Stone Cabin HMA and to the south by Nevada Test and Training Range. The northern parcel of Saulsbury HMA is north of Highway 6, and is bordered to the east by U.S. Forest Service Administered lands and the Monitor Wild Horse Territory (WHT). The proposed gather area includes areas within and outside of the HMA boundaries throughout the Stone Cabin, Ralston, Reveille, Hunts Canyon, and a portion of the Monitor Allotment. These areas fall under the jurisdictional boundaries of the BLM TFO. Though the Monitor WHT is located in between the Saulsbury and Stone Cabin HMAs, it is not included in this proposed gather, as the USFS is in the process of establishing the AML for the area. Refer to the Figures 1, 2, and 3 which display HMA boundaries, livestock grazing allotments, Wild Horse Territories (WHT; administered by the US Forest Service), and the proposed gather area. The Stone Cabin HMA is 403,736 acres in and Saulsbury HMA includes 81,152 acres. The total proposed gather area represents 484,888 acres within the Stone Cabin Complex HMAs, and 400,112 acres outside of designated HMAs, in areas primarily adjacent to HMAs where wild horses exist or may move to during gather activities.

1.2. Appropriate Management Level (AML)

The AML for the Stone Cabin HMA and a portion of the Saulsbury HMA were established through a Consent Decision signed by Administrative Law Judge David Torbet on May 11, 1992, through the Department of Interior Office of Hearings and Appeals, Hearings Division. The Consent Decision established an AML for the Stone Cabin Allotment (and HMA) of 364 wild horses, and the Ralston Allotment portion of the Saulsbury HMA at 10 wild horses. The AML for the portion of the Saulsbury HMA in the Hunts Canyon Allotment was established as 30 wild horses through a Final Multiple Use Decision (FMUD) in 1996. The FMUD was issued following an interdisciplinary analysis of

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monitoring data, the completion of an Allotment Evaluation for the allotment, and the involvement of interested public.

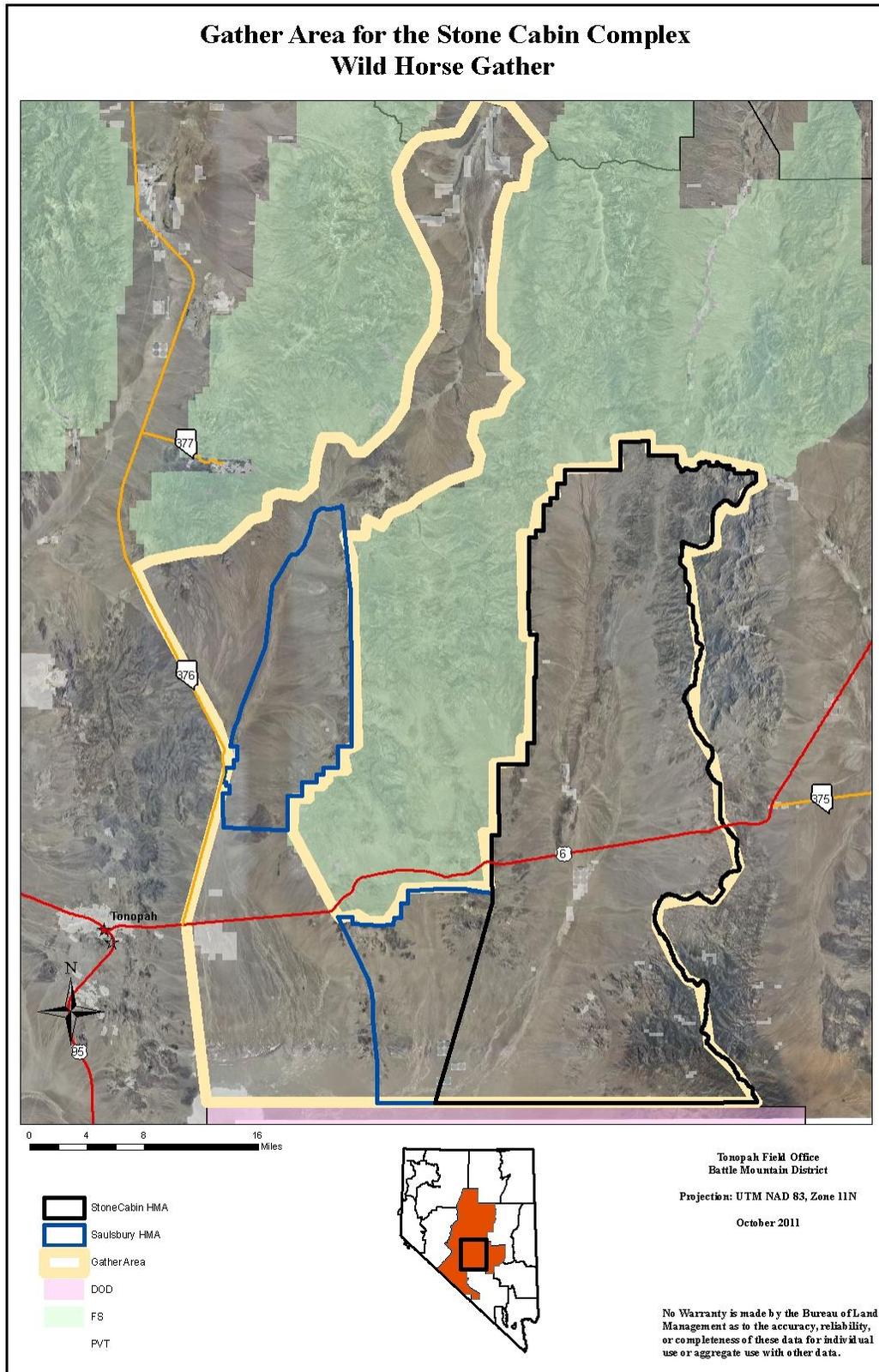
The most recent helicopter inventory flight of the Stone Cabin Complex was conducted in 2009, which resulted in a direct count of 560 wild horses. The 2011 estimated population based on 16% average annual increase (long-term average from inventory flights) is 752 wild horses in the Complex with approximately 552 located within the Stone Cabin HMA and 200 within the Saulsbury HMA. These population estimates exceed the established AML in Stone Cabin by 188 animals, and exceed the Saulsbury HMA by 160 wild horses. Prior to the proposed gather, an inventory will be conducted to obtain a more recent population estimate. Table 1 displays the AML and population estimates for the HMA.

Table 1. Established AML and Population Estimates

HMA	Allotment	AML	Est. 2011 Population
Stone Cabin	Stone Cabin	364	552
	Total	364	552
Saulsbury	Ralston	10	28
	Hunts Canyon	30	172
	Total	40	200
Grand Totals		404	752

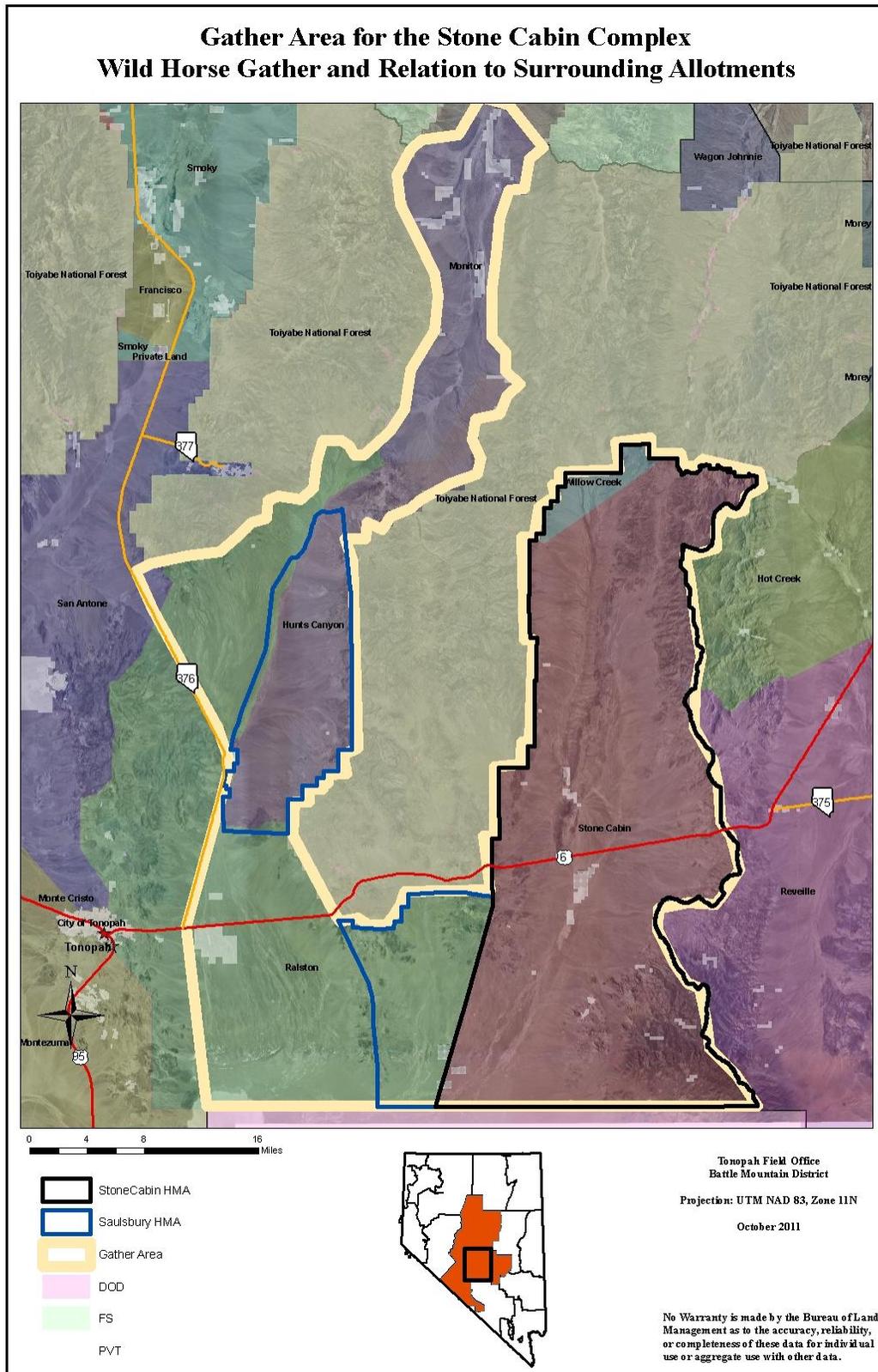
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Figure 1. Gather area for the Stone Cabin Complex wild horse gather.



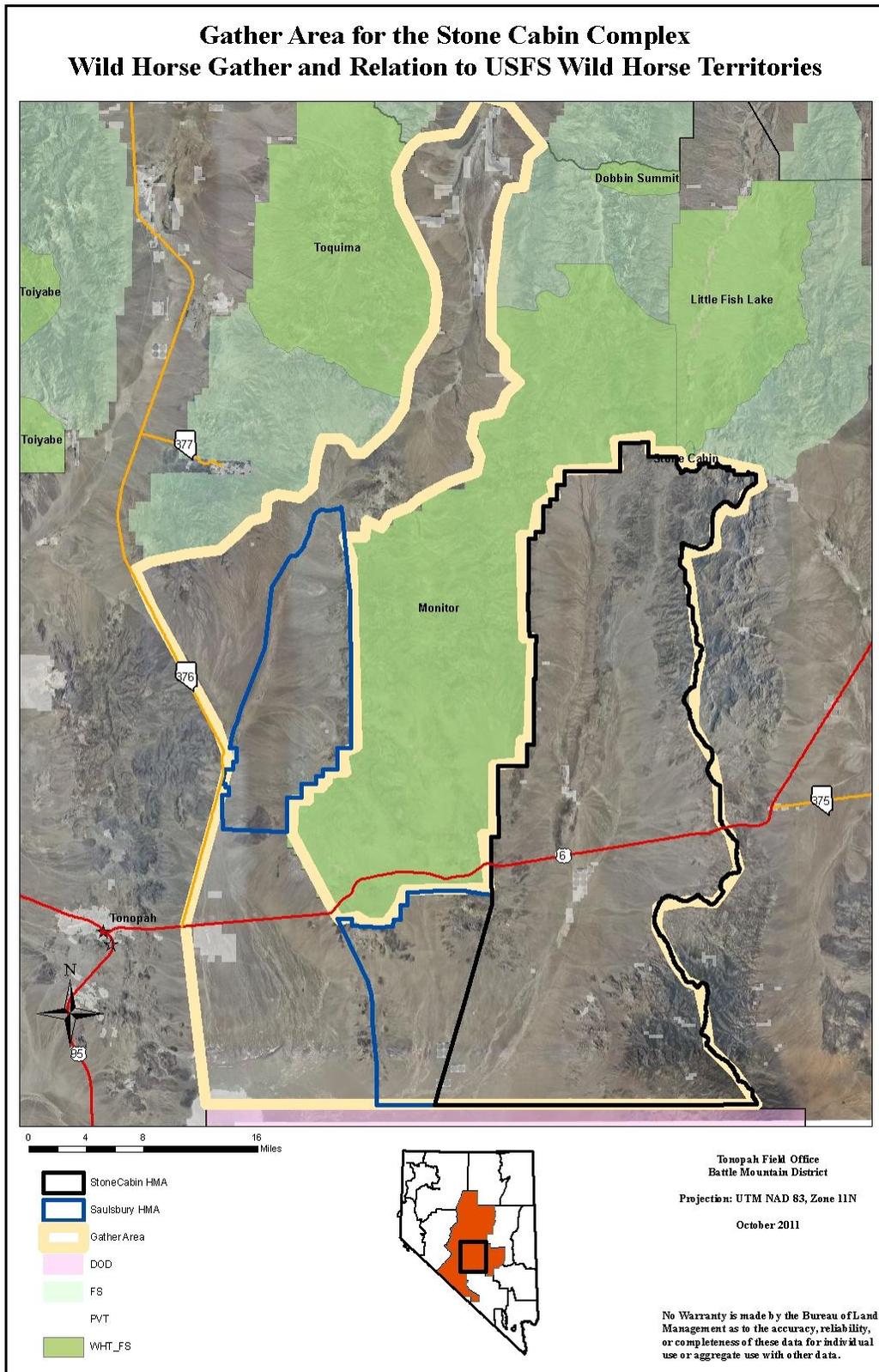
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Figure 2. Gather area for the Stone Cabin Complex wild horse gather and its geographical location in relation to surrounding grazing allotments.



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Figure 3. Gather area for the Stone Cabin Complex wild horse gather in relation to nearby Wild Horse Territories (WHT) administered by the US Forest Service.



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1.3. Purpose and Need for Action

The purpose of the Proposed Action is to remove wild horses from outside of the HMAs, remove excess wild horses from inside the HMAs to maintain the AML and reduce the population growth rate. The proposed action would help prevent undue or unnecessary degradation of the public lands, and to protect rangeland resources from deterioration associated with excess wild horses within the HMAs, and to restore a thriving natural ecological balance and multiple use relationship on the public lands consistent with the provisions of Section 1333 (a) of the *WFRHBA of 1971*.

This action is needed to remove wild horses from areas not designated for wild horse use, and to remove excess wild horses from within the HMAs to achieve a population size consistent with the established AML (FMUD 1996; Consent Decision 1992), slow population growth rates, protect rangeland resources from deterioration associated with an overpopulation of wild horses, and restore and maintain a thriving natural ecological balance and multiple use relationship on the public lands consistent with the provisions of Section 3(b) (2) of the *Wild Free-Roaming Horses and Burros Act of 1971* WFRHBA. Further, the action is needed to ensure current and future populations of healthy wild horses.

Based on a review of monitoring, inventory, and all other information available at this time, the TFO has determined that excess wild horses are present within the Stone Cabin Complex and need to be removed in order to comply with the WFRHBA, to achieve a population consistent with the established AMLs, meet Land Use Planning objectives, and to restore a thriving natural ecological balance and prevent degradation of rangeland resources resulting from an overpopulation of wild horses. This assessment is based on factors including, but not limited to the following rationale:

- Aerial inventories (2006-2010) have documented wild horses residing outside of the Saulsbury and Stone Cabin HMA boundaries.
- Estimated 2011 Stone Cabin HMA population exceeds the AML (364 wild horses; 151%) as established through the 1992 Consent Decision.
- Estimated 2011 Saulsbury HMA population exceeds the AML (40 wild horses; 500%) as established through the 1996 FMUD and 1992 Consent Decision.
- Throughout the Stone Cabin Complex, use by wild horses is exceeding the forage allocated to their use.
- Vegetation communities throughout the Complex are degraded as characterized by a diminished occurrence of desirable perennial grasses and increased undesirable species.
- Wild horse populations are making concentrated use in the Stone Cabin HMA, and in- and outside of the boundaries of the Saulsbury HMA.
- Water sources with BLM held water rights that are available to wild horses are very limited in both HMAs, and riparian degradation is occurring due to the overpopulation of wild horses using these areas.
- Vehicle collisions with wild horses occur on Nevada State Highway 6 with animals residing and travelling outside the Saulsbury HMA and routinely crossing the highway creating a public safety hazard.
- Vehicle collisions with wild horses on Access Road 504 (Rocket Road) with vehicles travelling to or from the Tonopah Test and Training Range.

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- The AMLs of 364 (Stone Cabin HMA) and 40 (Saulsbury HMA) must be maintained for continued progress towards the Standards for Rangeland Health in accordance with the Mojave/Southern Great Basin RAC.

Large portions of the Stone Cabin Complex are in diminished ecological condition and have limited forage availability, and limited water resources with BLM held water rights. Some contributing factors are climate, soils, precipitation levels, historic overpopulations of wild horses, and historic use by livestock. Condition of the rangeland resource is discussed in the documents identified in Section 1.7, 3.5 and Appendix D. Progress towards improved rangeland health is a lengthy process in arid western rangelands under the best conditions.

The AMLs for the HMAs need to be achieved and maintained to not only to make progress towards improved rangeland health and prevent further decline of important wild horse habitat, but also to allow for improvement of wildlife habitat and ensure long-term health and well-being of the wild horses. Maintaining wild horse populations consistent with the established AML would also promote progress towards attainment of RAC Standards and for Rangeland Health, RMP and Allotment Specific Objectives.

Comments received from the public for BLM gathers over the past few years have emphasized the desire for BLM to increase the use of fertility control in order to reduce the number of wild horses that have to be removed from the range or maintained in Long Term Pastures. This proposed gather is consistent with National BLM direction to increase the use of fertility control to maintain wild horses within AML with fewer necessary removals.

The following is a message from the BLM Director Bob Abbey: *“The BLM finds itself in the predicament of needing to gather overpopulated herds from the Western range each year while its holding costs keep rising – with no end in sight. Recognizing this unsustainable situation, the Government Accountability Office, in a report issued in October 2008, found the Bureau to be at a “critical crossroads” because of spiraling off-the-range holding costs and its limited management options concerning unadopted horses.*

*In response, Secretary of the Interior Ken Salazar and I announced on October 7, 2009, a new and sustainable way forward for managing our nation’s wild horse horses and burros. We recommended **applying new strategies aimed at balancing wild horse and burro population growth rates with public adoption demand to control holding costs [emphasis in original].** This effort would involve slowing population growth rates of wild horses on Western public rangelands through the aggressive use of fertility control, the active management of sex ratios on the range, and perhaps even the introduction of non-reproducing herds in some of the BLM’s existing Herd Management Areas in 10 Western states”. Refer to the entire message at http://www.blm.gov/wo/st/en/prog/wild_horse_and_burro/national/about/director.html*

The following is a quote from the Humane Society for the United States (HSUS): *“The HSUS strongly supports an increase in the use of fertility control – specifically the Porcine Zona Pellucida (PZP) immunocontraception vaccine – and sex ratio adjustments to slow population growth. This work should immediately be expanded to as many herds as possible as an alternative to gathers and long term holding. With an efficacy rate of over 90%, a comprehensive contraception program could dramatically reduce the financial burden on the agency and allow the BLM to once again focus its resources and efforts on range management programs” (HSUS 2010).*

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The American Association of Equine Practitioners (AAEP) recently issued a BLM Task Force Report in August 2011 following their evaluation of handling procedures and animal welfare at wild horse gathers, and short and long term holding facilities. In the Executive Summary of this report is stated: “*Clearly the mission of the BLM Program – Healthy Ranges, Healthy Horses – is not a simple one. A central issue for all discussions involving the care and management of the wild horse population is controlling the reproductive rate of the wild horses on the range. The AAEP encourages the BLM to prioritize research and application of effective fertility control methods in order to reduce the foaling ate in wild herds*”.

1.4. Conformance with Existing Land Use Plans

The Federal Land Policy and Management Act of 1976 (FLPMA) requires that an action under consideration be in conformance with the applicable BLM Land Use Plan. The Proposed Action and Action Alternatives are in conformance with the Wild Horse and Burro Objectives of the Tonopah Resource Management Plan (RMP) Record of Decision dated 1997. Pertinent excerpts from that document are as follows:

Objective: To manage wild horses and/or burro populations within Herd Management Areas at levels which will preserve and maintain a thriving natural ecological balance consistent with other multiple-use objectives (pg. 14).

1. Continue the following management determinations:
 - a. Manage wild horses and/or burros in 16 HMAs listed in Table 3 of the RMP.
 - b. Manage wild horses and/or burros at AML or interim herd size (IHS) for each HMA outlined in Table 3. Future herd size or AMLs within each HMA will be adjusted as determined through short-term and long-term monitoring data methods as outlined in the *Nevada Rangeland Monitoring Handbook* and BLM Technical References.
2. When the AML is exceeded, remove excess wild horses and/or burros to a point which may allow up to three years of population increase before again reaching the AML.

Within the 1997 RMP the definition of AML is given as “*the maximum number of wild horses and/or burros to be managed within a herd management area and has been set through monitoring and evaluation or court order*” (pg. 15).

1.5. Relationship to Statutes, Regulations, Policy, Plans or Other Environmental Analysis

The Proposed Action is in conformance with the WFRHBA of 1971 (Public Law 92-195, as amended), Section 302 (a) and (b) of the Federal Land Policy and Management Act (FLPMA) of 1976, the Public Rangelands Improvement Act of 1978 (Pub. L. 95-514, Sec. 4), the Code of Federal Regulations (CFR) at 43 CFR §4700, and policies. Applicable excerpts are as follows:

Where the Secretary determines . . . that an overpopulation exists . . . he shall immediately remove excess animals from the range so as to achieve appropriate management levels. Such action shall be taken . . . until all excess animals have been removed so as to restore a thriving natural ecological balance to the range, and protect the range from the deterioration associated with overpopulation.

The law also provides that determinations will be made “*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)*” [emphasis added]. FLPMA amended the

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WFRHBA with “*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*”.

PRIA directs the continued “*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*”.

BLM policy IM 210-135, states at Section E: “*During gather or herd management area planning, the authorized officer will consider a range of alternatives to reduce (slow) population growth rates and extend gather cycles for all wild horse herds with annual growth rates greater than or equal to 5%. These alternatives may include (but are not limited to): fertility control, adjustments in the sex ratio in favor of males, a combination of fertility control and sex ratio adjustment, and management of selected HMAs for non-reproducing wild horses*”. Similar direction is also located at Section 4.5.3 of the Wild Horses and Burros Management Handbook H 4700-1.

The HMAs discussed in this EA have not been designated as “ranges” under 43 CFR 4710.3-2.²

1.6. Conformance with Rangeland Health Standards and Guidelines

The Proposed Action and Alternative 1 are in conformance with the Mojave/Southern Great Basin RAC Rangeland Health Standards and Guidelines which require BLM to manage wild horses and burros within AML and in balance with other uses. Applicable excerpts are as follows:

The standards for rangeland health will be reached and maintained by managing wild horse and burro numbers so as not to exceed Appropriate Management Levels for each Herd Management Area. Controlling wild horse and burro numbers through gathers and other control programs is essential.

Wild horses and burros within Herd Management Areas should be managed for herd viability and sustainability. Herd Management Areas should be managed to maintain a healthy ecological balance among wild horse and/or burro populations, wildlife, livestock, and vegetation.

Guideline 4.1: Wild horses and burro population levels in HMAs should not exceed AML.

Guideline 4.2: AMLs should be set to reflect the carrying capacity of the land in dry conditions based upon the most limiting factor: living space, water or forage. Management levels will not conflict with achieving or maintaining standards for soils, ecological components, or diversity of habitat and biota.

²There are currently four designated Wild Horse and Burro Ranges in the Western United States that are managed principally for wild horses and burros consistent with 43 CFR 4170.3-2. These are the Pryor Mountain Wild Horse Range in Montana; the Little Book Cliffs Wild Horse Range in Colorado; the Nevada Wild Horse Range and the Marietta Wild Burro Range in Nevada. 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.

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Guideline 4.3: Interaction with herds should be minimized. Intrusive gathers should remove sufficient numbers of animals to ensure a period between gathers that reflects national wild horse and burro management strategies.

The Mojave/Southern Great Basin RAC Rangeland Health Standards and Guidelines can be accessed at www.blm.gov/nv/st/en/res/resource_advisory/mojave-southern_grat.html or by contacting the TFO.

Currently, a Rangeland Health Evaluation (RHE) is being conducted for the Stone Cabin Allotment in which the Standards for Rangeland Health will be assessed through the analysis of monitoring data and evaluation of RMP objectives. Monitoring data collected thus far shows major shifts in plant communities away from the potential due to intermittent drought and grazing stressors. Current data shows a decrease in the perennial grass populations, especially Indian ricegrass (*Achnatherum hymenoides*), which is the major component of the potential native community in the majority of the ecological sites on the allotment. The data also show substantial dominance of undesirable shrubs (i.e. rabbitbrush; *Chrysothamnus viscidiflorus*) in many areas of the allotment. Factors contributing to the present state of the allotment include historic and current grazing practices and overpopulations of wild horses.

1.7. Other NEPA Analysis

This EA analyzes the impacts to the human environment that could result from gathering and removing wild horses within the Stone Cabin Complex. The AML for Stone Cabin HMA and the Ralston Allotment portion of the Saulsbury HMA was established through the 1992 Consent Decision. Additionally, the Stone Cabin and Saulsbury HMAs were included within the Stone Cabin Complex Gather EA, 2006. This EA tiers to the prior NEPA documents and will incorporate relevant portions of those documents by reference, where applicable. The other relevant NEPA and decision documents are identified below:

- Hunts Canyon Allotment Evaluation, May 6, 1996
- Proposed Multiple Use Decision (PMUD), Hunts Canyon Allotment, September 9, 1996 (PMUD was not protested so it became the Final Multiple Use Decision (FMUD)).
- Tonopah RMP and Record of Decision (ROD), October 6, 1997
- Stone Cabin Complex Wild Horse Gather EA # NV065-EA07-028, December 2006

1.8 Decision to be Made

The authorized officer would determine whether to implement the proposed gather in order to bring the wild horse population back to AML and to vaccinate all of the captured mares that would be released with fertility control vaccine in order to maintain population size within the established AML and avoid the deterioration of the range that can result from wild horse overpopulation.

The decision would not establish or adjust the AML, which was established through previous planning-level decisions. Monitoring and other available information confirms that an excess population of wild horses exists within the HMA, and need to be removed in order to preserve a thriving natural ecological balance and conform to the 1992 Consent Decision. Future decisions regarding long-term management within the HMA would continue to be accomplished with public involvement through a Herd Management Area Plan or other activity level management plans specific to the HMA. Additionally, the decision would not adjust livestock use, which also has been allocated through prior planning-level processes and decisions.

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The No Action Alternative would not achieve the identified Purpose and Need identified in Section 1.3. However, it is analyzed in this EA to provide a basis for comparison with the action alternatives, and to assess the effects of not conducting a gather at this time. The No Action Alternative would not be consistent with the requirement under the WFRHBA to remove excess wild horses and burros from public lands and is also not in conformance with regulatory provisions for management of wild horses and burros as set forth at 43 CFR § 4700. The No Action Alternative would not result in achievement of the established AML or progress towards the improvement of rangeland conditions.

1.9. Scoping and Issue Identification

As part of the preparation of this EA, a scoping letter dated June 29, 2011 was mailed to 22 individuals, agencies and organizations on the interested public list for the Stone Cabin Complex. Among these was the Nevada State Clearinghouse which made the scoping letter available for review by Nevada State Agencies. Comments were received from the following:

- Nevada Department of Wildlife is supportive of the gather and removal numbers, as well as removing wild horses from outside the boundaries of the HMAs involved.
- U.S. Fish and Wildlife Service (USFWS) expressed concerns regarding the impacts of the proposed wild horse gather on species of special concern and candidate species, migratory birds, and wetlands and riparian areas; and provided input regarding the cumulative impact analysis, monitoring, and quality assurance.

2. Description of the Proposed Action and Alternatives

The following section details the Proposed Action and Alternatives that will be analyzed in this EA, as well as alternatives considered, but not carried forward for analysis.

The Proposed Action and sequential alternatives were developed to meet the Purpose and Need (i.e. to remove excess wild horses, manage wild horses within identified HMA boundaries, reduce herd growth rates, maintain AML and ensure a thriving natural ecological balance). Additionally, these alternatives considered current National WH&B Program direction that directs the BLM to implement population controls during gathers in an effort to reduce population growth rates so as to reduce gather frequency and the number of excess wild horses that ultimately must be removed from the range in future gathers in order to maintain populations at AML. The Proposed Action was developed in consideration of the issues presently and previously identified during internal and external scoping and agency consultation.

The post-gather target of 218 wild horses in the Stone Cabin HMA and 29 animals in the Saulsbury HMA was determined based on a projected 16% annual increase and a 3-year interval until AML is exceeded and another gather is necessary. All mares selected for release back to the HMAs would be treated with fertility control vaccine (PZP-22 or most current formulation) and additional stallions would be released to adjust the sex ratio of the remaining population in favor of males (60%). The Complex would potentially need to be re-gathered in 2-3 year increments to re-apply fertility control to mares.

Alternative 1 includes the selective removal of excess wild horses to achieve a post gather population of 247 within the Stone Cabin Complex and sex ratio adjustment without implementation of fertility control.

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Alternative 2 involves selective removal of excess wild horses, implementation of fertility control and adjustment of sex ratios to favor males, achieving a post-gather population of 299 wild horses in the Stone Cabin Complex with a portion managed as a non-breeding population. The target sex ratio for the remaining *breeding* population would be 50:50.

Alternative 3 is the non-selective removal (gate cut) of excess wild horses until the target gather number is achieved.

Alternative 4 requires no action.

A trapsite adoption event could be planned to occur in conjunction with the gather activities in which selected wild horses would be adopted to qualified applicants at the gather location.

Table 2. Proposed Action and Alternative 1 Gather Estimates

HMA	AML	Est. Population ³	Est. Gather Number ⁴	Est. Un-gathered	Est. to Remove	Est. to Release	Est. Post-gather
Stone Cabin	364	552	524	28	334	190	218
Saulsbury	40	200	190	10	171	19	29
Total	404	752	714	38	505	209	247

2.1. Management Actions Common to the Proposed Action and Action Alternatives

The proposed gather would take place as early as February 2012 and would be completed in accordance with this EA, Wild Horse and Burro Gather Plan and Standard Operating Procedures (SOPs; Appendix A). The BLM would be responsible for contractor compliance to national contract specifications including SOPs.

The primary gather technique would be the helicopter-drive trapping method. The use of roping from horseback could also be used when necessary. Multiple gather sites (traps) would be used to gather wild horses both from within and outside the Complex. The BLM would make every effort to place gather sites in previously disturbed areas, but if a new site needs to be used, a cultural resource inventory would be completed prior to using the new gather site. No gather sites would be set up near greater sage-grouse leks, known populations of Sensitive Species; or in riparian areas, cultural resource sites, Wilderness Study Areas (WSAs) or congressionally designated Wilderness Areas. All gather sites, holding facilities, and camping areas on public lands would be recorded with Global Positioning System equipment, given to the Battle Mountain District Invasive, Non-native Weed Coordinators, and then assigned for monitoring during the next several years for invasive, non-native weeds. All gather and handling activities (including gather site selections) would be conducted in accordance with SOPs in Appendix A.

3. Estimated population represents the population following 2011 foaling.

4. Estimated gather numbers based on ability to capture 95% of the population, which would vary depending on terrain, animal location, weather conditions and actual population size experienced during the proposed gather.

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Following the capture of wild horses, animals would be sorted by age and sex, and selected either for release back to their respective HMA or for transport to BLM WH&B adoption preparation or holding facilities. Table 2 displays the anticipated gather and removal figures.

Animals gathered from inside the HMA boundaries would be subject to the National Selective Removal Policy to the extent possible (refer to Appendix A), while ensuring that the post-gather populations consist of diverse age groups and animal characteristics. Goals for the gather include releasing horses within all age classes except weanlings, and most yearlings. Wild horses captured from outside of the HMA boundaries would be removed regardless of age and would not be released back into the HMAs.

Priority for removal of wild horses captured from within HMA boundaries would be given to animals that were four years of age or younger. It is anticipated that most animals released would be five to 20 years of age. An emphasis would be placed on older mares and stallions (15+ years of age) to be released back into the HMA to avoid the stress of transportation and handling to these older horses. However, if necessary to achieve the post-gather population objective, animals within the older age class could be selected for removal.

Most foals would be removed and transported to BLM WH&B adoption preparation or holding facilities as they would be 6-9 months of age and weaned from their dams. If foals too young to wean are encountered, they would be transported to the facilities with their dam. In certain circumstances, some foals could be selected to be released with their dam if it is determined that the foals are too young to travel safely or if the mother has been selected for release and the foal should not be weaned.

Herd health and characteristics data would be collected as part of continued monitoring of the wild horse herds. Other data, including sex and age distribution, condition class information (using the Henneke rating system), color, size and other information may also be recorded for all gathered wild horses. Genetic baseline data would be collected to monitor the genetic health of the wild horses within the combined project area.

Gathered wild horses would be transported to BLM holding facilities where they would be prepared for adoption and/or sale to qualified individuals who can provide them with a good home or for transfer to long-term grassland pastures.

Due to the mountainous terrain and vegetative cover, gather efficiency may be less than optimal. Population gather projections show that an 80% or greater gather efficiency is necessary to achieve the management goals. If gather efficiency is less than 80%, an insufficient number of wild horses may be gathered to allow for the implementation of fertility control or to adjust sex ratio, or to achieve the low range of AML. If gather efficiencies do not allow for the attainment of the management goals in winter 2012, the alternative would include returning to the Complex in 2014 or 2015 to gather a sufficient number of wild horses to achieve the desired population as well as to allow the BLM to implement the population control component of the alternative. If a follow-up gather is necessary, the ungathered wild horses would have a heightened response to human presence and would therefore be more difficult to gather in the year immediately following the initial gather. Any follow-up gather activities would be conducted in a manner consistent with those described for the winter 2012 gather. Funding limitations and competing priorities might also require delaying the follow-up gather and population control component of the alternative until Fiscal year 2015.

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If gather efficiencies utilizing helicopter drive-trapping do not achieve the desired goals of the Alternative selected or if a helicopter gather cannot be scheduled, water/bait trapping may be utilized during the life of the plan to remove sufficient numbers of horses to achieve the management targets, to relieve resource concerns and/or concentrated groups of horses both inside and adjacent to the Complex. Any water/bait trapping activities would be scheduled during time periods that would be most effective to gather sufficient numbers of animals to achieve management targets.

Wild horses would be selected and released back to the Complex, so as to represent the historic characteristics of the Complex. This would include selecting animals of moderate or larger stature, average or better confirmation, and coloring patterns, which are the historic range of colors found within the Complex. Animals that exhibit exceptional characteristics may be chosen for release outside of the selective removal priorities on a case by case basis. Wild horses to be released would be selected for health, stamina, strength and mothering abilities when these factors can be determined. Weak, unhealthy, and unthrifty animals would not be selected for release back into the HMAs. A helicopter inventory flight may be conducted following the gather to collect information about numbers and distribution of remaining wild horses within the Complex.

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 the BLM for care and treatment of wild horses. All excess wild horses removed from within and outside the HMAs would be made available for adoption or sale to qualified individuals.

Any old, sick or lame horses unable to maintain an acceptable body condition (greater than or equal to a Henneke body condition score (BCS) of 3 or with serious physical defects such as club feet, severe limb deformities, or sway back would be humanely euthanized as an act of mercy. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy (Washington Office Instruction Memorandum 2009-041). Refer to:

http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-041.html

2.2. Proposed Action and Alternatives

2.2.1. Proposed Action: Selective removal of excess wild horses, implement fertility control and adjustment of sex ratios to favor males, achieving a post-gather population of 247 wild horses in the Stone Cabin Complex.

The objective of the Proposed Action would gather and remove approximately 505 excess wild horses within the combined project area to achieve a post-gather population of 218 wild horses in the Stone Cabin HMA and 29 wild horses in the Saulsbury HMA, totaling 247 wild horses in the Stone Cabin Complex, which is the combined low point of AML. This assumes a 95% capture success rate and a total of 28 uncaptured animals with an estimated 50:50 sex ratio. Capture success may vary depending on topography, weather, and location of the wild horses. All wild horses residing in areas outside of the Complex would be gathered and removed. Under this alternative, the BLM would also attempt to gather a sufficient number of wild horses beyond the excess wild horses to be removed, so as to allow for the application of fertility control (PZP-22 or most current formulation) to all breeding age mares (approximately 84) that are released and to adjust the sex ratio of animals on the range following the gather to favor males (60% stallions). This is in line with the Director's proposed national WH&B

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strategy. The sex ratio of potential released animals will be dependent on the sex ratio of gathered wild horses. Approximately 65% or more of all released wild horses would likely be stallions, thus achieving a 60% male sex ratio on the range (including animals not gathered). In order to achieve a post-gather population of 247 total animals at the desired sex ratio, approximately 125 stallions and 84 mares would need to be released or retained in the HMAs. Fertility control would be applied to all the released mares to decrease the future annual population growth, extend the time before another gather was required, and reduce the number of excess wild horses that would have to be removed during future gathers. The procedures to be followed for implementation of fertility control are detailed in Appendix B.

The Proposed Action was developed in conformity with the Tonopah RMP which determined that when a gather is conducted to achieve AML, that the population be reduced to a level that would allow for three years before another gather would be required. The Proposed Action is consistent with this provision as well as current BLM policy and direction to reduce gather frequencies and the number of animals that need to be removed from the range over time through application of fertility control and adjustment of sex ratios to favor stallions, which reduces the proportion of the population that would give birth to foals.

2.2.2. Alternative 1: Selective removal of excess wild horses to achieve a post gather population of 247 within the Stone Cabin Complex, sex ratio adjustment without implementation of fertility control.

Alternative 1 is similar to the Proposed Action with the exception that fertility control would not be administered to any mares released back to the Stone Cabin Complex. Wild horses would be selected for release back to the range to achieve a post-gather population of 247 total wild horses in the Complex. The objective for the sex ratio of the post-gather population would be 60% stallions (males) and 40% mares as described above for the Proposed Action.

2.2.3. Alternative 2: Selective removal of excess wild horses, implement fertility control and adjustment of sex ratios to favor males, achieving a post-gather population of 299 wild horses in the Stone Cabin Complex with a portion managed as a non-breeding population (geldings).

Alternative 2 would be similar to the Proposed Action except that an additional 52 geldings would be managed as a non-breeding population. This represents one-third of the difference between the low AML level/post gather objective (247) and the high AML level (404) for the Complex, or 17% of the estimated post gather population. The core breeding population would still consist of 247 wild horses with a sex ratio of 50:50, which would require approximately 3 years of population growth until AML was exceeded (including the additional 52 geldings). The HMAs would be managed for a post-gather population target of 176 stallions/geldings and 123 mares.

Stallions selected for gelding would be between 5 and 15 years of age and have a body condition score of 3 or above. The surgery would be performed at either a temporary holding facility at the gather location or at a BLM-managed holding center by a licensed veterinarian using appropriate anesthetic agents and surgical techniques (see Gelding SOPs in Appendix C). 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

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surgery of this type is rare and would be expected to be less than five percent of the animals treated. The procedures to be followed for gelding of stallions are detailed in the Gelding SOPs in Appendix C.

Gelded animals would be monitored for approximately 7 to 10 days post-surgery. Observations would be made in the field at key water locations within the complex. 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 designed to determine whether or not geldings form bachelor bands as expected or intermix with the breeding population. Observations would be made as needed to determine the behavior of the geldings at key water locations within the Complex. Observations of individual animal behavior could also be made. 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.

2.2.4. Alternative 3: Non-selective removal of excess wild horses (Gate-Cut)

Wild horses would be gathered and removed as encountered until removal and post-gather population objectives were achieved. No wild horses would be released so that number gathered would equal number removed. The post-gather population estimate for the combined HMAs would still be 247 wild horses. No selection would be made based on age, health or characteristics and all horses gathered would be removed, leaving the remaining wild horses within the Complex undisturbed. No population controls such as Fertility Control or sex ratio adjustment would be possible under this alternative, and the population would continue to increase at an average of 16% annually.

2.2.5. Alternative 4: No Action Alternative (No Wild Horse Gather)

Under the No Action Alternative, a wild horse gather would not be conducted within the Stone Cabin Complex. Wild horse populations would not be actively managed at this time and wild horses would not be removed from areas outside of HMA boundaries that are not designated for use by wild horses. The current population of 752 combined wild horses would continue to increase at an estimated rate of 16% annually. The established AML of 404 within the Stone Cabin Complex would continue to be exceeded and the TFO's failure to act would be in contempt of the 1992 Consent Decision and the Tonopah RMP. Additionally, implementation of the No Action Alternative would not result in progress towards attainment of the RAC Standards for Rangeland Health, or Land Use Plan Objectives for the Stone Cabin and Saulsbury HMAs and associated allotments.

The No Action Alternative is in violation of the Wild Free-Roaming Horses and Burros Act, of 1971 (PL-195, as amended) and is not in conformance with BLM wild horse and burro management requirements contained in 43 CFR §4700. The No Action Alternative would not achieve the identified Purpose and Need identified in Section 1.3; however, it is analyzed in this EA to provide a basis for comparison with the action alternatives, and to assess the effects of not conducting a gather at this time.

2.3. Alternatives Considered but Eliminated from Detailed Analysis

Through completion of EAs for proposed wild horse gathers in Nevada in 2010 and 2011, several alternatives have been proposed for consideration and are discussed below.

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2.3.1. *Gathering the Stone Cabin Complex to AML (Upper Level)*

A post-gather population size at the upper level of the AML would result in AML being exceeded following the next foaling season (spring 2012). This would be problematic for several reasons.

The AMLs established for the HMAs represent the maximum population for which a thriving natural ecological balance should be maintained. The desired post gather population represents the number of animals that should remain in the HMAs following a wild horse gather in order to allow for a periodic gather cycle of approximately every 3 years and to prevent the population from exceeding the established AML between gathers. The need to gather below the AML has been recognized by the IBLA, which has held that AML means, “*that ‘optimum’ number of wild horses which results in a thriving natural ecological balance and avoids a deterioration of the range*” (109 IBLA 119 API 1989). “*Proper range management dictates removal of horses before the herd size causes damage to the range land. Thus, the optimum number of horses is somewhere below the number that would cause resource damage*” (118 IBLA 75).

Additionally, gathering to the upper range of AMLs would result in the need to follow up with another gather within one year, and could result in overutilization of vegetation resources, damage to the rangeland, and increased stress to wild horses. This Alternative would not meet the Purpose and Need identified in Section 1.3 and therefore was eliminated from further consideration in this document.

2.3.2. *Control the excess wild horses with only the use of fertility control treatment*

This alternative would not decrease the existing overpopulation of wild horses, resource concerns would continue, and implementation would result in significantly increased gather and fertility control costs. Populations would continue to grow, resource degradation would continue, and progress would not be made towards attainment of Rangeland Health Standards or Land Use Plan Objectives. This alternative would not meet the Purpose and Need identified in Section 1.3, and was eliminated from further consideration.

2.3.3. *Use of Bait and/or Water Trapping*

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 in areas where water is limited or absent to achieve the desired goals of Proposed Action and Alternatives 1-3 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) water rights within the Stone Cabin Complex are primarily held by the grazing permittees, (3) access for the horses (and other range users) to all other water sources except the water trap source must be controlled to be effective which may cause short-term impacts to other users, and (4) the presence of scattered water sources on both private and public lands inside and outside the HMAs would make it almost impossible to restrict wild horse access to one source to effectively gather and remove the excess animals in order to achieve management goals.

The large geographic area involved and the extended time necessary to trap the wild horses under this alternative would result in a significant increase in gather cost and would make it difficult to limit the

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gather to a reasonable time. The longer gather period (which could be several months) would either cause individually removed animals to be held for an extended time until the gather was completed in order to administer fertility control and adjust sex ratios, or it would preclude the use of these population control measures, and preclude any option to select removal and release animals for preferred age structure or other desirable traits. Given the impracticalities of implementing this alternative for such a large geographic area, this alternative was eliminated from detailed study.

2.3.4. Remove or Reduce Livestock within the HMAs

This alternative would involve no removal of wild horses and instead addresses the excess wild horse numbers through the removal or reduction of livestock grazing within the HMA. This alternative was not brought forward for analysis because it is inconsistent with the Tonopah RMP objectives and multiple use management.

The proposal to reduce livestock would not meet the Purpose and Need identified in Section 1.3 and is not consistent with the WFRHBA, which directs the Secretary to manage wild horses in balance with other multiple uses and to immediately remove excess wild horses. Analysis of population inventory and monitoring data resulted in the determination that limited water and forage resources within the Saulsbury HMA were causing wild horses to move outside the HMA boundaries. Under this alternative, wild horses would continue to reside outside of HMA boundaries in areas that are not designated for their use.

Livestock grazing can only be reduced or eliminated following the process outlined in the regulations at 43 CFR § 4100. Such changes cannot be made through a wild horse gather decision. Changes in forage allocations between livestock and wild horses would have to be re-evaluated and implemented through the appropriate decision-making processes to determine whether a thriving natural ecological balance can be achieved at a higher AML and in order to modify the current multiple use relationship established in the RMP.

The allocation of livestock AUMs within the 1997 Tonopah RMP was completed with public involvement and resulted in data interpretation, and carrying capacity analysis, which affirmed the number of AUMs to be allocated to wild horses and livestock based upon the 1996 FMUD.

While the BLM is authorized to remove livestock from HMAs “*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*” (43 CFR § 4710.5), this authority is usually applied in cases of emergency and not for general management of wild horses or burros.

For these reasons, this alternative was dropped from detailed analysis and this Gather Plan and EA would not involve reductions of permitted livestock or increases of the established AMLs. Allocations to livestock or wild horses will be re-evaluated in future years and implemented through appropriate decision and environmental analysis documents.

2.3.5. Alternative capture techniques instead of helicopter capture of excess wild horses

Within Nevada, scoping and issuance of Gather Plan EAs for wild horse gathers has resulted in comments from the public requesting that the BLM capture wild horses through alternative methods. The following is a summary of some of those methods with information about their use.

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- Net gunning techniques normally used to capture big game animals also rely on helicopters. These methods can be safe and effective on a small scale with optimum ground conditions and access. The use of this method is not practical on a large scale and could result in additional injury to animals, humans and impacts due to the need for cross country off-road travel to access netted animals.
- Chemical immobilization is a very specialized technique and strictly regulated. Currently the BLM does not have sufficient expertise to implement this method and it would be impractical to use given the size of the HMAs, access limitations and approachability of the horses.
- Use of wranglers 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 HMAs, 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 used to herd the wild horses and dangerous to humans. For these reasons, this method was eliminated from further consideration.

2.3.6. Letting nature take its course

While some members of the public have advocated “letting nature take its course”, allowing horses to die of dehydration and starvation would be inhumane treatment and would be contrary to the WFRHBA, which mandates removal of excess wild horses. The damage to rangeland resources that results from excess numbers of wild horses is also contrary to the WFRHBA, which mandates the Bureau to “protect the range from the deterioration associated with overpopulation”, “remove excess animals from the range so as to achieve appropriate management levels”, and “to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area”.

Once the vegetative and water resources are at these critically low levels due to excessive utilization by an over population of wild horses, the weaker animals, generally the older animals, and the mares and foals, are the first to be impacted. It is likely that a majority of these animals would die from starvation and dehydration. The resultant population would be heavily skewed towards the stronger stallions which would lead to significant social disruption in the Complex. By managing the public lands in this way, the vegetative and water resources would be impacted first and to the point that they have no potential for recovery. Competition between wildlife and wild horses for forage and water resources would continue and wild horse numbers would continue to increase above AMLs.

Wild horses are aggressive around water sources, and some wildlife may not be able to compete, which could lead to the death of individual animals. Wildlife habitat conditions would deteriorate as wild horse numbers above AML reduce herbaceous vegetative cover. As the vegetation resources are over utilized to the point of no recovery wild horses would start showing signs of malnutrition and starvation which could lead to a catastrophic die off. This degree of resource impact would lead to management of wild horses at a greatly reduced level if BLM is able to manage for wild horses at all on the Complex in the future. For these reasons, this alternative was eliminated from further consideration.

2.3.7. Make on-the-ground and individualized excess wild horse determination prior to removal

An alternative to make on-the-ground and individualized excess wild horse determinations prior to removal was recommended through the public review process under the view set forth by some commenters that a tiered or phased removal of wild horses from the range is mandated by the

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WFRHBA. Specifically, this alternative would involve a tiered gather approach, whereby BLM would first identify and remove old, sick or lame animals in order to euthanize those animals on the range prior to gathering. Second, BLM would identify and remove horses for which adoption demand exists by qualified individuals, such as younger horses or horses with unusual and interesting markings. Last, BLM would remove any additional excess horses necessary to bring the horse/burro population back to AML.

This proposed alternative would only be viable in situations where the project area is contained within barriers (natural and/or manmade) which prohibits the animals movements outside the project area, the area is readily accessible and wild horses are clearly visible, and where the number of horses to be removed is so small that a targeted approach to removal can be implemented. Under the conditions present within the project area, however, this proposed alternative is impractical, if not impossible, as well as more disruptive to and less humane for a variety of reasons.

First, BLM does euthanize old, sick or lame animals on the range when such animals have been identified. This occurs on an on-going basis and is not limited to wild horse gathers. During a gather, if old, sick or lame animals are found and it is clear that an animal's condition requires the animal to be put down, that animal is separated from the rest of the group that is being herded so that it can be euthanized on the range. However, horses that meet the criteria for humane destruction because they are old, sick or lame usually, in most cases cannot be identified as such until they have been gathered and examined up close, so as to determine whether the horses have dental regression or damage, genetic defects (i.e. club foot), injuries (old/new), and the overall wild horse body condition. Old, sick and lame horses meeting the criteria for humane euthanasia are also only a very small percentage of the total number of horses to be gathered, comprising on average about 0.5% of gathered horses. Thus, in a gather of over 1,000 horses, potentially about five of the gathered horses might meet the criteria for humane destruction. Due to the size of the Complex, access limitations associated with topographic and terrain features and the challenges of approaching horses close enough to make an individualized determination of whether a horse is old, sick or lame, it would be virtually impossible to conduct a phased culling of such horses on the range without actually gathering and examining the horses.

Similarly, rounding up and removing wild horses for which an adoption demand exists, before gathering any other excess wild horses would be both impractical and much more disruptive and traumatic for the animals. The size of the Complex, terrain challenges, difficulties of approaching the horses close enough to determine age and whether they have characteristics (such as color or markings) that make them more adoptable, the impracticalities inherent in attempting to separate the small number of adoptable horses from the rest of the herd, and the impacts to the horses from the closer contact necessary, makes such phased removal a much less desirable method for gathering excess wild horses. This approach would create a significantly higher level of disruption for the horses on the range and would also make it much more difficult to gather the remaining excess wild horses. Furthermore, if BLM plans to apply any population controls to gathered horses prior to release, it would be necessary to gather more than just the excess horses to be removed.

Making a determination of excess as to a specific horse under this alternative, and then successfully gathering that horse would be impractical to implement (if not impossible) due to the size of the Complex, terrain challenges and difficulties approaching the wild horses close enough to make an individualized determination, would be extremely disruptive to the wild horses due to repeated culling and gather activities over a short period of time, would be cost-prohibitive, and would be unlikely to

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result in the successful removal of excess horses or application of population controls to released horses. This approach would also be less humane and more disruptive and traumatic for the horses. This alternative was therefore eliminated from any further consideration.

2.3.8. Raising the Appropriate Management Levels for Wild Horses

This alternative was not brought forward for detailed analysis because it is outside of the scope of the analysis, and is inconsistent with the Tonopah RMP and WFRHBA which require the immediately removal of excess wild horses, and is inconsistent with multiple use management. Adjusting AML must be based on the analysis of monitoring data. Monitoring data collected within the Stone Cabin Complex does not indicate that an increase in AML is warranted. Wild horse AML would be analyzed in future Rangeland Health Assessments which would include involvement with the interested public.

2.3.9. Control of Wild Horse Numbers by Natural Means

This alternative would use natural means, such as natural predation, to control the wild horse population. This alternative was eliminated from further consideration because it is contrary to the WFRHBA which requires the BLM to protect the range from deterioration associated with an overpopulation of wild horses. It is also inconsistent with the Tonopah RMP which directs the Battle Mountain District of the BLM to conduct gathers as necessary to achieve and maintain AMLs. The alternative of using natural controls to achieve a desirable AML has not been shown to be feasible in the past. Wild horse populations in the Stone Cabin Complex are not substantially regulated by predators, as evidenced by the 16% average annual increase in the wild horse populations within these HMAs. In addition, wild horses are a long-lived species with documented foal survival rates exceeding 92% and are not a self-regulating species. This alternative would result in a steady increase in the wild horse populations which would continue to exceed the carrying capacity of the range until severe or unusual conditions that occur periodically-- such as blizzards or extreme drought-- cause a catastrophic mortality of wild horses in the Complex. Refer to 2.3.6 above for more detailed information about an Alternative that would allow nature to take its course.

2.3.10. Designation of the HMAs to be Managed Principally for Wild Horses

This action to Designate the Stone Cabin Complex as a “Wild Horse and Burro Range” under 43 CFR 4710.3-2 would require the amendment of the Tonopah RMP, 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. As this is not an “exclusive” designation, it potentially would not change the level of livestock grazing permitted to occur in the area. There are currently four designated Wild Horse and Burro Ranges in the western United States that are managed principally for wild horses and burros consistent with 43 CFR 4710.3-2. These are the Pryor Mountain Wild Horse Range in Montana; the Little Book Cliffs Wild Horse Range in Colorado; the Nevada Wild Horse Range and the Marietta Wild Burro Range in Nevada.

3. Affected Environment and Environmental Consequences

To comply with the National Environmental Policy Act (NEPA), the Bureau of Land Management is required to address specific elements of the environment that are subject to requirements specified in statute or regulation or by executive order (BLM 1988, BLM 1997, BLM 2008). The following table outlines the elements that must be addressed in all environmental analyses, as well as other resources deemed appropriate for evaluation by the BLM, and denotes if the Proposed Action, sequential alternatives, or the No Action Alternative affects those elements.

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Potential or expected impacts to the affected resources are discussed following the tables. Direct impacts are those that result from the actual gather and removal of wild horses from the Stone Cabin and Saulsbury HMAs. Indirect impacts are those impacts that occur once the excess animals are removed.

Table 3a: Elements Checklist

ELEMENT	PRESENT YES/NO	AFFECTED YES/NO	RATIONALE
Air Quality	Yes	No	The proposed gather area is not within an area of non-attainment or areas where total suspended particulate matter exceeds Nevada air quality standards. Areas of disturbance would be temporary and fleeting in nature, and would take the form of fugitive dust.
ACECs	No	No	Resource is not present.
Cultural Resources	Yes	No	Through adherence of the Standard Operating Procedures (SOPs) (Appendix A), potential impacts to cultural sites would be eliminated. Archeological clearance of gather corrals, holding corrals and others areas of potential effects would occur prior to construction. If cultural resources were encountered, those locations would not be utilized unless impacts could be avoided.
Environmental Justice	No	No	The Proposed Action or alternatives would have no effect on minority or low-income populations.
Fish Habitat	No	No	Resource is not present.
Flood Plains	No	No	Resource is not present.
Forests and Rangelands (HFRA only)	Yes	No	This project does not meet the criteria to qualify as an HFRA project.
Noxious Weeds and Invasive, Nonnative Species	Yes	Yes	Discussed below.
Migratory Birds	Yes	Yes	Discussed below under Wildlife.
Native American Religious Concerns	No	No	There are no known Native American concerns.
Prime or Unique Farmlands	No	No	Resource not present.
Threatened or Endangered Species (plants and animals)	No	No	No Threatened or Endangered Species are known to exist within the project area.
Wastes, Hazardous or Solids	No	No	Not Present.
Water Quality	Yes	No	Resource would not be affected.
Wetlands and Riparian Zones	Yes	Yes	Discussed in detail below.
Wild and Scenic Rivers	No	No	Resource not present.
Wilderness	Yes	No	Wilderness Study Areas are present. Discussed in detail below.

Other resources of the human environment that have been considered for this EA are listed in the table below.

Table 3b Checklist of other Resources

OTHER RESOURCES	PRESENT YES/NO	AFFECTED YES/NO	RATIONALE
Grazing/Livestock Management	Yes	Yes	Discussed below.
Land Use Authorization	Yes	No	Resource is not affected by the proposed action or alternatives
Minerals	Yes	No	Resource is not affected by the proposed action or alternatives.

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OTHER RESOURCES	PRESENT YES/NO	AFFECTED YES/NO	RATIONALE
Paleontological Resources	No	No	Resource is not affected by the proposed action or alternatives. There is a minimal likelihood that resources would be present. Any surface disturbance resulting from the proposed gather would not be sufficient to cause impacts.
Recreation	Yes	No	Resource is not affected by the proposed action or alternatives.
Socio-Economic Values	Yes	No	Resource is not affected by the proposed action or alternatives.
Soils	Yes	Yes	Discussed below.
Special Status Species (plants and animals)	Yes	Yes	Discussed below under Wildlife.
Vegetation	Yes	Yes	Discussed below.
Visual Resources	Yes	No	Resource is not affected by the proposed action or alternatives. Gather operations would be temporary and isolated in nature. There would be no permanent changes to the landscape.
Wild horses	Yes	Yes	Discussed below.
Wildlife	Yes	Yes	Discussed below.

3.1. General Description of the Affected Environment

The general area receives 5-8 inches of annual precipitation in the valley bottoms. The mountain tops can receive as much as 16 inches. The average precipitation received in 2 rain gauges in the Stone Cabin HMA since 1985 is 6.1 and 7.9 inches annually. Summers are hot and dry, with high temperatures in the 90's or higher. Winters are cold, with temperatures dropping below freezing and occasionally below zero. The Stone Cabin and Saulsbury HMAs receive snow during the winter which may range from several inches to nearly a foot in depth depending upon the severity of the winter and elevation.

Drought is a recurrent feature of arid Central Nevada. Drought should not be confused with aridity. Drought has been defined as a period when precipitation is less than 75% of the average amount (Society for Range Management 1989) while aridity refers to areas of low rainfall and is a permanent feature of climate. From 1944 to 1984 drought occurred in 17 out of 40 years in the southwestern United States (Holecheck and al. 1995). Klages (1942) concluded that “even slight reductions from normal precipitation can cause severe reductions in plant yield in areas below 300 mm (~11.81 inches) of precipitation. Two or more consecutive years of drought have far more impact on vegetation than one year of drought followed by normal or above-normal precipitation.”

3.2. Wild Horses

Affected Environment

Stone Cabin HMA

The Stone Cabin HMA has 403,736 acres of public lands. The Stone Cabin HMA is split by the Highway 6 right of way fence constructed in 2009. The Hot Creek HMA borders the northeastern side of the HMA and the Nevada Wild Horse Range (NWHR) is located to the south within the Nevada Test and Training Range (NTTR). The Reveille HMA forms the southeastern boundary of the Stone Cabin HMA. Refer to Figure 1 on page 6 for the geographic location of the Stone Cabin and Saulsbury HMAs and associated gather area.

Saulsbury HMA

The Saulsbury HMA has 81,152 public land acres and is divided into 2 parcels. The southern unit of the HMA is located immediately west of the Stone Cabin HMA and south of Nevada State Highway 6.

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This southern portion is bordered to the east by the Stone Cabin HMA and to the south by the NTTR. The northern parcel of the Saulsbury HMA includes the majority of the Hunts Canyon allotment, north of Nevada State Highway 6. It is bordered to the east by U.S. Forest Service Administered lands. These USFS administered lands include the Monitor WHT and the southern portion of the Monitor Range which separates the northern portions of the Saulsbury and Stone Cabin HMAs.

The proposed gather area includes areas within and outside of the HMA boundaries throughout the Stone Cabin, Ralston, Hunts Canyon, and Reveille Allotments, and a portion of the Monitor Allotment. These areas fall under the jurisdictional boundaries of the BLM TFO. . The total proposed gather area representing the associated allotments and HMAs includes 885,000 acres.

The Stone Cabin HMA is contiguous with the Reveille HMA to the east, portions of the NWHR to the south, and part of the Saulsbury HMA to the west. Though fenced, some movement between HMAs is expected, particularly between Stone Cabin and Reveille HMAs due to the terrain, discontinuous fencing and known trailing and wild horse movement patterns. Movement has been documented between Stone Cabin HMA and the NWHR. Prior to 2009, the State Highway 6 right-of-way was not fenced, allowing unrestricted movement between north and south portions of the Stone Cabin HMA. Wild horses from the Saulsbury HMA continue to cross the highway on USFS administered land as the highway is not fenced.

Directly north of the Stone Cabin HMA lies the BLM's Little Fish Lake HMA and United States Forest Service's (USFS) Little Fish Lake Wild Horse Territory (WHT) and directly west lies the Hot Creek HMA. Situated between the Stone Cabin and Saulsbury HMAs is the Monitor WHT. Regular movement occurs between the Saulsbury and Stone Cabin HMAs into the Monitor WHT as there are no fences along the boundary between BLM and USFS lands. During winter months, wild horses may move from the Monitor WHT into the lower elevations onto the Saulsbury HMA, and in the summer months, wild horses may move into slightly higher elevations of the Monitor WHT. The BLM and USFS will manage these areas as a Complex in the future when USFS finalizes the AML for the Monitor WHT. It is anticipated that some movement of horses onto USFS lands will occur during the proposed gather due to human presence and gather activities which may reduce the efficiency of the gather operations.

These HMAs have potential movement with other BLM HMAs and USFS WHTs which span nearly 100 miles north and 20-30 miles west of the Stone Cabin Complex. This region of Nevada has 13 HMAs and WHTs in which wild horses could move throughout and in between. Though the degree of movement is unknown due to the inability to track individual wild horse movement, adequate interchange between HMAs within this "metapopulation" likely occurs to maintain genetic health of the Stone Cabin Complex. Samples were collected for genetic analysis during the most recent gather in 2007. The analysis reveals that genetic variation and allelic diversity of the Stone Cabin and Saulsbury HMAs is high, indicating interchange of animals from neighboring HMAs, and low risk for inbreeding. Because of the mixed ancestry of these herds, the genetics data reveals no clear breed group association; however, there is genetic similarity with Oriental breeds followed by the Old World Spanish. Compared to other Nevada herds, the Stone Cabin and Saulsbury herds are most closely associated with the NWHR, with additional similarity to Callaghan and New Pass/Ravenswood HMAs. The AML for the Stone Cabin HMA was established through the Consent Decision signed by Administrative Law Judge David Torbet on May 11, 1992, through the Department of Interior Office of Hearings and Appeals, Hearings Division. The Consent Decision established an AML for the Stone

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Cabin Allotment (and HMA) of 364 wild horses, and the Ralston allotment portion of the Saulsbury HMA at 10 wild horses. The AML for the portion of the Saulsbury HMA in the Hunts Canyon Allotment was established as 30 wild horses through a Final Multiple Use Decision (FMUD) in 1996.

The AML was established as mentioned in order to ensure that the population was in balance with available forage resources and to make progress towards RMP Objectives. Mount Lewis Field Office (MLFO) and TFO staff completed the most recent helicopter inventory of the Stone Cabin and Saulsbury HMAs in August 2009, which resulted in a direct count of 397 wild horses in the Stone Cabin HMA and 147 wild horses in the Saulsbury HMA. At this time, the Monitor WHT was also inventoried with a direct count of 149. The south portion of the Stone Cabin and Saulsbury HMAs were inventoried again in February 2010, in conjunction with the Reveille HMA with a direct count of 241 wild horses. Following the spring 2011 foaling season with an anticipated 16% growth rate, the population is estimated to be 552 animals in the Stone Cabin HMA, and 200 animals in the Saulsbury HMA.

It is anticipated that the age structure of the Stone Cabin and Saulsbury 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. The release animal data from the most recent gather in 2007 was input into the WinEquus population model to predict the current population age structure and sex ratio. The modeled sex ratio is 46% mares and 54% stallions.

The Stone Cabin Complex wild horses exhibit common colors associated with wild horses such as bay, brown, chestnut, sorrel and black. What makes the Stone Cabin Complex unique is the Stone Cabin Grey which is unique to the areas and was reportedly revered by Velma Johnston. Some sources indicate that the Stone Cabin Grey horses are descendants of a Steeldust Grey Thoroughbred, well known in Texas that Jack Longstreet (famous gunfighter) put out in the Stone Cabin Valley. Additionally, fine quarter horses owned by local ranchers in the area years ago may have contributed to the quality of the horses in the area today⁵. The Stone Cabin Grey is typically born black or dark, and begins to "roan out" as early as 3-4 years of age, continuing to become more grey until they are nearly white by age 15. Many of the grey horses retain dark black or grey manes and tails.

Stone Cabin Complex wild horses are mild tempered and have become accustomed to humans and vehicle traffic over the years. The access by road, and distribution of the wild horses have made these HMAs prime viewing areas for the public, and a wild horse viewing destination for travellers. The Nevada Handbook published for people wanting to know more about Nevada by Moon Publications, Inc., states this about wild horses: "Controversy and drought notwithstanding, it's a thrill to see free-roaming herds. One of the best places to observe wild horses is along U.S. 6 east of Tonopah and west of Warm Springs [the Stone Cabin HMA]."

The very first congressionally approved wild horse gather after the passage of the Wild Free-Roaming Horse and Burro Act of 1971 was conducted in this HMA in 1975, with Velma Johnston herself in attendance. Since that time, numerous removal operations have taken place, including a history of emergency removals due to drought.

5: <http://anamericanmustang.blogspot.com/2008/10/stone-cabin-grey.html>

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The most recent gather of the Complex was completed in February 2007. Through the gather, a total of 588 wild horses were gathered from the Stone Cabin and Saulsbury HMAs, which included 102 wild horses outside of HMA boundaries in Monitor Valley.

A total of 128 wild horses were released, consisting of 70 mares, one newborn foal and 57 studs. The post gather population was estimated to be approximately 241-281 wild horses based on the number of wild horses re-released to the range, the estimated number uncaptured, and an estimated 60-100 that moved north into the Little Fish Lake HMA and WHT.

Wild horses have mostly maintained adequate health and no emergency gathers have been necessary in recent years. Due to extreme drought in 1996/1997 and limited water and forage, an emergency gather was conducted in 1997, removing all but an estimated 50 wild horses within the Stone Cabin HMA and 30 wild horses within the Saulsbury HMA. Since that time, the completion of two additional gathers has prevented the population from growing to extreme levels in either HMA and emergencies have not occurred.

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 the proposed gather area. Throughout the HMAs administered by the Battle Mountain District, there are few predators that exist to control wild horse or burro populations. Some mountain lion predation occurs, but it is not believed to be substantial. Coyote are not prone to prey on wild horses unless young, or extremely weak. Other predators such as wolf or bear do not exist. Wild horses in general are very resilient and adaptable animals with a metabolism that has evolved to allow them to survive and thrive in poor quality habitat (compared to their domestic counterparts). Wild horses typically do not begin to show signs of body condition decline until the habitat components are severely deficient. Once the decline begins, their health deteriorates rapidly.

Population Modeling Summary

Population modeling was completed for the proposed action and alternatives to analyze how the alternatives would affect the wild horse populations. Analysis included removal of excess wild horses with no fertility control, as compared to alternatives which consider removal of excess wild horses with fertility control and sex ratio adjustments. The No Action (no removal) Alternative was also modeled (Appendix E). The primary objective of the modeling was to identify if any of the alternatives “crash” the population or cause extremely low population numbers or growth rates. The results of population modeling show that minimum population levels and growth rates would be within reasonable levels and adverse impacts to the population would not be likely under Alternatives 1, 2, and 3. Graphic and tabular results are displayed in detail in Appendix E.

The results of the modeling suggest that implementation of fertility control (Proposed Action, Alternative 2) when compared to Alternatives 1 and 3 that does not utilize fertility control treatments could result in reduced population growth rates. Based on the modeling projections (Table 1 in Appendix E), the Proposed Action or Alternative 2 would be most effective in slowing wild horse population growth rates.

Environmental Consequences

Direct and Indirect Impacts of the Proposed Gather

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The purpose of this section is to provide relevant information to the proposed gather and summarize the potential direct and indirect effects to wild horses that could occur with implementation of the Proposed Action and Range of Alternatives.

Proposed Action -- Selective removal, fertility control, 60:40 sex ration favoring males.

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 and sex ratio adjustment 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 until AML is exceeded, and intervals between gathers, and reduce disturbance to individual animals as well as to the herd social structure over the foreseeable future. The modeling suggests that that average population growth rates under the median trial for the Proposed Action would be 6.1%. Gathers would still need to occur every 3 years in order to re-apply fertility control, however, according to the modeling, 289-560 fewer wild horses would need to be removed from the range than under Alternatives 1 and 3 over 11 years.

According to the modeling, if follow-up gathers could be implemented on a regular basis in future years, it is possible that the population control measures may be adequate to maintain the population within the existing AMLs if implemented successfully, with the need to remove few if any wild horses from the range.

Reducing the wild horse population back to the 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. 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.

Gather Operations – Helicopter Trap

The BLM has been gathering excess wild horses from public lands since 1975, beginning in the Stone Cabin HMA, and using helicopter since the late 1970's. Refer to Appendix A for information about methods that are utilized to reduce injury or stress to wild horses and burros during gathers. Since 2004, BLM Nevada has gathered over 26,000 excess animals. Of these, mortality has averaged only 0.5% which is very low when handling wild animals. Another 0.6% of the animals captured were humanely euthanized due to pre-existing conditions and in accordance with BLM policy. This data affirms that the use of helicopters and motorized vehicles has proven to be a safe, humane, effective and practical means for the gather and removal of excess wild horses from the range. BLM staff is on-site at all times to observe the gather, monitor animal health, and coordinate the gather activities with the contractor. The SOPs outlined in Appendix A would be implemented to ensure that the gather is conducted in a safe and humane manner, and to minimize potential impacts to or injury of the wild horses. In their August 2012 BLM Task Force Report, the AAEP concluded that the care, handling and management practices utilized by the agency are appropriate for this population of horses and generally support the safety, health status and welfare of the animals.

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Over the past 35 years, various impacts to wild horses from gathers have been observed. Individual, direct impacts to wild horses include handling stress associated with the capture, sorting, animal handling, and transportation of the animals. The intensity of these impacts varies by individual, and is indicated by behaviors ranging from nervous agitation to physical distress. Observations made through completion of gathers show that the majority of the wild horses captured acclimate quickly to the holding corral situation, becoming accustomed to water tanks and hay, as well as human presence. Both the BLM Wild Horse and Burro Specialists, and the Gather Contractor and crew are very attentive to the needs of all wild horses captured during gathers, ensuring their health and safety.

Accidental death or the need to humanely euthanize animals, as a direct result of gather activities is infrequent and averages less than one half to one percent of the wild horses gathered (0.5-1.0%). Injuries sustained by wild horses during gathers may include nicks and scrapes to legs, face, or body from brush or tree limbs while being herded to the gather corrals by the helicopter. Rarely, wild horses will encounter barbed wire fences and will receive wire cuts. These injuries are generally not fatal and are treated with medical spray at the holding corrals until a veterinarian can examine the animal. During some gathers, due to temperament and/or body condition, injuries are more frequent while on other gathers, no wild horses are injured or die.

Most injuries are sustained once the animal has been captured and is either within the gather corrals, holding corrals, or occurs during sorting. These injuries result from kicks and bites or from collisions with corral panels or gates. Transport and sorting is completed as quickly and safely as possible to reduce the occurrence of fighting and then the wild horses are moved into the large holding pens to settle in with hay and water. Injuries received during transport and sorting consist of superficial wounds of the rump, face, or legs. Occasionally, horses may sustain a spinal injury or a fractured limb which requires humane euthanasia but these injuries are rare. Similar injuries could be sustained if wild horses were captured through bait and/or water trapping, as the animals still need to be sorted, aged, transported, and otherwise handled following their capture.

Indirect individual impacts are those impacts which occur to individual horses after the initial stress event, and may include spontaneous abortions in mares, and increased social displacement and conflict in stallions. 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 with amongst older stallions following sorting and release into the stud pen. Traumatic injuries usually do not result from these conflicts.

Injuries and death may occur within the holding pens containing mares awaiting fertility control and stallions awaiting release. Oftentimes, these animals must be held for 7-10 days or longer while the gather in a given area is being completed, before they can be released. During this time, through fighting and other behaviors, injuries can occur but rarely result in death. Spontaneous abortion events among mares following capture is very rare. Observations following capture indicate the rate of miscarriage varies, but can occur in about 1 to 5% of the captured mares, particularly if the mares are in very thin body condition or in poor health.

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,

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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

Through the capture and sorting process, wild horses are examined for health, injury and other defect. BLM Euthanasia Policy IM-2009-041 is used as a guide to determine if animals should be euthanized (refer to SOPs Appendix A). 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 prevents them from being able to travel or maintain adequate 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.

A few foals may be orphaned during a gather. This can occur if the mare rejects the foal, the foal becomes separated from its mare and cannot be matched up following sorting, the mare dies or must be humanely euthanized during the gather, the foal is ill or weak and needs immediate care that requires removal from the mare, or the mare does not produce enough milk to support the foal. On occasion, foals are gathered that were previously orphaned on the range (prior to the gather) because the mother rejected it or died. These foals are usually in poor, unthrifty condition. Every effort is made to provide appropriate care to orphan foals. Veterinarians may administer electrolyte solutions or orphan foals may be fed milk replacer as needed to support their nutritional needs. Orphan foals may be placed in a foster home in order to receive additional care. Despite these efforts, some orphan foals may die or be humanely euthanized as an act of mercy if the prognosis for survival is very poor. Due to the timing of the proposed gather, it is unlikely that orphan foals will be encountered as the majority of the current year's (2011) foals will be weaned already from their mothers.

Wild horses are usually in very good fitness and are able to endure the physical requirements of the gather much better than their domestic counterparts. However, the environmental conditions and the overall health and well-being of the wild horses is continually monitored through both summer and winter gathers to adjust gather operations as necessary to protect the wild horses from gather related health issues. For these reasons, flexibility in gather operations is an inherent part of all gathers.

A winter gather may also result in less stress as the cold and snow may not affect wild horses to the degree that heat and dust might during a summer gather. Wild horses may be able to travel farther and over terrain that is more difficult during the winter, even if snow covers the ground. Water requirements are lower during the winter months, making distress from heat exhaustion extremely rare. By comparison, during summer gathers, wild horses may travel long distances between water and forage and have the potential to become more easily dehydrated. In any case, wild horses are typically in top physical fitness and are able to endure the physical demands of a wild horse gather (whether in winter or summer) better than a domestic horse, regardless of breed due to the requirements of surviving in the wild. Most temperature related issues during a gather can be mitigated by adjusting daily gather times to avoid the extreme hot or cold periods of the day.

Heat stress does not occur often, but if it does, death can result. Should wild horses be in a weakened state due to emergency conditions brought on by a shortage of water or forage, higher mortality could be experienced due to these pre-existing conditions. In these cases, the BLM takes extra precautions to ensure the safe capture and post-gather care of these animals and provides immediate veterinary care if necessary. Electrolytes can be administered to the drinking water during gathers that involve animals

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in weakened conditions during summer gathers. Additionally, Battle Mountain District Wild Horse and Burro staff maintains a supply of electrolyte paste if needed to directly administer to an affected animal. The BLM and the contractor are also pro-active in controlling dust in and around the holding facility and the gather corrals to limit the horses' exposure during summer months.

Wild horses may be located at higher elevations and denser tree cover during summer months, increasing the difficulty of the gather. Wild horses are often located in lower elevations, in less steep terrain during winter gathers due to snow cover in the higher elevations. Subsequently, the horses are closer to the potential gather corrals, and need to maneuver less difficult terrain in many cases. Deep snow cover can increase fatigue and stress during winter gathers. The helicopter pilot, regardless of season, allows horses to travel slowly at their own pace. The Contractor may plow trails in the snow leading to the gather corrals to make it easier for horses to travel to the gather site.

The BLM does not gather wild horses, with a helicopter unless it is an emergency, during the six weeks before or after the *peak* foaling period (April and mid-May) which correlates to the 4 month period between March 1 and June 30. It is not uncommon for a very small number of foals to be encountered during any month of the year however most are born during March thru June. If newborn foals or foals too young to wean are gathered, they are matched up with their mares after being gathered. During the proposed gather, most foals would be 6-11 months old and of bigger body size, and can easily be weaned, if not weaned already. Fall and winter time-frames are less stressful to foals than summer gathers. Young foals in summer months may be more prone to dehydration and complications from heat stress. Additionally, the handling, sorting and transport can be a stress to the young animals however, the BLM staff on site takes every precaution to assure that the horses are handled and maintained to reduce these concerns.

Population Growth Controls (Fertility Control treatments and sex ratio adjustments)

Under the Proposed Action and Alternative 2, the objective for the gather would include the application of fertility control to approximately 80 mares released back to the range. 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 procedures (SOPs, Appendix A. 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. 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). Available data from 20 years of application to wild horses contradicts the claim that PZP application in wild mares causes mares to foal out of season or late in the year (Kirkpatrick and Turner 2003). The PZP vaccine is currently being used on over 75 horse management areas for the Bureau of Land Management and its use is appropriate for all free-ranging wild horse herds. The long-term goal is to reduce or eliminate the need for gathers and removals (Kirkpatrick et al. 2010).

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The highest success obtained for fertility control has been achieved when applied during the timeframe of November through February. The efficacy for the application of the two-year PZP vaccine based on winter application is as follows:

Table 3. Fertility Control Efficacy (Effectiveness)

Year 1	Year 2	Year 3	Year 4
Normal	94%	82%	68%

The treatment would be controlled, handled, and administered by a trained BLM employee (SOPs, Appendix A). 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.

As the sole approach, contraception would not allow the BLM to achieve the original population objectives; however, in conjunction with other techniques (e.g., removals of excess animals and adoption) and through incorporation of other population control techniques (e.g., sex ratio adjustments, sterilization), it now provides a valuable tool in a larger, adaptive management approach to wild horse and burro management.

Contraception may be a cost effective and humane treatment to employ in horses to prevent increases in populations, or with other techniques, to reduce horse populations (Bartholow 2004). In general, contraception would not remove horses from an HMA's population which would result in some continuing environmental effects by those individuals. Horses are long-lived reaching 20 years of age in the wild and those horses returned to the HMA may continue exerting throughout their life span negative effects on the environment as described above, as opposed to the removal of a horse. Contraception, if effective, reduces future reproduction. Limiting future population increases of horses would limit increases in environmental damage from higher densities of horses. It may also reduce the effect of horse gather activities on the environment (if it limits the numbers of horse gathers required). If application of contraception to horses requires capturing and handling horses, the risks and costs associated with capture and handling of horses may be roughly equivalent (not counting the cost of adoption). Application of contraception to older animals and returning them to the HMA may reduce risks associated with horses that are difficult to adopt or handle in captivity.

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

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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. Kirkpatrick et al. (2010) conclude by stating that “the larger question is, even if subtle alterations in behavior may occur, this is still far better than the alternative” and that the “other victory for horses is that every mare prevented from being removed, by virtue of contraception, is a mare that will only be delaying her reproduction rather than being eliminated permanently from the range. This preserves herd genetics, while gathers and adoption do not.” (Kirkpatrick and Turner 2002, 2008; Turner and Kirkpatrick 2002, 2003; Willis et al. 1994.)

Population wide indirect impacts are more difficult to quantify and would occur over time. A large percentage of inoculated mares would experience reductions in fertility. Recruitment of foals into the population would be reduced over a three-year period. The potential multi-year reprieve from foaling would greatly increase overall health and fitness of the mares, as well as the health of the foals born after fertility returns.

Following resumption of fertility, the proportion of mares that conceive and foal could be increased (rebound effect) due to the increased fitness. Additionally, fertility control treatment could cause breeding and foaling seasons to become “out of sync” with foals born earlier or later in the year, or throughout the year but is generally associated with the timing of the treatment and not the vaccine itself. Research is continuing to document and quantify these effects.

The indirect effect of fertility control and adjustment of sex ratios to favor stallions would extend the time before another gather is required when compared to a gather without implementation of either population growth control method. Wild horses would experience reduced stress and disruption to population dynamics as a result of less frequent gathers. However, it is being recommended that the BLM return to these areas every 2-3 years to re-apply fertility control in order to maintain its effectiveness in controlling population growth rates. By reducing population growth rates, the number of wild horses that would have to be removed from the HMAs during future gathers would also be reduced or possibly eliminated.

Fertility control application would allow the average population size to be maintained at a level consistent with the AML. Long term genetic and physical health and future reproductive success of mares within the herd would be sustained. Reduced population growth rates and smaller population sizes would also allow for improvements to range condition, which would have long-term benefits to wild horse habitat quality and contribute to the achievement and maintenance of a thriving natural ecological balance.

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 Alternatives 1 and 2, 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

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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.

Modification of sex ratios for a post-gather population favoring stallions could also reduce growth rates and subsequent population size, as a smaller proportion of the population would consist of mares that are capable of giving birth to foals. As a result, gather frequency could be reduced as well as the numbers of horses gathered and removed in future gathers.

Wild horses that are gathered would be subject to one or more of several outcomes listed below:

Wild Horses Remaining or Released into the HMAs following Gather

The post-gather goal would be for 218 wild horses to remain within the Stone Cabin HMA, and 29 animals in the Saulsbury HMA. Approximately 505 excess wild horses would be removed during the gather, with an estimated 28 and 10 wild horses un-captured from Stone Cabin and Saulsbury HMAs, respectively. 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 and with most if not all impacts to individual wild horses disappearing within hours to several days of release. No observable effects associated with these impacts would be expected within one month of release except a heightened awareness of human presence.

The primary effects to the wild horse population that would be directly related to the 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 Stone Cabin and Saulsbury HMAs are expected to reflect a normal age structure due to the length of time since the last gather or other activities that would have influenced the age structure. The National Selective Removal Criteria of selecting wild horses for removal (Appendix A) would be followed to the extent possible, however it is expected that the majority of released and non-gathered animals would consist of all age groups greater than 5 years of age.

Herd shifts favoring older age horses (over 15 years) have been observed resulting in a favoring of stallions over mares in some herds. Explanations include sex-based differences in reproductive stress (relative demand for individual contributions to reproduction) and biological stress (timing the most physically demanding period of the annual cycle).

The effects of successive removals on populations causing shifts in herd demographics favoring younger horses (5 to 15 years) would also have direct consequences on the population. These impacts are not thought of typically as adverse to a population. They include development of a population which is expected to be more biologically fit, more reproductively viable, and more capable of enduring stresses associated with traumatic natural and artificial events.

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It is not expected that genetic health would be impacted by the Proposed Action, or Action Alternatives. Smaller, *isolated* populations (< 200 total population size) are particularly vulnerable when the number of animals participating in breeding drops below a minimum needed level (Coates-Markle, 2000), (emphasis added). The wild horses in the Stone Cabin or Saulsbury HMA do not fall into this category because of the known intermixing between the Stone Cabin HMA and the Reveille and Little Fish Lake HMAs, and genetic similarity to the NWHR. Wild horses in the Saulsbury HMA often mix with wild horses on the Monitor WHT (administered by the U.S. Forest Service), which is not included in this gather plan. Most wild horse herds sampled have high genetic heterozygosity, genetic resources are lost slowly over periods of many generations, and wild horses are long-lived with long generation intervals (Singer, 2000). Genetic analysis completed following the most recent gather in 2007 reveals that the genetic variation and allelic diversity of the Stone Cabin and Saulsbury HMAs is high, indicating interchange of animals from neighboring HMAs, and low risk for inbreeding.

The genetic effective population size (N_e) is a measure of the total number of mares and stallions which contribute genetically, through successful breeding, to the next generation. A population with an age structure involving high numbers of young animals (<5 years of age) will have a lower value of N_e than a similar sized population with a larger component of older breeding-age animals (>5 years of age). Through implementation of the BLM selective removal policy, the wild horses aged 5-10 years of age would be the first priority for release back to the range. Most or all wild horses under five years of age would be removed, thus resulting in a potential increase to the N_e for the Stone Cabin and Saulsbury HMAs.

With completion of a wild horse gather to remove excess wild horses, deterioration of the range associated with wild horse overpopulation would be avoided and rangelands would have the opportunity to recover from prior overpopulation impacts. Managing wild horse populations in balance with the available habitat and other multiple uses would lessen the potential for individual animals or the herd to be affected by drought, and would avoid or minimize the need for emergency gathers, which would reduce stress to the animals and increase the success of these herds over the long-term. Individuals would be able to maintain optimum body weight and overall health even in “bad” years marked by poor precipitation or harsh winters. Through maintenance of AML, progress would be made towards the Mojave-Southern Great Basin Standards and Guidelines for Rangeland Health, Allotment Specific and RMP Objectives.

A thriving natural ecological balance between wild horses and other resource values would be maintained throughout the Stone Cabin and Saulsbury HMAs, and future deterioration of the range would be avoided. It is anticipated that at population levels consistent with the AML wild horses within the HMAs would also be less likely to move outside the boundaries of the HMA and into non-HMA areas that are not managed for wild horses. Managing wild horse populations in balance with the habitat and other multiple uses would ensure that the populations are less affected by drought or other climate fluctuations, and that emergency gathers are either avoided or minimized, thus reducing stress to the animals, and increasing the long-term success of these herds.

Temporary Holding Facilities During Gathers

Wild horses gathered would be transported from the gather corrals (trap sites) to a temporary holding corral within the HMAs primarily in goose-neck trailers however straight deck semi-trailers may be used. At the temporary holding corrals wild horses would be aged and sorted into different pens based

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on sex. The horses would be fed quality hay and water while in the holding facility. Mares and their un-weaned foals (if encountered) would be kept in pens together. Horses identified for retention in the HMA and for fertility control treatment would be maintained in these temporary corrals until the fertility control treatment can be implemented and they be returned to their respective HMA.

At the temporary holding facility, recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses would be provided by a veterinarian. 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).

Trap Site Adoption Event

If public interest is received the Tonopah Field Office may hold a small trap-site adoption event in conjunction with the Stone Cabin Complex gather. A small number of wild horses (15-20) would be marked and put into separate pens and offered for adoption by pre-qualified applicants. Once adopted, the wild horses would be freezemarked, vaccinated, dewormed and loaded into the adopters stock trailers for transport home. All standard adoption requirements would apply. The trap site adoption would allow wild horses to be transported directly to their new homes without additional transport to BLM short term facilities and the added stress of additional handling.

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

About 505 total excess wild horses would be removed. Wild horses identified for removal would be transported from the capture/temporary holding corrals to the designated BLM short-term holding corral facility(s) in straight deck semi-trailers or goose-neck stock trailers.

Vehicles would be inspected by the BLM Contracting Officer's Representative (COR) or Project Inspector (PI) prior to use to ensure wild horse safety. Wild horses would be segregated by age and sex and loaded into separate compartments. A small number of mares may be shipped with foals. Transportation of recently captured wild horses is limited to a maximum of 8 hours. During transport, potential impacts to individual horses can include stress, as well as slipping, falling, kicking, biting, or being stepped on by another animal. Unless wild horses are in extremely poor condition, it is rare for an animal to be seriously injured or to die during transport.

Upon arrival at the short term holding facility, recently captured wild horses would be off-loaded by compartment and placed in holding pens where they are fed quality hay and given water. Most wild horses begin to eat and drink immediately and adjust rapidly to their new situation. At the short-term holding facility, a veterinarian examines each load of horses and provides recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club feet, and other severe congenital abnormalities) would be humanely euthanized using methods acceptable to the AVMA. Wild horses in very thin condition or animals with injuries would be sorted and placed in hospital pens, fed separately and/or treated for their injuries as indicated. Recently captured wild horses, generally mares, in very thin condition may have difficulty transitioning to feed. Some of these animals may be in such poor condition that it is unlikely they would have survived if left on the range. Some mares may lose their pregnancies. Every effort

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would be taken to help the mare make a quiet, low stress transition to captivity and domestic feed to minimize the risk of miscarriage or death.

At short-term corral facilities, once the horses have adjusted to their new environment, they are prepared for adoption or sale. Preparation involves freeze-marking the animals with a unique identification number, drawing a blood sample to test for equine infectious anemia (Coggins test), vaccination against common equine diseases, castration, and de-worming. During the preparation process, potential impacts to wild horses are similar to those that can occur during handling and transportation. Serious injuries and deaths from injuries during the preparation process are rare, but can occur.

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

Adoption or Sale with Limitations, and Long Term Pastures

Adoption applicants are required to have at least a 400 square foot corral with panels that are at least six feet tall for horses over 18 months of age. Applicants are required to provide adequate shelter, feed, and water. The BLM retains title to the horse for one year and the horse and the facilities are inspected to assure the adopter is complying with the BLM's requirements. After one year, the adopter may take title to the horse after an inspection from an official, veterinarian, or other individual approved by the authorized officer to ensure humane care, at which point the horse becomes the property of the adopter. Adoptions are conducted in accordance with 43 CFR 4750.

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

Potential impacts to wild horses from transport to adoption, sale or long-term grassland holding pastures (LTPs) are similar to those previously described. One difference is that when shipping wild horses for adoption, sale or LTP, animals may be transported for a maximum of 24 hours. Immediately prior to transportation, and after every 18-24 hours of transportation, animals are offloaded and provided a minimum of 8 hours on-the-ground rest. During the rest period, each animal is provided access to unlimited amounts of clean water and 25 pounds of good quality hay per horse with adequate feed bunk space to allow all animals to eat at one time. Most animals are not shipped more than 18 hours before they are rested. The rest period may be waived in situations where the travel time exceeds the 24-hour limit by just a few hours and the stress of offloading and reloading is likely to be greater than the stress involved in the additional period of uninterrupted travel.

Wild horses generally 5 years of age and older (those for which there is less adoption or sale demand) are transported to LTPs. Each LTP is subject to a separate environmental analysis and decision making process. Wild horses in LTPs remain available for adoption or sale to individuals interested in

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acquiring a larger number of animals and who can provide the animals with a good home. The BLM has maintained LTPs in the Midwest for over 20 years.

The long-term grassland pastures 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. About 28,600 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, Iowa, 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 LTP are highly productive grasslands compared to more arid western rangelands. These pastures comprise about 256,000 acres (an average of about 10-11 acres per animal). Of the animals currently located in LTP, less than one percent is age 0-4 years, 49 percent are age 5-10 years, and about 51 percent are age 11+ years.

Mares and castrated stallions (geldings) are segregated into separate pastures except one facility where geldings and mares coexist. No reproduction occurs in the long-term grassland pastures, but some foals are born to mares that were pregnant when they were removed from the range and placed onto the LTP. These foals are gathered and weaned when they reach about 8-10 months of age and are then shipped to short-term facilities where they are made available for adoption. Handling of wild horses at the LTPs is minimized to the extent possible although regular on-the-ground observation and weekly counts of the wild horses to ascertain their numbers, well-being, and safety are conducted. A very small percentage of the animals may be humanely euthanized if they are in very thin condition and are not expected to improve to a Henneke Body Condition Score of 3 or greater due to age or other factors. 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). The savings to the American taxpayer which results from contracting for LTP averages about \$4.45 per horse per day as compared with maintaining the animals in short-term holding facilities.

Euthanasia and Sale without Limitation

While humane euthanasia and sale without limitation of healthy horses for which there is no adoption demand is required under the WFRHBA, Congress prohibited the use of appropriated funds for this purpose between 1987 and 2004 and again in 2011. It is unknown if a similar limitation will be placed on the use of Fiscal Year 2012 appropriated funds.

Alternative 1 – Sex Ratio Modification without Fertility Control

The effects of Alternative 1 would be similar to the Proposed Action with the exception of the effects associated with the application of PZP Fertility Control. Under this alternative, the exclusion of fertility control could result in less stress for the mares as they will experience less handling associated with this alternative and would foal normally. Further, wild horses would potentially be held a shorter duration in the corrals as opposed to awaiting fertility control injections. However, the modeling suggests that population growth rate under this alternative would be 17.1%. At this rate, the population would exceed AML and need to be gathered every 3 years, and 289-316 more wild horses would need to be removed over the next 11 years than under the Proposed Action. For more detail, refer to the data and discussion in Appendix E.

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Alternative 2 -- Fertility Control, 50:50 Sex Ratio and addition of 52 Geldings

The effects of Alternative 2 would be similar to the Proposed Action except for the release of 52 geldings. Also, the sex ratio of the released mares and stallions (breeding population) would be maintained or adjusted to a 50:50 ratio rather than 40:60 ratio as identified for the Proposed Action. Any adjustments necessary to achieve the targeted sex ratio would be made based on the sex ratio observed in the gathered animals during the sorting process. According to the modeling, the mean population growth under the median trial, the growth rate is estimated at 6.2%. The effects to the breeding population would be similar to the Proposed Action. A gather would still need to occur every 3 years to re-apply fertility control, and longer periods of time before the AML is exceeded could be expected. The number of wild horses that would need to be removed over the next 11 years is equivalent to the Proposed Action, which is much less than Alternatives 1 and 3. The additional release of the geldings would represent 17% of the post gather population.

According to the modeling, if follow-up gathers could be implemented on a regular basis in future years, it is possible that the population control measures may be adequate to maintain the population within the existing AMLs if implemented successfully, with the need to remove few if any wild horses from the range.

Gelding

Stallions selected for gelding would be between 5-20 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 would not be gelded within 36 hours of capture and no animals that were roped during capture would be gelded at the temporary holding corrals for release. The surgery would be performed at either at a temporary holding facility at the gather location or at a BLM-managed holding center by a licensed veterinarian using appropriate anesthetic agents and surgical techniques (see Gelding SOPs in Appendix C). The final determination of which specific animals would 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.

Though castration (gelding) is a common surgical procedure, minor complications are not uncommon after surgery, and it is not always possible to predict when postoperative complications would occur. Fortunately the most common complications are almost always self-limiting, resolving with time and exercise. Individual impacts to the stallions during and following the gelding process should be minimal and would mostly involve localized swelling and bleeding. A small amount of bleeding is normal and generally subsides quickly, within 2-4 hours following the procedure. Some localized swelling of the prepuce and scrotal area is normal and may begin between one to 5 days after the procedure. Swelling should be minimized through the daily movements (exercise) of the horse during travel to and from foraging and watering areas. Most cases of minor swelling should be back to normal within 5-7 days, more serious cases of moderate to severe swelling are also self-limiting and resolve

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with exercise after one to 2 weeks. Serious complications (eviscerations, anesthetic reaction, injuries during handling, etc.) that result in euthanasia or mortality during and following surgery are rare and are expected to affect less than five percent of the animals treated. These complications are generally noted within 12 hours of surgery. If they occur they would be treated in the same manner as at BLM facilities.

Gelded animals would be monitored periodically for complications for approximately 7-10 days post-surgery and release. This monitoring would be completed either through aerial recon if available or field observations from major roads and trails. It is not anticipated that all the geldings would 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 suggests that the geldings would 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 increases the effectiveness of slowing the annual population growth rate and extending the gather cycle when used in conjunction with other population control techniques.

Surgical sterilization techniques, while not reversible, may provide reproductive control on horses without any additional handling of the horses as required in the administration of chemical contraception techniques.

It should be noted that adequate reduction of population growth of horses may only result if a large proportion of male horses in the population are sterile because of their social behavior (Garrott and Siniff 1993). By itself, it is unlikely that sterilization (gelding) would allow the BLM to achieve its horse and burro population management objectives. A single stallion is capable of impregnating multiple mares. Therefore, to be effective, it would require that either all the male or all the female wild horses/burros in the population be gathered and treated. If the treatment was not of a permanent nature, the animals would need to be gathered and treated on a cyclical basis. This would also require marking of individual animals and extensive record keeping ensuring that all animals were regularly treated and individual animals were not treated more frequently than required.

Alternative 3 – Gate Cut, no Population Controls or Selective Removal

Wild horses would be gathered and removed as encountered until removal and post-gather population objectives were achieved. No wild horses would be released so that number removed would equal number gathered. The post-gather population estimate for the Complex would still be 247 wild horses. Impacts from this alternative would be similar as the Proposed Action with the exception the effects associated with the PZP application and the adjustment of sex ratios.

Approximately 247 wild horses would remain un-captured in the Complex, once the number of horses were gathered and removed to meet the objectives. These horses could experience minor disturbance due to the activity of the helicopter but would otherwise be unaffected, and would resume normal

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activity once removal operations were complete. Sex ratios and age distributions of the un-gathered population would be unknown but should be comparable to the ratios observed in the gathered animals and the impacts to the residual herd's health and distribution is difficult to assume.

The largest difference under this Alternative (Gate Cut) is that without the ability to selectively remove animals from the range by age, substantially more wild horses would be removed that would likely go to LTPs than under the other Action Alternatives. According to population model projections, approximately 45% of the wild horses currently existing within the Complex fall into age groups older than 5 years of age, which have proven to be less adoptable or not adoptable.

Another impact of the Gate Cut Alternative is the precluded ability to select for animal health or desirable or historical characteristics in animals released back to the range. Experience over the past 35 years has shown that oftentimes gate cut gathers result in unintended impacts to the remaining herds. For example, typically horses of larger size (draft), gentle disposition, or bright/light coloring are the easiest to locate and capture, and thus the first to be removed under a gate cut scenario. In effect, the gate cut gather removes these genetic traits from the herds, and oftentimes these traits are gone from the population forever. Additionally, removal through gate cut gathers may distort the distribution within the HMA by removing all animals concentrated in certain areas (where capture is easiest), while leaving animals in the outlying areas that are more difficult to gather (trees, terrain, distance), and which may be characterized by lesser quality habitat.

The inability to select for desirable or historic traits equates to a missed opportunity to maintain or improve the health, conformation, color patterns or demeanor of the wild horses within a population, and potential permanent loss of these genetic traits from the population. Not being able to select younger, more adoptable wild horses for removal would result in substantially more wild horses placed into LTPs at very high costs when compared to opportunities available under the other Action Alternatives.

Because no wild horses would be released back to the range, no adjustment to sex ratios or application or fertility control would take place. Horses would not be held at the holding corrals for extended lengths of time while waiting to apply fertility control, and horses would not be stressed by additional handling to apply fertility control. Fertility and foaling rates would be unaffected in the un-gathered population of approximately 247 wild horses, with the population increasing at an average rate of 16% per year until the AML is exceeded and another gather would be necessary in 3 years to remove excess wild horses. In the long term, lack of population controls would result in an increased number of excess wild horses that must be gathered and removed from the range in future gathers to maintain the AML. According to the modeling, 382-560 more excess wild horses would need to be removed under this Alternative over 11 years as opposed to the Proposed Action. Refer to the Population Modeling Summary in this Section and Appendix E for more detailed information.

Alternative 4 – No Action Alternative

Under the No Action Alternative, a wild horse gather would not be conducted within the Stone Cabin Complex. The animals would not be subject to the individual direct or indirect impacts as a result of a gather operation in late winter 2012. Wild horse populations would not be actively managed at this time, and wild horses would not be removed from areas outside of HMA boundaries that are not designated for use by wild horses. The current population of 752 wild horses in the Complex would

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continue to increase at an estimated rate of 16% annually. The established AML of 404 wild horses for the Complex would continue to be exceeded and the TFO's failure to act would be in contempt of the 1992 Consent Decision and the Tonopah RMP. Additionally, implementation of the No Action Alternative would not result in progress towards attainment of the RAC Standards for Rangeland Health, or Land Use Plan Objectives for the Stone Cabin and Saulsbury HMAs and associated allotments.

The effects of implementing the No Action Alternative would be continued population increases within the Complex. According to the median trial of the population modeling output, the population could grow to nearly 2800 wild horses (highest trial) in the next 6 years if left un-gathered.

Wild horses are a long-lived species with documented survival rates exceeding 92% for all age classes. Predation and disease have not substantially regulated wild horse population levels within or outside the project area. Throughout the Complex, few predators exist to control wild horse populations. Being a non-self-regulating species, 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.

Over the short-term, individual animals in the herd would be subject to increased stress and possible death as a result of increased competition for water and forage as the population continues to grow even further in excess of the land's capacity to meet the wild horses' habitat needs.

The areas currently experiencing heavy utilization by wild horses would increase over time. This would be expected to result in increasing utilization, riparian damage, and increase competition for resources throughout the Complex. Increased trampling and trailing damage by wild horses in/around riparian areas would result in larger, more extensive areas of bare ground. Competition for the available water and forage between wild horses, domestic livestock, and native wildlife would continue and further increase. Once the vegetative and water resources are at these critically low levels due to excessive utilization by an over population of wild horses, the weaker animals, generally the older animals and the mares and foals, are the first to be impacted. It is likely that a majority of these animals would die from starvation and dehydration. The resultant population would be heavily skewed towards the stronger stallions which would lead to significant social disruption in the HMAs. By managing the public lands in this way, the vegetative and water resources would be impacted first and to the point that they have no potential for recovery. This degree of resource impact would lead to management of wild horses at a greatly reduced level if BLM is able to manage for wild horses at all on the HMAs in the future. As a result, the No Action Alternative would not ensure healthy rangelands that would allow for the management of a healthy wild horse population, and would not promote a thriving natural ecological balance.

As populations increase beyond the capacity of the habitat, more bands of horses would also leave the boundaries of the HMAs where possible in search of forage and water, thereby increasing impacts to rangeland resources outside the HMA boundaries as well. This alternative would result in increasing numbers of wild horses in areas not designated for their use and could potentially increase wild horse-vehicle collisions along Highway 6, and would not achieve the stated objectives for wild horse herd management areas, namely 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.*"

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The BLM realizes that some members of the public advocate “letting nature take its course”, however allowing horses to die of dehydration and starvation would be inhumane treatment and clearly indicates that an overpopulation of horses exists in the HMA, and is not consistent with the WFRHBA if 1971.

Promulgated Federal Regulations at Title 43 CFR 4700.0-6 (a) state “*Wild horses shall be managed as self- sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat*” (emphasis added).

3.3. Livestock Management

Affected Environment

The purpose of this section is to assess the potential direct and indirect effects to livestock management within the various grazing allotments as a result of the Proposed Action and the Range of Alternatives. The information presented here is to supply the reader with a general background of the history and degree of livestock use that occurs within the Allotments containing the Stone Cabin Complex. Please refer to Figure 2 (pg 7), which displays the allotment boundaries in the Proposed Gather Area.

Stone Cabin, Hunts Canyon, and Ralston Allotments

The Stone Cabin HMA is located within the Stone Cabin Allotment administered by the TFO within Nye County, NV. The Stone Cabin HMA spans 403,736 acres, synonymous to the Stone Cabin Allotment. Livestock grazing has been at or below permitted levels in recent years. The following table displays the actual use by livestock within the whole of the Stone Cabin Allotment since 2005.

Table 5. Livestock Actual Use – Stone Cabin Allotment

Year	Active /Permit (AUMs)	Actual Use (AUMs)	% of Active Permit
2005	13985	12314	88%
2006		12375	88%
2007		6952	50%
2008		10195	73%
2009		10745	77%
2010		13146	94%

The following table displays the season of use for the Stone Cabin Allotment.

Table 6. Stone Cabin Allotment Season of Use

Livestock Number	Kind	Season	AUMs
166	Cattle	3/1-2/28	1992
2067		3/1-5/15	5165
20		5/16-11/15	121
1500		10/16-2/28	6707
Total			13985

The TFO plans to complete a Rangeland Health Evaluation (RHE) in the future for the Stone Cabin Allotment, and Stone Cabin HMA. An interdisciplinary study of vegetation, actual use, climate, riparian, utilization, ecological status and trend data will be analyzed and evaluated to determine the

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attainment or non-attainment of Tonopah RMP Objectives and Standards and Guidelines established by the Mojave-Southern Great Basin Resource Advisory Council (RAC). Data collection has been ongoing and will continue. A scoping letter was issued to the interested public on March 9, 2011. When completed, the RHE and associated documents will be made available to the interested public. Following review/analysis of the data and coordination with the interested public, appropriate actions would be identified to implement any needed changes to the grazing management systems such as season or levels of use, as well as appropriate adjustments to the wild horse AML.

The northern portion of the Saulsbury HMA is located in and encompasses most of the Hunts Canyon Allotment. The southern portion of the Saulsbury HMA is located within the Ralston Allotment on which no livestock permit currently exists. Permitted livestock use and season of livestock use on the Hunts Canyon Allotment are represented in the following tables.

Table 7. Livestock Actual Use – Hunts Canyon Allotment

Year	Active /Permit (AUMs)	Actual Use (AUMs)	% of Active Permit
2005	2239	1561	70%
2006		1621	72%
2007		1358	61%
2008		1414	63%
2009		1458	65%
2010		1614	72%

The following table displays the season of use for the Hunts Canyon Allotment.

Table 8. Hunts Canyon Allotment Season of Use

Livestock Number	Kind	Season	AUMs
262	Cattle	3/1-6/1	801
262		9/15-2/28	1438
Total			2239

Though current livestock grazing permits do not exist within the Ralston Allotment, it has a history of trespass livestock use. The BLM is currently in legal litigation with the alleged trespass operator.

Currently, there are two permittees that run cattle year round between the Stone Cabin Allotment, Hunts Canyon Allotment, Wagon Johnnie Allotment, and Forest Service administered allotments. One operation typically places cattle on the south half of the Stone Cabin Allotment during the winter months. As the temperature becomes warmer, the operator moves their cattle north toward the Wagon Johnnie Allotment and Forest Service lands where they will leave them for the summer months.

The other permittee runs cattle in the Hunts Canyon Allotment during the spring and winter months. They utilize the northern portion of the Stone Cabin Allotment during the summer months

Environmental Consequences

Proposed Action: Fertility Control and Sex Ratio Adjustment

The proposed gather would not directly impact livestock operations within the allotments or within the gather area. Operations involved in removing wild horses may temporarily disturb livestock present

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during the removal process. Livestock owners within the area would be notified prior to the gather, enabling them to take precautions and avoid conflict with livestock grazing.

Removal of excess wild horses will effectively reduce direct competition for forage between wild horses and cattle. This reduced competition will allow forage plant species to increase in density and production over time. Management of fertility and sex ratios of wild horse species will also reduce the pressure on key forage species by maintaining the horse populations at or below AML for a longer period of time as compared to Alternatives 1 and 3. This will have the effect of allowing more time for key forage species to increase in density and productivity. The modeling suggests that the mean population under the median trial for the Proposed Action would be 374 wild horses.

Alternative 1: Sex Ratio Modification without Fertility Control

Impacts would be the same as the Proposed Action with the exception of the possibility of wild horse populations increasing at a faster rate. This would allow AML to be reached and exceeded much quicker. This would require the need for more frequent gathers and could negatively affect key forage species density and productivity by increasing competition for resources by wild horses and cattle. This would likely have a negative effect on overall rangeland health and potentially contribute to degradation leading to less water and forage resources for livestock grazing. Refer to the modeling summary data and discussion in Appendix E.

Alternative 2: Fertility Control with the addition of Geldings

With the implementation of fertility control, impacts would be the same as the Proposed Action except the addition of 52 geldings. Even though non-breeding geldings would not contribute to population increases, they would directly compete with livestock for forage and water resources. However, removal of excess wild horses will effectively reduce direct competition for forage between wild horses and cattle. The modeling suggests that the mean population under the median trial for the Alternative 2 would be 410 wild horses, including the 52 geldings, and the population growth rate would be 6.2%. Refer to the modeling summary and Appendix E for more detailed information regarding wild horse population estimates, gather numbers, and growth rates projected for this alternative.

Alternative 3: Gate Cut (no Population Controls)

Impacts would be similar to Alternative 1 except there would be no management in place to reduce population growth rates. Wild horse populations would exceed AML in approximately 3 years, and improvements would be slower and less noticeable as the population grows more quickly than with the other Action Alternatives. This would allow the competition for resources with livestock to continue, and could negatively affect key forage species density and productivity by increasing competition for resources by wild horses and livestock if not gathered when AML is exceeded. This would likely have a negative effect on overall rangeland health and potentially contribute to degradation leading to less water and forage resources for livestock grazing. Refer to the modeling summary data and discussion in Appendix E for more detailed information.

No Action Alternative (No Wild Horse Gather):

The effects of implementation of the No Action Alternative would be continued population increases within the Complex. According to the median trial of the population modeling output, the population

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could grow to nearly 2800 wild horses (highest trial) in the next 6 years if left un-gathered. More uncontrolled increases within the population size beyond the AML would result in continued use by wild horses outside of HMA boundaries which would affect utilization levels of native forage and use of riparian areas. Within the Complex, concentrated use by wild horses would also continue and affects to rangeland health would be commensurate with population size, increasing utilization levels, causing further decline in plant health and frequency of desirable key plant species which would affect the use of these areas by permitted livestock. With decline of rangeland health, forage and water availability and quality would also decline for use by livestock.

3.4. Noxious weeds, Invasive and Non-Native Species

Affected Environment

Any surface disturbance activity can create a potential environment and opportunity for an invasive species to establish and spread. Although a complete inventory has not been completed, four weed species from the noxious weed list are known to be found on public lands within the proposed gather area: Russian knapweed (*Centaurea repens*), salt cedar (*Tamarisk chinensis*), Halogeton (*Halogeton glomeratus*), and Cheat grass (*Bromus tectorum*).

Environmental Consequences

Proposed Action: Fertility Control and Sex Ratio Adjustment

The proposed wild horse gather could potentially result in the direct spread of existing populations of invasive and non-native species. Precautions would be taken prior to the setup of gather corrals and holding facilities. If noxious weeds were found, a different location would be selected to prevent the spread of seed. The Contracting Officers Representative (COR), Project Inspector (PI), or other qualified specialist would examine proposed holding facilities and gather corrals prior to construction to determine if noxious weeds are present.

Indirect impacts of the Proposed Action relate to wild horse population size, as it affects ground disturbance and rangeland health. Noxious weeds, invasive, and non-native species can increase with overuse of the range by grazing animals or through surface disturbance. Maintenance of healthy populations of native perennial plant species minimizes the establishment of noxious weeds, invasive and non-native species. It is expected that implementation of the proposed wild horse gather and achievement of the established AML would result in improved condition of native rangeland and riparian areas throughout the Stone Cabin and Saulsbury HMAs. As a result, the risk of spread by noxious weeds and invasive species across the HMAs would be reduced.

Alternative 1: Sex Ratio Modification without Fertility Control

Results would be similar to the Proposed Action, however, growth rates would not be substantially reduced. With population increases, trailing and trampling damage, especially to riparian resources would be increased, increasing the risk of noxious weed dispersal and invasion.

Alternative 2: Fertility Control with the addition of Geldings

The impacts are the same as the Proposed Action except the 52 geldings would contribute more hoof damage (i.e. trampling) than would occur in their absence, possibly increasing the risk of spread of noxious weeds. However, this alternative could also result in an opportunity to maintain population

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sizes within the established AML, therefore offering an opportunity for improvements to rangeland health and reduced risk of noxious weed spread.

Alternative 3: Gate Cut (no Population Controls)

Populations would be temporarily reduced through the gather, however without population controls, the populations would more hastily rebound to current population levels, increasing trailing, trampling, etc. more quickly than alternatives with means of fertility control. This alternative would result in the largest risk to noxious weed spread commensurate with wild horse population size.

No Action Alternative (No Wild Horse Gather):

Without completion of a wild horse gather, ground disturbing activities associated with the gather that could cause some spread of invasive and noxious plant species would not occur. However, there would be an increased risk of spread by noxious weeds and invasive species since existing concentrated use patterns by wild horses within the Complex would continue and would increase. The continued population levels in excess of the AML would prevent progress towards healthy rangeland conditions and could promote spread of invasive or noxious species particularly along trails and near water sources.

3.5. Rangeland Vegetation Resources (Forest and Rangeland) Affected Environment

The vegetation resources within the Stone Cabin and Saulsbury HMA are dictated by geological, climatological, topographical, hydrological and soil factors within the Southern Great Basin, These factors determine what type of plant communities have developed on the landscape. A classification was developed to facilitate the variation and analysis of the vegetative landscape into units known as ecological sites. An ecological site is defined as “a distinctive kind of land with specific characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation”. Any land inventory, analysis, and resulting management decisions require the knowledge of these individual sites and their interrelationships to one another on the landscape.

The climate associated with the Proposed Gather Areas can be characterized as arid with hot, dry summers and cold winters. Periodic droughts occur on an intermittent basis within this area. During these events, the annual forage production can be substantially reduced. The timing of the precipitation is critical to plant production and growth and not necessarily the total annual precipitation. If the amount of precipitation during the active growth period is inadequate, the annual production of vegetation will be substantially reduced regardless of the precipitation received during the rest of the year.

The vegetation in the HMAs is dominated by desert shrub communities in the southern portion of the boundaries. Sagebrush communities are in the northern portion of HMAs and winterfat dominated communities occur on silt loam soils mostly but not limited to valley bottoms. The salt desert shrub is primarily a browse range “[...]the salt desert shrub range is the only one on which more than half the forage resource (65 to 90 percent) is browse (Holmgren, Hutchings, Selar 1972).” “Because of the arid climate, herbage yields and grazing capacities are low [...] the salt desert is mainly a winter range (Cook et al 1954). “

The following tables display the ecological sites within the Stone Cabin Complex.

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Table 9. Ecological Site distribution within the Stone Cabin HMA.

Ecological Site ID	Ecological Site Name	Habitat Type	Yield (above, normal, low)	Acres	Percent
R029XY052NV	Claypan 16+" P.Z.	ARAR8/ACLE9-POFE	700-450-300	2954	1.0%
R029XY042NV	Coarse Silty 5-8" P.Z.	KRLA2/ACHY	700-450-300	4300	2.0%
R029XY041NV	Dry Wash	ERNAN5-ATCA2/ACHY	500-300-100	400	< 1.0%
R029XY017NV	Loamy 5-8" P.Z.	ATCO-ARSP5/ACHY	700-450-200	51391	20.0%
R029XY006NV	Loamy 8-10" P.Z.	ARTRW/ACHY-HECO26	800-600-300	2706	11.0%
R029XY114NV	Loamy Fan 8-10" P.Z.	ARTRW/LECI4-ACHY	1000-800-600	4026	2.0%
R029XY022NV	Loamy Slope 5-8" P.Z.	ATCO/ACHY-PLJA	400-250-100	6465	3.0%
R029XY016NV	Loamy Upland 5-8" P.Z.	GRSP-ATCA2/ACHY	1000-700-500	1987	1.0%
R029XY048NV	Outwash Plain	ATCA2/LECI4	1000-800-400	2254	1.0%
F029XY066NV	PIMOS-JUOS WSG: 1R0501	PIMO-JUOS/ARTRV	200-125-50	11189	4.0%
PLAYA	Playa	Playa	N/A	313	< 1.0%
R028BY004NV	Saline Bottom	SAVE4/LECI4-SPAI	2200-1500-800	1143	< 1.0%
R029XY012NV	Sandy 5-8" P.Z.	ATCA2/ACHY	800-500-300	20780	8.0%
R029XY046NV	Sandy Loam 5-8" P.Z.	ATCA2-KRLA2/ACHY	700-500-300	23196	9.0%
R029XY049NV	Sandy Loam 8-12" P.Z.	ARTRW/ACHY	1100-800-500	12426	5.0%
R028BY011NV	Shallow Calcareous Loam 8-10" P.Z.	ARNO4/ACHY-HECO26	600-450-250	1912	1.0%
R029XY008NV	Shallow Calcareous Loam 8-12" P.Z.	ARNO4/ACHY	700-500-250	627	29.0%
R029XY014NV	Shallow Calcareous Slope 8-12" P.Z.	ARNO4/ACHY-HECO26	350-200-75	641	< 1.0%
R029XY076NV	Sodic Flat	SAVE4/DISP	450-250-100	39	< 1.0%
R029XY024NV	Sodic Terrace 5-8" P.Z.	ATCO-SAVE4/ACHY	500-350-150	740	3.0%

Table 10. Ecological Site distribution within the Saulsbury HMA

Ecological Site ID	Ecological Site Name	Habitat Type	Yield (above, normal, low)	Acres	Percent
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Ecological Site ID	Ecological Site Name	Habitat Type	Yield (above, normal, low)	Acres	Percent
R029XY008NV	Shallow Calcareous Loam 8-12" P.Z.	ARNO4/ACHY	700-500-250	20466	15.0%
R029XY014NV	Shallow Calcareous Slope 8-12" P.Z.	ARNO4/ACHY-HECO26	350-200-75	2572	2.0%
R029XY106NV	Gravelly Clay Slope 10-12" P.Z.	ARTR2/ACTH7-ACHY	700-400-250	4989	4.0%
R029XY049NV	Sandy Loam 8-12" P.Z.	ARTRW/ACHY	1100-800-500	131	0.0%
R029XY006NV	Loamy 8-10" P.Z.	ARTRW/ACHY-HECO26	800-600-300	1196	1.0%
R029XY046NV	Sandy Loam 5-8" P.Z.	ATCA2-KRLA2/ACHY	700-500-300	8786	7.0%
R029XY012NV	Sandy 5-8" P.Z.	ATCA2/ACHY	800-500-300	19495	15.0%
R029XY048NV	Outwash Plain	ATCA2/LECI4	1000-800-400	838	1.0%
R029XY017NV	Loamy 5-8" P.Z.	ATCO-ARSP5/ACHY	700-450-200	44643	33.0%
R029XY024NV	Sodic Terrace 5-8" P.Z.	ATCO-SAVE4/ACHY	500-350-150	930	1.0%
R029XY022NV	Loamy Slope 5-8" P.Z.	ATCO/ACHY-PLJA	400-250-100	4901	4.0%
R029XY033NV	Loamy Slope 3-5" P.Z.	ATCO/ACHY	100-50-25	605	3.0%
R029XY016NV	Loamy Upland 5-8" P.Z.	GRSP-ATCA2/ACHY	1000-700-500	16440	12.0%
R029XY042NV	Coarse Silty 5-8" P.Z.	KRLA2/ACHY	700-450-300	3387	3.0%
R029XY020NV	Silty 5-8" P.Z.	KRLA2/ACHY-ELEL5	500-350-200	3997	3.0%
R029XY087NV	Gravelly Loam 5-8" P.Z.	SAVEB/ACHY	700-450-300	83	<1.0%
F029XY066NV	Pinus monophylla-Juniperus osteosperma/Artemisia tridentata ssp. vaseyana/Poa fendleriana-Achnatherum	PIMO-JUOS/ARTRV/POFE-ACHY	200-125-50	723	1.0%

Vegetation Summary – Stone Cabin & Saulsbury HMAs

There is an overall decrease in the Indian ricegrass populations throughout the HMAs. In some areas the population is only at remnant levels and while other areas have completely disappeared or eradicated by grazing stressors. It is estimated that the populations of Douglas rabbitbrush is the dominant plant and cover over 50,000 acres of the Stone Cabin HMA. The viability of the Indian ricegrass has poor vigor and low productivity as indicated by photograph 1.

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In vegetation communities dominated by extensive areas of sagebrush or salt desert shrub vegetation the carrying capacity is limited because the resources are finite, and forage production is either inherently low, or reduced below the Potential Natural Community (PNC) or the Desired Plant Community (DPC). The competition for forage resources between livestock and wild horses puts an increasing demand on the resources due to overlapping diets. The present condition of the vegetation communities displays significant departure from the potential. The most significant departure is a decrease in the percent of Indian ricegrass and other perennial grasses and an increase in the percent of shrubs. The original carrying capacity to support grazing animals (i.e. wild horses, livestock) is no longer viable given the current vegetative productivity and ecological status of the Stone Cabin and Saulsbury HMAs. The number of grazing animals is too high to support the current level grazing within the proper use factors without a continuous decrease in rangeland health.

A significant portion of the salt desert shrub range, mainly fourwing and winterfat ecological sites, has been converted to plant communities dominated by Douglas rabbitbrush. Indian ricegrass, winterfat and fourwing saltbush are highly palatable plants that currently produce at levels far below the potential for the soil. They have ceased being the dominant species because they are highly preferred by livestock and wild horses. The common pattern was that production of key perennial forage species at most sites was well below the potential and key species of shrubs and grasses were continuing to decrease. In addition, the kind and amount of plants in relationship to their ecological site were unbalanced.

Photo 1 – Impacts of exceeded proper use over time on an Indian ricegrass plant.



Winterfat is another plant in which its range within both HMAs has been substantially reduced or eradicated by grazing stressor. The following photograph displays a winterfat plant in which the proper use factor has been exceeded over time. The plant is prostrate as a reaction to grazing pressure over time.

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Photo 2 -- Exceeded proper use over time on a winterfat plant.



An ongoing vegetation monitoring program is in place with trend, production, and utilization data being collected. Based on the above factors; vegetation conditions, downward trend of perennial grass species, frequency of drought, and the limited availability of forage and water to competing wild horses, livestock and wildlife, the TFO has determined that no data is currently available indicating that the current AML should be increased, and the excess wild horses in the Stone Cabin Complex need to be removed.

Currently, a Rangeland Health Evaluation (RHE) is being conducted for the Stone Cabin Allotment in which the Mojave-Southern Great Basin Area Standards and Guidelines for Rangeland Health will be assessed through the analysis of monitoring data and evaluation of RMP objectives. Monitoring data collected thus far shows major shifts in plant communities away from the potential due to intermittent drought and grazing stressors. Current data shows a decrease in the perennial grass populations, especially Indian ricegrass which is the major component of the potential natural community in the majority of the ecological sites on the allotment. The data also show substantial dominance of undesirable shrubs (i.e. rabbitbrush; in many areas of the allotment. Factors contributing to the present state of the allotment include historic and current grazing practices and overpopulations of wild horses.

Environmental Consequences

Gather corrals and holding facility locations are usually selected in areas easily accessible to stock trailers and standard equipment, often utilizing roads, gravel pits or other previously disturbed sites, which are accessible using existing roads. New roads would not be created to construct capture corrals. Based on typical wild horse gather operations, it is estimated that approximately 4-8 trap-sites and one set of temporary holding corrals would be needed within the Proposed Gather Area. Disturbance would occur to native vegetation in and around any new temporary gather corrals and holding facilities due to the use of vehicles and concentration of horses in the immediate area. The disturbed area, however, would make up less than one acre.

Wild horses affect vegetation through grazing, or actual utilization of the above ground forage, and through trampling or trailing. In general, wild horses disperse throughout the landscape and are not as apt to congregate in some areas as livestock sometimes do, and typically utilize steeper terrain. A wild horse may consume 20 to 25 lbs of forage per day to maintain its metabolic, physiological and energy levels. Therefore, a wild horse must travel various distances to locate enough food to maintain itself throughout the day. An increasing herd size further increases the level of forage depletion in which the

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plant communities continue to deteriorate to a lower seral level which in turns increases the acreage needed to support each wild horse.

Proposed Action: Fertility Control and Sex Ratio Adjustment

Under the Proposed Action, the population growth would be lower than under Alternative 1 or 3 according to the modeling, which would have the effect of reducing average population sizes and gather frequency. With the implementation of fertility control and sex ratio adjustments, the wild horse population would be maintained at AML.

Achieving and maintaining the established AML, would benefit the vegetation by reducing the grazing pressure on the forage resources. Removal of excess wild horses would reduce the population of horses to a level that would be in balance with the available forage and water sources.

Maintaining AML within the Proposed Gather area would prevent overgrazing, damage by trampling, trailing or pawing, and would help promote improved rangeland health through increased seedling establishment of shrubs, forbs and grasses. Increased cover, frequency, production, and vigor of desirable key species would also be promoted through the long term. Repeated utilization and widespread use of plants during the critical growing period would not be as likely to occur, and heavy utilization would be minimized or avoided. By bringing the wild horse population within the established AML, degradation of the range by wild horses would not occur, and limited vegetation available during drought years would not be damaged by an overpopulation of wild horses.

Implementation of the proposed gather and resulting improved rangeland health would promote attainment of the 1997 Tonopah RMP and Standards and Guidelines for Nevada's Mojave-Southern Great Basin Area vegetation objectives. The removal of the excess wild horses would also result in significant progress being made towards meeting the Mojave-Southern Great Basin Standards and Guidelines for Rangeland Health over the long-term and improve vegetation resources that are important for wild horse and wildlife habitat.

Alternative 1: Sex Ratio Modification without Fertility Control

Under Alternative 1, effects would be similar to the Proposed Action, albeit only short term. According to the modeling, wild horse populations would grow at an average of 17.1% in the median trial. With populations growing at this rate, AML would be exceeded in approximately 3 years and any improvements to range vegetation would slow or become unnoticeable.

Alternative 2: Fertility Control with the addition of Geldings

Alternative 2 (same as Proposed Action with additional geldings) would have similar results as the Proposed Action, except that because of the additional geldings the population may exceed AML sooner, and resources would receive slightly higher levels of use and degradation. However, this alternative would yield reduced growth rates in the breeding population, fewer wild horses removed from the range, and would maintain AML similarly with the Proposed Action. Maintaining AML long-term could improve overall range conditions.

Alternative 3: Gate Cut (no Population Controls)

Alternative 3 would have similar effects as Alternative 1. According to the model, population growth rates would be slightly higher under this Alternative at 19.6%.

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No Action Alternative (No Wild Horse Gather)

The No Action Alternative would not allow for improvements of the plant community structures and dynamics. According to the population modeling, the population could grow to nearly 2800 wild horses by 2018 (highest trial) if a gather is not conducted to manage the population consistent with the established AML. An overpopulation of excess wild horses at these levels would have obvious consequences to the vegetation health of the HMA through overutilization, trampling and diminished plant health and frequency of key forage species within the plant community.

Increased trailing and trampling would occur as horses travel longer distances to locate forage from the available water sources. Key forage species would further be lost within the plant communities, along with increases in undesirable and unpalatable species such as galleta grass and rabbitbrush. The majority of the Stone Cabin and Saulsbury HMAs receives less than 8 inches of annual precipitation and has very low potential for improvement under even optimal conditions. Without a gather to achieve AML, continued downward trends and reductions in ecological condition would be expected and would decrease the carrying capacity of the range for wild horses as well as other users. Irreparable damage to the arid, desert ecosystems could result, making it impossible to make progress towards attainment of BLM Standards for Rangeland Health, RAC Standards for Rangeland Health or RMP Objectives under the no action alternative

3.6. Riparian-Wetland Resources and Water Quality

Affected Environment

Riparian-wetland areas are the most productive and valuable resources found on public land. These areas play a significant role in restoring and maintaining the chemical, physical, and biological integrity of the nation's water. Wildlife species use riparian-wetland areas more than any other type of habitat. In the Great Basin, approximately 69 different species of wildlife are found within riparian areas.

Direct field observation of feces and hoof prints are the primary means of differentiating animal use. Based on direct field observations, livestock, wildlife, and wild horse use of riparian and wetland areas for food, water and shelter have collectively affected the functioning condition of riparian-wetland areas.

In most cases, wild horses briefly visit water sources. The exception may include large open springs or meadows. High wild horse populations in relationship to limited water sources result in degradation of riparian and wetland habitat. Wild horses utilize lotic (streams) and lentic (springs) sites differently because of inherent social behaviors. Wild horses tend to move quickly away from lotic sites to avoid dangerous encounters with other horses or predators. Lentic sites have a valley landform that is wider and capable of being viewed from further distances. These sites deteriorate faster with continuous concentrated use. In addition to potential physical impacts to riparian areas, dominant horses can physically exclude other wildlife and livestock species.

Riparian areas and water sources are limited within the Stone Cabin Complex, and heavily relied on by wild horses, wildlife and livestock. Currently, some of the riparian areas within the Stone Cabin Complex are degraded, and monitoring indicates that many of the natural water sources and riparian areas throughout the Complex are at non-functioning condition. Many of the water sources in the have been developed by the permittee, who has the majority of the water rights. However, many of these

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sources are on private land and are fenced or turned off during periods absent of cattle grazing. When available, these springs and developed sources are used by cattle, wild horses and wildlife.

Other springs and seeps occur sparsely throughout the gather area and are available for use by wild horses. However, several of these are on private property and could be fenced at any time. Further, many of the springs and seeps not on private ground are only available in winter into late spring as they normally dry up in the hot summer months. Some riparian areas have been impacted by excessive wild horse use. Such impacts include over-grazing of riparian vegetation and trampling or trailing (e.g., at Clifford Spring; Photo 3), which causes loss of riparian vegetation and erosion.

In the southern portion of the Stone Cabin HMA, Haws Canyon and Clifford Spring contain the only available water to wild horses that are not contained within by private property. Haws Canyon contains a perennial stream, except in droughty years, which wild horses utilize. During droughty times, water is only available in the higher elevations of the canyon and wild horses are reluctant to use these, speculatively because of predation concerns and limited visibility. Trailing and utilization of riparian vegetation by wild horses is apparent.

It is apparent in data collected with remote wildlife cameras that competition for water at Clifford Spring is severe between pronghorn and wild horses. Several pictures actually document pronghorn waiting for water as the wild horses water. Oftentimes, there are wild horses at the water source for extended periods of time, in which no pronghorn can drink.

There is only one known water source in the southern portion of the Saulsbury HMA, and in the summer months dries to slightly more than a puddle (Photo 4). Data collected with the use of remote wildlife cameras shows that pronghorn, mule deer, elk, and wild horses.

Environmental Consequences

The proposed wild horse gather would not have any direct impacts to riparian or wetland zones within the Stone Cabin Complex because gather corrals and holding corrals would not be constructed near riparian areas.

Proposed Action: Fertility Control and Sex Ratio Adjustments

The Proposed Action would indirectly impact riparian wetland zones by decreasing utilization, trailing and trampling by wild horses in these sensitive areas, thus allowing for riparian wetland areas to improve through natural processes. Achieving and maintaining AML would relieve some of the grazing pressure from the springs and riparian areas, and would further ensure that wild horse populations are in balance with water and forage availability. In areas such as the southern portions of Saulsbury and Stone Cabin HMA where water is extremely limited or contained within private property, a smaller population of wild horses and reduced growth rate would not only reduce pressure on these springs due to wild horses congregating around these sensitive areas, it would alleviate some of the competition with wildlife species and help improve overall wild horse health and well-being.

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Photo 3 – Wild horse drinking from a small water source in the back of the cave-like Clifford Spring, in the southern portion of the Stone Cabin HMA. Notice the bare ground around the spring source and the restricted access to the water source.



Photo 4 – The only known water source in the southern portion of the Saulsbury HMA, utilized by wild horses, wildlife, and occasional use by non-permitted cattle.



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Alternative 1: Sex Ratio Modification without Fertility Control

Results would be similar to the Proposed Action however; growth rates would not be substantially reduced. Pressure and competition would be temporarily relieved but without further reduced growth rates, wild horse populations would return to current population numbers in approximately 3 years according to the model, where riparian degradation and competition would continue. Refer to Appendix E for a more detailed summary of the population modeling.

Alternative 2: Fertility Control with the addition of Geldings

The results of this alternative would be the same as Proposed Action except the 52 geldings could contribute more competition with wildlife, and utilize additional water.

Alternative 3: Gate Cut (no Population Controls)

Populations would be temporarily reduced; however the populations would more hastily exceed AML (about 3 years), increasing competition and riparian degradation more quickly than the Proposed Action or Alternative 2 with means of fertility control. Refer to Appendix E for further information regarding the modeling projections.

No Action Alternative (No Wild Horse Gather):

Wild horse population size would continue to increase in excess of the established AML. An extended overpopulation of excess wild horses would have obvious consequences to the health of riparian areas within the HMAs through overutilization, trampling, erosion and potential infestation of invasive weeds. According to the population modeling, estimated populations could grow to nearly 2800 wild horses in 6 years if left un-gathered (highest trial; refer to Appendix E). Once wild horse populations reach this level, damage to riparian resources would be permanent, and many wild horses would starve. The No Action Alternative could cause irreparable damage to these critical wildlife habitats and to the animals and other species that depend on these areas.

3.7. Soils

Affected Environment

Soils in the Stone Cabin Complex are typical of soils found throughout the Great Basin and Nevada. The geophysical configuration of the gather area consists primarily of north-south trending mountain ranges with intervening valleys and playas. Most of Nevada's mountains were originally formed from either volcanism or related, plate tectonic processes. Refer to the Natural Resource Conservation Service (NRCS) Soil Survey for Nye County. Soils within the Proposed Gather Area vary widely in their physical and organic characteristics. They are described in very broad taxonomic classifications as aridisols, entisols and inceptisols.

Environmental Consequences

Proposed Action

Direct impacts such as soil erosion and compaction would potentially occur at gather corrals, which are one acre or less in size however due to short duration of use of the area it is not anticipated to be significant or long lasting. Under most situations, gather holding corrals are typically situated in areas of previous disturbance such as gravel pits or along roadsides. Procedures identified in the Gather Plan and SOPs would be followed to minimize impacts to soils during gather operations.

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Achievement of AML, in balance with the capacity of the habitat, would result in improvements to vegetation communities, less bare ground, reduced erosion of soil by wind and water, and reduced trailing, and concentrations of wild horses around water sources. This would benefit soils. Achievement of AML would improve or maintain biological crusts, where present, due to reduced hoof action by wild horses.

Alternative 1: Sex Ratio Modification without Fertility Control

Impacts would be the same as the proposed action. Without implementation of fertility control, populations could grow at a more rapid rate (17.1% from modeling), and the benefits to the soil (less trailing, erosion, bare ground) would not be as long-lasting.

Alternative 2: Fertility Control with the addition of Geldings

Impacts would be the same as the proposed action, however 52 additional geldings would contribute slightly more damage to soil and resources.

Alternative 3: Gate Cut (no Population Controls)

Impacts would be similar to those brought forward in Alternative 1, except that with no means to reduce population growth, populations would soon be back to current levels or higher. This would have very short-lived benefits to soil.

No Action Alternative (No Wild Horse Gather)

Current soil disturbance would continue as wild horse populations continue to increase at 16% annually. Concentrated use of areas around water, and trailing would increase proportionally with increases in the population. Soils would be disturbed more frequently, and wind and water erosion would increase. Loss of soils would promote degradation of the native plant communities, reducing available forage, and increasing vulnerability for establishment of invasive and annual weeds such as halogeton, Russian thistle, and cheatgrass. If populations grew to nearly 2800 wild horses by 2016, as the population modeling suggested it could, resources would become scarcer, and trailing, trampling, soil erosion and loss, and bare ground could increase to irreparable levels.

3.8. Threatened & Endangered Species, Special Status Species, Migratory Birds and Wildlife

Affected Environment

Threatened, Endangered and Special Status Species

No federally listed threatened or endangered species inhabit the Stone Cabin or Saulsbury HMAs, therefore the Proposed Action and Alternatives 1 - 3 would not affect any of them and they will not be further discussed in this document.

On March 5, 2010, the U.S. Fish and Wildlife Service announced Proposed Rules in the Federal Register for the notice of 12-month findings for petitions to list the greater sage grouse as a threatened or endangered species. The Fact Sheet for this finding iterated the following, *“After thoroughly analyzing the best scientific and commercial information available, the Fish and Wildlife Service has concluded that the greater sage-grouse warrants protection under the Endangered Species Act. However, the Service has determined that proposing the species for protection is precluded by the need*

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to take action on other species facing more immediate and severe extinction threats. As a result, the sage-grouse will be added to the list of species that are candidates for Endangered Species Act protection. The Service will review the status of the sage-grouse annually, as we do all candidate species, to determine whether it warrants more immediate attention.” Greater sage-grouse identified in the table below are the only species with Candidate status that have been documented within the HMAs. Most habitat occurs at low to mid-elevations on the Northwest portions of the gather area. Greater sage-grouse winter habitat occurs in sagebrush-dominated sites where sagebrush protrudes above the snow. Nesting and early summer habitat is tied to sagebrush sites with diverse, well-vegetated understories. These habitats, along with wet meadows and other riparian sites, provide good habitat for brood rearing as well. Five active leks are known to exist within the HMAs.

On July 9, 2007, the bald eagle was removed (de-listed) from the list of threatened and endangered species. BLM is coordinating with the Nevada Department of Wildlife (NDOW) to ensure compliance with state regulations regarding the bald eagle. As of August 30, 2007, BLM policy is to consider the bald eagle as a BLM Sensitive Species. After de-listing, bald eagles will continue to be protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act. Both of these laws prohibit killing, selling or otherwise harming eagles, their nests, or their eggs. In May 2007, the U.S. Fish and Wildlife Service (Service) clarified its regulations implementing the BGEPA and published the National Bald Eagle Management Guidelines. The Service has established a permit program under the BGEPA that would authorize limited take of bald and golden eagles consistent with the purpose and goal of the BGEPA. The Service has also prepared a draft post-delisting bald eagle monitoring plan. These documents and more information about bald and golden eagle are available on the Service’s website at <http://www.fws.gov/migratorybirds/baldeagle.htm>. Golden eagles have been documented as year-round residents of the HMAs. Bald eagles have not been documented within the HMAs.

BLM protects by policy, special status plant and animal species. The list includes certain species designated by the state of Nevada, as well as species designated as “sensitive” by the Nevada BLM State Director. Refer to the table below for the list of BLM Sensitive Species whose range or migration routes are known or believed to occur within the gather area.

Table 9. Special Status Species

BLM Sensitive Species that may occur in the gather area	
Mammals	Common Name
<i>Euderma maculatum</i>	Spotted bat
<i>Eptesicus fuscus</i>	Big brown bat
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat
<i>Lasionycteris noctivagans</i>	Silver-haired bat
<i>Lasiurus blossevillii</i>	Western red bat
<i>Myotis californicus</i>	California myotis
<i>Myotis ciliolabrum</i>	Western small-footed myotis
<i>Myotis evotis</i>	Long-eared myotis
<i>Myotis evotis</i>	Long-eared myotis
<i>Myotis lucifungus</i>	Little brown myotis
<i>Pipistrellus Hesperus</i>	Western pipistrelle
<i>Brachylagus idahoensis</i>	Pygmy rabbit

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<i>Myotis volans</i>	Long-legged myotis
<i>Ovis canadensis nelsoni</i>	Desert bighorn sheep
Birds	Common Name
<i>Vireo vicinior</i>	Gray vireo
<i>Aquila chrysaetos</i>	Golden eagle
<i>Athene cunucularia</i>	Burrowing owl
<i>Buteo regalis</i>	Ferruginous hawk
<i>Falco mexicanus</i>	Prairie falcon
<i>Lanius ludovicianus</i>	Loggerhead shrike
<i>Baeolophus griseus</i>	Juniper titmouse
<i>Ixobrychus exilis</i>	Least bittern
<i>Centrocercus urophasianus</i>	Greater Sage-grouse
<i>Gymnorhinus cyanocephalus</i>	Pinyon jay
<i>Spizella breweri</i>	Brewer's Sparrow
<i>Pooecetes gramineus</i>	Vesper sparrow
<i>Sphyrapicus nuchalis</i>	Red-naped sapsucker
<i>Vermivora luciae</i>	Lucy's Warbler

Migratory Birds

“Migratory bird” means any bird listed by the United States Fish & Wildlife Service (USFWS) in 50 CFR 10.13. All native birds found commonly in the United States, with the exception of native resident game birds, are protected under the Migratory Bird Treaty Act (MBTA) (16 United States Code 703711). The MBTA prohibits taking of migratory birds, their parts, nests, eggs, and nestlings. Executive Order 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices.

Additional direction is provided within the Memorandum of Understanding (MOU) between the BLM and the USFWS dated January 17, 2001. This MOU strengthens migratory bird conservation through enhanced collaboration between the two agencies, in coordination with state, tribal, and local governments. The MOU identifies management practices that could impact populations of high priority migratory bird species including migratory bird nesting, migration, and overwintering habitats, and develops objectives and recommendations that would avoid or minimize these impacts. A variety of migratory birds use the habitat types within the Proposed Gather Area for breeding and foraging.

Potential migratory bird species that may be found within the Stone Cabin and Saulsbury HMAs could include but are not limited to the Ash-throated Flycatcher, Bewick's Wren, Black-headed Grosbeak, Black-throated Gray warbler, Black-throated Sparrow, Blue-gray Gnatcatcher, Brewer's Sparrow, Brown-headed Cowbird, Bushtit, Cassin's Finch, Chipping Sparrow, Common Raven, Costa's hummingbird, Gray Flycatcher, Horned Lark, House finch, House Sparrow, House Wren, Le Conte's Thrasher, Lesser Goldfinch, Loggerhead Shrike, Mourning Dove, Northern Mockingbird, Rock Wren, Sage Sparrow, Say's Phoebe, Spotted Towhee, Swainson's thrush, Vesper Sparrow, Western Scrubjay, and the White-crowned sparrow (Great Basin Bird Observatory 2007).

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Wildlife

Wildlife species found in the HMAs include but are not limited to mountain lion, coyote, bobcat, badger, long-tailed weasel, black-tailed jackrabbit, numerous birds, reptiles and small mammals. Hoofed mammal species include mule deer, pronghorn and bighorn sheep.

It has been documented through pictures and the use of infrared wildlife cameras throughout the Stone Cabin and Saulsbury HMA that wild horses are directly competing with native wildlife for water resources. Wildlife species documented competing with wild horses for water include but are not limited to mule deer, pronghorn, elk, and numerous other mammal and bird species.

Environmental Consequences

Proposed Action

Removing excess wild horses from these HMAs would have minimal, short-term direct impacts to wildlife themselves. Individual animals of all species that could be present in or near gather corrals or holding facilities could be temporarily displaced. The possibility exists that special status plant and animal species could be disturbed during the gather activities. However, gather corrals would typically be located in areas that have previously been disturbed (i.e. gravel pits), and for short periods of time (1-3 days). Once the gather corrals were dismantled and the helicopter gone, animals should return to normal activities. Should it be determined necessary by a qualified biologist, gather sites would be inventoried prior to selection to determine the presence of sensitive species. If potential impacts could not be mitigated, these areas would be avoided. Direct impacts would not be expected to animal populations as a result of the gather operations.

In addition to the removal of wild horses to reduce numbers to below AML, mares released back into the HMAs under the Proposed Action would be treated with fertility control vaccines. This treatment would prolong the positive impacts to wildlife habitat resulting from reduction in wild horse numbers and growth rates (i.e. riparian degradation, trampling, reducing nesting cover). It would also decrease the necessity of emergency gathers which would reduce the frequency of the short-term disturbances to wildlife species associated with gather operations.

Because the proposed gather would not occur during the nesting season, (roughly March through July) wild horse gather activities would not affect birds protected under the Migratory Bird Treaty Act. The proposed gather activities constitute relatively low potential for disturbance to individual nesting birds and no potential for impact to migratory bird populations because no gather corrals would be located at riparian areas that many migratory bird species depend heavily on.

Achieving the AML would result in reduced competition between wild horses and wildlife as soon as the gather is completed. This would result in improved habitat conditions by increasing forage availability, herbaceous cover, and quality. In addition, the gather and reduction of wild horse numbers would reduce competition between wild horses and wildlife for available forage and water resources.

The northern portion of the Stone Cabin HMA, Ralston Allotment, and Hunts Canyon Allotment contain sage grouse habitat and contains numerous active leks. Removal of excess wild horses from these HMAs would mitigate degrading impacts to local sage grouse populations. Healthy native understories important to sage grouse would be allowed to recover, thus benefiting sage grouse.

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Wildlife and wildlife habitat would be indirectly affected by the Proposed Action and Alternatives 1 - 3. However, removal of excess wild horses and achievement of the established AML, and reduced population growth rates would provide the best opportunity for conservation, protection, and preservation of identified species and their habitats. Implementation of the proposed action would reduce utilization on key forage species, improving the quantity and quality of forage available to wildlife and decrease competition for water sources. Habitat conditions within in riparian areas, and uplands would be expected to improve to the benefit of most wildlife, sensitive species and migratory birds.

Under the Proposed Action, the population growth rates would be reduced more than under the other alternatives, according to the modeling, which would have the effect of reducing average population sizes and gather frequency. In turn, wildlife, sensitive species and migratory bird habitat (upland and riparian areas) would benefit slightly more under the Proposed Action. Competition between wildlife and wild horses would also be slightly less under the Proposed Action, and reduced gather frequency would equate to fewer disturbances to wildlife.

Alternative 1: Sex Ratio Modification without Fertility Control

Impacts would be the same as the Proposed Action. Without implementation of fertility control, population growth rates would be higher than the Proposed Action resulting in larger population sizes over time, potentially increased gather frequency, and shortening the time frame of reduced competition with wildlife for resources. For modeling projections regarding growth rates and population sizes, refer to Appendix E.

Alternative 2: Fertility Control with the addition of Geldings

Impacts would be the same as the Proposed Action, however 52 additional geldings would contribute slightly more resource competition with wildlife through increased utilization of vegetation and riparian resources. According to the population modeling, the growth rate of 6.2% would essentially the same as the Proposed Action (6.1%). Yet, there would be slightly higher wild horse populations under this Alternative.

Alternative 3: Gate Cut (no Population Controls)

Wild horse populations would be temporarily reduced, but with no means to control population growth rates, and populations growing at an average of 19.6% (modeling projection) per year, any benefits to wildlife species would be very short lived or irrelevant. Wild horse populations would return to current populations in about 3 years and conditions would improve more slowly.

No Action Alternative (No Wild Horse Gather):

If a gather is not conducted to manage the population consistent with the established AML, the overpopulation of excess wild horses would have consequences to wildlife habitat health through decreased forage and cover, and would increase competition between wildlife and wild horses for forage and the already limited water resources.

Wild horse populations would continue to increase at an average rate of 16% per year, resulting in heavy and severe use of vegetation resources, and degradation of plant communities including riparian areas. Throughout the Complex continuing downward trends would be expected in key perennial

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species and overall ecological condition, resulting in reduced forage availability to wildlife, livestock, and wild horses, and to declining condition of habitat relied on by wildlife and sensitive species. If wild horse populations grow to nearly 2800 wild horses by 2016 (highest trial) as modeling suggests it could, potentially all wildlife species and populations could be detrimentally affected across large spatial and temporal scales. Forage, already-limited water, and cover could be permanently lost or replaced by exotic and/or invasive species.

The No Action Alternative would have no direct impact to migratory birds since the gather would not take place. However, indirect impacts would be decreased forage and nesting cover caused by large numbers of wild horses, which could cause a loss of preferred habitat for some species of migratory birds and other wildlife.

3.9. Wilderness Study Areas (WSAs)

Affected Environment

Two Wilderness Study Areas (WSAs) are located near or within the proposed gather area. WSAs are known for their rugged, remote and sometimes inaccessible mountain peaks and ranges. Canyons in some of the WSAs consist of rock outcroppings, spires, rock faces, and ridges with sheer vertical drops. Vegetation consists mainly of dense pinion pine and juniper woodland with a sagebrush and grass understory. Due to the very rugged terrain and lack of forage in the WSAs, wild horses rarely frequent the WSAs.

Kawich WSA

The Kawich WSA is located in the Kawich Range in northeastern Nye County approximately 50 miles east of Tonopah, Nevada, and includes 54,320 acres of public land. The area provides winter habitat for a large population of mule deer. The Kawich WSA consists of mountainous country with a high central plateau and several peaks. There are two small one-half acre lakes, the Bellehelen Lakes, located on the top of the plateau at the northern end of the WSA. The proposed gather area includes part of the Kawich WSA.

Rawhide Mountain WSA

The Rawhide Mountain WSA is located in the Hot Creek Range in northeastern Nye County approximately 50 miles east of Tonopah, Nevada. The WSA includes 64,360 acres of public land, although only about half of the WSA is within the proposed gather area. The central portion of the Rawhide Mountain WSA is extremely rugged with high elevations and remote drainages and pristine riparian settings around springs.

Environmental Consequences

The Interim Management Policy (IMP) for Lands under Wilderness Review, (H-8550-1) provides guidance for management of WSAs. The IMP addresses wild horse and burro management in Chapter III, Section E which specifically allows for the use of helicopters for gathering wild horses. In addition, the IMP states:

“Taking into account that wild horse and burro numbers fluctuate dramatically within WSAs due to a variety of factors, the Bureau must still endeavor to make every effort not to allow populations within WSAs to degrade wilderness values, or vegetative cover as it existed on the date of the passage of the Federal Land Policy and Management Act

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(FLPMA). Wild horse and burro populations must be managed at appropriate management levels as determined by monitoring activities to ensure a thriving natural ecological balance”.

Proposed Action and Alternatives 1, 2, and 3:

The Proposed Action would not have any direct impacts to the WSAs in or near the Stone Cabin Complex. Since the Proposed Action excludes the use of motorized/mechanized vehicles within the WSAs, the non-impairment criteria would be met, and the completion of a wild horse gather would not result in any unacceptable impacts to WSA lands.

The gather operation would result in the complete removal of all wild horses from areas not designated for their use, and achievement of AML within the Complex. As a result, riparian areas and native vegetation would benefit and experience improvement, and wilderness values and wildlife habitat would be enhanced in the WSAs. Benefits resulting among the alternatives would be proportional to the differences in population size at any given time. Because wild horse use is not heavy within the WSAs, impacts would be negligible. There would be no noticeable difference to WSAs among the Action Alternatives.

No Action Alternative (No Wild Horse Gather)

The No Action Alternative could potentially cause wild horses to more frequently utilize resources in the WSAs as the designated HMAs would populate beyond the capacity of the habitat. If wild horse numbers in the nearby HMAs were to go un-gathered and wild horses began moving into the WSAs, resource degradation and competition with wildlife could become an issue.

3.10. Human Health and Safety

Affected Environment

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 wild horses 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 wild horses 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. Though rare, helicopter crashes and hard landings can and have occurred (approximately 10) over the last 30+ years while conducting wild horse and burro gathers which necessitates the need to follow gather operations and visitor protocols at every wild horse and burro gather to assure safety of all people and animals involved. Flying debris caused

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by a helicopter incident poses a safety concern to BLM and contractor staff, visitors, and the wild horses.

During the herding process, wild horses 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 wild horses 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.

The BLM is committed to allowing access by interested members of the public to the fullest possible degree without compromising safety or the success of operations. To minimize risks to the public from helicopter operations, the gather Contractor is required to conduct all helicopter operations in a safe manner, and to comply with FAA regulations (FAR) 91.119 (Appendix H) and BLM IM No. 2010-164 (Appendix G)⁶. Public observation sites will also be established in locations that reduce safety risks to the public (e.g., from helicopter-related debris or from the rare helicopter crash landing, or from the potential path of gathered horses), to wild horses (e.g., by ensuring observers will not be in the line of vision of horses being moved to the gather site) and to contractors and BLM employees who must remain focused on the gather operations and the health and well-being of the wild horses. The Visitor Protocol and Ground Rules for public observation found in Appendix F provide the public with the opportunity to safely observe the gather operations. Every attempt will be made to identify observation site(s) at the gather location that offers good viewing opportunities, although there may be circumstances (flat terrain, limited vegetative cover, private lands, etc.) that require viewing locations to be at greater distances from the gather site to ensure safe gather operations..

Environmental Consequences

Proposed Action and Alternatives 1,2, and 3

All helicopter operations must be in compliance with FAR 91.119. Public safety as well as that of the BLM and contractor staff is always a concern during the gather operations and is addressed through the implementation of Visitor and Ground Rules that have been used in recent gathers to ensure that the public remains at a safe distance and does not impede 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.

No Action Alternative (No Wild Horse Gather)

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

⁶ At recent gathers, public observers have ranged in number from only a handful of individuals to a maximum of between 15-25 members of the public. At these numbers, BLM has determined that the current level of public visitation to gather operations falls below the threshold of an "open air assembly" under the FAR regulations. 14 CFR § 91.119.

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3.11 Wild Horse Gather Mitigation Measures

This EA has analyzed the potential impacts that could occur with completion of a gather to remove excess wild horses and apply fertility treatment to released mares. The following section summarizes the measures developed to ensure that these potential impacts are minimized or avoided entirely.

BLM staff is on-site at all times to observe the gather, monitor animal health, and coordinate the gather activities with the contractor. The SOPs outlined in Appendix A would be implemented to ensure that the gather is conducted in a safe and humane manner, and to minimize potential impacts to or injury of the wild horses. Both the BLM WH&B Specialists and the Gather Contractor and crew are very attentive and sensitive to the needs of all wild horses captured during gathers, and ensuring their health, safety and well-being during and after the gather is a focus and priority.

BLM staff would coordinate with the contractor on a daily basis to determine animal locations in proximity to trap corrals, and to discuss terrain, animal health, gather distances and other gather logistics to ensure animal safety.

An Animal and Plant Health Inspection Service (APHIS) or other veterinarian may be on-site during the gather, as needed, to examine animals and make recommendations to the BLM for care and treatment of wild horses. Injuries would be examined and treated if needed by a veterinarian at the holding corrals.

Fertility control treatments would be conducted in accordance with the approved standard operating and post-treatment monitoring procedures (SOPs, Appendix B). The treatment would be controlled, handled, and administered by a trained BLM employee.

BLM policy prohibits the gathering of wild horses with a helicopter, (unless under emergency conditions), during the period of March 1 to June 30 which includes and covers the six weeks that precede and follow the peak of foaling period (mid-April to mid-May).

The gather helicopter pilot allows the wild horses to travel at their own pace for most of the distance to the gather location. The pilots are very experienced and do not place undue pressure on the horses until just the right time when entering the wings of the gather trap, when it is important to move the horses safely into the gather corrals and prevent them from turning back or trying to disband at the last minute. This is to avoid the need to re-gather or to rope the horses from horseback which could expose the wild horses to additional stress or injury. Foals separated during the gather process are safely gathered and transported to the gather corrals to be reunited with their mother.

Transport and sorting is completed as quickly and safely as possible so as to move the horses into the large holding pens where they can settle in with hay and water. When releasing animals back to the range, they would be returned to the same general area from which they were gathered.

Any old, sick or lame horses unable to maintain an acceptable body condition (greater than or equal to a Henneke body condition score (BCS) 3) or with serious physical defects such as club feet, severe limb deformities, or sway back would be humanely euthanized as an act of mercy. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy (Washington Office Instruction Memorandum 2009-041).

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Individual animals are monitored and veterinary or supportive care is administered as needed. Electrolyte powder can be administered to the drinking water and electrolyte paste administered to individual animals if needed. The overall health and well-being of the animals is continually monitored through both summer and winter gathers to adjust gather operations as necessary to protect the animals from gather related health issues. Any orphan foals are attentively cared for through administering electrolyte solutions and/or feeding milk replacer as needed to support their nutritional needs. Foster or adoptive homes are identified to ensure good care to these young animals.

Should the need arise; BLM equipment operators would plow trails in the snow to facilitate the safe and humane movement of horses to a gather site. If dust becomes an issue, BLM ensures that contractors reduce speeds on dusty roads and water down corrals and alleyways.

The SOPs in Appendix A identify additional measures implemented during the completion of wild horses gathers to minimize or avoid impacts to wildlife, and other resources in addition to wild horses. Gather corral sites and temporary holding facilities would be located in previously used sites or other disturbed areas whenever possible (such as gravel pits, or road pull outs or junctions). Gather areas would not be constructed near riparian areas or near infestations of noxious weeds. Potential trap sites or holding facilities would be inventoried for cultural resources and noxious weeds. If cultural resources or noxious weeds are encountered, these locations would not be utilized unless they could be modified to avoid any impacts.

Observation Protocols would be implemented to ensure the safety of the public, BLM employees and contractors and the wild horses while members of the public are in the area to observe the gather operations. These protocols are detailed in Appendix F.

4. Cumulative Impact Analysis

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.

Cumulative impacts are impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The Cumulative Effects Study Area (CESA) for this project includes the Stone Cabin, Hunts Canyon, and Ralston, Reveille and Monitor Allotments. The time frame for analysis is from the passage of the Wild Free-Roaming Horses and Burros Act of 1971 to 2022 ten years past the proposed gather which is a reasonable time frame to consider potential future actions within this analysis

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

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Past, Present, and Reasonably Foreseeable Actions

The past, present, and reasonably foreseeable future actions applicable to the assessment area are identified as the following:

Project -- Name or Description	Status (x)		
	Past	Present	Future
Issuance of multiple use decisions and grazing permits for ranching operations through the allotment evaluation process and the reassessment of the associated allotments.	x	x	x
Livestock grazing	x	x	x
Wild horse and burro gathers	x	x	x
Mineral exploration / geothermal exploration/abandoned mine land reclamation	x	x	x
Recreation	x	x	x
Range Improvements (including fencing, wells, and water developments)	x	x	x
Wildlife guzzler construction			x
Invasive weed inventory/treatments	x	x	x
Wild horse and burro management: issuance of multiple use decisions, AML adjustments and planning	x	x	x
Wind or Solar Power Generation Plants			x

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

Effects of Past, Present, and Reasonably Foreseeable Future Actions

Past Actions

The Tonopah Management Framework Plan, signed on July 16, 1981, designated the Stone Cabin and Saulsbury Wild Horse Management Areas and established an interim herd sizes.

The gather area has been utilized by domestic livestock since the area was settled over 100 years ago. The BLM instituted structured and organized administration of domestic livestock use of the public lands in the Tonopah area in the 1960's. Some changes have been made to the livestock management within the Stone Cabin and Hunts Canyon Allotments through a Proposed Multiple Use Decision issued September 9, 1996. A Notice of Closure of livestock grazing was issued December 6, 1996 due to severe drought, limited forage, and heavy to severe use levels. Grazing resumed in grazing year 1997 once drought conditions subsided and perennial vegetation was reestablished. An emergency wild horse gather was conducted in 1997 due to the severe drought and degraded condition of the range.

Since passage of the Wild Free-Roaming Horses and Burros Act of 1971, the Stone Cabin Complex has experienced wide fluctuations in wild horse populations, and at times very high numbers of wild horses have inhabited the Complex. Since 1984, the Stone Cabin HMA has been gathered 6 times with a total of 1,456 wild horses being gathered. The Saulsbury HMA has only been gathered twice during

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the same temporal span with a total of 414 wild horses being captured. Table 10 displays what years the HMAs have been gathered and how many wild horses were captured in those respective years.

Historic wild horse and domestic livestock use have occurred throughout the gather area. Recreation, mineral exploration, and invasive weed treatment have had, and are expected to continue to have negligible impacts to grazing or wild horse management within the project area.

Table 10 – Gather years and the number of wild horses captured during those years for the Stone Cabin and Saulsbury HMAs.

YEAR GATHERED	NUMBER GATHERED IN STONE CABIN HMA	NUMBER GATHERED IN SAULSBURY HMA
1985	85	
1991	564	
1995	211	
1997	216	146
1999	176	
2007	204	268
TOTAL	1456	414

Past activities, which may have affected wild horses within the Stone Cabin and Saulsbury HMAs primarily, include livestock grazing through the impacts on vegetation condition and availability, as well as water quality and quantity, and drought. Wild horse use/overpopulation and wild horse gathers to remove excess wild horses are likely the largest impact to the quality and quantity of habitat used by wild horses and thus the health and long term success of wild horses in the HMA. In 2009, Nevada Department of Transportation constructed a fence along the Highway 6 right of way which nearly eliminated wild horses' ability to move between the north and south portions of the Stone Cabin HMA. This changed historic wild horse movement in the area between forage and water, and has potentially increased pressure on some of the available water sources in the south portion. Wild horses can still move between the north and south portions of the Saulsbury HMA as Highway 6 is not fenced through USFS land; in which wild horses can move between unrestricted. Although there are few mineral activities in the gather area at the present time, such activities and other small projects may have had or in the future may have temporary and isolated impacts to the wild horses.

Present Actions

Currently, the Stone Cabin Complex population is estimated to be 752 wild horses. This population currently exceeds the established AML, and a substantial portion of the Saulsbury HMA population resides outside of the HMA boundary. Permitted livestock use is the primary use that occurs within the associated Allotments in addition to the use by wild horses and wildlife.

A Rangeland Health Evaluation (RHE) is currently being conducted on the Stone Cabin Allotment. Once complete data is collected and analyzed, Standards for Rangeland Health will be evaluated and if necessary, changes to livestock and wild horses use recommended and implemented through decisions if necessary, following consultation with the interested public. Despite the lack of an authorized permit to grazing livestock in the Ralston Allotment, trespass livestock use is occurring.

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Reasonably Foreseeable Future Actions

Future activities which could occur include adjustments to livestock grazing numbers or season of use, water developments, spring enclosures, and mineral exploration activities. The future may also involve further adjustments (increases or decreases) to the AML of the Stone Cabin and Saulsbury HMAs and the development of a Herd Management Area Plan (HMAP). Other activities, such as future gathers to maintain AML, implementation of fertility control and/or modification of sex ratios within the HMAs could occur. Should future genetic analysis indicate concerns with genetic viability, specific treatment protocols would be developed to address these concerns such as potential augmentation of wild horses from other similar HMAs.

Wild horses will continue to move throughout Stone Cabin, Saulsbury, and surrounding HMAs (Nevada Wild Horse Range, Hot Creek HMA, Little Fish Lake WHT/HMA, and Monitor WHT). Future planning involves

- Management of Stone Cabin and Saulsbury HMAs south of Highway 6 as a Complex with the Reveille HMA,
- Management of Stone Cabin and Saulsbury HMAs north of Highway 6 as a Complex with the Monitor WHT.

Although no plans have been submitted thus far, the possibility exists that the Highway 6 right of way fence could be further restricting wild horse movements through the north and south portions of the Saulsbury HMA.

Inventory and gathers would be planned to occur together with USFS to improve management of these areas.

The BLM would continue to conduct monitoring to assess progress towards meeting Mojave-Southern Great Basin Standards and Guidelines, Rangeland Health Standards and RMP objectives. Wild horses would continue to be a component of the public lands, managed within a multiple use concept.

The BMDO is in the process of updating and revising the Shoshone-Eureka and Tonopah Land Use Plans. Actions in these updated plans could include changes to HMA designation or allocation, implementation of SOPs for management of these populations, and identification of tools to use for population control. The LUP Revision process includes involvement with the interested public. Information about this process can be found on the LUP Revision website at:
http://www.blm.gov/nv/st/en/fo/battle_mountain_field/blm_information/rmp.html

While there is no anticipation for amendments to the Wild Free-Roaming Horses and Burros Act that would change the way wild horses could be managed on the public lands, the Act has been amended three times since 1971. Therefore, there is potential for amendment as a reasonably foreseeable future action.

As the BLM achieves AML on a Bureau wide basis gathers should become more predictable due to facility space. This should increase stability of gather schedules, which would result in the Stone Cabin and Saulsbury HMAs being gathered at least every four years. Fertility control should also become more readily available as a management tool, with treatments that last between gather cycles, reducing the need to remove as many wild horses, and possibly extending the time between gathers.

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Impacts

Cumulative beneficial effects from the Proposed Action and Range of Action Alternatives are expected, and would include improvement of the rangeland vegetation and riparian areas, which in turn positively impact wildlife, wild horse populations, and livestock as forage and water availability and quality is maintained and improved.

The combination of the past, present, and reasonably foreseeable future actions, along with the Proposed Action or Action Alternatives, should result in more stable wild horse populations, healthier rangelands, healthier wild horses, and fewer multiple-use conflicts within the Stone Cabin Complex.

The Proposed Action and Action Alternatives would contribute to isolated areas of disturbed vegetation through the gather activities. Due to the small size or short duration of the disturbance (<2 weeks), cumulative impacts associated with the Proposed Action or range of Action Alternatives, when compared to the overall CESA, are expected to be negligible especially when identified mitigation measures are implemented.

The Proposed Action and Action Alternatives are expected to result in indirect impacts that would contribute to improved rangeland health, proportional to the number of horses on the range via the alternatives. In the long term, the achievement of AML in conjunction with other foreseeable actions (such as changes to livestock management systems) would lead to improved habitat for wild horses and wildlife. An overall lower population and density of wild horses across the landscape would promote recovery of native vegetation currently in a state that is less than the potential or desirable condition, as well as reduce or eliminate additional degradation to vegetation and riparian areas. Removal of excess wild horses from the Stone Cabin or Hunts Canyon Allotment would not impact the movement of wild horses among the HMAs or WHTs that has been found to occur, which promotes continued genetic viability.

Because of the movement of wild horses between the Stone Cabin Complex and neighboring HMAs, the proposed removal operation, as well as future gathers could affect the number of animals in these HMAs. Experience has shown that when the population is reduced in one HMA, often times there are compensatory population fluctuations as wild horses migrate into an area of lower population from an area of higher population. This is likely a natural response to reduced competition for forage, water, and space. The outcome can be noticeable or subtle shifts in the populations between HMAs over time, and particularly in the years following a gather operation. The HMAs that could be affected by this include Reveille, Hot Creek, and Little Fish Lake, and Monitor WHT and the NWHR located on the Nevada Test and Training Range.

Additionally, due to the normal movement of wild horses between the Stone Cabin Complex and the adjacent HMAs and WHT, it is expected that genetic health of all populations will continue to be maintained.

A cycle of AML maintenance, improved rangeland health and improvements to animal health could result. In past years, the gather frequency has fluctuated, and populations have increased to many times the AML, followed by gathers that required the removal of a large portion of the population (up to 92%) to reach AML given the high population growth rate and length of time between gathers. Animal health was an issue during some of these gathers due to over population coupled with drought conditions, which often precluded the ability to select animals for release based on characteristics, age or other traits. In the future, the two-year fertility control protocol could result in the *release* of

Stone Cabin Complex Wild Horse Gather Environmental Assessment

approximately 80 percent of the animals gathered (after application of fertility treatment to mares) by maintaining stable populations within the established AML ranges, removal of primarily young animals, and avoiding the cycle of over populated ranges, necessitating the gather and removal of large numbers of excess animals in order to achieve the lower limit of AML.

Through a two-year fertility control protocol, repeated gathers would have the effect of reducing the gather efficiency as wild horses learn to avoid the helicopter. Though horses would be disturbed every two years, most horses would be re-released back to the range resulting in less disturbance to existing social structures.

If a two year fertility control protocol is not continued, and a gather cycle of every 3-4 or 5-7 years with fertility control occurs, the effects would be similar with a few exceptions. Increased numbers of wild horses would need to be removed during each gather to achieve the lower limit of AML. Fertility control would not be completely effective at controlling the population because of the increased gather interval, which would exceed the period during which the fertility control vaccine is effective. Increased numbers of older wild horses could need to be removed that may need to be maintained in LTPs. Age selection criteria could be implemented that would restrict removal of older horses, thus increasing the proportion of older horses remaining on the range.

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 next 10-20 years, continuing to manage wild horses within the established AML range would ensure a thriving natural ecological balance and multiple use relationship on public lands in the area.

With implementation of the Proposed Action or the Action Alternatives, excessive use by wild horses would not occur as long as the AML is maintained. Key forage species would improve in health, abundance and robustness, and would be more likely to set seed and reproduce, which in turn would contribute to their increase within the plant community.

As future wild horse decisions are implemented and future gathers conducted to remove excess wild horses and maintain AML, these impacts are expected to continue and result in overall improvements to the forage availability for livestock, wild horses and wildlife. Wild horse habitat would be protected from further losses of important key forage species, which would increase in frequency, vigor and production. Improved habitat condition would lead to improved equine body condition, healthier foals, and ensure herd sustainability through drought years.

Cumulatively, application of fertility control through the Proposed Action could greatly increase the health of mares within the HMA over many years to come with reduced biological costs due to raising foals. Once normal fertility resumes, mares would reflect higher body condition which would result in larger, stronger foals more apt to reach their genetic potential and survive adverse conditions.

The proposed gather and other foreseeable actions would begin to offset past negative trends in habitat modification by allowing progress towards attainment of the Mojave-Southern Great Basin Standards and Guidelines, Rangeland Health Standards and RMP Objectives. When combined with past, present, and reasonably foreseeable future actions, and incorporating mitigation measures, the potential for cumulative impacts to wildlife habitat from the Proposed Action would also be negligible.

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The No Action Alternative would not result in any long-term cumulative benefits to any rangeland user. The No Action Alternative would allow continued degradation of vegetation by an excess population of wild horses throughout the Complex which would cause continued loss of key perennial forage species replaced by less palatable and nutritious native and non-native plants. Past impacts would not be offset, and downward trends would occur.

If the population is left to grow uncontrolled, wild horses would soon reach a level where water is not only inadequate, but severe damage would occur to springs and other water sources. In areas like the southern portions of the Saulsbury and Stone Cabin HMAs, water may become unavailable to wild horses at such high populations.

As the population within the Stone Cabin Complex continued to grow over time, increased numbers of wild horses would move into adjoining HMAs and outside HMA boundaries, thereby increasing the populations in those HMAs as well as establishing wild horse populations in areas not identified for their management which would contribute to negative impacts on the resources. During future gathers, additional wild horses would need to be removed from within and outside these HMAs in order to reach the AML targets.

No other past, present or reasonably foreseeable actions would offset the damage to the range caused by an ever increasing population of wild horses. Even complete removal of permitted livestock would not be enough to allow unregulated population growth within the Complex, as water is very limited throughout the area. The population would eventually reach a level in which water and/or forage were inadequate to meet the needs of the population. Body condition decline would begin and would be rapid. Without an emergency gather to remove the stressed animals, a large portion of the population would die a painfully suffering death.

Deterioration of uplands and riparian areas through an overpopulation of wild horses would not improve habitat for future generations of wild horses or wildlife. Chronic and long term degradation of rangeland resources could result in irreparable damage to the arid habitat and could result in the need to permanently remove all wild horses from the Stone Cabin Complex, cumulatively resulting in reduced AML or discontinuing long term management of wild horses within this Complex for due to lack of suitable habitat. In the long term, the No Action Alternative would result in the reductions or elimination of livestock, and a severe reduction or extirpation of native wildlife within the Stone Cabin Complex.

5. Suggested Monitoring

The BLM would continue to conduct the necessary monitoring to periodically evaluate the effects of livestock grazing and use by wild horses and wildlife, and determine if progress is being made in the attainment of multiple use objectives and Standards for Rangeland Health. Monitoring would be in accordance with BLM policy as outlined in the *Nevada Rangeland Monitoring Handbook* and other BLM technical references.

The TFO would continue to plan for inventory flights at approximately 2 year intervals to monitor the growth and distribution of the wild horse populations in the Stone Cabin Complex, movement between the surrounding HMAs, WHTs, and the NWHR; and the effects of fertility control on growth rates. Vegetation monitoring to consist of utilization, trend, frequency, cover, production, species

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composition, proper functioning condition and other rangeland studies would continue to be completed.

6. Consultation, Coordination and List of Preparers

Refer to Section 1.9 for a summary of the public scoping.

Public hearings are held annually on a state-wide basis regarding the use of motorized vehicles, including helicopters and fixed-wing aircraft, in the management of wild horses and burros. During these meetings, the public is given the opportunity to present new information and to voice any concerns regarding the use of the motorized vehicles. The Ely District Office hosted the state-wide meeting on June 15, 2011; the current gather operation SOPs were reviewed in response to the concerns expressed and no changes to the SOPs identified.

Comments on the Stone Cabin and Saulsbury HMA Wild Horse Gather Preliminary Environmental Assessment DOI-BLM-NV-B020-2011-0106-EA will be accepted for 30 days until November 29, 2011. Interested individuals should mail written comments to the BLM Tonopah Field Office, 1553 S. Main, P.O. Box 911, Tonopah, NV 89049 attn: Thomas J. Seley, Tonopah Field Manager.

This EA is also posted at http://www.blm.gov/nv/st/en/fo/battle_mountain_field.html; in the map of Nevada, click on the Battle Mountain District and you will be directed to the District webpage. Comments need to be received (mailed, faxed, or emailed) no later than November 29, 2011. **The only email comments that will be considered are emails sent to Stonecabinhma@blm.gov. Email comments sent to any other email address WILL NOT be considered.**

List of Preparers

Dustin Hollowell	WH&B Specialist
Shawna Richardson	WH&B Specialist
Sheryl Post	Rangeland Management Specialist
Marc Pointel	Supervisory Natural Resource Specialist
Devin Englestead	Wildlife Biologist
Brandon Jolley	Rangeland Management Specialist
Sue Rigby	Archaeologist
John Hartley	Planning and Environmental Coordinator

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Stone Cabin and Saulsbury HMA Interested Party Mailing List

<u>Name</u>	<u>Organization</u>
	National Mustang Association
	Nevada Cattlemens Association
	Stone Cabin Partnership
	Western Range Services
Al Steniger	Timbisha Shoshone Tribe
Barbara Durham	Nevada State Clearinghouse
Clearinghouse Coordinator	NDOW-Southern Region
Brad Hardenbrook	Wild Horse Organized Assistance
Dawn Lappin	Nye County Commissioner
Gary Hollis	US Fish and Wildlife Service
Jill Ralston	Nye County Commissioner
Lorinda Wichman	Western Watersheds Project
Katie Fite	Colvin and Son LLC
Larry Schutte	The Cloud Foundation
Makendra Silverman	Duckwater Shoshone Tribe
Maurice Frank Churchill	Sustainable Grazing Coalition
Richard A Orr	Center for Biological Diversity
Rob Mrowka	American Horse Protection Association
Robin Lohnes	NDOW
Steve Siegel	NDOW
Teri Slatauski	Colvin and Son LLC
Tom Colvin	NDOW-Southern Region
Tracy Kipke	

Appendix A: Wild Horse Gather Plan and Standard Operating Procedures

I. Gather Plan

The purpose of the gather plan is to outline the methods and procedures for conducting a gather to remove excess wild horses from public lands administered by the TFO. Implementation of the Proposed Action would require the capture of 714 and removal of approximately 505 wild horses to achieve a post-gather population of 247 wild horses. A trap-site adoption event could also be scheduled to coincide with the gather activities (refer to Section 1-J).

A. Gather Area

The Proposed Gather Area includes the Stone Cabin and Saulsbury HMAs and areas outside of HMA boundaries in the Ralston, Hunts Canyon, Reveille and Monitor Allotments. The area is approximately 885,000 acres. Refer to Map 1 and 2, which display the HMAs, grazing allotments and the gather area.

B. Administration of the Contract /Gather Operations

The National Wild Horse and Burro Gather Contract would be used to conduct the wild horse gather tentatively scheduled for the, winter 2012. BLM personnel would be responsible for overseeing the contract for the capture, care, aging, and temporary holding of wild horses from the capture area. BLM WH&B Specialists would be present during all aspects of the gather activities.

Standard Operating Procedures (SOPs) described within this document would be utilized for the capture and handling of wild horses and burros. SOPs have been developed over time to ensure minimal impacts associated with gathering, handling, and transporting wild horses and burros and collecting herd data.

It is estimated that 4-5 gather corrals and 1 set of central holding corrals would be necessary to complete the gather. Ideally, gather corrals would be established in areas of previous soil or vegetation disturbance (such as gravel pits, roads etc.), to avoid impacts to unaltered vegetation and soils. A cultural resources investigation would be conducted prior to the construction of gather corrals and temporary holding facilities. Refer to the SOPs, Section H for more detailed information.

A notice of intent to impound would be made public prior to the gather. Branded and/or claimed horses would be transported to a temporary holding facility. Ownership would be determined under the estray laws of the State of Nevada by a Nevada Brand Inspector. Collection of gather fees and any appropriate trespass charges would be collected per BLM policy and regulation.

An APHIS or private veterinarian would be on-call or on-site for the duration of the gather to provide recommendations to WH&B Specialists for care and treatment of sick or injured wild horses. Consultation with the veterinarian may take place prior to the euthanasia of wild horses in accordance with Washington Office Instruction Memorandum (IM 2009-041). Refer to Part H for more information about the euthanasia policy.

Precautions would be taken to ensure that young or weak horse foals are safely gathered and cared for appropriately. If a foal were determined to be an orphan, qualified adopters would be contacted immediately to provide proper care for the foal. Milk replacer formula and electrolytes would be available to care for orphan foals if necessary.

C. General Overview of Wild Horse and Horse Gather Methods

The gather contractor supplies and transports all equipment needed to conduct a gather to a central location where Holding Corrals are constructed. These corrals consist of six or more pens constructed of sturdy panels, with a central alleyway and working/squeeze chute in the center. Corral panels are covered with snow fencing to keep animals calm, and water tanks located within the pens. The central alley and pen arrangement allows the BLM

staff and the contractor to sort recently captured animals, separating animals to ship to the adoption facilities, and mares and foals from stallions to prevent fighting and injury. The pen arrangement allows the contractor to off-load wild horses from stock trailers into the pens, and facilitates the loading of the horses to be transported to facilities onto large straight deck trucks.

At various locations throughout the HMA, smaller sets of gather corrals are constructed called “traps”. The trap or gather corrals consists of a series of pens made out of panels, and “wings” made out of jute netting that funnel wild horses into the corrals as they are captured. Once captured, the horses are loaded into stock trailers and transported to the central Holding Corrals for sorting. Horses may remain in the gather site or on the stock trailer for no time at all, or up to an hour or more while other groups of horses are brought to the gather corrals.

The contractor utilizes a helicopter and pilot to conduct gathers. Use of a helicopter is humane, safe and effective. Methods for use of helicopter are well established, and the contract pilots very skilled. Wild horses settle down once gathered and do not appear to be more than slightly annoyed by the helicopter.

The pilot locates groups of wild horses within the HMA and guides them towards the gather corrals. In most cases, horses are allowed to travel at their own pace, and are not “pushed”. Distances average 4-7 miles over mixed terrain which may consist of rolling foothills, or steeper terrain, drainages, ridges and valley bottoms. The horses often follow their own trails. The pilot and the BLM staff monitor the condition of the horses to ensure their safety, checking for signs of exhaustion, injuries etc. The contractor and pilots are very skilled at designing and building gather corrals, and safely herding the horses to them. Generally, wild horses are very fit, and recover quickly from being captured. Distances that the horses travel are modified to account for summer temperatures, snow depth, animals in weakened condition, young foals, or older/lame animals. Under ideal conditions, some horses could be herded 10 miles or more at the discretion of the COR/WH&B Specialist.

Once near the gather site, the contractor holds a “Prada” horse at the mouth of the wings. As the pilot pushes the wild horses closer, the Prada horse is released, who then runs into the gather corrals, leading all of the wild horses with him. Crewmembers rush in to secure gates once the horses are within the corrals. During summer gathers, the crew often separates foals from adults at the gather site so that they may be transported to the Holding Corrals separately and avoids being injured by adult horses. Foals may be loaded into a separate stock trailer where they can have shade, water, and electrolyte if necessary. Once unloaded at the Holding Corrals, foals may be rejoined with the mothers if not old enough to wean, and monitored to ensure that all of the foals “join-up”. Often paint marks are applied to the foals and mothers to assist the contractor and BLM staff in identifying pairs.

Occasionally (and more frequently for difficult to gather areas) helicopter-assisted roping is implemented, in which the pilot moves a small group of horses to the gather area, and the crewmembers rope the animals by horseback. This method often prevents overstressing the horses from repeated attempts to move them into the gather corrals. The roped horses are then led to the corrals, to awaiting stock trailers, or immobilized on the ground until they can be loaded into stock trailers.

Once horses are loaded and transported to the Holding Corrals, they are sorted by the contractor’s staff and BLM employees. The contractor looks at the horse’s teeth to estimate age while held in the chute, and the BLM staff documents age, color, body condition and lactation status of the horse. Aging wild horses is a process of estimation due to the type of wear that can occur to the teeth of a wild horse on the range.

Injuries are noted and treated if needed. Once sorted, the horses are given hay and unlimited water, if no health concerns exist. During this time, the BLM may consult with a veterinarian to treat sick or injured animals, or make recommendations for euthanasia.

When the pens hold enough horses to transport to the BLM adoption facility, they are loaded into the straight deck trailers that hold 35-45 wild horses depending upon their size. The trailers have three compartments so that

mares, stallions and foals can be transported separately. It may require 3-8+ hours for the wild horses to arrive at the adoption preparation facility. The TFO typically ships horses to National Wild Horse and Burro Center at Palomino Valley near Sparks, Nevada; or may ship horses to the facility at Ridgecrest, California Arizona, Gunnison Correctional Facility in Gunnison, UT, or Indian Lakes Facility in Fallon, NV if needed.

During sorting, the BLM staff identifies the wild horse to be re-released back to the HMA according to the objectives for the herd. Mares may be held until the end of the gather so that fertility control can be given to them to slow future population growth rates. When it is time for the release, the mares and stallions are each loaded into separate stock trailers and transported back inside the HMA near water sources, if possible. The rear of the trailer is opened up, and the horses are allowed to step off and travel back into the HMA. Sometimes the horses are released directly from the holding corrals if they are centrally located within the HMA.

Before the wild horses are transported to adoption facilities or released, hair is sampled for genetic testing. Data collected during the gather in conjunction with genetic analysis report will be incorporated into a Herd Management Area Plan (HMAP) in the future.

D. Data Collection

WH&B Specialists would be responsible for collecting population data. The extent to which data is collected may vary among the field offices to meet specific needs pertaining to each HMA.

1) Hair Samples/Genetics Analysis

Hair samples could be collected and analyzed to establish genetic baseline data of wild horses (genetic diversity, historical origins, unique markers, and norms for the population).

WHB Specialists could collect a minimum sample size of 25 hair samples from both mares and stallions in a ratio similar to the sex ratio released. Age would not be a defining factor in determining which animals to sample. Samples would be sent to Texas A&M University for analysis.

2) Herd Health and Viability Data Collection

WHB Specialists would document information related to age, sex, color, overall health, pregnancy, or nursing status from each animal captured. An estimate of the number of horses evading capture would also be recorded.

Information on reproduction would be collected to the extent possible, through documentation of the wild horses captured during the gather, and the age of those released following the gather.

3) Characteristics

WHB Specialists would record color and size of the animals, and any characteristics as to type would be noted, if determined. Any incidence of negative genetic traits (parrot mouth, club foot etc.) or other abnormalities would be noted as well.

4) Condition Class

A body condition class score would be recorded based on the Henneke System. This would be recorded for the population in general and/or for specific animals if necessary.

E. Euthanasia

The Authorized Office (or designee) will make decisions regarding euthanasia, in accordance with BLM policy as expressed in Washington Office Instructional Memorandum No. 2009-041. A veterinarian may be called to make a diagnosis and final determination. Current BLM SOP is to have a Veterinarian from APHIS on site throughout the gather to observe animal health and condition and provide input to BLM staff regarding the potential need to euthanize wild horses on gathers. Euthanasia shall be done by the most humane method available. Authority for humane euthanasia of wild horses or burros is provided by the Wild Free-Roaming Horses and Burros Act of

1971, Section 3(b)(2)(A), 43 CFR 4730.1, BLM Manual 4730 - Euthanasia of Wild horses and Burros and Disposal of Remains. The following are excerpted from IM 2009-41:

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

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

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

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

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

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

I. Special Stipulations

- 1) Private landowners or the proper administering agency(s) would be contacted and authorization obtained prior to setting up gather corrals on any lands which are not administered by BLM. Wherever possible, gather corrals would be constructed in such a manner as to not block vehicular access on existing roads.
- 2) Gather corrals would be constructed so that no riparian vegetation is contained within them. No vehicles would be operated on riparian vegetation or on saturated soils associated with riparian/wetland areas.
- 3) 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.
- 4) Standard operating procedures in the site establishment and construction of gather corrals will avoid adverse impacts from gather corrals, construction, or operation to wildlife species, including threatened, endangered, or sensitive species.
- 5) Archeological clearance by a BLM archaeologist or District Archeology Technician of gather corrals, holding corrals, and areas of potential effects would occur prior to construction of gather corrals and holding corrals. If cultural resources were encountered, those locations would not be utilized unless they could be modified to avoid impacts. Due to the inherent nature of wild horse gathers, gather corrals and holding corrals would be identified just prior to use in the field. As a result, Cultural Resource staff would coordinate with WH&B personnel to inventory proposed locations as they are identified, and complete required documentation.
- 6) Wilderness Study Areas: When gathering wild horses from within Wilderness Study Areas (WSAs), applicable policy will be strictly adhered to. Only approved roads will be traveled on. A Wilderness Specialist or designee would be present to ensure that only inventoried ways or cherry stemmed roads are traveled on by vehicles within the WSA.
- 7) Wildlife stipulations
The following stipulations would be applied as appropriate.
 - a. Sage Grouse
 - i. Avoid active leks (strutting grounds) by 2 miles. March 1- May 15
 - ii. Avoid nesting and brood rearing areas (especially riparian areas where broods concentrate beginning usually in June) by 2 miles. April 1 – August 15
 - iii. Avoid sage grouse wintering areas by 2 miles while occupied. Most known wintering grounds in the Shoshone-Eureka Resource Area occur at high elevations and are not likely to be affected. Dates vary with severity of winter
 - iv. Minimize and mitigate disturbance to the vegetation in all known sage grouse habitat.
 - b. Ferruginous Hawk: Avoid active nests by 2 miles. March 15- July 1.

J. Trapsite Wild Horse Adoptions

Interest has been received from the public for an adoption to be planned in conjunction with this proposed gather. Scheduling of an event would be contingent upon continued interest received, available budget, and personnel. A trapsite wild horse adoption would be completed in accordance with IM NV-2001-041, which outlines requirements for adoptions during gather operations.

Prior to the beginning of the gather, the BMFO would issue news releases and send flyers to previous adopters and the interested public announcing the proposed event. The event would also be posted on the

National Wild Horse and Burro webpage. Coordination would take place with the gather contractor in advance to prevent conflicts. Applications for adoption would be accepted by the BMFO until the day of the planned event. BMFO would evaluate applications received by potential adopters, and determine qualification to adopt. Adopters that do not submit applications by the event date would not have first priority for selection of animals. A public or viewing day may be scheduled the day before or the day of the event. The event type (first-come, first-served, competitive or lottery) would be based upon the interest received from potential adopters.

BLM staff would freezemark, de-worm and vaccinate all wild horses adopted. A veterinarian would be on-site to draw blood for coggins testing and complete health certificates. Adopted wild horses would be brand inspected by a qualified brand inspector. BLM staff would halter and load wild horses into approved stock trailers, and follow-up with compliance inspections and assistance as needed after the event.

II. Standard Operating Procedures for Wild Horse and Horse Gathers

Gathers would be conducted by utilizing contractors from the Wild Horse Gathers-Western States Contract, or BLM personnel. The following procedures for gathering and handling wild horses would apply whether a contractor or BLM personnel conduct a gather. For helicopter gathers conducted by BLM personnel, gather operations will be conducted in conformance with the *Wild Horse Aviation Management Handbook H-4740-1* (January 2009).

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

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

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

1. Helicopter Assisted Trapping. This capture method involves utilizing a helicopter to direct wild horses into a temporary corral.
2. Helicopter Assisted Roping. This capture method involves utilizing a helicopter to herd wild horses or burros to ropers.
3. Bait Trapping. This capture method involves utilizing bait (e.g., water or feed) to lure wild horses into a temporary corral.

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

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

1. The primary concern of the contractor is the safe and humane handling of all animals captured. All capture attempts shall incorporate the following:

All gather corral and holding facilities locations must be approved by the Contracting Officer's Representative (COR) and/or the Project Inspector (PI) prior to construction. The Contractor may also be required to change or move corral locations as determined by the COR/PI. All gather corrals and holding facilities not located on public land must have prior written approval of the landowner.

2. The rate of movement and distance the animals travel shall not exceed limitations set by the COR who will consider terrain, physical barriers, access limitations, weather, extreme temperature (high and low), condition of the animals, urgency of the operation (animals facing drought, starvation, fire rehabilitation, etc.) and other factors. In consultation with the contractor the distance the animals travel will account for the different factors listed above and concerns with each HMA.
3. All gather corrals, wings, and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:
 - a. Gather corrals 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 horses, and the bottom rail of which shall not be more than 12 inches from ground level. All gather corrals and holding facilities shall be oval or round in design.
 - b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered, plywood, metal without holes larger than 2"x4".
 - c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for horses, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet above ground level for horses and 1 foot to 6 feet for burros. The location of the government furnished portable fly chute to restrain, age, or provide additional care for the animals shall be placed in the runway in a manner as instructed by or in concurrence with the COR/PI.
 - d. All crowding pens including the gates leading to the runways shall be covered with a material which prevents the animals from seeing out (plywood, burlap, plastic snow fence, etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level for horses and 2 feet to 6 feet for burros.
 - e. All pens and runways used for the movement and handling of animals shall be connected with hinged self-locking or sliding gates.
4. No modification of existing fences will be made without authorization from the COR/PI. The Contractor shall be responsible for restoration of any fence modification which he has made.
5. When dust conditions occur within or adjacent to the trap or holding facility, the Contractor shall be required to wet down the ground with water.
6. Alternate pens, within the holding facility shall be furnished by the Contractor to separate mares or mares with small foals, sick and injured animals, estrays, or other animals the COR determines need to be housed in a separate pen from the other animals. Animals shall be sorted as to age, number, size, temperament, sex, and condition when in the holding facility so as to minimize, to the extent possible, injury due to fighting and trampling. Under normal conditions, the government will require that animals be restrained for the purpose of determining an animal's age, sex, or other necessary procedures. In these instances, a portable restraining chute may be necessary and will be provided by the government.

Alternate pens shall be furnished by the Contractor to hold animals if the specific gathering requires that animals be released back into the capture area(s). In areas requiring one or more satellite gather corrals, and where a centralized holding facility is utilized, the contractor may be required to provide additional holding pens to segregate animals transported from remote locations so they may be returned to their traditional ranges. Either segregation or temporary marking and later segregation will be at the discretion of the COR.

7. The Contractor shall provide animals held in the gather corrals and/or holding facilities with a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day. Animals held for 10 hours or more in the gather corrals or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day. An animal that is held at a temporary holding facility through the night is defined as a horse/horse feed day. An animal that is held for only a portion of a day and is shipped or released does not constitute a feed day.
8. It is the responsibility of the Contractor to provide security to prevent loss, injury, or death of captured animals until delivery to final destination.
9. The Contractor shall restrain sick or injured animals if treatment is necessary. The COR/PI will determine if animals must be euthanized and provide for the destruction of such animals. The Contractor may be required to humanely euthanize animals in the field and to dispose of the carcasses as directed by the COR/PI.
10. Animals shall be transported to final their destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the COR/PI for unusual circumstances. Animals to be released back into the HMA following gather operations may be held up to 21 days or as directed by the COR/PI. Animals shall not be held in gather corrals and/or temporary holding facilities on days when there is no work being conducted except as specified by the COR/PI. The Contractor shall schedule shipments of animals to arrive at final destination between 7:00 a.m. and 4:00 p.m. No shipments shall be scheduled to arrive at final destination on Sunday and Federal holidays, unless prior approval has been obtained by the COR. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours in any 24 hour period. Animals that are to be released back into the capture area may need to be transported back to the original gather site. This determination will be at the discretion of the COR.

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

1. Capture attempts may be accomplished by utilizing bait (feed, water, mineral licks) to lure animals into a temporary gather corral. If the contractor selects this method the following applies:
 - a. Finger gates shall not be constructed of materials such as "T" posts, sharpened willows, etc., that may be injurious to animals.
 - b. All trigger and/or trip gate devices must be approved by the COR/PI prior to capture of animals.
 - c. Gather corrals shall be checked a minimum of once every 10 hours.
2. Capture attempts may be accomplished by utilizing a helicopter to drive animals into a temporary trap. If the contractor selects this method the following applies:
 - a. A minimum of two saddle-horses shall be immediately available at the trap site to accomplish roping if necessary. Roping shall be done as determined by the COR/PI. Under no circumstances shall animals be tied down for more than one half hour.

- b. The contractor shall assure that foals shall not be left behind, and orphaned.
3. Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. If the contractor with the approval of the COR/PI selects this method the following applies:
 - a. Under no circumstances shall animals be tied down for more than one half hour.
 - b. The contractor shall assure that foals shall not be left behind, or orphaned.
 - c. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who will consider terrain, physical barriers, weather, condition of the animals and other factors.

C. Use of Motorized Equipment

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The Contractor shall provide the COR/PI with a current safety inspection (less than one year old) for all motorized equipment and tractor-trailers used to transport animals to final destination.
2. All motorized equipment, tractor-trailers, and stock trailers shall be in good repair, of adequate rated capacity, and operated so as to ensure that captured animals are transported without undue risk or injury.
3. Only tractor-trailers or stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities, and from temporary holding facilities to final destination(s). Sides or stock racks of all trailers used for transporting animals shall be a minimum height of 6 feet 6 inches from the floor. Single deck tractor-trailers 40 feet or longer shall have two (2) partition gates providing three (3) compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing two (2) compartments within the trailer to separate the animals. Compartments in all tractor-trailers shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have a minimum 5 foot wide swinging gate. The use of double deck tractor-trailers is unacceptable and shall not be allowed.
4. All tractor-trailers used to transport animals to final destination(s) shall be equipped with at least one (1) door at the rear end of the trailer, which is capable of sliding either horizontally or vertically. The rear door(s) of tractor-trailers and stock trailers must be capable of opening the full width of the trailer. Panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of all trailers must be strong enough so that the animals cannot push their hooves through the side. Final approval of tractor-trailers and stock trailers used to transport animals shall be held by the COR/PI.
5. Floors of tractor-trailers, stock trailers and loading chutes shall be covered and maintained with wood shavings to prevent the animals from slipping.
6. Animals to be loaded and transported in any trailer shall be as directed by the COR/PI and may include limitations on numbers according to age, size, sex, temperament and animal condition. The following minimum square feet per animal shall be allowed in all trailers:
 - 11 square feet per adult horse (1.4 linear foot in an 8 foot wide trailer);
 - 8 square feet per adult horse (1.0 linear foot in an 8 foot wide trailer);
 - 6 square feet per horse foal (.75 linear foot in an 8 foot wide trailer);
 - 4 square feet per horse foal (.50 linear feet in an 8 foot wide trailer).

7. The COR/PI shall consider the condition and size of the animals, weather conditions, distance to be transported, or other factors when planning for the movement of captured animals. The COR/PI shall provide for any brand and/or inspection services required for the captured animals.
8. If the COR/PI determines that dust conditions are such that the animals could be endangered during transportation, the Contractor will be instructed to adjust speed.

D. Safety and Communications

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

E. Site Clearances

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

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

G. Public Participation

Opportunities for public viewing (i.e. media, interested public) of gather operations would be made available to the extent possible; however, the primary considerations will be to protect the health, safety, and welfare of the animals being gathered and the personnel involved. The public must adhere to guidance from the on-site BLM representatives. It is BLM policy that the public will not be allowed to come into direct contact with wild horses

or burros being held in BLM facilities. Only authorized BLM personnel or contractors may enter the corrals or directly handle the animals. The general public may not enter the corrals or directly handle the animals at any time or for any reason during BLM operations (refer to Appendix F, G, and H).

H. Responsibility and Lines of Communication

The Contracting Officer's Representatives (CORs) and the project inspectors (PIs) have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. Dustin Hollowell, WH&B Specialist would serve as the primary COR. Alternate COR and PI(s) would be selected prior to the start of the gather. Marc Pointel, Supervisory Natural Resources and Thomas Seley, Field Manager, TFO will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, State Office, National Program Office, and BLM Holding Facility offices. All employees involved in the gather operations will keep the best interests of the animals at the forefront at all times.

All publicity, formal public contact and inquiries will be handled through the Nevada State Office and Battle Mountain District Office Public Affairs Officer. These individuals will be the primary contact and will coordinate with the COR on any inquiries.

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

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

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

Appendix B: Standard Operating Procedures for Fertility Control Treatment

22-month time-release pelleted vaccine:

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

1. PZP vaccine would be administered only by trained BLM personnel or collaborating research partners.
2. Mares that have never been treated would receive 0.5 cc of PZP vaccine emulsified with 0.5 cc of Freund's Modified Adjuvant (FMA). Mares identified for re-treatment receive 0.5 cc of the PZP vaccine emulsified with 0.5 cc of Freund's Incomplete Adjuvant (FIA).
3. The fertility control drug is administered with two separate injections: (1) a liquid dose of PZP is administered using an 18-gauge needle primarily by hand injection; (2) the pellets are preloaded into a 14-gauge needle. These are delivered using a modified syringe and jabstick to inject the pellets into the gluteal muscles of the mares being returned to the range. The pellets are designed to release PZP over time similar to a time-release cold capsule.
4. Delivery of the vaccine would be by intramuscular injection into the gluteal muscles while the mare is restrained in a working chute. The primer would consist of 0.5 cc of liquid PZP emulsified with 0.5 cc of Freund's Modified Adjuvant (FMA). The pellets would be loaded into the jabstick for the second injection. With each injection, the liquid or pellets would be injected into the left hind quarters of the mare, above the imaginary line that connects the point of the hip (hook bone) and the point of the buttocks (pin bone).
5. In the future, the vaccine may be administered remotely using an approved long range darting protocol and delivery system if or when that technology is developed.
6. All treated mares will be freeze-marked on the hip or neck HMA managers to positively identify the animals during the research project and at the time of removal during subsequent gathers.

Monitoring and Tracking of Treatments:

1. At a minimum, estimation of population growth rates using helicopter or fixed-wing surveys will be conducted before any subsequent gather. During these surveys it is not necessary to identify which foals were born to which mares; only an estimate of population growth is needed (i.e. # of foals to # of adults).
2. Population growth rates of herds selected for intensive monitoring will be estimated every year post-treatment using helicopter or fixed-wing surveys. During these surveys it is not necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e. # of foals to # of adults). If, during routine HMA field monitoring (on-the-ground), data describing mare to foal ratios can be collected, these data should also be shared with the NPO for possible analysis by the USGS.
3. A PZP Application Data sheet will be used by field applicators to record all pertinent data relating to identification of the mare (including photographs if mares are not freeze-marked) and date of treatment. Each applicator will submit a PZP Application Report and accompanying narrative and data sheets will be forwarded to the NPO (Reno, Nevada). A copy of the form and data sheets and any photos taken will be maintained at the field office.
4. A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, disposition of any unused PZP, the number of treated mares by HMA, field office, and State along with the freeze-mark(s) applied by HMA and date.

Appendix C: Standard Operating Procedures for Field Castration (Gelding) of Wild Horse Stallions

June 2011

Gelding would 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 D: Vegetation and Monitoring Information

Rangeland monitoring studies were conducted during the 2011 Fiscal year to monitor the effects of wild horses and livestock grazing on the rangeland health of the Stone Cabin Allotment. Precipitation, trend, cover, production, utilization, actual use, and use pattern mapping were conducted to assess rangeland health. Key areas previously established throughout the allotment were used to monitor resource conditions, and the impacts of past and current management of livestock as well as the impacts of wild horse populations.

Key Area

A Key Area is a representative area of an ecological site. An ecological site is an area with a specific soil type and other physical characteristics (average annual precipitation, elevation, and aspect, etc.) that reflects a specific native vegetation community with consistent characteristics. Key Areas are selected based on the uniformity of vegetation, grazing use, and relative forage value of the plant community. These serve as monitoring points for measuring change in species composition over time and the impacts of grazing. Key areas reflect the current grazing management over similar areas in the allotment. Therefore, key areas serve as representative samples of range condition, trend, seasonal use, and forage production.

Key Species

Key Species are vegetation species that provide significant nutritional value to a variety of species. Below is a list of Key Species of importance that are present within the Stone Cabin Allotment.

- **Indian ricegrass** (*Achnatherum hymenoides*)
- **Galleta grass** (*Pleuraphis jamesii*)
- **Winterfat** (*Krascheninnikovia lanata*)
- **Bottlebrush Squirreltail** (*Elymus elymoides*)
- **Fourwing saltbrush** (*Atriplex canescens*)
- **Sand dropseed** (*Sporobolus cryptandrus*)
- **Bud sagebrush** (*Picrothamnus desertorum*)

Trend Analysis

Initial analysis of the trend data has shown that in general, there is an overall decrease in the density and vigor of key forage species. This decrease is likely attributed to extensive and prolonged grazing pressure from both livestock and wild horses. Overgrazing of plant species generally forces the plant to utilize stored carbohydrate reserves in order to produce new photosynthetic material. If there is enough pressure from grazers, the plant will eventually utilize all its stores and succumb to over utilization. Over grazing during the critical growth

stage also reduces the availability of seeds in the seed bank. This reduces the chance of reestablishment of new seedlings.

There also appears to be a change in plant community and structure in many areas throughout the allotment. A significant portion of the salt desert shrub range, mainly fourwing and winterfat ecological sites, have transitioned to plant communities dominated by Douglas rabbitbrush. Indian ricegrass, winterfat, and fourwing saltbush are highly favorable plant species to livestock and wild horses. These species are currently yielding at levels much lower than the potential for the sites. Over utilization due to extensive grazing pressure by wild horses and livestock is a causative factor for these highly favorable forage species to decline. This decline has allowed Douglas rabbitbrush to fill in and out-compete key species for resources across the landscape.

Use Pattern Mapping

Use Pattern Mapping is a method of tracking utilization levels across an area by livestock and wild horses. Utilization measurements of the previous year's growth are taken at sites across the landscape. Sites are selected based on how representative of use levels, proximity to water, and vegetation composition. This data is then compiled to determine general grazing trends of livestock and wild horses across the landscape.

Initial analysis of the utilization data has shown that in general, percent utilization ranges in the moderate category on average in the valley bottoms. This category is defined as having between 40 and 60 percent utilization of the prior year's growth. Around sources of water, the utilization category is typically in the heavy range with 60 to 80 percent utilization. The areas around the mountains average lighter utilization levels which range from 21 through 40 percent utilization. Refer to Figure 1.

Proper use levels were established in the "Notice of Final Decision" for the Stone Cabin Allotment 1996 (the document is available upon request). The document states that the proper use for grasses is 55 percent and for shrubs 45 percent with an average of the overall utilization of 50 percent. The analysis shows that approximately 56% of the allotment falls within 41 – 60 percent utilization or higher categories. These utilization levels are at or above the established use levels and likely are contributing to the continual degradation of the allotments key plant species. Refer to Table 1.

Table 1 – Use category levels and the percent of the Stone Cabin Allotment in each of the categories from monitoring data collected in 2011.

Use Class	Percent Coverage	Approximate Acres
Heavy	13.87%	54915
Moderate	42.33%	167666
Light	31.68%	125485
Slight	12.12%	47983

Rangeland Health Standards and Objectives

The Mojave-Southern Great Basin (MSGB) Resource Advisory Council (RAC) Standards for Rangeland Health are as follows:

- **Standard 1: Soils.** Watershed soils and stream banks should have adequate stability to resist accelerated erosion, maintain soil productivity, and sustain the hydrologic cycle.
 - Upland watershed condition as indicated by:
 - Ground Cover, surfaces (e.g. biological crust, pavement),
 - Compaction/filtration
- **Standard 2: Ecosystem Components.** Watersheds should possess the necessary ecological components to achieve State water quality criteria, maintain ecological processes, and sustain appropriate uses.
 - Upland condition indicated by: Canopy and ground cover, including litter, live vegetation, biological crust, and rock
 - Riparian Condition: Not Present
 - Water Quality: Not Applicable
- **Standard 3: Habitat and Biota.** Habitats and watersheds should sustain a level of biodiversity appropriate for the area and conducive to appropriate uses as indicated by:
 - Vegetation composition (relative abundance of species);
 - Vegetation structure (life forms, cover, height, and age classes);
 - Vegetation distribution (patchiness, corridors);
 - Vegetation productivity;
 - Vegetation nutritional value.

Initial analysis indicates that significant progress has not been made towards attainment of the standards in most cases. Reasons for these failures stem from most ecological sites producing at levels far below potential. Also, key forage species are below the potential as well as having been replaced by less palatable plants such as galleta grass, rabbitbrush, halogeton, and cheatgrass. The reasons behind the lack of production as well as invasive plant species encroachment is due to extensive grazing pressure by livestock and wild horses.

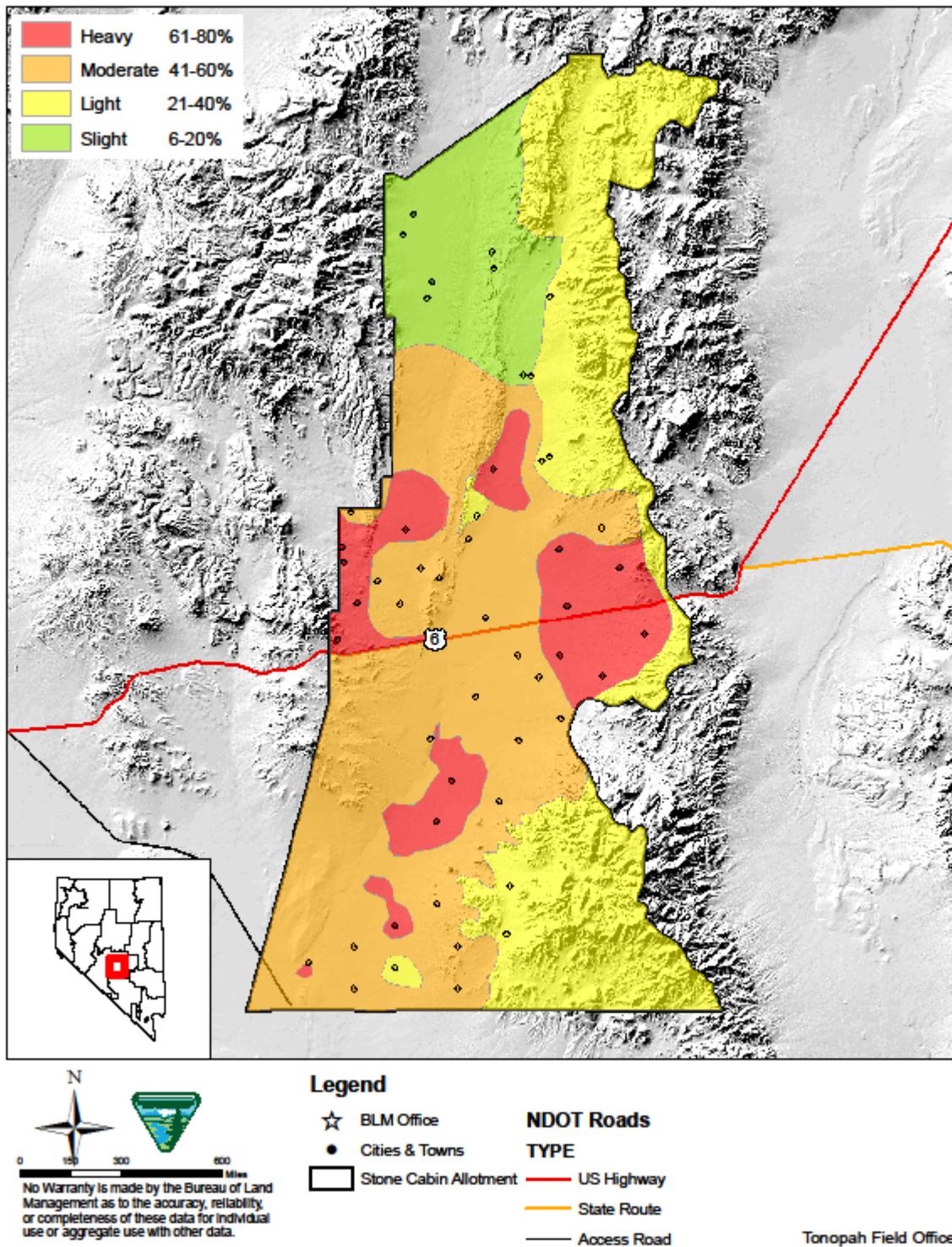
Recommendations

Restoration of degraded landscapes within the Great Basin can be a slow process. Low precipitation levels and regular drought occurrence reduces plant vigor, density, and establishment after disturbances. Furthermore, establishment of less palatable plant species such as galleta grass, rabbitbrush, halogeton, and cheatgrass increase the time required for restoration

and in some cases, may shift a plant community to a state that may require extensive restoration efforts to shift it back.

In order to prevent further degradation of the landscape, and promote range improvement, AML needs to be achieved and maintained. Reductions in overall wild horse populations would reduce grazing pressure on key species during critical growth periods as well as reduce the overall competition for resources. Establishment of a fertility control program would further enhance the restoration efforts by prolonging the time it takes to reach set AML levels which would in turn, allow more time for key plant species to reestablish and increase in density and vigor.

Figure 1. Utilization pattern map for the Stone Cabin Allotment.



Appendix E: Summary of Population Modeling

Population Model Overview

The WinEquus Feral Horse Population Model, developed by Dr. Steven Jenkins at the University of Nevada at Reno was designed to assist WH&B specialists evaluate various management plans and possible outcomes for management of wild horses that might be considered for a particular area. The population model is not applicable for burros. Windows version 1.40 of the model is accessible at www.equinox.unr.edu/homepage/jenkins.

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.

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.

For the purposes of the modeling, the populations of the Saulsbury and Stone Cabin HMAs were combined. A 2011 initial population was determined by modeling the estimated 2007 post gather population (determined from sex and age distribution from 2007 captured animals and released animals) from 2007 to 2011. The data regarding release horses and an estimated age structure of uncaptured horses were compiled to estimate the 2007 post gather population. Additionally, the Stone Cabin and Saulsbury HMAs are part of a larger Complex with the Monitor WHT administered by the USFS. However, because the USFS does not have AML established for this WHT, and it has never been gathered before, no data exists to use as part of the model for the Stone Cabin Complex. Therefore, the modeling only includes the Stone Cabin and Saulsbury HMAs.

For the Stone Cabin Complex analysis, all simulations used the survival probabilities and foaling rates supplied with the WinEquus population model for the Garfield Flat HMA. Survival and foaling data was collected by M. Ashley and S. Jenkins at Garfield Flat, Nevada between 1993 and 1999.

The model was run for 50 trials for a 10 year period to assess the potential outcomes for these management scenarios over a longer period of time. This provides for a more useful comparison of alternatives when assessing small populations. The model output provides information for 11 years.

For each simulation, a series of graphs and tables were generated which included the “most typical” trial, projected population sizes, growth rates, and gather numbers, and minimum, average, and maximum population sizes. These numbers are useful to make relative comparisons of the different alternatives, and potential outcomes under different management options. This output, together with the time series and most typical trial graphs are useful representations of the results of the program in terms of assessing the effects of the management plan because it shows not only expected average results but also extreme results that might be possible. The following parameters were used for the Stone Cabin and Saulsbury HMA population modeling:

- Initial population was set as exact under advance options to remove variation due to random starting populations. The initial population was set as 752 horses, as the model automatically inserts a foaling season during the first year.
- Starting year is 2012.
- Gathering occurs at minimum interval of 3 years except where fertility control is implemented, in which a gather occurs at a regular interval of 3 years.
- Initial gather year is 2012 (see note below).
- Threshold population size for gathers is 404.
- Target population size following removals is 247.
- Foals are included in AML.
- Percent of population that can be gathered = 90%.

For the fertility control only scenarios, the model was set for regular gather intervals of 3 years, and was set to gather for fertility control regardless of population size.

For the gather without fertility control scenarios, the model was set to gather on a minimum interval of 3 years, and to gather when the threshold level of 404 animals was reached.

The application of fertility control should reduce growth rates, increase the time until the next gather is necessary, reduce the number of animals that need to be gathered and removed from the range, and reducing the number of wild horses being relocated to long term pastures. The manipulation of the sex ratio to favor more stallions than mares in the post-gather population should also result in reduced growth rates of the population. The population model generates standard tables that display this information for the various trials. Additionally, data generated for all ages, sexes, years and trials can be compiled into tables for comparison of average or most typical trials. The “Spaghetti” and most typical trial graphs are generated by the model. Each line on the graph represents a trial simulated by the model.

Objectives of Population Modeling

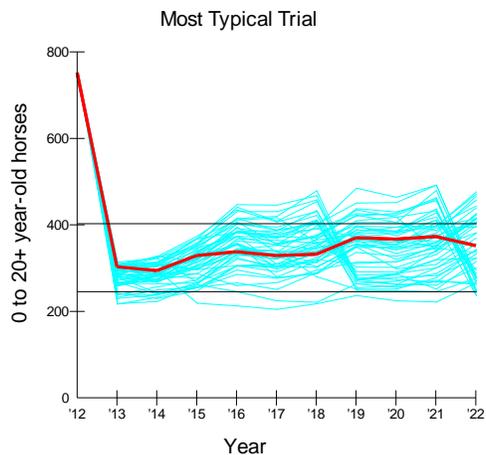
Review of the data output for each of the simulations provided many use full comparisons of the possible outcomes for each alternative. Some of the questions that need to be answered through the modeling include:

- 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?

Please caution from taking the results of this model too literally. The most appropriate and effective use and interpretation of this model is for **comparison** of population growth under various conditions.

Proposed Action – Fertility Control with Sex Ratio Adjustment

For the Proposed Action, modeling was completed with the Fertility Control with Gather Option and the selection criteria for post gather population set to simulate a 60:40 sex ratio favoring stallions. The model displayed results for 11 years through year 2022.



Most Typical Trial – Proposed Action

Average population growth rates for the Proposed Action simulations ranged from 0.8-11.5% with the median trial growth rate being 6.1%, with median population size over eleven years of 264-374 wild horses. The model produced tables and graphs depicting the number of gathers that could occur under each scenario. For the Proposed Action scenario, no gathers are reflected in year 1 (2013) or year 2 (2014). A 3-year gather cycle was used in the model; therefore, a gather was reported in 2015, 2018, and 2021.

One of the substantive outputs of the model is the anticipated number of animals that would need to be gathered and/or removed under each scenario. The model reflects that fewer wild horses would need to be removed from the range under this alternative over the next 11 years,

when compared to Alternatives 1, 2, and 3. Average growth rates were within reasonable ranges, and none of the trials reflect a “crash” in the population. The graph above depicts the “most typical trial” (indicated in red) of the 50 trials (indicated in blue) simulated for the Proposed Action. The slope of the increase is gradual, reflecting the effects of fertility control and sex ratio modification to the population growth rates. This also achieves a stable population that may stay within the AML range. Other outputs from the modeled Proposed Action follow:

Population Size

Population Sizes in 11 Years*

	Min	Mean	Max
Lowest Trial	152	316	752
10th Percentile	226	344	752
25th Percentile	248	356	752
Median Trial	264	374	752
75th Percentile	280	388	752
90th Percentile	291	399	752
Highest Trial	316	411	752

* 0 to 20+ year-old horses

In 11 years and 50 trials, the lowest number of 0 to 20+ year-old horses ever obtained was 152 and the highest was 752 (current population). In half the trials, the minimum population size in 11 years was less

than 371 and the maximum was less than 752. The average population size across 11 years ranged from 316 to 411.

Gather

Totals in 11 Years*

	Gathered	Remove	Treated
Lowest Trial	1333	441	306
10th Percentile	1414	444	342
25th Percentile	1461	449	356
Median Trial	1525	589	392
75th Percentile	1588	616	418
90th Percentile	1649	634	443
Highest Trial	1685	682	499

* 0 to 20+ year-old horses

Growth Rate

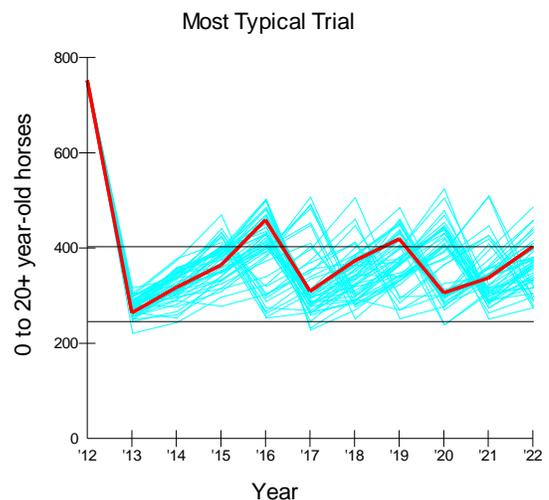
Average Growth Rate in 10 Years

Lowest Trial	0.8
10th Percentile	3.9
25th Percentile	5.1
Median Trial	6.1
75th Percentile	7.2
90th Percentile	8.9
Highest Trial	11.5

Alternative 1 – Sex Ratio Adjustment with no Fertility Control

This alternative was modeled using the Removal Only Option. Selection criteria for removed animals set to simulate a 60:40 sex ratio favoring stallions. The results are similar to the Proposed Action, but show slightly higher potential population growth rates ranging from 9.9-20.4%. The growth rates are less than Alternative 3 and No Action, (which reflects normal growth rates). Population sizes in 11 years were also very similar to the Proposed Action (266-386 for the median trial over 11 years).

The primary difference between the Proposed Action and Alternative 1 is the number of horses removed. According to the model, gathers would be needed approximately every 3 years or slightly higher frequency. The model predicts that between 730-998 wild horses would need to be removed over an 11 year period as opposed to 441-682 for the Proposed Action, due to the application of fertility control under the Proposed Action.



Most Typical Trial – Alternative 1

The number of animals needing to be gathered within 11 years is slightly lower than the Proposed Action; however, the number of animals reflected by the model for removal was higher than the Proposed Action. According to the model, with all other parameters being equal, the use of fertility control and sex ratio modification could result in the need to remove approximately 300 fewer excess animals in eleven years.

Population Size

Population Sizes in 11 Years*

	Min	Mean	Max
Lowest Trial	222	351	752
10th Percentile	244	376	752
25th Percentile	254	380	752
Median Trial	266	386	752
75th Percentile	280	391	752
90th Percentile	286	398	752
Highest Trial	300	409	752

* 0 to 20+ year-old horses

Gather

Totals in 11 Years*

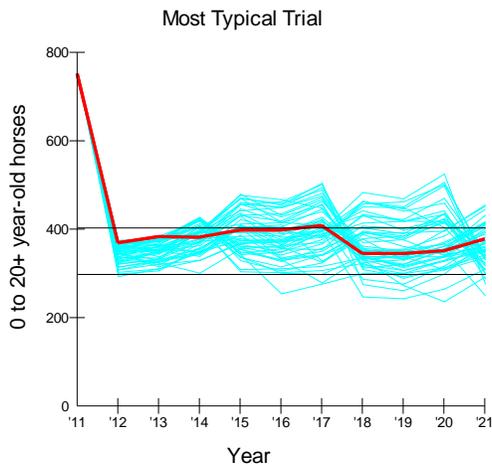
	Gathered	Removed
Lowest Trial	830	730
10th Percentile	874	774
25th Percentile	901	798
Median Trial	940	830
75th Percentile	979	871
90th Percentile	1066	944
Highest Trial	1119	998

* 0 to 20+ year-old horses

Growth Rate

Average Growth Rate in 10 Years

Lowest Trial	12.7
10th Percentile	13.8
25th Percentile	15.5
Median Trial	17.1
75th Percentile	18.0
90th Percentile	19.0
Highest Trial	20.1



Most Typical Trial – Alternative 2

Growth rates for this alternative were similar to the proposed action at 0.4-10.3%. The population, number gathered, and number removed were also very similar to the Proposed Action as the breeding population was modeled exactly as the population in the Proposed Action. Therefore, the model only considers the non-reproducing geldings as individuals in the population and not a contributor to population increase.

Population

Population Sizes in 11 Years*

	Min	Mean	Max
Lowest Trial	237	366	752
10th Percentile	270	381	752
25th Percentile	299	394	752
Median Trial	312	410	752
75th Percentile	326	420	752
90th Percentile	344	424	752
Highest Trial	354	436	752

* 0 to 20+ year-old horses

Gather

Totals in 11 Years*

	Gathered	Removed	Treated
Lowest Trial	1488	403	352
10th Percentile	1520	492	380
25th Percentile	1563	503	393
Median Trial	1622	530	414
75th Percentile	1668	580	427
90th Percentile	1710	612	448
Highest Trial	1723	666	486

* 0 to 20+ year-old horses

Alternative 2 – Fertility Control with additional release of Geldings.

This alternative was modeled to depict a post-gather population of 247 breeding wild horses, implementation of fertility control, and release of an additional 52 geldings. Sex ratio of the 247 wild horses was modeled as 50:50, with no modification as under the Proposed Action or Alternative 1. The gather was simulated to gather 90% of the wild horses and selective removal of excess wild horses with all residual mares being treated with fertility control.

The median population size over 11 years was slightly higher than for The Proposed Action and Alternative 1.

Growth Rate

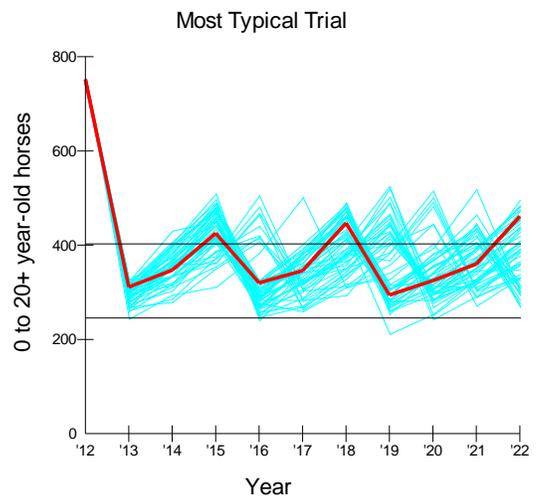
Average Growth Rate in 10 Years

Lowest Trial	0.4
10th Percentile	3.4
25th Percentile	5.2
Median Trial	6.2
75th Percentile	7.7
90th Percentile	8.7
Highest Trial	10.3

Alternative 3: Gate Cut, No Population Control

This alternative was modeled using the Removal Only Option. In this comparison, the model was ran so that excess horses were gathered and removed until the objective of 247 remaining wild horses was reached. This alternative would not allow for any selection for release or removal based on age, phenotype, color, health, etc. There are no sex ratio adjustments or any other mechanism to slow population growth rates.

The simulated Alternative 3 displays normal growth rates at 15.1-23.3%. The number of gathers needed and number of horses removed over the 11 year simulation period is higher than the Proposed Action and Alternatives 1 and 2. The model projects that at least 4 gathers would be needed to keep the population from exceeding AML. Further, 823-1242 wild horses would need to be removed from the range in the next 11 years.



Most Typical Trial – Alternative 3

Population

Population Sizes in 11 Years*

	Min	Mean	Max
Lowest Trial	212	367	752
10th Percentile	250	380	752
25th Percentile	260	389	752
Median Trial	271	395	752
75th Percentile	282	405	752
90th Percentile	292	410	752
Highest Trial	303	417	752

* 0 to 20+ year-old horses

Gather

Totals in 11 Years*

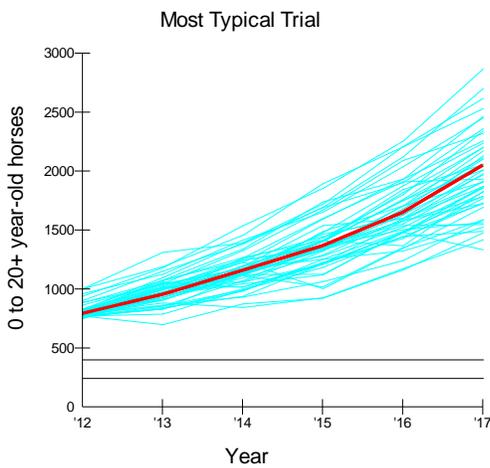
	Gathered	Removed
Lowest Trial	882	823
10th Percentile	936	884
25th Percentile	996	940
Median Trial	1083	1018
75th Percentile	1155	1094
90th Percentile	1219	1148
Highest Trial	1324	1242

* 0 to 20+ year-old horses

Growth Rate

Average Growth Rate in 10 Years

Lowest Trial	15.1
10th Percentile	16.6
25th Percentile	17.7
Median Trial	19.6
75th Percentile	20.8
90th Percentile	21.9
Highest Trial	23.3



Most Typical Trial -- No Action

No Action

The No Action Alternative was also simulated through the model but was only projected 5 years until 2017. The simulation produced expected results consisting of continued herd growth with average growth rates of 11.8-25.9%. The average population within 11 years reflects 989-1777 wild horses, with a maximum of 1421-2872 identified. There is no comparison for number gathered or removed as these options are not available under the No Action alternative.

The graph depicts the modeling simulation of the No Action Alternative.

Population

Population Sizes in 6 Years*

	Min	Mean	Max
Lowest Trial	703	989	1421
10th Percentile	768	1127	1540
25th Percentile	779	1213	1733
Median Trial	799	1328	1928

75th Percentile	829	1415	2204
90th Percentile	900	1590	2462
Highest Trial	1007	1777	2872

* 0 to 20+ year-old horses

Growth Rate

Average Growth Rate in 5 Years

Lowest Trial	11.8
10th Percentile	14.0
25th Percentile	16.6
Median Trial	19.1
75th Percentile	21.6
90th Percentile	23.4
Highest Trial	25.9

Conclusions

The results of the population modeling are summarized below.

- **Do any of the Alternatives “crash” the population?**

Results of the modeling do not indicate that implementation of any of the alternatives would result in a crash of the population. Minimum population levels and growth rates are all within reasonable levels, and adverse impacts to the population are not likely.

- **What effect does fertility control have on population growth rate?**

The results of the modeling suggest that implementation of fertility control when compared to Alternatives without population control methods could result in reduced population growth rates. The median growth rates produced by the model are displayed in the following table.

Table 1. Median Trial for Average Growth Rates in 11 years

Proposed Action	Alternative 1	Alternative 2	Alternative 3	No Action
Fertility Control with Sex Ratio Adjustment	Sex Ratio Adjustment, with no Fertility Control	Fertility Control and Addition of Geldings	Gate Cut, No Population Control	
6.1%	16.6%	6.2%	19.6%	19.1%

- **What effect do the different alternatives have on the average population size?**

The results of the model indicate that the Proposed Action with implementation of fertility control and sex ratio modification to favor stallions could result in average population sizes that are lower than Alternatives 1 and 3. The model suggests that manipulation of sex ratios to favor stallions without fertility control (Alternative 1) would have less notable influence. Through implementation of the Proposed Action or Alternative 2, and reduced growth rates and lower average population sizes over time, the frequency of gathers would be reduced, as would the total number of animals that would need to be gathered and number of excess wild horses that would need to be removed in the future to maintain AML (Table 4). Because the frequency of gathers would likely be lessened,

the disturbance to individual animals and the population as a whole through gathers would also be reduced.

The following tables display the average population sizes produced and projected gather and removal numbers for each Alternative between the 10th and 90th percentile. These numbers may be interpreted as in 50 trials and 11 years, only 10 percent of the trials produced results lower than presented below, and 10 percent produced results higher than those presented below. In other words, 80 percent of the trials had results that fell within the ranges given in these tables.

Table 2. Average Population Sizes in 11 years – 10th -90th Percentile

Proposed Action	Alternative 1	Alternative 2	Alternative 3	No Action
Fertility Control with Sex Ratio Adjustment	Sex Ratio Adjustment, with no Fertility Control	Fertility Control and Addition of Geldings	Gate Cut, No Population Control	
341-399	419-449	381-424	380-410	1127-1590

Table 3. Horses gathered, removed and treated in 11 years – 10th -90th Percentile

Action	Proposed Action	Alternative 1	Alternative 2	Alternative 3	No Action
	Fertility Control with Sex Ratio Adjustment	Sex Ratio Adjustment, with no Fertility Control	Fertility Control and Addition of Geldings	Gate Cut, No Population Control	
Gathered	1414-1649	874-1066	1520-1710	936-1219	0
Removed	444-634	774-944	492-612	884-1148	0
Treated	342-443	0	380-448	0	0

When compared to no population controls implemented at all following a wild horse gather, fertility control and adjustment of sex ratios could considerably reduce the number of animals that would have to be removed in 11 years. The use of sex ratio adjustment alone could reduce the number of excess wild horses that would have to be removed but not as significantly as when combined with fertility control (Refer to Table 4). The implementation of a non-reproductive component in release of geldings would produce similar, yet slightly higher population sizes, growth rates and removal numbers to the Proposed Action.

Table 4: WinEquus Population Model Results Stone Cabin Complex

Alternative	Minimum Populations	Average Populations	Maximum Populations	Median Growth Rates	Gathered	Removed
Proposed Action	152-316	316-411	752	6.1	1333-1685	441-682
Alternative 1	222-300	351-409	752	17.1	830-1119	730-998
Alternative 2	237-354	366-436	752	6.2	1488-1723	403-666
Alternative 3	212-303	367-417	752	19.6	882-1324	823-1242

Appendix F: Daily Visitation Protocol and Ground Rules



**Daily Visitation Protocol and Ground Rules for the
Stone Cabin Complex Wild Horse Gather**



BLM recognizes and respects the right of interested members of the public and the press to observe the Stone Cabin Complex wild horse gather. At the same time, BLM must ensure the health and safety of the public, BLM's employees and contractors, and America's wild horses. Accordingly, BLM developed these rules to maximize the opportunity for reasonable public access to the gather while ensuring that BLM's health and safety responsibilities are fulfilled. Failure to maintain safe distances from operations at the gather and temporary holding sites could result in members of the public inadvertently getting in the path of the wild horses or gather personnel, thereby placing themselves and others at risk, or causing stress and potential injury to the wild horses.

General Daily Protocol

- A Wild Horse Gather Info Phone Line will be set up prior to the gather so the public can call for daily updates on gather information and statistics. Visitors are strongly encouraged to check the phone line the evening before they plan to attend the gather to confirm the gather and their tour of it is indeed taking place the next day as scheduled (weather, mechanical issues or other things may affect this) and to confirm the meeting location.
- Visitors must direct their questions/comments to either their designated BLM representative or the BLM spokesperson on site, and not engage other BLM/contractor staff and disrupt their gather duties/responsibilities - professional and respectful behavior is expected of all. BLM may make the BLM staff available during down times for a Q&A session on guided public-observation days. However, the contractor and its staff will not be available to answer questions or interact with visitors.
- Observers are prohibited from riding in government and contractor vehicles and equipment.
- Observers must provide their own 4-wheel drive high clearance vehicle, appropriate shoes, winter clothing, food and water. Observers are prohibited from riding in government and contractor vehicles and equipment.
- Gather operations may be suspended if bad weather conditions create unsafe flying conditions.
- BLM will establish one or more observation areas, in the immediate area of the gather and holding sites, to which individuals will be directed. These areas will be placed so as to maximize the opportunity for public observation while providing for a safe and effective horse gather. The utilization of such observation areas is necessary due to the use and presence of heavy equipment

and aircraft in the gather operation and the critical need to allow BLM personnel and contractors to fully focus on attending to the needs of the wild horses while maintaining a safe environment for all involved. In addition, observation areas will be located so as to protect the wild horses from being spooked, startled or impacted in a manner that results in increased stress.

- BLM will delineate observation areas with yellow caution tape (or a similar type of tape or ribbon).
- Visitors will be assigned to a specific BLM representative on guided-observation days and must stay with that person at all times.
- Visitors are **NOT** permitted to walk around the gather site or temporary holding facility unaccompanied by their BLM representative.
- Observers are prohibited from climbing/trespassing onto or in the trucks, equipment or corrals, which is the private property of the contractor.
- When BLM is using a helicopter or other heavy equipment in close proximity to a designated observation area, members of the public may be asked to stay by their vehicle for some time before being directed to an observation area once the use of the helicopter or the heavy machinery is complete.
- 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.
- Individuals attempting to move outside a designated observation area will be requested to move back to the designated area or to leave the site. Failure to do so may result in citation or arrest. It is important to stay within the designated observation area to safely observe the wild horse gather.
- 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 from participating in any subsequent observation days.
- *BLM reserves the right to alter these rules based on changes in circumstances that may pose a risk to health, public safety or the safety of wild horses (such as weather, lightening, wildfire, etc.).*

Guided Observation Day-Specific Protocol

- A guided 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. On this day, 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 may rendezvous at a designated place and

may be escorted by BLM representatives to and from the gather site. If not escorted, maps and meeting locations/times will be provided.

- The number of guided observation days per week, and which days they are, will be determined prior to the gather and will be announced through a press release and on the website. Interested observers should RSVP ahead through the BLM-Tonopah Field Office number (TBD). A meeting place will be set for each guided-observation day and the RSVP list notified. BLM representatives may escort observers on guided observation days to and from the gather site and temporary holding facility.

Non-Guided Observation Day Specific Protocol

- Non-guided observation days are days other than guided public observation days when the public can observe the 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.
- On non-guided-observation days, individuals who arrive at the sites will be directed to the designated observation area by BLM personnel and informed of behavioral rules (such as remaining quiet and still to ensure a safe and effective gather operation).

Maps of the gather area and major landmarks will be provided on the Stone Cabin Complex web-page and from the TFO. Please contact the TFO gather line for updated information during the gather.

Appendix G: BLM IM Number 2010-164

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240
<http://www.blm.gov>

July 22, 2010

In Reply Refer To:
4710 (260) P

EMS TRNASMISSION 07/23/2010
Instruction Memorandum No. 2010-164
Expires: 09/30/2011

To: All Field Officials (except Alaska)
From: Assistant Director, Renewable Resources and Planning
Subject: Public Observation of Wild Horse and Burro Gathers

Program Area: Wild Horse and Burro Program

Purpose: The purpose of this Instruction Memorandum (IM) is to establish policy for public observation of wild horse and burro (WH&B) gathers.

Policy/Action: The Bureau of Land Management's (BLM's) policy is to accommodate public requests to observe a gather primarily through advance appointment, on days and at times scheduled by the authorized officer. Planning for one public observation day per week is suggested.

Specific viewing opportunities will be based on the availability of staff with the necessary expertise to safely and effectively host visitors, as well as other gather-specific considerations (e.g., weather, terrain, road access, landownership). The public should be advised that observation days are tentative and may change due to unforeseen circumstances (e.g., weather, wildfire, trap relocation, equipment repair, etc.). To ensure safety, the number of people allowed per observation day will be determined by the District Manager (DM) and/or Field Office Manager (FM) in consultation with the Contracting Officer's Representative/WH&B Specialist (COR) for the gather.

The DM/FM has the primary responsibility for effectively planning and managing public observation of the gather operation. Advance planning will:

- Ensure that the public have opportunities to safely observe wild horse gathers;
- Minimize the potential for disruption of the gather's execution;
- Maximize the safety of the animals, visitors, and the BLM and contractor personnel;
- Provide for successful management of visitors; and
- Ensure preparedness in the event of unanticipated situations.

The authorized officer will consider the following when planning for public observation of WH&B gather operations. Also see Attachment 1 (Best Practices When Planning for Public Observation at Gathers).

A. Safety Requirements

During WH&B gathers, the safety of the animals, the BLM and contractor personnel, and the public is of paramount importance. Because of the inherent risk involved in working with WH&B, the public will not be allowed inside corrals or pens or be in direct contact with the animals. Viewing opportunities during the gather

operation must always be maintained at a safe distance (e.g., when animals are being herded into or worked at the trap or temporary holding facility, including sorting, loading) to assure the safety of the animals, the BLM and contractor personnel, and the public.

Unless an emergency situation exists, the BLM's policy prohibits the transportation of members of the public in Government or Contractor-owned or leased vehicles or equipment. Therefore, observers are responsible for providing their own transportation to and from the gather site and assume all liability for such transportation.

The helicopter/aircraft is the private property of the gather contractor. Due to liability and safety concerns, Bureau policy prohibits observers from riding in or mounting cameras onto the aircraft. Should observers create unsafe flying and gathering conditions, for example, by hiring an aircraft to film or view a gather, the COR, in consultation with the gather contractor, will immediately cease gather operations.

The COR has the authority to stop the gather operation when the public engage in behavior that has the potential to result in harm or injury to the animals, employees, or other members of the public.

B. Planning for Public Observation at WH&B Gathers

During advance planning for public observation at WH&B gathers, the authorized officer should consult with the State External Affairs Chief or appropriate Public Affairs office. An internal communications plan will be developed for every gather (Attachment 2). It may also be helpful to prepare answers to frequently asked questions (Attachment 3).

C. Law Enforcement Plan

A separate Law Enforcement Plan should be developed if the need for law enforcement support is anticipated. The Law Enforcement Plan must be approved in advance by the Special Agent-In-Charge (SAC) or the State Staff Ranger of the State in which the gather is occurring.

D. Temporary Closure to Public Access

Under the authority of section 303(a) of the Federal Land Management and Policy Act (43 U.S.C. 1733(a)), 43 CFR 8360.0-7, and 43 CFR 8364.1, the authorized officer may temporarily close public lands within all or a portion of the proposed gather area to public access when necessary to protect the health and safety of the animals, the public, contractors and employees. Completion of a site-specific environmental analysis of the environmental impacts associated with the proposed closure and publication of a Federal Register Notice is required.

E. Gather Contract Pre-Work Conference

- Talk to the contractor about how many members of the public are expected and when. Discuss, and reach mutual agreement, about where best to position the public at the individual trap-sites to allow the gather to be observed, while accomplishing the gather objectives and assuring the humane treatment of the animals and the safety of the BLM and contractor personnel, and public.
- No deviation from the selected viewing location(s) should be made, unless the gather operation is being adversely impacted. The COR will consult with the gather contractor prior to making any changes in the selected viewing locations.
- The BLM's policy prohibits it from ferrying observers in the helicopter or any other mode of conveyance unless an emergency situation exists. Review this policy with the contractor during the pre-work conference.

F. Radio Communication

- Assure there is effective radio communication between law enforcement personnel, gather COR or project inspectors (PIs), and other BLM staff.
- Identify the radio frequencies to be used.
- Communication with the gather contractor is through the BLM COR or PI, and from the gather contractor to the helicopter pilot. Direct communication between BLM personnel (other than the COR) and the

helicopter pilot is not permitted, unless agreed upon by the BLM authorized officer and the contractor in advance, or the pilot is requesting information from the COR.

G. Pre- and Post-Action Gather Briefings

- Pre-briefings conducted by knowledgeable and experienced BLM staff can be helpful to the public.
- The pre-gather briefing is an opportunity to explain what individuals will see, why the BLM is conducting the gather, how the animals will be handled, etc.
- Post-action briefings may also be helpful in interpreting and explaining what individuals saw, what happened, why certain actions were taken, etc.

H. Summary of Individual Roles and Responsibilities

1. District and/or Field Office Managers

DMs and/or FM's are responsible for keeping the State Director and State WH&B Lead fully informed about the gather operation. Included is working with State/local public affairs staff to prepare early alerts if needed. An additional responsibility is determining if a law enforcement presence is needed.

2. Public Affairs Staff

The local district/field office public affairs staff is responsible for working with the COR, DM/FM, other appropriate staff, the State WH&B Program Lead, and the State Office of Communications to implement the communications strategy regarding the gather.

3. Law Enforcement

Develop and execute the law enforcement plan in consultation with District/Field Office Managers, the COR/PI, and the State's Special Agent-In-Charge or State Staff Ranger.

4. Contracting Officer's Representative (COR)/Project Inspectors (PIs)

The COR and the PI's primary responsibility is to administer the contract and manage the gather. A key element of this responsibility is to assure the safe and humane handling of WH&B. The COR is also responsible for working closely with the DM/FM and Public Affairs Staff to develop the communication plan, and for maintaining a line of communication with State, District, and Field Office managers, staff and specialists on the progress of, and any issues related to, the gather operation.

Timeframe: This instruction memorandum is effective immediately.

Budget Impact: Higher labor costs will be incurred while accommodating increased interest from the public to attend gather events. The budget impacts of unanticipated situations which can occur during WH&B gathers include substantial unplanned overtime and per diem expense. Through advance planning, necessary support staff can be identified (e.g., law enforcement, public affairs, or other BLM staff) and the cost-effectiveness of various options for providing staff support can be evaluated. In situations where public interest in a gather operation is greater than anticipated, the affected state should coordinate with the national program office and headquarters for assistance with personnel and funding.

Background: Heightened interest from the public to observe WH&B gathers has occurred. Advance planning for public observation of gather operations can minimize the potential for unanticipated situations to occur during WH&B gathers and assure the safety of the animals, the BLM and contractor personnel, and the public.

Manual/Handbook Sections Affected: No change or affect to the BLM manuals or handbooks is required.

Coordination: This IM was coordinated among WO-200 and WO-260 staff, State WH&B Program Leads, field WH&B Specialists, public affairs, and law enforcement staff in the field.

Contact: Questions concerning this policy should be directed to Susie Stokke in the Washington Office at (202) 912-7262 or Lili Thomas in the National Program Office at (775) 861-6457.

Signed by:
Bud C. Cribley
Acting, Assistant Director
Renewable Resources and Planning

Authenticated by:
Robert M. Williams
Division of IRM Governance, WO-560

**Appendix H: Federal Aviation Administration
General Operating and Flight Rules Sec. 91.119**

Part 91 GENERAL OPERATING AND FLIGHT RULES
Subpart B--Flight Rules General

Sec. 91.119

Minimum safe altitudes: General.

Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

(a) Anywhere. An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

(b) Over congested areas. Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.

(c) Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

[(d) Helicopters, powered parachutes, and weight-shift-control aircraft. If the operation is conducted without hazard to persons or property on the surface—

(1) A helicopter may be operated at less than the minimums prescribed in paragraph (b) or (c) of this section, provided each person operating the helicopter complies with any routes or altitudes specifically prescribed for helicopters by the FAA; and

(2) A powered parachute or weight-shift-control aircraft may be operated at less than the minimums prescribed in paragraph (c) of this section.]

Amdt. 91-311, Eff. 4/2/10