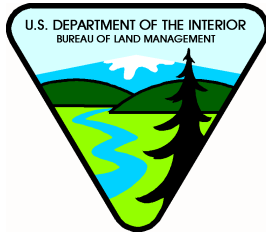




**United States Department of the Interior
Bureau of Land Management
Surprise Field Office**

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**Gather and Removal of Wild Horses from the
High Rock Herd Management Area**

Preliminary Environmental Assessment CA-370-06-16

**Surprise Field Office
PO Box 460
Cedarville CA 96104**

**Phone: 530-279-6101
FAX: 530-279-2171**

1.0 Purpose and Need for the Proposed Action

This environmental assessment (EA) will analyze the impacts of potential methods to maintain established Appropriate Management Levels for the High Rock Herd Management Area (HMA). The EA will also assess whether or not fertility control treatment should be applied to mares released back to the HMA following the gather.

The High Rock HMA is located in northern Washoe County, Nevada about 50 miles east of Cedarville. The HMA is entirely within the Black Rock Desert-High Rock Canyon Emigrant Trails National Conservation Area. The HMA consists of approximately 94,391 acres of public lands. Refer to Map 1.

An Appropriate Management Level (AML) of 120 wild horses and with a minimum level of 78 wild horses is based on upon monitoring data collected within the herd area and the impacts of wild horses on the natural resources, and was established by EA # CA-028-93-03 and CA-370-01-07. The Interior Board of Land Appeals in case number IBLA 94 94-163 et al. affirmed the AMLs in EA # CA-028-93-03 and previous removals of excess animals from the High Rock Herd Management Area. Consequently, this EA does not address the establishment of the AML. The current population is estimated at 482 horses, including foals. The population size has increased to the level that animals now have moved outside the HMA.

The primary goal for managing wild horses at AMLs is to achieve a thriving natural ecological balance of resources, while maintaining a healthy and self-sustaining population of wild horses. Recent information indicates that current populations of wild horses are significantly impacting riparian resources. Therefore, the key limiting factors for wild horses within the HMA continues to be riparian impacts by wild horses and the limited amount of water available for yearlong wild horse use.

The BLM has determined that there are excess wild horses present in the High Rock Herd Management Area and it is necessary to remove approximately 404 horses (including foals) from the current population of the HMA, and from adjacent public lands not managed for wild horses. Removal of wild horses would restore herd numbers to levels consistent with the AML, and is needed at this time to balance wild horse populations, with wildlife, livestock, wilderness, soil and vegetation resources, and to protect the range from the deterioration associated with overpopulation of wild horses.

1.1 Conformance with Existing Land Use Plan

The principal land use plans for the High Rock HMA is the Black Rock Desert-High Rock Canyon Emigrant Trails National Conservation Area Resource Management Plan (Black Rock-High Rock RMP), and the Rangeland (Land) Health Standards and Guidelines for Northeastern California and Northwestern Nevada. The Proposed Action is in conformance with this plan and consistent with federal, state, and local laws, regulations, and plans to the maximum extent possible.

Land Use Plan Objectives

The Black Rock – High Rock RMP objectives:

To manage sustainable populations of wild horses in nine Herd Management Areas (HMAs) and wild burros in two HMAs consistent with the intent of the NCA Act within established AMLs to maintain a thriving ecological balance among wild horse and burro populations, wildlife, livestock, vegetation resources, and other values and uses.

To maintain free roaming behavior of wild horses and burros.

The HMA Objectives:

Maintain a healthy, self-sustaining wild and free-roaming horse herds.

Strive to achieve 100% adoptability of all horses that are removed from the herds through the regular adoption program.

Prevent inbreed problems from occurring in the HMA.

The Proposed Action is consistent with the objectives and decisions of these plans.

1.2 Conformance with Rangeland Health Standards

In 2000 and 2004, riparian and land health assessment data was collected on the Massacre Mountain Allotment (which includes the High Rock HMA) to determine conformance with Rangeland Health Standards. This assessment information, along with other monitoring information collected since 1998 indicates that while not all Rangeland Health Standards are being met, resource conditions are progressing toward meeting most standards. Field data indicates that riparian resources continue to be impacted by excessive utilization and trampling by wild horses at current population levels.

The Proposed Action is consistent with meeting Rangeland Health Standards.

1.3 Relationship to Statutes, Regulations, Policies, Plans, or Other Environmental Analysis

The Proposed Action is authorized under Section 3(b) (2) of the 1971 Free-Roaming Wild Horses and Burros Act and Section 302(b) of the Federal Land Policy and Management Act of 1976.

The Herd Management Area Plans (HMAP) affected by the Proposed Action was signed in 1989. The HMAP provides general management parameters, and the 1993 and 2001 EA (CA-028-93-

03 and CA-370-01-07) Decision Records established the AML. The HMA also overlaps with Massacre Mountain Allotment.

The Cowhead-Massacre MFP, Wild Horse Herd Management Area Plan; EAs CA-028-93-03 and CA-370-01-07; and the Black Rock and High-Rock RMP are available from the Surprise Field Office for public review.

The Proposed Action is consistent with the provisions of the Wilderness Act of September 3, 1964 (P.L. 88-577, 78 Stat. 890; 16 U.S.C. 1121 (note), 1131-1136).

1.4 Scoping and Issue Identification

A Notice of Proposed Action was mailed to 74 interested individuals, groups, and agencies on June 7, 2006. Several comments were received in support of the “action alternatives” the removal of excess wild horses from the High Rock HMA.

2.0 Alternatives, Including the Proposed Action

2.1 Actions Common to All Alternatives

The wild horse population model “Win Equus version 1.4” was used to predict populations under each alternative. The information is summarized in Appendix A.

2.1.2 Actions Common to Alternatives 1 & 2.

Common to all alternatives, except the No Action Alternative, animals would be removed using the selective removal strategy in accordance with the Gather policy & Selective Removal Criteria, (Washington Office IM 2005-206).

Genetic information would be collected from animals captured to determine herd characteristics. This data would also be used to determine genetic variability in the herd, and would be the basis for periodic introduction of new animals into the population for the expansion of the genetic base of the herd. All gathering and handling activities would be conducted in accordance with the Standard Operating Procedures (SOP's) described in Appendix B. A veterinarian may also be on site, as needed, to examine animals and make recommendations to BLM for care or treatment of wild horses.

2.2 Alternatives to be considered in detail

2.2.1 Alternative 1 (Proposed Action) Gather to Low Range AML with Fertility Control

The Proposed Action would implement population management for the High Rock HMA and to manage horses within ranges for Appropriate Management Levels (AML) of 78 to 120 head. Therefore, the Proposed Action is to reduce the herd to the low range AML (78 head), and then maintain the herd at or below 120 head by subsequent gathers and removals.

Therefore, the Proposed Action is to gather approximately 95% of the herd. Gathered wild horses would be examined to determine sex, age, and color; acquire blood samples for genetic analysis; and assess herd health (pregnancy, parasite loading, physical condition, etc.). BLM would determine which horses are returned to the range by an analysis of existing population characteristics and post gather data: age, sex ratio, condition, conformation and color. The representation of age classes returned to the range may include horses under 5 years old, and a balanced representation of horses over 6 years old. In accordance with BLM policy, most wild horses less than 5 years old would be prepared for BLM's adoption program. The sex ratio of horses returned to the HMA would be approximately 50% studs, and 50% mares. This overall age structure would maintain genetic viability, and healthy sustainable populations.

At this time it is not known if there is a need to augment the genetic pool by the introduction of animals from other herds. Under the Proposed Action and Alternative 2, the general condition and appearance of the wild horses, as well as data from blood drawn for genetic analysis would be used to determine actions necessary to keep the populations self-sustaining. Currently, some horses from the High Rock HMA are mixing with horses from the Fox-Hog HMA, and from Winnemucca's Warm Springs Canyon HMA. These interchanges may be providing an adequate genetic pool. Following the gather, any wild horses introduced into the HMA would be consistent with HMAP objectives for general characteristics of color, size, type, etc.

Wild horses would be gathered by using a helicopter to herd horses into capture sites constructed of portable panels. This operation would be accomplished either by BLM employees, contractor, or a combination of both. Access limitations may require multiple capture sites from the HMA and from lands adjacent to the HMA. Horses in the immediate vicinity of Mustang Springs, at the division fence between High Rock HMA and the Warm Springs Canyon HMA may also be gathered.

Capture sites would be located outside of Wilderness Area boundaries and whenever possible, sites would be located in previously disturbed areas. No motorized vehicles will be used in wilderness. No landing of aircraft will occur within a wilderness except in the case of an emergency. The Proposed Action and Alternative #2 also includes repairing the existing division fence between the High Rock HMA and the Warm Springs Canyon HMA. This fence is located in the East Fork High Rock Canyon Wilderness area. Repair and maintenance of this fence would not use motorized or mechanized transport or motorized equipment and would be consistent with BLM wilderness policy. This fence is also the division fence between the Winnemucca and Surprise Field Offices, and is necessary for the management of livestock on the Massacre Mountain Allotment and the Soldier Meadows Allotment.

The actual gathering process is estimated to be completed in less than 15 days, and is scheduled for September 2006. All gathering and handling activities would be conducted in accordance with the Standard Operating Procedures (SOP's) described in Appendix B. Several factors such as the condition of animals, herd health, weather conditions, or other environmental

considerations could adjust the gathering schedule. Physical condition class would be determined by using the Henneke rating system.

To implement the proposed action, there will be horses over 6 years old not returned to the herd and these horses would be prepared for long term holding facilities. For example, if the 95% of the horses are captured, then 402 horses would be permanently removed from the HMA, and 55 horses would be selected to be returned to the HMA, along with the un-gathered horses to maintain AMLs. Of the 402 horses removed, an estimated 75% or 301 head would be prepared for BLM's adoption program, and about 101 horses would be prepared for long term holding facilities. The age, sex, temperament, and physical condition of the estimated 28 mares and 28 studs horses returned to the HMA would be recorded to track future population trends.

The Proposed Action also includes fertility control, research and monitoring as appropriate. Applying fertility control measures as part of the Proposed Action would slow the reproduction rate of mares returned to the HMA following the gather. Among other things, this would decrease the gather frequency. With fertility control implementation, gathers are projected to occur on four year intervals, requiring one less gather within a 15 year period

The estimated 28 mares selected for return to the HMA would be treated with an immunocontraceptive vaccine or Porcine Zona Pellucida (PZP). This vaccine would slow down reproduction of captured, treated, and released mares for up to three breeding seasons. All treated mares would be freeze marked on the right hip with two letters assigned by National Program Office for tracking purposes to enable researchers to positively identify animals in the research project during the data collection phase. Monitoring could include helicopter flights conducted in years 2 through 4 intervals to determine efficacy of treated mares. The purpose of the flight scheduled in year-4 is to determine the percentage of mares that have returned to fertility. In addition, field monitoring would be routinely conducted as part of other regular monitoring activities.

Treated mares (as identified by the hip freeze marking) would not enter the adoption market for a minimum of three years following treatment. Field data will be forwarded to the National Program Office (NPO) prior to treatment. Pertinent data includes the identification of each mare (including a photograph when possible), date of treatment, type of treatment (1yr, 2yr- and Adjuvant used) Herd Management Area (HMA), etc. This information and any photos will be maintained at the field office and a copy of the completed form will be sent to the NPO.

NPO maintains a tracking system detailing the PZP criteria, and the number of treated mares by HMA, FO and State along with the freeze-mark applied. In the vast majority of cases, the released mares will never be gathered sooner than the mandatory three-year holding period. In those rare instances when, due to unforeseen circumstances, that treated mare(s) are removed from an HMA, they will be maintained either in a BLM facility or a contracted Long Term Holding Facility until the expiration of the three-year holding period. In the event that it is necessary to remove treated mares, their removal and disposition will be coordinated through

NPO. After expiration of the three-year holding period, treated animals may be placed in the adoption system. Appendix C contains additional SOP for fertility controls treatments.

Following the attainment of wild horse AMLs, BLM would conduct monitoring of resource conditions to provide data to reaffirm or reestablish AML numbers to achieve and maintain a thriving natural ecological balance and multiple-use relationship. Any adjustments to AML would be accomplished with sufficient utilization, trend, actual use, climatic and rangeland health assessment information, and through a reasoned interdisciplinary analysis and Environmental Assessment, including public involvement. Adjustments to AML would occur if monitoring indicates wild horses to be a causal factor in non-attainment of resource objectives and/or rangeland health standards.

2.2.2 Alternative 2: Gather to Low Range AML without Fertility Control

Alternative 2 is the same as the Proposed Action except, BLM would not conduct immunocontraceptive fertility control as part of the Proposed Action. The estimated 28 released mares would not be treated to inhibit reproduction. This alternative would also capture about 458 horses and remove 402 horses from the High Rock HMA, and areas adjacent to the HMA not managed for wild horses.

2.2.3 Alternative 3 (No Action) Do Not Gather at this time

This alternative consists of not gathering and removing wild horses from the HMA. Wild horse populations would be allowed to self-regulate their numbers naturally through the affects of forage availability, disease, water, space availability, predation, and climatic variability, such as severe winters or prolonged drought. These factors could result in herd size from 1107 to 1730 head in 10 years, based on population modeling for the High Rock Herd (see Appendix A).

Recent monitoring information indicates that No Action Alternative is not in conformance with the Land Health Standards, Black Rock-High Rock RMP, and the High Rock Herd Management Plan. No action alternative is also not in conformance with the 1971 Free-Roaming Wild Horses and Burros Act which mandates the BLM to protect the range from the deterioration associated with overpopulation, and to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area. However, for comparative purposes, the No Action Alternative will be included in this analysis.

Affected Environment

The HMA is located in relatively remote areas of northern Washoe County, Nevada about 50 miles east of Cedarville CA. The HMA is approximately 94,391 acres of public lands. The High Rock HMA adjoins the Winnemucca Field Office boundary and the Warm Springs Canyon HMA to the east. The Nut Mountain and Wall Canyon East HMAs is located to the north, and the Fox-Hog HMA is located on the south side. There are no fences or natural boundaries to the immediate northwest side of the HMA to limit horse movements, but historically horses

infrequently moved to that direction until populations exceed AML. The elevations vary from 4,900 feet at the canyon bottoms to about 6,500 feet on the higher ridges. The HMA is dissected by several major canyons, and this topography allows for sufficient yearlong habitat for wild horses. (See attached HMA Map).

The Affected Environment is also described in environmental assessment EA No. CA-028-93-03, and CA-370-01-07 and are incorporated into this EA by reference.

3.0 Environmental Consequences (Proposed Action & Alternatives)

Critical Elements	Affected	Critical Elements	Affected
Air Quality	No	Soils	Yes
Areas of Critical Environmental Concern (ACEC)	No	Waste, Hazardous or Solid	No
Cultural Resources	Yes	Water Quality, Surface and Ground	Yes
Environmental Justice	No	Paleontological Resources	No
Farmlands, Prime or Unique	No	Wild and Scenic Rivers	No
Flood plains	No	Wilderness/WSA	Yes
Native American Concerns	No	Threatened and Endangered Species (Special Status Species)	Yes

Other Issues Analyzed

Riparian, vegetation, recreation, wild horses, livestock management, wildlife, and noxious weeds.

3.1 Cultural Resources

Affected Environment

There are numerous cultural resource sites throughout the HMA, mainly in the vicinity of permanent and intermittent water sources (i.e., riparian areas) have the highest potential for cultural resource sites. These range from prehistoric temporary and permanent occupation sites, to historic ranching, homesteading and trail sites.

Environmental Consequences

Direct impacts to cultural resources are not anticipated to occur due to implementation of the Proposed Action and Alternative #2 (action alternatives) because gather sites and temporary holding facilities would have been inventoried for cultural resources prior to construction. All proposed and previously used gather sites and temporary holding facility locations would be reviewed to determine if these have had a cultural resources inventory and/or if a new inventory is required. If cultural resources were encountered at proposed gather sites or temporary holding facilities, these locations would not be utilized unless they could be modified to avoid impacts. There would no direct impacts associated with No Action Alternative.

However, the No Action Alternative would have the most adverse impacts to cultural resource sites from overgrazing and trampling, including the modification and displacement of artifacts and features as well as erosion of organic middens containing valuable information. Since wild horses tend to concentrate in these areas, these areas are likely to be impacted by trampling and erosion. Indirect impacts associated with each of the Alternatives would be related to wild horse population size. Impacts would be the least with implementation of the Proposed Action.

3.2 Soils/Watershed

Affected Environment

The watersheds within the HMA are dissected by a number of intermittent and ephemeral creek systems, including High Rock Canyon and Pole Canyon that drain east within NCA and into High Rock Lake.

The soils within the HMA are described in the Soil Survey for Washoe County Nevada, North part, and issued in 1999. The primary soils that grow Wyoming or Lahontan sagebrush include Bonbadil, Ceejay, and HangRock. Widespread soils that grow big and mountain sagebrush include Bitner, and Ashcamp. The low sagebrush sites are often associated with the Grassycan soils.

Environmental Consequences

Wild horse use under the Proposed Action would have the least negative impact on soils and watershed health. Implementation of the No Action Alternative, would have indirect, long-term impacts on soils, and is related to the wild horse population size and the growth rates associated. As wild horse numbers increase, utilization of vegetation and trampling/compaction of soils

increase. Over utilization of vegetation, soil trampling and compaction would increase soil erosion.

Implementation of the Proposed Action when compared with Alternative #2 would have slightly lower population growth rates and the greatest period of time when wild horse numbers are at or below maximum AML.

3.3 Water Sources and Water Quality (Surface and Ground)

Affected Environment

Availability of water sources has been determined to be one of the key limiting factors for wild horses in the HMA. The vast majority of the water and riparian habitat are associated with High Rock Canyon creek and scattered springs in the HMA. In addition to natural water sources, there are several small reservoirs in the HMA. Typically, by late summer and during dry years, many of the reservoirs are dry and consequentially large portions of the HMA are poorly watered. Nevertheless, when wild horse populations are at AML water quality on the HMA is expected to meet the needs of beneficial uses.

Environmental Consequences

Under the Proposed Action and Alternative #2, riparian habitat conditions on most sites are expected to be maintained as utilization and trampling by wild horses would be reduced from present levels. Water quality is expected to meet the needs of beneficial uses for livestock, wild horses and wildlife.

Under the No Action Alternative, wild horse populations would continue to grow, resulting in continued heavy use of water sources. Higher wild horse numbers would increase trampling damage to springs and utilization of riparian areas. The increased numbers of wild horses would cause more disturbances to soils, increasing silt load. Pollutants such as animal feces would also be increased.

3.4 Wetlands/Riparian Zones

Affected Environment

The majority of the drainages and springs support herbaceous plant communities, including grasses, forbs, sedges, and rushes. Most of the higher elevation drainages and a few of the most perennial lower elevation drainages, particularly High Rock Canyon Creek, and several tributaries contain some woody riparian vegetation, including willow, rose, and aspen. Although riparian areas represent very small acreages in the HMA, they generally have the potential to contain diverse plant species and vegetation structure. In 2000, six key upland spring riparian sites in the Little High Home Range were assessed for properly functional condition, and all sites were at risk or in non-functional condition due to impacts from wild horses. Similar conditions have been documented in the East of the Canyon Home Range.

Environmental Consequences

Under the Proposed Action and Alternative #2, current riparian habitat conditions are expected to be maintained as utilization and trampling by wild horses would be reduced from existing population levels.

The No Action Alternative #3 would allow wild horse populations to continue to grow, resulting in increased use on public waters by wild horses. As the wild horse population continues to grow, there would be an equivalent increase in trampling damage to springs and utilization of riparian areas outside the HMA.

3.5 Wilderness

Affected Environment

The HMA occurs with the Black Rock Desert/High Rock Canyon NCA, and approximately 95% of the HMA is located within portions of the East Fork High Rock, High Rock Canyon, and the Little High Rock Canyon Wilderness Areas (WA).

The High Rock Canyon, East Fork High Rock Canyon and Little High Rock Canyon Wilderness Areas consist of a large area of broad volcanic uplands dissected by deeply cut drainages. Elevations in the Wilderness range from 4,900 to 6,600 feet. The main vegetation type is sagebrush, with willows and one small stand of aspens occurring in the canyons. The canyons are relatively well watered and support meadow complexes and other riparian vegetation. Remnants of early homesteads can be found in canyons. Wildlife in the area includes California bighorn sheep, mule deer, pronghorn antelope, mountain lions, coyotes, and sage grouse. The canyons also provide outstanding habitat for nesting raptors. The Applegate-Lassen Emigrant Trail is located in High Rock Canyon. The area provides outstanding opportunities for solitude and primitive recreation. The National Desert Trail is located in High Rock Canyon, and Pole Canyon and Little High Rock Canyon provide good opportunities for day hikes, backpacking and horseback trips.

The Wilderness Act of 1964 mandates that wilderness areas be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness, and to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness.

The Wilderness Act also mandates that wilderness areas be managed in such a manner as to maintain or enhance the values of naturalness, untrammeled character, opportunities for solitude, opportunities for primitive or unconfined recreation, and any special features found in the areas. Several special features of the area were specifically mentioned in the BRHR NCA Act of 2000. They include; wagon ruts, historic inscriptions, evidence of early homesteading, prehistoric and historic Native American sites, sensitive plants, a broad representation of Great Basin land forms and plant and animal species, and a largely untouched emigrant trail view shed.

Environmental Consequences

Direct, short-term impacts of the Proposed Action and Alternative #2 on wilderness values would consist of the sight and noise of the helicopter used to herd wild horses to gather sites located outside of wilderness area. During the time frame of the proposed gather (about 15 days) solitude and primitive recreation may be negatively impacted for recreationists who would be subjected to the sight and sound of the helicopter. This impact would be temporary, relatively short term in nature and likely to effect less than 20 visitors. Gathering facilities would not be located in the WA boundaries, but could be located on cherry stemmed roads within the WA boundary.

Indirect, long-term impacts are related to the wild horse population sizes and growth rates associated with each of the Alternatives. As wild horse numbers increase there would be a loss of plant vigor, production, and diversity from over-grazing. Overall, ecological site conditions would decline. Ecological sites in degraded condition detract from the natural character of wilderness areas. Therefore, No Action Alternative would have the greatest long-term negative impact on wilderness values.

3.6 Wildlife, including Threatened and Endangered Species

Affected Environment

The assortment of elevation and habitat types in the HMA results in a diversity of wildlife habitat types. The mosaics of low sagebrush and big sagebrush communities provide spring, summer, and fall habitat for pronghorn antelope and Greater sage-grouse. Bitterbrush and several big sagebrush species help provide yearlong habitat for mule deer. Sagebrush also provides habitat for migratory non-game bird species such as Brewer's sparrow and Sage thrashers. The canyons and remote ridges provide habitat for bighorn sheep, and the canyons also support several species of raptors, as well as chukar and quail. The riparian systems are important for all species of wildlife, with the perennial systems being particularly important due to their scarcity.

There are no known federally listed Endangered, Threatened, Proposed, or Candidate wildlife species using the areas in the HMA. However, Greater sage-grouse, a sensitive species is found throughout HMA, and use riparian areas and the sagebrush communities for year-round habitat.

Environmental Consequences

Direct, short-term impacts to wildlife with implementation of the Proposed Action or Alternative #2 would consist primarily of disturbance and displacement to wildlife, including migratory non-game bird species by the low-flying helicopter. Typically, the natural survival instinct response of wild animals to this type of disturbance results in fleeing from the perceived danger. This impact would be very localized and of short-duration.

Indirect, long-term impacts are related to the wild horse population sizes and growth rates associated with each of the Alternatives. The largest horse numbers would occur under the No Action Alternative, which would result in heavy to severe grazing on vegetation. Trampled and compacted of soils would increase, while plant vigor, production, diversity, and the value of

plant communities for wildlife habitat are reduced. Excessive wild horse numbers also have impacts on greater sage-grouse by consuming herbaceous cover needed in nesting sites, and by reducing the diversity and quantity of forbs available on uplands in the early spring and on riparian areas season-long.

The No Action Alternative would have the greatest negative impact on wildlife habitat, including sensitive animal species populations. Implementation of the Proposed Action and Alternative #2 is not expected to have a negative impact on wildlife habitat, including sensitive species populations.

3.7 Wild Horses

Affected Environment

The proposed action is in conformance with BLM's 2001 Wild Horse Strategy, which is to implement population management for each HMA and to manage within low and high ranges of the Appropriate Management Levels (AML). The HMA would be gathered on a three - four year cycle, based on annual reproduces rates of 16% to 20%. Therefore, the Proposed Action is to reduce the herd to the low range AML (78 head), and then allow the herd to grow to the AML (120 head). The current populations are estimated at 482 wild horses (including foals), based on a helicopter census conducted in May 2001, and adjusted for the 2002 - 2006 foaling seasons. Past gathers and census information indicates that the HMA increases at a fairly consistent rate of about 16-20% per year (See Appendix A, page 12, Average Growth Rates)

The herd management plan was completed in 1985, and revised in 1989 to incorporate herd management. The High Rock HMA is managed as two separate home ranges: the area east of High Rock Canyon is the East of Canyon Home Range, and the area west of High Rock Canyon is the Little High Rock Home Range.

Both home ranges have been managed by the structured management, with generally older animals selected as the base herd. The Proposed Action would incorporate this removal strategy. Following the 2000 gather of the East of the Canyon Home Range, all animals older than 5 years were returned to the HMA and the AML was not reached. In 2001 a partial gather was conducted in Little High Rock Home Range under the new gathering strategy. This gather was also necessary due to severe water storages, and concern that horses would perish due to drought conditions. Based on a helicopter census in 2001, the overall HMA population was 26 head above AML.

The following Table 1 shows recent gather population information by home range.

Table 1, HMA Recent Gather Information

High Rock HMA	Appropriate Management Levels	Last Gathered	Number Gathered	Estimated Population after Gather and Turnouts
East of the Canyon Home Range	30-40	August, 2000	210	95 (2000)
Little High Rock Home Range	48-80	July, 2001	386	51 (2001)
Totals	78-120			146

Environmental Consequences

The long-term impacts of maintaining an AML is designed to achieve a thriving, natural ecological balance that would be a benefit to the wild horses in the HMA. At this population level, wild horses would be assured adequate forage and water during even the hottest and driest periods of the year. This would lead to wild horses in better physical condition, and better able to endure severe winters and drought. Direct impacts to wild horses under the Proposed Action and Alternative #2 (action alternatives) may occur to individual animals. These impacts include:

- 1) Handling stress associated with the herding, capture, processing, and transportation of animals from temporary trap sites to temporary holding facilities (if used), and from the trap sites or temporary holding facilities to an adoption preparation facility in either Litchfield or Fallon. Animals selected for return to the HMA would be transported back to the HMA. The advantages of transporting all of the animals to an improved holding facilities include access to better veterinary care for immunizations, genetic work, and treatment of injuries; access to better sorting facilities (chutes, pens, etc.) that allow for safer and more humane handling of horses; and access to larger and safer pens, water, and forage facilities for horses to be kept in while gather and processing operations are conducted.

- 2) When wild horses are transported to the adoption preparation facility, exposure of wild horses to domestic horse diseases, such as strangles is possible. Domestic horses used during gather operations would be present at the capture sites. The trucks, chutes, and panels used at the capture sites have been used to handle horses in the past and may harbor disease agents. Domestic and wild horses from other areas are also present and may transmit diseases to the HMA wild horses, even though horses from the herd would not be kept in the same corrals as the other horses.

The effect of removing wild horses from the population are not expected to have an impact on herd dynamics or population variables; as long as the selection criteria for removal ensured a typical population structure was maintained. Obvious potential impacts on horse herds and populations from exercising poor selection criteria not based on herd dynamics include modification of age or sex ratios to favor a particular class of animal.

Under the Proposed Action and Alternative #2, blood would be drawn for genetic analysis. This data would be used to determine actions necessary to keep the populations self-sustaining. The Proposed Action includes the use of immuno-contraception which would limit the numbers of mares that would conceive and deliver foals. This could reduce the genetic variability entering the population for several years after treatment, and after each subsequent treatment. Animals from other HMA's in the region could be used to add to the breeding population if necessary to ensure genetic viability. Animals selected for population augmentation would be selected to adhere to the type and color characteristic of the herd.

The Proposed Action would mitigate the potential adverse impacts on wild horse populations by establishing a procedure for determining what selective removal criteria is warranted for the herd. The flexible procedures (Appendix B SOP's) would allow for correction of any existing discrepancies in herd demographics that could predispose a population to increased chances for catastrophic impacts. The Proposed Action would also establish a standard for selection that would minimize the possibility for developing negative age or sex based selection effects to the population in the future.

Population-wide indirect impacts would not appear immediately as a tangible effect and are more difficult to quantify. Population wide indirect impacts would be associated primarily with the use of fertility control drugs and involve reductions in short term fecundity of initially a large percentage of mares in a population, increasing herd health as AML is achieved, and potential genetic issues regarding the control of contributions of mares to the gene pool, especially in small populations.

Implementation of the Proposed Action or Alternative # 2 would allow immediate achievement of AML. Population-wide impacts include the temporary displacement of bands during capture and the associated re-dispersal, modification of herd demographics (age and sex ratios), temporary separation of members of individual bands of horses, re-establishment of bands following releases, and the removal of animals from the population. With the exception of changes to herd demographics, direct population-wide impacts over the last 20 years have proven to be temporary in nature with most, if not all, impacts disappearing within hours to several days of release. No observable effects associated with these impacts would be expected within one month of release except a heightened shyness toward human contact. Observations of animals following release have shown horses relocate themselves back to their home ranges within 12 to 24 hours of release.

Following administration of the immunocontraceptive fertility control vaccines, as called for in the Proposed Action, minor swelling may occur at the injection site and/or an injection site injury

may occur, however this is rare. The intensity of these impacts varies by individual, and is indicated by behaviors ranging from nervous agitation to physical distress.

Mortality of wild horses captured during a gather may occur, however it is infrequent and typically is no more than one half to one percent of the animals captured.

Impacts that could occur after the initial stress may include spontaneous abortion in mares, and increased social displacement and conflict in studs. Spontaneous abortion following capture is very rare. Traumatic injuries that may occur typically involve biting and/or kicking that may result in bruises and minor swelling which normally does not break the skin. These impacts are known to occur intermittently during wild horse gather operations. The frequency of occurrence of these impacts among a population varies with the individual.

If forage and available water was unlimited, it is projected that the No Action alternative would allow the populations to increase dramatically during the next 10 years (projected to vary from 1107 to 1730 head). However, water and forage could limit growth, and could possibly lead to large-scale die-offs, especially during drought or severe winters.

In an attempt to predict population dynamics, a computer simulation was run using the wild horse population model developed by Dr. Stephen Jenkins of the University of Nevada, Reno (Jenkins 2002). For each alternative, populations were predicted for the next 4, 10, and 15 years (see Appendix A).

3.8 Vegetation,

Affected Environment

The lowest elevation in the HMA is 4,900 feet which occurs at the bottom of High Rock Canyon, and highest elevation is about 6,300 feet which occurs on the ridges above this canyon. There are a variety of soils in the HMA that are capable of supporting primarily big sagebrush, and Thurber's needlegrass dominated communities.

The most productive sites in the HMA include the Loamy 10-12" ecological sites which support communities dominated by Mountain sagebrush, bluebunch wheatgrass, and Thurber's needlegrass. The Scabland 10-14" ecological sites that support low sagebrush and Sandberg's bluegrass dominated communities. The Shallow Loam ecological sites that support low sagebrush and Idaho fescue dominated communities.

The majority of the drainages and springs at the mid and lower elevations support herbaceous plant communities, including grasses, forbs, sedges, and rushes. Most of the higher elevation drainages and a few of the most perennial lower elevation drainages, especially High Rock Canyon Creek, also contain some woody riparian vegetation, including willow, rose, and aspen.

Environmental Consequences

Direct impacts to vegetation with implementation of the Proposed Action or Alternative #2 could include disturbance of native vegetation immediately in and around temporary trap sites, and holding and processing facilities. Impacts are created by vehicle traffic, and hoof action of penned horses, would occur in the immediate vicinity of the corrals or holding facilities.

Generally, these sites would be small (less than one half acre) in size. Since most trap sites are used during recurring wild horse gather operations, any impacts would remain site specific and isolated in nature. In addition, most trap sites are selected to enable easy access by transportation vehicles and logistical support equipment and would therefore generally be adjacent to or on roads, pullouts, water haul sites, or other flat spots that were previously disturbed. There would be no direct impacts of trapping or transportation activities on soils or vegetation under the No Action Alternative.

Indirect, long-term impacts on vegetation are related to the wild horse population size and the growth rates associated with each of the Alternatives. Wild horses are large ungulates with few natural predators. They are present in native plant communities within the HMA year-round, and they congregate around water sources and trail along drainages. They utilize primarily herbaceous vegetation and trample and compact soils, especially when soils are wet. As wild horse numbers increase, utilization of vegetation and trampling/compaction of soils increase. These impacts are greatest where wild horses tend to congregate; however, when wild horse numbers become excessive, the impacts become noticeable on the slopes and tables at greater distances from water and trail corridors. When vegetation is heavily used and soils are trampled and compacted, plant vigor, production, and diversity are reduced.

The No Action Alternative #3 would allow wild horses to increase to the highest populations. This number of wild horses, and the fact that they are on the range 12 months out of the year, would have negative impacts to the vegetative resources. The Proposed Action and Alternative #2 would maintain wild horse numbers at a level that would limit the majority of the negative effects of wild horse grazing to areas where wild horses congregate, around water sources, and along drainages.

3.9 Livestock Grazing,

Affected Environment

The High Rock HMA overlaps with the Massacre Mountain Allotment and is managed under the guidance of the Technical Review Teams (TRT, written in the 1980's. This TRT included members of the Modoc-Washoe Stewardship committee, which represented a variety of interests and the Surprise Field Office BLM personnel.

The Massacre Mountain Allotment (149,000 acres) is permitted for two cattle operations. Active Use or preference is 5,823 animal unit months (AUMs), and the grazing period is for up to six months, or from April 15 to October 1. Typically both operators normally turnout cattle by May 1, one operator uses the allotment for the entire period, and while the other operator removes their cattle from the allotment by August 1. The allotment has few internal pasture fences;

consequently livestock are managed by rotating through unfenced use areas with specific periods of use with the intention of meeting utilization guidelines and resource objectives. The majority of the cattle grazing occur outside of the HMA, and cattle rarely use the east one-half (approximately) of the HMA because of a lack of sufficient water sources. The Rock High Canyon area has been managed for long term rest from livestock grazing, although in the future grazing may be prescribed to meet certain resource objectives.

Environmental Consequences

Indirect, long-term impacts are related to the wild horse population sizes and growth rates associated with each of the Alternatives. As wild horse numbers increase, utilization of forage and water increases and there would be greater competition between cattle and livestock. The action alternatives would have least impacts to livestock operations, and on the social and economic values associated with livestock grazing. The No Action Alternative would result in the most rapid increase in wild horse numbers, and simply would not be consistent with livestock operations on public lands. Since horses are on the range year-long there would be severe grazing and tramping damage to riparian areas and wild horses would continue to move to lands outside the HMA.

In summary, implementation of the Proposed Action, and Alternative #2 would be compatible with livestock grazing, and on the social and economic values associated with livestock grazing.

3.10 Noxious Weeds and Invasive, Non-native Species,

Affected Environment

Noxious weeds and invasive non-native species introduction and proliferation are a growing concern among local and regional interests. Noxious weed surveys have been conducted in portions of the HMA, and several small sites of Perennial Pepper weed, Bull and Scotch thistle have been found. These known locations of noxious weeds tend to occur at riparian sites or along roads and are being treated and monitored.

Vehicles and OHV traveling on various routes, and crossing the associated drainages along these routes, increase the likelihood that several other species of noxious weeds may be spread in the HMA in the near future.

Environmental Consequences

Direct, short-term impacts associated with the Proposed Action and alternative #2 includes the potential to import or transport noxious weeds and/or spread existing noxious weed seeds and plant parts to new areas in the HMA. Weed free hay would be fed to domestic horses used for the gather operations and weed free hay would be fed to wild horses held at the portable corrals. There are no direct impacts associated with the Proposed Action or Alternatives #2.

Indirect, long-term impacts are related to the wild horse population sizes and growth rates associated with each of the Alternatives. Disturbed areas and areas in poor ecological condition are much more susceptible to having noxious weeds and invasive non-native species populations

establish and expand in size. Implementation of the Proposed Action and Alternative #2 would result in the highest possibility that wild horse populations are at AML. Therefore, the Proposed Action would be the least likely to result in increased populations of noxious weeds and invasive non-native species. Implementation of No Action Alternative would produce the most rapid increase in wild horse numbers. As wild horse numbers increase, utilization of vegetation and trampling/compaction of soils would increase. Eventually, plant vigor, production, and diversity would be reduced and overall ecological site conditions would decline. Population modeling indicates there could be up to 1,730 horses in the HMA within 10 years. Appendix A contains an in-depth population analysis. As a result, No Action Alternative would have the greatest negative impact on soils and vegetation, and would be the most likely to result in increased populations of noxious weeds and invasive non-native species.

The Proposed Action and Alternative # 2 may have about the same impacts to soils and vegetation, or the spread of noxious weeds and invasive non-native species, because only an estimated 28 mares would be treated for fertility control under the Proposed Action.

3.11 Recreation,

Affected Environment

The HMA is a popular destination for pronghorn antelope, big horn sheep, mule deer, and upland game bird (chukar, quail, dove, and sage-grouse) for Nevada resident hunters and non-resident hunters. The Proposed Action gather was scheduled for September, in part, to reduce potential conflicts with hunting seasons, and other recreation users.

The main access road to the HMA is by NV Highway 8A, and Highway 34. Common recreation uses in the HMA consist of off-highway driving, camping, hiking and wildlife/wild horse viewing. There are several roads accessible to four-wheel drive vehicles in or near the HMA. These roads reach some of the higher elevation areas and, as a result, they afford recreational users the opportunity to view wildlife, wild horses, or to enjoy the solitude.

Environmental Consequences

Direct, short-term impacts to recreation with implementation of the Proposed Action and Alternative #2 would consist primarily of disturbance from a low-flying helicopter, particularly if the gather occurred during the big game hunting seasons. These big game hunts are highly sought after, and in most cases hunters wait up to 5 or more years to draw a tag. A low-flying aircraft is often considered intrusive to hunting activities, and to wilderness characteristics.

Indirect, long-term impacts are related to the wild horse population sizes and growth rates associated with each of the Alternatives. As wild horse numbers increase, utilization of cover, space, forage, and water increases. As the amount and quality of habitat is reduced, wildlife populations are also reduced, as is opportunities for hunting and wildlife viewing. Conversely, as wild horse numbers increase, the likelihood of recreational users seeing wild horses from the main roads and trails increases.

The actual gather activities are expected to be completed in 15 days, which would reduce the possibility of conflicting with outdoor activities. Compared with Alternative #2, implementation of the Proposed Action would result in slightly lower wild horse population growth rates, and the greatest period of time when wild horse numbers are at or below maximum AML's. Therefore, the Proposed Action would have slightly less impacts on recreation activities by increasing the gather cycle to 4 years, instead of 3 years, and over a 15 year period there would be one less gather.

In summary, the No Action Alternative would result in the most rapid increase in wild horse numbers and the greatest negative impact on recreation involving hunting, camping, and wildlife viewing and the greatest positive impact on recreation involving wild horse viewing.

4.0 Residual Impacts

Irreversible and Irrecoverable Commitment of Resources

The implementation of "action alternatives" is not likely to result in significant impacts that may be characterized as irreversible and irretrievable commitments. Several gathers have occurred on the High Rock HMA, and on adjacent HMA within the last 25 years and there is no indication of genetic isolation or that the herd is not self-sustaining.

Unavoidable Adverse Impacts

The implementation of actions associated with the Proposed Action or Alternative #2 were designed to reduce to any impacts to wilderness resources or values, and including impacts to wildlife species and recreation.

5.0 Cumulative Impacts (Proposed Action & Alternative)

Cumulative impacts are impacts on the environment that 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.

Implementation of the Proposed Action or Alternative #2 would reduce the existing wild horse population to AML, and this would help promote a thriving natural ecological balance. The achievement and maintenance of AML would maintain or increase in vegetation density, vigor, reproduction, productivity, diversity, and forage availability. Subsequent removals would sustain animal populations in a thriving natural ecological balance and would contribute to retain ecological sites condition.

Adverse impacts to vegetation with implementation of Proposed Action or Alternatives #2 would include disturbance of small quantities of native vegetation and soils immediately in and around

temporary trap sites, holding, and processing facilities. Impacts created by vehicle traffic, and hoof action of penned horses, can be severe in the immediate vicinity of these facilities, and the impacts would re-occur each time horses were gathered. Since most trap sites and holding facilities are used during recurring wild horse gather operations, any impacts would remain site specific and isolated in nature. Based on past experience these impacts are inconspicuous within several years. Also, most trap sites or holding facilities are selected to enable easy access by transportation vehicles and logistical support equipment and would therefore generally be adjacent to or on roads, pullouts, water haul sites, or other flat spots that were previously disturbed. These common practices would minimize the cumulative effects of these impacts.

The removal of animals and the subsequent maintenance of AML would allow reduced utilization of riparian and upland habitats on a year-long basis. This management coupled with a livestock grazing program, which is based on the physiological needs of the vegetation would result in improved rangeland health.

Under the No Action Alternative, cumulative impact of large numbers of wild horses would increase each year that horses are not gathered. These impacts would affect all of the resources that depend on stable soils and intact vegetative communities, including wildlife viewing, and hunting, wilderness, cultural resources, water quality, and the social and economic values associated with livestock grazing. The HMAP objectives, NCA decisions, and Land Health Standards can not be met under the No Action Alternative.

The Surprise Field Office would continue to identify any adverse impacts as they occur, and mitigate them as needed on a project specific basis to maintain habitat and herd quality. The Proposed Action would contribute to the cumulative impacts of future actions by maintaining the herd at AML, and establishing a process whereby biological and/or genetic issues associated with herd or habitat fragmentation would become apparent sooner and mitigating measures implemented more quickly.

A related action is the proposal to Construct Wildlife Water Developments in the East Fork High Rock Canyon Wilderness Area within the Black Rock-High Rock NCA (EA CA-370-06-02). The EA discusses the issues expressed by NDOW and others over the wild horse impacts to riparian conditions in the HMA, and the limited water resources for wildlife. The Decision Record for this project confirms continued monitoring of wild horse populations and habitat use to ensure that unacceptable adverse affects are not occurring from wild horse use to the bighorn populations.

6.0 Mitigation Measures

The Proposed Action and Alternatives incorporate proven standard operating procedures that have been developed over time. These SOP's (Appendix B) represent the "best methods" for reducing impacts associated with gathering, handling, and transporting wild horses, and collecting herd data. Additional impact reducing mitigation measures have been incorporated into the alternatives. Therefore no additional mitigation measures are proposed.

7.0 Consultation and Coordination

A Notice of Proposed Action was mailed to 74 interested individuals, groups, and agencies on June 7, 2006. Several comments were received in support of the proposed removal of excess wild horses from the High Rock HMA. Consultation and coordination with affected interests will also occur during the 30 day comment period for this preliminary EA. Any comments will be considered in BLM decision for this EA.

7.1 List of Preparers

Steve Surian Supervisory Rangeland Management Specialist/Environmental Coordinator

Jerry Bonham Range/Wild Horse Technician

7.2 Persons, Groups, and Agencies Consulted

Copies of this environmental assessment will be sent by first class mail to the following groups and individuals for review and comment:

Bill Phillips; Nevada State Clearinghouse; Cathy Barcomb, Nevada Commission for the Preservation of Wild Horses; Dawn Lappin, Wild Horse Organized Assistance; Roy Leach, Dave Pulliam, Clint Garrett, Nevada Department of Wildlife; Bryan Lamont, Rocky Mountain Elk Foundation; The Fund For Animals, Inc.; Frances Benally, Chair, Ft. Bidwell Tribal Council; Ms. Virginia Lash, Chair, Cedarville Rancheria; Ms. Anne Martin, American Lands Alliance Wes Finley, N.E. California RAC; Lee Chauvet, Chair, N.E. California RAC; Nevada Cattlemen's Association, North Washoe Unit, c/o Jesse Harris; Northwest Great Basin Association; Barbara Flores, Colorado Wild Horse and Burro Coalition; Barbara Burhans; France Benally, Chair Fort Bidwell Tribal Council, NRCS, USDA, Jim Gifford; Mr. Mike Harper; MS Vicky Hoover; James Jurad; Bryan Lamont; White Pine Ranch; Bunyard Ranches. Susan Lynn, Nevada Water Network; James Morefield, NV Natural Heritage Program; Shaaron Netherton Friends of the Nevada Wilderness; Marjorie Sill, Debbie Sease, Rose Strickland, Vicki Hoover, Sierra Club; Stephen Smith, Nevada State Office; Mr. Steve Tabor; Ed and Anita Wagner; Johanna Wald, NRCD; John Walker; Ed & Anita Wagner, Coalition for NV Wildlife; Great Old Broads for Wilderness Org.; Wilderness Watch; Northern Native Plants Society Northwest Great Basin Association; Tribal Council Pyramid Lake Paiute Tribe; Dennis Rechel, Walker River Bowmen; California Wilderness Coalition Central Office; AZ Wilderness Coalition; Silver Arrow Bowmen; Canvasback Gun Club; Nevada Bow Hunters Association; Oregon Natural Desert Assoc.; Ralph Albright, Greg Aplet, Sarah Barth, The Wilderness Society; Joel Blakeslee, Judi Caron, Washoe County Wildlife Advisory Board; Karen Boeger; Leah Brashear; Mr. Paul C. Clifford JR.; Ms. Mary Conelly; John Davis, Robert Davison Wildlife Mgt. Institute; Nevada Trophy Hunters c/o

Mr. Tony Diebold; Mr. Gale, NV Wildlife Federation Dupree; Mr. Bob Ellis; Tina Nappe, Bill Vasconi, Fraternity for the Desert Bighorn; Larry Johnson, Coalition for Nevada's Wildlife; Nevada Bighorns Unlimited; Reno Fly Shop, Bob Ellis, Desert Survivors, Rocky Mountain Coordinator- Fund for the Animals, Inc.; Kody Menghini; LeRoy Perks, Craig Stevenson; Clint Bentley; Jim Shepard; William L. Retzer; Terry Williams.