



# United States Department of the Interior



## BUREAU OF LAND MANAGEMENT

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In Reply Refer To:  
4700 (NV-022.42)

SEP 29 2005

Dear Reader:

The Bureau of Land Management (BLM) Winnemucca Field Office (WFO) has completed the Blue Wing Complex Wild Horse and Burro Gather Plan and Environmental Assessment (EA) and the McGee Mountain Wild Burro Gather Plan and EA (EA# NV-020-05-22 and EA# NV-020-05-23, respectively).

The Blue Wing Complex EA analyzes the impacts of gathering wild horses and burros from the Blue Wing Mountains, Nightingale Mountains, Shawave Mountains, Kamma Mountains, Seven Troughs, and Lava Beds herd management areas (HMAs) and the Trinity Range, Selenite Range, and Antelope Range herd areas (HAs). The Blue Wing Complex is located approximately 55 miles northeast of Reno in Pershing, Humboldt, and Churchill Counties, Nevada.

The McGee Mountain Gather Plan and EA analyzes the impacts of gathering excess wild burros from the McGee Mountain (NV-210) herd management area (HMA). McGee Mountain is located about 85 air miles north west of Winnemucca, NV, within Humboldt County, Nevada.

These documents are included on the enclosed compact disk (CD) in portable document format (PDF). Comments to one or both EAs must be received by the Winnemucca Field Office by October 29, 2005. Please specify which EA you are commenting on by using the EA number. Hard copies of the EA are also available for your convenience at the Winnemucca Field Office or upon request. After the public comment period has ended, comments will be analyzed and taken into consideration in the decision making process.

Public comments submitted on these two EAs, including names and street addresses of respondents will be available for public review at the Winnemucca Field Office during regular business hours (7:30 a.m.-4:30 p.m.), Monday through Friday, except holidays. Individual respondents may request confidentiality. If you wish to withhold your name or address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your comments. Such requests shall be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

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DEPARTMENT OF ADMINISTRATION  
OFFICE OF THE DIRECTOR  
BUDGET AND PLANNING DIVISION

Comments or questions on these EAs may be directed to Nadine Paine or Heidi Hopkins at the Winnemucca Field Office, 5100 East Winnemucca Boulevard, Winnemucca, Nevada 89445 or by phone at 775-623-1500.

Sincerely,



Arlan G. Hiner  
Assistant Field Manager,  
Renewable Resources

1 Enclosure

1. CD containing the Blue Wing Complex Gather Plan and EA and the McGee Mountain Gather Plan and EA



**United States Department of the Interior  
Bureau of Land Management  
Winnemucca, Field Office September 2005**

**BLUE WING COMPLEX WILD HORSE AND BURRO  
CAPTURE, REMOVAL, AND FERTILITY CONTROL  
ENVIRONMENTAL ASSESSMENT**

**Preliminary  
Environmental Assessment  
NV-020-05-EA-22**



Winnemucca Field Office  
Bureau of Land Management  
5100 East Winnemucca Boulevard  
Winnemucca, NV 89445

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## **1.0 INTRODUCTION**

### **1.1 Background Information**

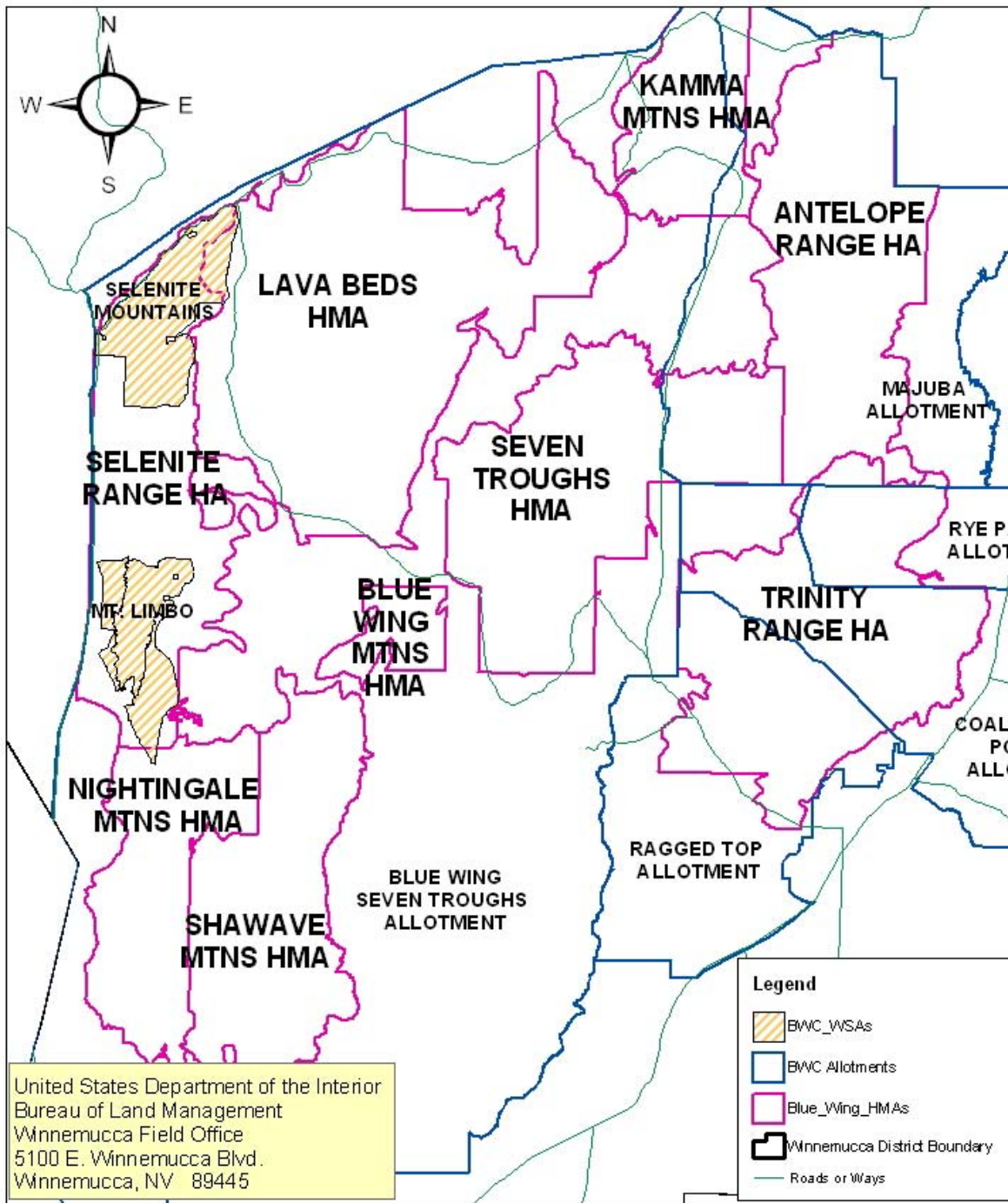
The Bureau of Land Management (BLM), Winnemucca Field Office (WFO) is proposing to capture approximately 642 wild horses and 282 burros and remove approximately 459 excess wild horses and 270 excess burros from the Blue Wing Complex starting in November of 2005. The Blue Wing Complex is comprised of six Herd Management Areas (HMAs) and three Herd Areas (HAs): Blue Wing Mtns. (NV-217), Kamma Mtns. (NV-214), Lava Beds (NV-215), Nightingale Mtns. (NV-219), Seven Troughs (NV-216), and Shawave Mtns. (NV-218) HMAs; and Antelope Range (NV-208), Selenite Range (NV-212), and Trinity Range (NV-232) HAs. This environmental assessment (EA) will analyze the impacts associated with the proposed capture and removal.

The September 2003 wild horse and burro gather in the Blue Wing Complex was a partial gather, due to budget constraints. Only Blue Wing Mtns., Nightingale Mtns., and Shawave Mtns. HMAs and the Trinity Mtns. HA were gathered. Horses and burros were believed to move north out of the Capture Area due to gather pressure; approximately 350 fewer horses and burros were captured than originally estimated. It is believed insufficient numbers were removed to bring the combined populations of the HMAs down to the low end of the Appropriate Management Level (AML), which would have helped achieve a thriving natural ecological balance; fertility control treatment was not administered to any mares.

The AMLs for the HMAs in the complex were originally established in the December 1994 Blue Wing/Seven Troughs Allotment Evaluation and Final Multiple Use Decision (FMUD). The AMLs were readjusted in accordance with the June 1999 Stipulated Agreement between C-Punch Corporation and the WFO. An AML of zero was established on the Antelope Range and Trinity Range HAs in the Sonoma-Gerlach Land Use Plan (LUP) signed in July 1982. The Selenite Range AML was set at zero through the Blue Wing/Seven Troughs Cooperative Resource Management Agreement signed in July 1984. AML ranges for the three HMA gathered in 2003 were set in that gather's EA, #NV-020-03-21 (see Table 1 for Current AMLs). All HAs have AMLs set at zero, so a total removal would be implemented on the Antelope Range, the Selenite Range, and the Trinity Range HAs.

All the HMAs and the Selenite HA are encompassed by the Blue Wing/Seven Troughs Allotment, with part of the Antelope Range HA in the Majuba Allotment and part of the Trinity Range HA in Ragged Top, Rye Patch, and Cole Canyon-Poker Allotments. The Blue Wing Complex is located approximately 50 miles west of Winnemucca and 45 miles northeast of Reno and covers more than 1 million acres, (see Map 1 below).

Map 3. Blue Wing HMA/HA Complex, WSAs, and Livestock Grazing Allotments



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



**Table 1. Current AMLs in the Blue Wing Complex**

HMA	Current AML (Range if Set)	
	Horses	Burros
Blue Wing Mountains	22 to 36	17 to 28
Kamma Mountains	46 to 77	0
Lava Beds	89 to 148	10 to 16
Nightingale Mountains	38 to 63	0
Seven Troughs	94 to 156	28 to 46
Shawave Mountains	44 to 73	0
<b>Total Complex AML Range</b>	<b>333 to 553</b>	<b>55 to 90</b>

The Blue Wing Mountains, the Shawave Mountains, the Nightingale Mountains HMAs, and the Trinity Range HA were censused in 2003 prior to the 2003 gather. The remainder of the HMAs and HAs were censused in 2001. An annual reproduction rate of 15% for wild horses and 11% for burros was applied to all HMAs and HAs through the 2005 foaling season to reach the current population estimate of 807 wild horses and 320 wild burros (see Table 2). The combined population totals for horses exceed the low range AML by 66% and for burros by 305%.

**Table 2. Current Wild Horse & Burro Population Estimates**

HMA/HA	Population Estimate	
	Horses	Burros
Antelope Range	64	0
Blue Wing Mountains	20	22
Kamma Mountains	135	0
Lava Beds	153	2
Nightingale Mountains	63	0
Selenite Range	107	140
Seven Troughs	183	158
Shawave Mountains	74	0
Trinity Range	8	0
<b>Total</b>	<b>807</b>	<b>320</b>

## 1.2 Need for the Proposal

Wild horse population estimates and analysis of vegetative and horse observation monitoring data from the 2003, 2004, and 2005 field seasons indicates an excess of wild horses and burros in the Blue Wing Complex. Current population estimates are 807 wild horses and 320 wild burros. The established range of AML is from 333 to 553 for wild horses and from 55 to 90 for wild burros. Current populations are approaching triple the low AML for horses and are almost six times the low AML for burros. Prolonged drought conditions resulting in a reduced forage base and heavy use around water sources, especially in the northern half of the allotment where livestock have grazed this past year, have left resources in danger of further degradation. Inadequate body condition levels have been noted by specialists in the field for some wild horses observed. Stressed range conditions coupled with inadequate body condition could cause a loss of wild horses, burros, and wildlife this winter. Some lactating mares, older animals, and growing juveniles display thinner body conditions than do dry mares and



bachelor band studs. Lack of a substantial snow pack in mid to higher elevations this year would allow horses to remove a considerable amount of residual plant material affecting potential vegetative production next spring, possibly causing an emergency situation. Conversely, a heavy snow pack this year could cause a high mortality rate because of limited access to forage.

The Proposed Action is needed to remove approximately 459 wild horses and about 270 wild burros from the Blue Wing Complex in November 2005 in order to restore wild horse and burro herd numbers to levels consistent with AML. Decreased forage demands on drought-stressed resources should result in improved wild horse body conditions. Lower horse densities would allow vegetative resources, riparian areas, and other natural resources, time to rest and recover from forage utilization, water usage, and hoof impacts.

Vegetative utilization and population monitoring of wild horse and burro use in the Blue Wing Allotment indicates wild equines are at risk of exceeding the range's habitat capacity to sustain them over the long-term. Resource damage is imminent and is likely to continue to occur without immediate action. Livestock use has remained relatively constant and is in compliance with permitted grazing systems that have provided periodic rest. Grazing in the Blue Wing Allotment alternates from the north to the south annually. Over the past year livestock have been in the north end of the allotment. Horse observations indicate deteriorating body condition in some herds. Survival for these herds, should the winter be severe, could be a problem. The proposed capture and removal is needed at this time to reduce wild horse grazing impacts and utilization levels and bring them into balance with other multiple-uses and with the productive capacity of the habitat. It would also improve the health of the wild horses and burros that remain on the range following the removal and insure long-term, self-sustaining wild horse and burro populations.

### **1.3 Conformance with Existing Land Use Plans (LUPS)**

The WFO's Sonoma-Gerlach Resource Area Management Framework Plan (MFP) Record of Decision (ROD), which directs management in the project area, was approved on July 9, 1982. This document has been reviewed and the Proposed Action is in conformance with this plan as required by regulation (43 CFR 1610.5-3(a)) and is consistent with federal and state laws, regulations, and plans to the maximum extent possible.

### **1.4 Conformance with Rangeland Health Standards**

The affected allotments have not been assessed for conformance with Rangeland Health Standards and Guidelines.

### **1.5 Relationship to Statutes, Policies, Plans, and Other Environmental Analyses**

The Proposed Action and alternatives are in conformance with the Wild Free-Roaming Horse and Burro Act of 1971 (PL 92-195 as amended); and with all applicable regulations found in 43 CFR (Code of Federal Regulations) 4700 and policies.

The carrying capacity for livestock, wildlife and wild horses; multiple-use management objectives; and, the Terms and Conditions for livestock grazing within Blue Wing/Seven

Troughs Allotment, the Majuba Allotment, the Ragged Top Allotment, the Coal Canyon Poker Allotment and the Rye Patch Allotment were established in conformance with the Land Use Plan, BLM policy, and are in conformance with the Sierra Front-Northwest Great Basin Resource Advisory Council (RAC) Area Standards and Guidelines.

Environmental analyses (EAs) have been conducted in past years which analyzed the impacts of various gather methods on wild equines and the effect of these techniques on the human environment. The following documents (among others) are available for public review at the Winnemucca Field Office:

1. Programmatic EA, Wild Horse Fertility Control Research, EA No. NV-020-00-02, November 1999.
2. Winnemucca District Wild Horse/Burro Removal Programmatic Environmental Assessment, EA No. NV-020-7-24, August 1987.

### **1.6 Issue Identification**

The following issues were identified as a result of public and internal scoping as being intricately involved with the proposal to remove wild horses and burros from the Blue Wing Complex:

- A need to reduce wild horse populations to preserve a thriving natural ecological balance,
- A need to reduce extensive trailing by wild horses and/or burros to distance and limited foraging and watering areas, as a result of growing wild equine densities and the continuing drought,
- A need to improve individual wild horse and burro body condition and generally improve herd health,
- A need to correct the sex ratio and age structure imbalance of wild horses (not burros) due to past gather actions,
- A need to improve riparian and wetland health and diversity, and
- A need to reduce forage utilization in areas that have experienced a perennial grass die-off due to the extensive drought.

## **2.0 ALTERNATIVES**

The alternatives discussed and analyzed below were based on the need to remove excess wild horses and burros before rangeland health deteriorated, as well as to improve and maintain healthy, self-sustaining equine herds.

Three alternatives, including the Proposed Action and the No Action Alternative, will be analyzed within this document. Two alternatives were considered but eliminated from further analysis. The alternatives are further described in the sections 2.1 and 2.2 below.

Alternatives analyzed in detail include:

- Alternative 1: Proposed Action – Gather the Blue Wing Complex Wild Horses and Burros to the Low Range of AML and implement Fertility Control on release mares

- Alternative 2: Gather the Blue Wing Complex Wild Horses and Burros to the Low Range of AML without Fertility Control
- Alternative 3: No Action Alternative – Do Not Remove Blue Wing Complex’s Wild Horses and Burros and Continue Existing Management

## 2.1 Actions Common to Alternatives 1 and 2

The following actions are common to Alternatives 1 and 2:

- Gather operations would be conducted in accordance with the Standard Operating Procedures (SOPs) described in the Nevada Wild Horse Gather Contract, (see Appendix A). The helicopter drive method would be used for this gather and would include multiple gather sites (perhaps eleven or more). To the extent possible, gather sites (traps) would be located in previously used trap sites and other disturbed areas. Undisturbed areas would be inventoried for cultural resources. If cultural resources are encountered, these locations would not be utilized unless they could be modified to avoid impacts to cultural resources. Trap sites would not be placed in known areas of Native American concern, i.e. near springs, developed or undeveloped. Post-gather, every effort would be made to return released animals to the same general area from which they were gathered.
- BLM personnel would administer the gather to insure both the contractor, BLM employees, and visitors to the gather are in compliance with regulations.
- Blood samples would be acquired to monitor genetic health and diversity. Other data including sex and age distribution, reproduction, body condition, color, size, etc. may also be recorded, along with the final disposition of that animal (removed or released).
- All horses will be aged to determine which age criteria they fall under.
- Burros will not be aged, since there is no selective removal criterion that applies to them.
- Wild horses would be removed using the selective removal strategy (Gather Policy and Selective Removal Criteria for Wild Horses and Burros, Washington Office IM 2005-206). Selective removal criteria for this gather would include:

- *Age Class – Five Years and Younger*

Wild horses five years of age and younger should be the first priority for removal and placement into national adoption program.

- *Age Class – Six to Fifteen Years Old*

Wild horses six to fifteen years of age should be removed last and only if management goals and objectives for the herd cannot be achieved through the removal of younger animals.

Animals encountered during gather operations should be released if, in the opinion of the Authorized Officer, they may not tolerate the stress of transportation, preparation and holding but would survive if released. Older animals in acceptable body condition with significant tooth loss and/or excessive tooth wear should also be released. Some situations, such as removals from private land, total removals, or emergency situations require exceptions to this.

- *Age Class – Sixteen Years and Older*

Wild horses aged sixteen years and older should not be removed from the range unless specific exceptions prevent them from being turned back and left on the range.

The Selective Removal Criteria, as stated above, would be followed to the extent possible. However, it is anticipated that animals from younger and/or older categories would need to be released to meet management objectives of maintaining a desired age class structure. In addition a certain number of wild horses inevitably evade capture; their estimated number will be deducted from the total number of animals released.

- Excess wild horses and burros would be sent to Bureau facilities for adoption preparation or long-term holding.

## **2.2 Proposed Action and Alternatives**

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

This alternative would continue implementation of a population management strategy for the Blue Wing Complex HMAs in which wild horses would be managed in an AML range from 333 to 553 head, and wild burros would be managed in an AML range from 55 to 90 head. A total removal of wild horses and burros would be implemented in the three HAs: Selenite Range, Antelope Range, and Trinity Range HAs. The Proposed Action would be to capture approximately 642 wild horses and 282 wild burros, remove about 459 wild horses and 270 burros, and release about 183 horses and 12 burros back into their respective HMAs. These numbers include capturing and removing approximately 179 horses and 140 burros from the HAs. If 25 or more mares would be released back into their respective HMAs, immunocontraceptive research, using Porcine zona pellucidae (PZP) to slow the reproductive rate of breeding age mares would be conducted. This application would reduce fertility of treated mares for two breeding seasons. Standard Operating Procedures (SOPs) regarding the use of PZP, as outlined in Appendix B, would be utilized. The BLM would be responsible for monitoring and compliance with these SOPs. Wild jennies would not be treated with PZP; their reproductive rate is much lower than for wild mares.

### **2.2.2 Alternative 2 (Gather to Low Range AML without Fertility Control)**

This alternative would continue implementation of a population management strategy for the Blue Wing Complex HMAs in which the population of wild horses and burros would be reduced to the lower range of AML in each one of the Blue Wing Complex HMAs. A total removal of wild horses and burros would occur in the HAs: Selenite Range, Antelope Range, and Trinity Range HAs. Alternative 2 would be the same as alternative 1 except no fertility control would be implemented on mares.

### **2.2.3 Alternative 3 No Action Alternative (Do Not Remove the Blue Wing Complex's Wild Horses and Burros and Continue Existing Management)**

Under this alternative the Blue Wing Complex wild horses and burros would not be gathered and existing management would continue. Current populations of horses and burros would continue to propagate at the average rate of from 18 to 25% annually for horses, and approximately 11% for burros. Horse and burro populations could eventually reach an equilibrium through elevated mortality rates, caused by high population densities, drought, insufficient forage, water and/or space availability, disease, predation, or a combination of these environmental factors. It has been shown that wild horse and burro populations in the complex are not substantially regulated by predators. In addition wild horses and burros are long-lived species and research has shown that foal survival rates can exceed 95 percent. This alternative would result in a steady increase in numbers which would exceed the carrying capacity of the range. The 1971 Wild Free-Roaming Horse and Burro Act mandates the Bureau to prevent the range from deterioration associated with overpopulation and to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area. Management actions to reduce herd numbers would inevitably need to be reevaluated.

### **2.2.4 Alternatives Considered But Eliminated From Further Analysis:**

- Gather to the Upper Range of AML without Fertility Control
- Gather to the Upper Range of AML with Fertility Control

These alternatives were dismissed from further analysis because gathering to the upper range of AML with or without fertility control would result in HMA populations being over AML the following year when foals were born.

## **3.0 AFFECTED ENVIRONMENT**

This section describes the affected critical elements, which are defined by the Bureau of Land Management National Environmental Policy Act (NEPA) Handbook (H-1790-1) and additional affected critical elements which have been specified in statutes or executive orders released subsequent to the existing planning documents and must be considered in all BLM environmental assessments. These additional critical elements are shown in the table below.

**Table 3. Additional Critical Elements & Relevant Authority**

ELEMENT	RELEVANT AUTHORITY
Invasive, Nonnative Species	-Lacey Act, as amended -Federal Noxious Weed Act of 1974 as amended -Endangered Species Act of 1973, as amended -E.O. 13112, Invasive Species, 2.3.99
Environmental Justice	E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 2/11/94
Water Quality	-Clean Water Act of 1987 (Surface & Ground) -Safe Drinking Water Act amendments of 1996 -E.O. 12088, Federal Compliance with Pollution Control Standards (Amended by E.O. 12580, 10/13/78, 2/23/87) -E.O. 12372 Intergovernmental Review of Federal Programs, 7/14/82
Migratory Birds	-E.O. 18186, Responsibilities of Federal Agencies To Protect Migratory Birds -The Migratory Bird Treaty Act -the Bald and Golden Eagle Protection Acts -the Endangered Species Act of 1973 -The Fish and Wildlife Coordination Act

Table 4 below summarizes the presence of the critical elements of the human environment and other priority resources of concern within the project area. Elements marked as being present, are discussed in the corresponding referenced section below as indicated in the table.

**Table 4. Critical Elements of the Human Environment and Other Priority Elements**

Element	Present	Affected	Reference Sections
Air Quality	Yes	Yes	3.1.1, 4.1.1
Areas of Environmental Concern	No	No	--
Cultural Resources	Yes	No	3.1.2, 4.1.2
Environmental Justice	No	No	--
Floodplains	No	No	--
Invasive, Non-native Species	Yes	Yes	3.1.3, 4.1.3
Migratory Birds	Yes	Yes	3.1.4, 4.1.4
Native American Religious Concerns	Yes	No	3.1.5, 4.1.5
Prime/Unique Farmlands	No	No	--
Special Status Species	Yes	Yes	3.1.6, 4.1.6
Waste, Hazardous or Solid	No	No	--
Water Quality (Surface & Ground)	Yes	Yes	3.1.7, 4.1.7
Wetland/Riparian Zones	Yes	Yes	3.1.8, 4.1.8
Wild & Scenic Rivers	No	No	--
Wilderness/Wilderness Study Area (WSA)	Yes	Yes	3.1.9, 4.1.9
Other Elements			
Vegetation	Yes	Yes	3.2.1, 4.2.1
Wildlife	Yes	Yes	3.2.2, 4.2.2
Wild Horses and Burros	Yes	Yes	3.2.3, 4.2.3
Livestock Grazing	Yes	Yes	3.2.4, 4.2.4

### 3.1 Critical Elements

#### 3.1.1 Air Quality

Air quality within the project area is considered good and is typical of rural areas within the northern Great Basin.

#### 3.1.2 Cultural Resources

A complete inventory of archeological sites within the project area has not been completed. Previous inventories have identified pre-historic sites (rock shelters, lithic scatters, lithic sources, quarry sites, hunting blinds, isolated projectile points, etc.) The highest concentration of prehistoric sites is in association with permanent and intermittent water sources. Historic sites in the project area are generally associated with ranching and mining operations. Other historic sites in the project area include the California Emigrant Trail, the Applegate-Lassen Trail, the Nobles Route, the Central Pacific Railroad, and other historic transportation and communication routes. There are also a number of formerly used military bombing ranges in the project area.

Numerous horse trap sites within the project area have been inventoried for cultural resources for past wild horse and burro gathers.

#### 3.1.3 Invasive, Non-native Species

Noxious weed and invasive non-native species introduction and proliferation are of growing concern among local and regional interests. Nevada Revised Statutes, Chapter 555.05 defines “noxious weeds” and mandates land owners and land management agencies to include control of noxious weeds on lands under their jurisdiction. Nevada has listed 42 non-native invasive plant species that require control. A complete list of these weeds is attached (See Appendix G).

Noxious weed surveys have not occurred within the project area, but will be conducted in the future. Specialists have observed the following invasive, non-native species within the project area.

**Table 5. Invasive, Non-Native Plant Species.**

Common Name	Scientific Name
Hoary Cress/Whitetop	<i>Cardaria draba</i>
Tall Whitetop	<i>Lepidium latifolium</i>
Russian Knapweed	<i>Centaurea repens</i>
Saltcedar/Tamarisk	<i>Tamarix ramosissima</i>

These weeds occur in a variety of habitats including road side areas, rights-of-way, riparian areas, as well as disturbed upland rangelands.

No other invasive, non-native species have been identified within the project area.

#### 3.1.4 Migratory Birds

Neo-tropical migrant bird species are species that breed in the temperate portions of North America and winter in the tropics of either Central or South America. They are protected by international treaty and additional emphasis on maintaining or improving

their habitats is provided by Executive Order #13186. The following table lists migratory birds, as defined by the 50 CFR Section 10.13 that have been observed in the last three decades within the project area based upon NV Department of Wildlife data.

**Table 6. Migratory Birds.**

Common Name	Scientific Name
Ferruginous hawk	<i>Buteo regalis</i>
Northern goshawk	<i>Accipiter gentilis</i>
Peregrine falcon	<i>Falco peregrinus</i>
Prairie falcon	<i>Falco mexicanus</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Short-eared owl	<i>Asio flammeus</i>
Western burrowing owl	<i>Athene cunicularia</i>
Mountain bluebird	<i>Sialia currucoides</i>
Green-tailed towhee	<i>Pipilo chlorurus</i>
Killdeer	<i>Charadrius vociferus</i>
Horned lark	<i>Eremophila alpestris</i>

### **3.1.5 Native American Religious Concerns**

Native American consultation has been undertaken for other projects in the Blue Wing Complex gather area in the past. No additional Native American consultation was undertaken for this project because, to the extent possible, previously used trap sites and other disturbed areas would be used. The location of other possible sites is unknown at this time.

Based on the results of previous Native American consultations it is known that there are areas of Native American concern in the Lava Beds and the Winnemucca Lake/Nightingale Mountains areas. Hot springs and other water sources are also considered sacred by Native American tribes. Riparian zones, in particular, are rich sources of plants for medicinal and other uses. In addition, the Pyramid Lake Paiute Reservation is adjacent to the southwestern portion of the project area.

### **3.1.6 Special Status Species**

At least eleven population management units (PMUs) for Greater Sage-grouse (*Centrocercus urophasianus*), a BLM sensitive species, exist in the Blue Wing Complex capture area: Limbo, Majuba 1, Majuba 2, Majuba 3, Majuba 4, Majuba 5, Nightingale, Shawave 1, Shawave 2, Trinity 1 and Trinity 2. Few active leks have been identified.

Potential habitat exists for the pygmy rabbit (*Brachylagus idahoensis*) and western burrowing owl (*Athene cunicularia hypugea*), both BLM sensitive species. However, at this time, no known populations of pygmy rabbits have been located in the Blue Wing Complex area, but western burrowing owls have been. The presence of additional BLM sensitive or rare species are described within section 3.13 Migratory Birds.

One BLM sensitive plant species, Crosby buckwheat (*Eriogonum crosbyae*), has been identified within the project area. This species is characterized as a low perennial herb



with identified threats being mineral exploration, private development, and off road vehicle use.

Less than 5% of the springs within the project area have been assessed for springsnails. No BLM sensitive or otherwise rare springsnail populations have been recorded.

### **3.1.7 Water Quality (Surface & Ground)**

No data are available describing the extent or the quality of ground water within the project area. Surface water is primarily limited to springs, seeps, and one stream. According to the draft GIS based BLM Water Inventory (2005), 687 water sources occur within the project area. Over 70% of the sources are springs (491), 25% are seeps (175), less than 4% are wells (11), ponds (1), reservoirs (8), or catchments (1). Jenny Creek, which is less than 2 miles in length, flows west off of the Selenite Mountains within the Selenite HA.

### **3.1.8 Wetland/Riparian Zones**

Wetland/riparian zones within the project area are extremely limited and are associated with the surface waters described in section 3.1.7(above). Jenny Creek was assessed in 1997 to determine riparian functionality in accordance with BLM Technical Reference 1737-15. The assessment indicated that the upper reach (<1 mile) of the creek was properly functioning and the lower reach (<1 mile) was functioning with an upward trend but was at-risk since one or more hydrologic, vegetative, or geomorphic attributes indicated a high probability that the system would degrade during a high flow event.

Within the past 5 years, riparian functionality was assessed on a subset of the undeveloped sources identified in draft GIS based BLM Water Inventory (2005). The assessments were performed using BLM Technical Reference 1737-16 and resulted in nearly 29% of the assessed sources being rated as properly functioning, 60% being functional at-risk (31.3% = functional at-risk downward, 49.3% being functional at-risk static, 19.4% = functional at-risk upward) and nearly 11% begin assessed as non-functional.

### **3.1.9 Wilderness/Wilderness Study Area (WSA)**

The Selenite and Mt. Limbo WSAs occur within the project area. These WSAs total approximately 56,419 acres and are located primarily in the Selenite HA with small portions occurring in the Lava Beds and Nightingale Mountains HMAs (see the map at the end of Appendix E).

## **3.2 Other Priority Resources**

### **3.2.1 Vegetation**

Vegetation varies by elevation and ranges from desert/salt/shrub and sagebrush/grass communities on the desert floor (3800 feet), to sagebrush/grass/juniper communities at higher elevations (8200 feet). Temperatures range from highs over 100 degrees in the summer to lows well below 0 degrees in the winter. Precipitation in the project area runs from approximately 4” annually at the lower elevations to approximately 10” at the higher elevations, with much of it coming in the form of snow and rain during the winter

months. The limited rainfall impacts the productivity of ecological sites within the project area.

### **3.2.2 Wildlife**

Terrestrial wildlife resources in the project area are typical of the Great Basin. A wide variety of wildlife species common to the Great Basin ecosystem can be found within the project area. The vegetation on the project area could be categorized into the broad vegetative types of big sagebrush and salt desert shrub, with small areas of Utah juniper, and low/black sagebrush. Free water within the project area is limited.

Common wildlife species occurring on the project area include coyote, badger, chukar partridge (introduced, but now common), and other non-game species. Mule deer habitats are generally associated with the mountain ranges within the project area whereas pronghorn antelope habitats occur throughout the project area. California bighorn sheep also occur within the project area in the Shawave Mountains.

Increasing utilization of vegetative resources annually and increased numbers of wild horses and burros, especially on winter range habitats, is likely resulting in adverse impacts to wildlife species within the project area. Adverse impacts to riparian habitats, which are used by over 80% of all wildlife species in the Great Basin during some point in their life cycle, are likely having an adverse affect on various wildlife species within the project area.

### **3.2.3 Wild Horses and Burros**

As stated in section 1.1, the Blue Wing Complex consists of six HMAs and two HAs in the Blue Wing/Seven Troughs Allotment, which is approximately 1.38 million acres, and one HA, the Antelope Range HA, in the Majuba Allotment, which is approximately 280,250 acres. The complex lies within Humboldt, Pershing, Churchill, and Washoe Counties and consists of north/south trending mountain ranges with broad valleys between (see Map on page 5).

Wild horses move freely between most of the HMAs and the burros move between the Seven Troughs, Lava Beds, Blue Wing Mountains, the north end of the Shawave, and part of the Nightingale Range HMAs and the Selenite Range and Trinity Range HAs even though they are not authorized in all of them. There are both wild horses and burros remaining in the Antelope Range HA, now entirely in the Majuba Allotment, from before the construction of the fence; it is therefore included in the Blue Wing Complex Gather to accomplish the land use plan objective of total removal of wild horses and burros from that HA. The Antelope Range HA is mostly checkerboard and is therefore supposed to be wild horse and burro free.

The current population of wild horses in the HMAs (not the HAs) is estimated to be approximately 628, about 295 over the low range AML. The condition of the horses, as observed by some BLM specialists appears to be deteriorating. The current estimated population of wild burros in the HMAs, where they are authorized, is approximately 182, about 127 over the low range AML. The burros, unlike the horses, are in HMAs where

they are not authorized. AMLs were established in the 1994 Blue Wing/Seven Troughs Allotment Re-Evaluation. The Allotment Re-Evaluation was modified by the 1999 Stipulated Agreement between the BLM and C-Punch Ranch. AML low ranges were established in the south half of the Blue Wing Complex in the Gather Plan/EA #NV-020-03-21 in 2003 and AML low range will be established for the remainder of the HMAs within the Blue Wing Allotment in this EA #NV-020-05-EA-22. These documents establish the AML ranges for the entire complex at 333-553 wild horses and 55-90 wild burros. Maintaining the wild horse and burro populations at or below the upper range of AML is expected to preserve a thriving ecological balance between wild equines, wildlife, livestock, vegetation, water resources, and other multiple uses. As noted in Table 2, current population numbers exceed the established AMLs.

The horses in the Blue Wing Complex are typical of most herds; they are composed mainly of bays, blacks, browns, and sorrels with some roans of various colors, buckskins, duns, palominos, and pintos included. The burro population is rather unique, since it includes, white, pinto, and even a few strawberry burros along with the more common grays, browns and blacks.

All the HMAs and HAs in the Blue Wing/Seven Troughs Allotment were gathered as a whole by court order in the winter of 1995 and in the summer of 1998, except for the Kamma Range HMA, which was gathered in February 1998. In 1995 approximately 2272 wild horses and 561 wild burros were captured and 1780 horses and 520 burros were removed. In 1998 approximately 1927 horses and 136 burros were captured and 1671 horses and 127 burros were removed. These captures and the numbers removed satisfied the court order. It wasn't until the 2003 gather that the area was formally called a "complex" although all six HMAs and associated HAs have always been gathered together, if funds were available.

Currently numbers are again over AMLs. During both the 1995 and the 1998 gathers the selective removal policy directed the removal of only horses five years old or younger. This severely skewed both the age structure and sex ratio of the remaining herds. The partial gather conducted in the South Blue Wing Complex in 2003, did not remedy the age and sex ratio situation because it didn't encompass all six HMAs within the Blue Wing Complex.

The Selenite Range HA portion of the proposed gather is included in the 1999 Stipulated Agreement, which stated that the BLM agreed to remove wild horses and burros from the Selenite Range HA after the Selenite Fence was completed. As previously stated, the Selenite Fence was completed earlier this year.

Several consecutive years of drought, coupled with a die-off of both cheat grass and perennial grasses last year in some of the HMAs has resulted in range deterioration. Uplands in close proximity to developed water sources are receiving the heaviest use.

### **3.2.4 Livestock Grazing**

The permittee on the Blue Wing/Seven Troughs allotment is C-Punch Ranch, Inc. The grazing system is described in the December 5, 1994 Final Multiple Use Decision and the subsequent August 12, 1999 Stipulated Agreement.

## **4.0 ENVIRONMENTAL IMPACTS**

This section includes an assessment of the environmental impacts on the critical elements of the human environment either affected or potentially affected by the Proposed Action and alternatives. It also includes an assessment of the environmental impacts on other priority resources within the project area.

### **4.1 Critical Elements**

#### **4.1.1 Air Quality**

##### Impacts Common to Alternative 1 and 2

Direct impacts associated with these alternatives would consist of an increase in fugitive dust levels as wild horses are herded to temporary gather site(s) and transported by stock trailer(s) to a temporary holding facility. Actions to reduce fugitive dust levels are identified in the Standard Operating Procedures (SOPs) in Appendix A. In addition, there would be an increase in vehicle traffic as excess wild horses are transported from the temporary holding site to a BLM adoption preparation/holding facility. These impacts would be temporary, and of short duration.

##### Alternative 3: No Action (No Gather/Removal)

No direct or indirect impacts would occur under this alternative

#### **4.1.2 Cultural Resources**

##### Impacts Common to Alternative 1 and 2

Direct impacts to cultural resources are not anticipated to occur because gather sites and temporary holding facilities would be placed in previously disturbed areas or inventoried for cultural resources prior to construction. If cultural resources are encountered, these locations would not be utilized unless they could be modified to avoid impacts to cultural resources.

Indirect impacts to cultural resources would be reduced in riparian zones where concentrations of wild horses and burros can lead to modification and displacement of artifacts and features as well as erosion of organic middens containing valuable information.

##### Alternative 3: No Action (No Gather/Removal)

There would be no direct impacts under this alternative. There would be indirect impacts to cultural resource sites in riparian zones where concentrations of wild horses and burros could lead to modification and displacement of artifacts and features as well as erosion of organic middens containing valuable information.

#### **4.1.3 Invasive, Non-Native Species**

##### **Impacts Common to Alternative 1 and 2**

Direct impacts include potential importation of new species of noxious weed seeds or transportation of existing noxious weed seeds and plant parts to new locations by vehicle, livestock, or contaminated hay fed to captured wild horses which are released back onto the range, before sufficient time has elapsed to facilitate contaminated seeds passing through their digestive systems. Indirect impacts would be related to horse and burro population densities and degree of utilization on desired forage species. Existing sites may spread more rapidly if desired plant communities are degraded.

##### **Alternative 3: No Action (No Gather/Removal)**

No direct impacts are expected under this alternative. Indirect impacts would include the potential increase in noxious weeds from increased utilization levels and ground disturbance related to increased wild horse and burro population numbers. Noxious weeds can increase with overuse of the range by grazing animals or through surface disturbance. Reduced vegetative vigor, health, and reproductive potential of desired vegetation would favor the increase of non-native invasive species.

#### **4.1.4 Migratory Birds**

##### **Impacts Common to Alternative 1 and 2**

The project area has riparian and sagebrush habitats where potential impacts to neotropical migrants may be expected. Neither alternative would directly impact migratory bird populations with the exception of possible temporary, short-term displacement from small areas of their habitat. Indirect impacts would be related to wild horse and burro densities and patterns of use. Reduction of current wild horse and burro populations would provide opportunity for vegetative communities to progress toward achieving a thriving natural ecological balance. Either alternative would positively impact to migratory bird habitat by creating a diverse vegetative structure through improvement and maintenance of healthy populations of native perennial plants.

##### **Alternative 3: No Action (No Gather/Removal)**

No direct impacts are expected under this alternative. Indirect impacts would be the increasing inability of rangelands to support healthy populations of native perennial plants necessary for healthy migratory bird populations. This impact would increase each year that no gather was implemented.

#### **4.1.5 Native American Religious Concerns**

##### **Impacts Common to Alternative 1 and 2**

No direct impacts to areas of Native American concern would occur because trap sites would be placed in previously used trap sites and other disturbed areas and/or in areas where there are no known Native American concerns. Indirect impacts to plants in riparian zones used by Native Americans for medicinal and other purposes would be reduced.

##### **Alternative 3: No Action (No Gather/Removal)**

There would be no direct impacts under this alternative. There would be indirect impacts to areas of Native American concern in riparian zones where concentrations of wild

horses and burros could impact plants utilized by Native Americans for medicinal and other purposes.

#### **4.1.6 Special Status Species**

##### **Impacts Common to Alternative 1 and 2**

Potential direct impacts include trampling of stream, riparian, wetland, and sagebrush habitat as horses and burros are gathered. The potential for this impact is low considering the infrequent number of water resources across the large project area. The potential to collapse rabbit or owl burrows from gathering horses and burros and/or equipment exists, but is also low due to the limited areas of concentrated gather activity across the large project area. Indirect impacts would be related to wild horse and burro population size and concentrations. Reduction of populations would positively impact utilization on riparian vegetation, trampling and shearing impacts to stream banks, and upland utilization levels (improving watershed health). Wild horse and burro reductions would impact sage-grouse habitat by reducing upland utilization, reducing degraded meadows, which are critical for sage-grouse brooding habitats, and reducing trampling impacts to sage-grouse cover/forage species. A direct improvement in sage-grouse brooding habitat, where sage-grouse avoid meadows and riparian areas with bare dirt, would result. Indirect positive impacts to potential pygmy rabbit and burrowing owl habitat would also occur due to fewer hoof impacts.

##### **Alternative 3: No Action (No Gather/Removal)**

No direct impacts are expected under this alternative. Indirect impacts would include increasing impacts to sage-grouse, pygmy rabbit, and burrowing owl habitats as wild horse and burro populations increase each year that a gather is postponed.

#### **4.1.7 Water Quality (Surface & Ground)**

##### **Impacts Common to Alternative 1 and 2**

No direct impacts to water quality are expected under these alternatives. Indirect beneficial impacts are likely, given the reduced numbers of wild horses and burros to within the range of AML. These benefits would be most likely realized during the summer season following the gather, since fewer animals would be congregating around water sources and, consequently, reduced animal waste inputs and grazing levels would be expected within and adjacent to these areas. The beneficial impacts would be greatest in the portions of the complex where livestock grazing is being rested.

##### **Alternative 3: No Action (No Gather/Removal)**

No direct impacts are expected under this alternative. Indirect consequences would include potentially increasing impacts to riparian habitats adjacent to undeveloped water sources, thus increasing impacts to surface water quality.

#### **4.1.8 Wetland/Riparian Zones**

Impacts would be similar to those described in section 4.1.7 Water Quality (Surface & Ground). Additionally, benefits to the riparian habitats as a result of implementation of Alternative 1 or 2 would likely promote progression toward attainment of the riparian functionality standard on undeveloped water sources. Alternative 3 would likely continue

or potentially worsen riparian conditions adjacent to natural spring sources and water bodies.

#### **4.1.9 Wilderness/Wilderness Study Area (WSA)**

The proposed action or alternatives should not directly impact wilderness values within the project area, with the exception of the sight and noise of the helicopter used to herd wild horses and burros to gather sites located outside of the WSAs. During the time frame of the proposed gather, solitude and primitive recreation may be negatively impacted for wilderness users who may be subjected to the sight and sound of the helicopter. This impact should be temporary and relatively short term in nature.

Indirect impacts would be related to population size. Reduction of the population from current levels should decrease competition for available forage and water sources, which potentially should lead to a reduction in utilization levels and a reduction in hoof action around unimproved springs, improvement in stream bank stability, and improved riparian habitat condition. Implementation of the Proposed Action should provide the opportunity for the greatest improvement of habitats and water quality, which should positively affect wilderness values. The opportunity for improvement decreases for each successive alternative. Implementation of Alternative 3 (No Gather/Removal) would allow potential impacts to habitats and water quality to increase each year and would negatively impact wilderness values.

A Minimum Requirement/Minimum Tool Analysis (Appendix E) was completed for the proposed gather as required by the Wilderness Act of 1964. The Minimum Requirement Analysis determines if the action is truly necessary for the administration of the area as wilderness, and if it is determined to be necessary, then a Minimum Tool Analysis is conducted to analyze which method of accomplishing the proposed action should be the least impacting to the wilderness values of naturalness, solitude, primitive/unconfined recreation, and any special features found in the wilderness area. The analysis recommended the Proposed Action as the preferred alternative. The Minimum Tool Analysis listed the following measures to mitigate impacts to Wilderness:

- All trap sites should be located outside of wilderness. No motorized vehicles should be used in wilderness. No landing of aircraft should occur except in the case of an emergency.
- Standard Operating Procedures outlined in Appendix A should be used.
- Gather activities should avoid weekends or holidays to minimize the likelihood of impacting wilderness visitors.
- A diary detailing all activities related to the gather should be completed daily.

## **4.2 Other Priority Resources**

### **4.2.1 Vegetation**

#### **Impacts Common to Alternative 1 and 2**

Direct impacts associated with these alternatives would consist of disturbance to vegetation and soils immediately in and around the temporary gather site(s) and holding

facilities. Impacts would be created by vehicle traffic, hoof action as a result of concentrating horses, and could be locally severe in the immediate vicinity of the gather sites and holding facilities. Generally, these sites would be small (less than one half acre) in size. Any impacts would remain site specific and isolated in nature. In addition, most gather sites and holding facilities would be selected to enable easy access by transportation vehicles and logistical support equipment. Normally, they are located near or on roads, pullouts, water haul sites, or other flat areas, which have been previously disturbed. These common practices would minimize the cumulative effects of these impacts.

Indirect impacts under these alternatives would be beneficial. Reduced concentrations of wild horses and burros would contribute to the recovery of the vegetative resources that are being impacted by the excessive number of animals. Forage utilization levels would be reduced which would result in improved forage availability, vegetation density, increased plant vigor, seed production, seedling establishment, and forage production over current conditions.

#### Alternative 3: No Action (No Gather/Removal)

This alternative would result in horse and burros populations continuing to exceed the maximum AML for the project area. Therefore, this alternative would allow for increased vegetative utilization levels potentially impacting the plant communities. This alternative would not be expected to allow maintenance of a thriving ecological balance associated with the needs of vegetation composition, structure and production and soil productivity and function.

#### **4.2.2 Wildlife**

##### Impacts Common to Alternative 1 and 2

Direct impacts associated with these alternatives would consist primarily of disturbance and displacement to wildlife by the low-flying helicopter. Typically, the natural survival instinct to this type of disturbance results in fleeing from the perceived danger. Mobile mammals, reptiles, and birds may be temporarily displaced by the construction and use of temporary gather sites and holding facilities. These impacts would be temporary, of short duration, and minimal. A slight possibility exists that non-mobile animals would be killed during gather operations.

Indirect impacts from these alternatives would be related to population size. A reduction in the number of wild horses from current levels would decrease competition for available cover, space, forage, and water. A reduction in forage utilization levels and hoof action around unimproved springs would improve stream bank stability and riparian habitat condition. Reduced utilization levels should allow for increased plant vigor, seed production, and seedling establishment, thereby supporting the ecological health of the habitat. Implementation of Alternative 1 would provide the opportunity for the greatest improvement of habitat and reduced competition for cover, space, forage, and water, which would positively affect wildlife. The opportunity for habitat improvement and reduced competition for cover, space, forage, and water decreases under Alternative 2.



### Alternative 3: No Action (No Gather/Removal)

No direct impacts would be expected under this alternative. Potential indirect adverse impacts to wildlife habitats would continue. Therefore it is considered likely that wildlife habitats and populations would suffer under the excessive grazing by wild horses and burros. Impacts would increase each year that a gather is postponed, which would negatively impact ecological condition, wildlife populations, livestock production, and other resource values.

### **4.2.3 Wild Horses and Burros**

#### Impacts Common to Alternative 1 and 2

Direct impacts to individual horses and whole populations, as a result of stresses associated with herding, capture, processing and transportation of animals from the gather sites to temporary holding facilities and to the adoption preparation facility, in addition to stresses as a result of fertility control treatment are well documented (refer to EA #NV-020-00-50). Impacts to the Blue Wing Complex herds, as a result of the Proposed Action, would be similar to those described in the referenced EA (and others). An excerpt of EA #NV-020-00-50 is included as Appendix D in this document for reference.

The indirect impacts of removing excess equines (459 horses and 270 burros) before range conditions further deteriorate include reducing the demand for water at available water sources, decreasing competition for available forage, and reducing negative impacts to riparian habitat. Decreased competition should result in improved herd health and body condition of individuals. Direct and indirect impacts specific to the Blue Wing Complex herds as a result of Alternatives 1 and 2 are discussed below.

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

Direct impacts of the Proposed Action would include capturing about 642 wild horses and 282 burros and removing 459 head of horses and 270 head of burros. Approximately 183 horses and 12 burros would be released back to the range following the gather. About 137 mares (75% of the release animals) would be treated with two-year immunocontraceptive (PZP) vaccine, which has shown to be 94% effective in year one, 82% in year two, and 68% in year three. Under this alternative, the average annual growth rate for the Blue Wing Complex would decline to about 8.0% (Appendix C).

Population modeling was completed for the Proposed Action for the Blue Wing Complex as a whole as described in Appendix C. Overall, implementation of the Proposed Action would prevent wild horse populations from increasing beyond the upper limit of the management range until 2008. However, some animals in the 6 to 15 age class may need to be removed to meet management objectives of low AML. Another removal in four years would maintain horse numbers within the population management range and provide another opportunity to conduct fertility control. One objective of the population modeling was to determine if the Proposed Action would “crash” the population, resulting in a genetically non-viable population and threatening the overall health of the herds. Modeling results do not indicate a crash is likely to occur. Genetic health impacts of a removal/treatment would be minimal. The Complex population would remain over

150 animals, a wide variety of phenotypes (size, color, type, markings) occur, and animals would continue to mix between the HMAs.

Some indirect impacts of removing 459 head of excess wild horses and 270 head of burros before range conditions further deteriorate would include reducing the demand for water at available water sources, decreasing competition for available forage, and reducing negative impacts to riparian habitat. Decreased competition coupled with reduced reproduction as a result of fertility control, should result in improved health and body condition of mares and foals, jennies and foals, and in maintaining healthy range conditions over the long-term. Additionally, reduced reproduction rates would be expected to extend the time interval between gathers thus reducing disturbance to individual animals and to social herds as well as reducing gather budget needs.

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

The direct impacts of this action would include capturing about 642 wild horses and 282 burros and removing 459 head of horses and 270 head of burros and releasing approximately 183 horses back to the range following the gather. Release mares would not be treated with fertility control. Under this alternative, an average annual growth rate of 15% would be expected to occur in the Blue Wing Complex HMAs until the next gather (Appendix C).

Population modeling was completed for Alternative 2 as described in Appendix C. Implementation of this alternative would need to include the removal of some horses in the 6 to 15 age class to reduce current populations to low AML. If all age classes are included in the removal criteria, the horse populations in year 2005 are similar to the Blue Wing Complex tables for alternative 2. Modeling results do not indicate a population crash is likely to occur in the Complex with this alternative. Genetic health impacts of a removal are not expected. The Complex population is over 150 animals, a wide variety of phenotypes (size, color, type, markings) occur, and animals are known to mix between herds.

#### Alternative 3: No Action (No Gather/Removal)

The direct impacts of not removing 459 excess wild horses and 270 excess burros would affect current and future herd population numbers. Populations would continue to grow annually by 20% or more within the Blue Wing Complex (Appendix C). The average median population displayed for Complex indicates wild horse populations would more than triple in ten years and not only severely stress resources, but result in poor equine body condition and health.

Indirect impacts may include high horse mortality rates, thin body conditions, and poor health as habitat resources are diminished by increasing horse populations. Older and younger age classes and lactating mares would be most affected by nutritional deficiencies and stress. Skewed sex ratios, undesirable age distributions, and social disruption may result as herd members compete for available resources. Nutritional deficiencies would negatively affect growing animals and may limit their potential growth. Parasites and disease would increase as population densities continue to

increase. Horses would move outside established HMAs in search of habitat as demands on resources within HMAs increase. Few resources would be available for wildlife and livestock.

#### **4.2.4 Livestock Grazing**

##### **Impacts Common to Alternative 1 and 2**

No direct impacts to livestock grazing are expected under these alternatives. The level of indirect impacts to livestock grazing would be commensurate with the proportion of wild horses and burros removed from the project area. Livestock grazing would benefit from improvements to vegetative resource conditions as described in section 4.2.1.

##### **Alternative 3: No Action (No Gather/Removal)**

This alternative would result in horse and burros populations continuing to exceed the maximum AML for the project area. Therefore, this alternative would result in adverse impacts to livestock commensurate upon the degree of impacts on vegetative resources as described in section 4.2.1.

## **5.0 CUMULATIVE IMPACTS**

The Council of Environmental Quality (CEQ) regulations defines cumulative impacts as: "...[T]he impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Please see page 5 for the map of the project area (cumulative impact assessment area) for this environmental assessment.

### **5.1 Past, Present, and Reasonable Foreseeable Future Actions**

Past and Present Actions occurring within the assessment area includes; livestock grazing, wild horse and burro management, recreation and mineral actions.

Reasonable foreseeable future actions (RFFA) located within the cumulative impact assessment area would include potential adjustments to livestock use based upon implementation of the Standards for Rangeland Health and Allotment Evaluations. It is anticipated that mineral actions would remain at past and present levels.

#### **Livestock Grazing**

Past and Present Actions: Sheep and cattle grazing has occurred within the assessment area since prior to the 1930's. During the 1960's stocking rates were reduced through adjudication of grazing privileges. Additional reductions occurred in the 1980's. Range improvements to facilitate livestock management, including fences, water developments and seedings have been installed.

Reasonably Foreseeable Future Actions (RFFA): It is anticipated that effective livestock management will allow achievement of the Standards for Rangeland Health.

### Mineral Actions

#### Past, Present and Reasonably Foreseeable Future Actions:

The assessment area has a long history of minerals development dating back to the 1860's. Abandoned mine lands sites within the assessment area total approximately 87. There are currently 837 existing mining claims within the assessment area. Exploration activity will probably remain low however increased development of geothermal resources is likely in the future.

### Recreation

**Past and Present Actions:** Past recreation use within the assessment area included dispersed recreation activities such as hunting, wildlife viewing, off highway vehicle use, motorcycle races, hiking and rock hounding. Present recreation includes similar dispersed activities as described for past use plus increasing levels of off highway vehicle travel.

**Reasonably Foreseeable Future Actions (RFFA):** Recreation use on public lands within the assessment area is increasing based on continued population growth within Nevada. Increasing uses vary from off highway vehicle (OHV) travel, hiking, hunting, rock hounding, climbing, camping, and wildlife watching.

### Wild Horses and Burros

**Past and Present Actions:** Since the passage of the 1971 Wild Free-Roaming Horse and Burro Act, equines have been gathered using at least two methods: Gate-cut and Selective Removal.

The gate-cut method reduced the herd populations by a predetermined number. When the required number of horses was in the trap, the gate was closed and all those inside were shipped to an adoption/holding facility. Specialists did not pick through the group to choose desirable animals with good confirmation or with historical herd characteristics to release back on the range. One result was fewer large animals left on the range, because the larger horses moved slower and therefore were easier to capture. The gate-cut method depleted many herds of their historic, unique qualities. One example is horses with draft blood in their veins are now rather rare, where they used to be common. This method also brought slower, older animals in, or mares with new foals. It severely disrupted the structure and characteristics of historic herds and brought many unadoptable horses into the traps that had to be put into wild horses sanctuaries.

Since older horses didn't adopt out well, under the Selective Removal policy it was decided to leave the older ones on the range. (Selective removal did not disturb burro herds; there has never been a problem adopting out burros of any age.) All horses older than five years of age were left on the range within HMAs; all horses under five were removed. Horses outside HMAs or in HAs were gathered up to age nine, with horses 10 and over being left on the range. This method resulted in a badly skewed sex ratio and age structure.

Currently, a modified selective removal policy is being implemented; specialists are able to leave some animals with desirable phenological traits, a more balanced sex ratio and age structure on the range, although mostly younger animals are still removed. The current selective removal will encourage healthier, more stable wild horse herds.

Reasonably Foreseeable Future Actions (RFFA): If the current removal policy is continued, herds may recover many of their historic characteristics and be healthier, less likely to be vulnerable to a population crash.

## **5.2 Cumulative Impact Analysis**

There are no known cumulative impacts to the resources within the cumulative assessment area. However, it is likely that natural resource conditions within the assessment area would improve through the implementation of the Standards for Rangeland Health, implementation of actions outlined in the future Resource management Plan for the Winnemucca Field Office, and periodic wild horse and burro gathers.

## **6.0 CONSULTATION AND COORDINATION**

Interested individuals, groups, and agencies have been notified by mail of the Proposed Action and the availability of this Preliminary EA. A copy of the Blue Wing Complex Gather Plan/Preliminary EA will be made available for public review for 30 days.

## **7.0 LIST OF PREPARERS**

Nadine Paine	Wildl. Biol. (Wild Horse & Burros Spec.) Author/Lead
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## 8.0 LIST OF ACRONYMS

AML	Appropriate Management Level
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
CEQ	Council of Environmental Quality
DR/FONSI	Decision Record/Finding of no significant impact
EA	Environmental Assessment
EO	Executive Order
FMUD	Final Multiple Use Decision
HA	Herd Area (area where horses are not managed)
HMA	Herd Management Area
IM	Instruction Memorandum
LUP	Land Use Plan
MFP	Management Framework Plan
NEPA	National Environmental Policy Act
OHV	Off Highway Vehicle
PL	Public Law
PMU	Population Management Unit
PZP	Porcine Zona Pellucida (contraceptive)
RAC	Resource Advisory Councils
RFFA	Reasonable Foreseeable Future Actions
ROD	Record of Decision
SOP	Standard Operating Procedures
WFO	Winnemucca Field Office
WSA	Wilderness Study Area

## **9.0 Appendix A Standard Gather Operating Procedures (SOPs)**

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

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

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

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

### **A. Capture Methods Used in the Performance of a Gather**

#### **1. Helicopter Drive Trapping**

This capture method involves utilizing a helicopter to herd wild horses and burros into a temporary trap. The following stipulations apply:

- 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 BLM. Under no circumstances shall animals be tied down for more than one hour.
- b. The Contractor shall assure that bands remain together, and that foals shall not be left behind.
- c. Domestic saddle horses may be used as a pilot (i.e. Judas) horse to lead the wild horses into the trap. Individual ground hazers may also be used to assist in the gather.

#### **2. Helicopter Assisted Roping**

This capture method involves utilizing a helicopter to herd wild horses or burros to ropers. The following stipulations apply:

- a. Under no circumstances shall animals be tied down for more than one hour.
- b. Roping shall be performed in such a manner that bands will remain together. Foals shall not be left behind.

#### **3. Bait Trapping**

This capture method involves utilizing bait (water or feed) to lure wild horses or burros into a temporary trap. The following stipulations apply:

- a. Finger gates shall not be constructed of materials that may be injurious to animals such as; "T" posts, sharpened willows, etc.

- b. All trigger and/or trip gate devices must be approved by the BLM prior to capture of animals.
- c. Traps shall be checked a minimum of once every 10 hours.

## **B. Trapping and Care**

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

1. All trap and holding facility locations must be approved by the BLM prior to construction. The Contractor may also be required to change or move trap locations as determined by the BLM. All traps and holding facilities not located on public land must have prior written approval of the land owner. Prior to setting up a trap or temporary holding facility, BLM will conduct all necessary clearances (archaeological, T&E, etc.).
2. Proposed trap sites and holding facility sites would be examined for the presence of noxious weeds prior to construction. If noxious weeds were found, the trap/holding facility location would be moved to an alternate location.
3. The rate of movement and distance the animals travel shall not exceed limitations set by the BLM, who will consider terrain, physical barriers, weather, condition of the animals, and other factors.
4. All traps, wings, and holding facilities shall be constructed, maintained and operated to handle animals in a safe and humane manner and be in accordance with the following:
  - a. Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and holding facilities shall be oval or round in design.
  - b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered with plywood (without holes) or like material.
  - c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for burros, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet for burros and 1 foot to 6 feet for horses. The location of the government furnished portable restraining chute used to restrain, age, or to provide additional care for animals shall be placed in the runway in a manner as instructed by or in concurrence with the BLM.
  - 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, snow fence etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses. Eight linear feet of this material shall be capable of being removed or let down to provide a viewing window.
  - e. All pens and runways used for the movement and handling of animals shall be connected with hinged self-locking gates.
5. No fence modifications will be made without authorization from the BLM. The Contractor shall be responsible for restoration of any fence modification, which he has made.
6. When dust conditions occur within or adjacent to the trap or holding facility, the Contractor shall be required to wet down the ground with water.
7. Alternate pens, within the holding facility, shall be furnished by the Contractor to separate mares or jennies with small foals, sick and/or injured animals, and strays 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 procedure. In these instances, a portable restraining chute will be provided by the government. Alternate pens shall be furnished by the Contractor to hold animals if the specific gathering requires the animals to be released back into the capture area(s). In areas requiring one or more trap sites, and when 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 BLM.
8. The Contractor shall provide animals held in the traps and/or holding facilities with a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day. Separate water troughs shall be provided at each pen where animals are being held. Water troughs shall be constructed of such material (e.g. rubber, galvanized metal with rolled edges, rubber over metal) so as to avoid injury to the animals.
  9. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than 2 pounds of hay per 100 pounds of estimated body weight per day. The contractor together with the on-site BLM representative would examine hay for noxious weed seeds or plant parts prior to initiating the gather. If noxious weed seeds or plant parts are found in the hay, the hay would be removed from the area.
  10. It is the responsibility of the Contractor to provide security to prevent loss, injury or death of captured animals until delivery to final destination.
  11. The Contractor shall restrain sick or injured animals if treatment is necessary. The BLM will determine if injured animals must be destroyed and provide for destruction of such animals. A veterinarian may be called to make a diagnosis and final determination for the disposition of sick or injured animals. The contractor may be required to dispose of the carcasses as directed by the BLM. Destruction shall be done by the most humane method available, in accordance with BLM policy outlined in Washington Office Instruction Memorandum No. 2001-165 which states;  
A BLM authorized officer may authorize the euthanasia of a wild horse or burro with any of the following conditions:
    - a. Displays a hopeless prognosis for life;
    - b. Suffers from a chronic or incurable disease or serious congenital defect;
    - c. Requires continuous treatment for the relief of pain and suffering; or
    - d. Is incapable of maintaining a Henneke body condition score greater than 2, in a normal rangeland environment.
  12. Animals shall be transported to final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the BLM 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 BLM. Animals shall not be held in traps and/or temporary holding facilities on days when there is no work being conducted except as specified by the BLM. 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 BLM. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours. Animals that are to be released back into the capture area may need to be

transported back to the original trap site. This determination will be at the discretion of the BLM.

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

### **C. 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 BLM 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 vehicle 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 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 at the minimum a 5 foot wide swinging gate. The use of double deck trailers is unacceptable and will 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 the trailer 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 BLM.
5. Floors of tractor-trailers, stock trailers, and the loading chute 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 BLM 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/adult horse (1.4 linear feet in an 8 foot wide trailer)
  - 8 square feet/adult burro (1.0 linear feet in an 8 foot wide trailer)
  - 6 square feet/horse foal (0.75 linear feet in an 8 foot wide trailer)
  - 4 square feet/burro foal (0.50 linear feet in an 8 foot wide trailer)
7. The BLM 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 BLM shall provide for any brand and/or inspection services required for the captured animals.
8. If the BLM determines that dust conditions are such that the animals could be endangered during transportation, the Contractor will be instructed to adjust speed.
9. The contractor together with the on-site BLM representative would examine vehicles for

noxious weed seeds or plant parts prior to initiating the gather. If noxious weed seeds or plant parts are found on vehicles, the vehicle would be cleaned.

#### **D. Safety and Communications**

1. The Contractor shall have the means to communicate with the BLM and all contractor personnel engaged in the capture of wild horses and burros utilizing a VHF/FM Transceiver or VHF/FM portable Two-Way radio. If communications are ineffective the government will take steps necessary to protect the welfare of the animals.
2. 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 BLM, 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 BLM.
3. All accidents occurring during the performance of any delivery order shall be immediately reported to the BLM.
4. The Contractor must operate in compliance with all applicable Federal, State, and Local laws and regulations.
5. Fueling operations shall not take place within 1,000 feet of animals.

#### **E. Public Participation**

Opportunities for public viewing (i.e. media, interested public) of gather operations will be made available to the extent possible, however the primary consideration will be to protect the health and welfare of the animals being gathered. The public must adhere to guidance from the on site BLM representative. It is BLM policy that the public will not be allowed to come into direct contact with wild horses and burros held in a BLM facility. Only BLM or contractor personnel may enter the trap site or temporary holding facility corrals. The general public may not directly handle the animals at any time or for any reason during gather operations.

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

The Contracting Officer's Representative, and Project Inspectors, from the Winnemucca Field Office, will have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. All employees involved in the gathering operation will keep the best interests of the animals at the forefront at all times.

The Assistant Field Manager for Renewable Resources and the Field Manager will take an active role to ensure that appropriate lines of communication are established between the field, Field Office, Nevada State Office, National Wild Horse and Burro Program Office, and the Palomino Valley Wild Horse and Burro Center. All publicity, formal public contact and inquiries will be handled through the Assistant Field Manager for Renewable Resources.

#### **G. Cultural Resources**

Personnel working at gather sites will be advised of illegality of collecting artifacts.

Prior to implementation of gather operations, trap sites and temporary holding facilities would be evaluated for cultural resources. Gather sites and temporary holding facilities would not be constructed on wetlands or riparian zones.

## 10.0 Appendix B Standard Fertility Control Treatment Operating Procedures (SOPs)

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

- PZP vaccine would be administered by trained BLM personnel.
- A liquid dose of PZP would be administered concurrently with a time-released portion of the drug (pelleted formulation) to breeding mares returned to the range (the pellets are injected with the liquid and are designed to release PZP at several points in time much the way time-release cold pills work).
- Delivery of the vaccine would be as an intramuscular injection by jab stick syringe or dart with a 12 gauge needle or 1.5” barbless needle, respectively while mares are restrained in the working chute; 0.5 cubic centimeters (cc) of the PZP vaccine would be emulsified with 0.5 cc of adjuvant (a compound that stimulates antibody production) and loaded into the delivery system. The pellets would be placed in the barrel of the syringe or dart needle and would be injected with the liquid. Upon impact, the liquid in the chamber would be propelled into the muscle along with the pellets.<sup>1</sup>
- All treated mares would be freeze-marked on the hip to enable researchers to positively identify the animals during the research project as part of the data collection phase.
- At a minimum, monitoring of reproductive rates using helicopter flyovers will be conducted in years two through four by locating treated mares and checking for presence/absence of foals. The flight scheduled for year four will also assist in determining the percentage of mares that have returned to fertility. In addition, field monitoring will be routinely conducted as part of other regular ground-based monitoring activities.
- A field data sheet will be forwarded to the field from BLM’s National Program Office (NPO) prior to treatment. This form will be used to record all pertinent data relating to identification of the mare (including a photograph when possible), date of treatment, type of treatment (one- or two-year vaccine, adjuvant used) and HMA, etc. The form and any photos will be maintained at the field office and a copy of the completed form will be sent to the authorized officer at NPO (Reno, Nevada).
- A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, disposition of any unused PZP, the number of treated mares by HMA, field office and state, along with the freeze-mark applied by HMA.
- The field office will assure that treated mares do not enter the adoption market for three years following treatment. In the rare instance, due to unforeseen circumstance, treated mare(s) are removed from an HMA before three years has lapsed, they will be maintained in either a BLM facility or a BLM-contracted long-term holding facility until expiration of the three-year holding period. In the event it is necessary to remove treated mares, their removal and disposition will be coordinated through NPO. After expiration of the three-year holding period, the animal may be placed in the adoption system.

<sup>1</sup> This delivery method has been used previously to deliver immunocontraceptive vaccine with acceptable results. Administration of this two-year vaccine to mares would be expected to be 94% effective the first year, 82% effective the second year, and 68% effective the third year. To date, one herd area has been studied using the two-year PZP vaccine. The Clan Alpine study in Nevada was started in January 2000, with the treatment of 96 mares. The test resulted in fertility

rates in treated mares of 6% in year one, 18% in year two and 32% in year three. Average fertility rates in untreated mares range between 50-60% in most populations. The Clan Alpine fertility rate in untreated mares, obtained from direct observation in September of each year, average 51% over the course of the study.

## 11.0 Appendix C Blue Wing Complex Population Modeling

### Results – Population Modeling, Blue Wing Complex

Version 1.40 of the WinEquus program, created April 2, 2002, was utilized to complete population modeling for the Blue Wing Complex HMAs to analyze effects of actions or no action on horse populations.

#### Objectives of Population Modeling

Review of the data output for each of the simulations provided useful comparisons of the possible outcomes for the different alternative. The developer, Stephen Jenkins, recommends thinking about the range of possible outcomes and not just focusing on one average or typical trial. Two 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?

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

Age-sex distribution data was compiled for the entire Complex rather than each HMA because reasonably reliable and accurate population data per HMA is not available. A census will be done prior to the proposed gather to supply more accurate population data per HMA. Age-sex data from the 2003 gather of the South Blue Wing Complex was extrapolated to include the whole complex. Modeled age-sex distributions were then used to represent the post-foaling 2005 age-sex structure for the complex as displayed in the table below.

**Initial Age-Sex Structure (2005) – Blue Wing Complex**

Age Class	Blue Wing Complex Wild Horses	
	Females	Males
Foals	87	65
1	64	71
2	65	47
3	46	27
4	24	23
5	18	14
6	17	12
7	13	9
8	3	4
9	1	2
10 – 14	4	13
15 – 19	14	33
20 +	63	68
<b>Total</b>	<b>419</b>	<b>388</b>

All simulations use the survival probabilities and foaling rates supplied with the WinEquus population model for the Garfield Flat HMA. Survival and foaling rate data were collected

between 1993 and 1999 by Dr. S. Jenkins and M. Ashley. They are utilized in the population model for each Alternative and are displayed in the following table:

**Survival Probabilities and Foaling Rates**

Age Class	Survival Probabilities		Foaling Rates
	Females	Males	
Foals	.919	.877	0
1	.996	.950	0
2	.994	.949	.52
3	.993	.947	.67
4	.990	.945	.67
5	.988	.942	.89
6	.985	.939	.76
7	.981	.936	.90
8	.976	.931	.88
8	.971	.926	.91
10 – 14	.947	.903	.81
15 – 19	.870	.830	.82
20 +	.591	.564	.75

The following table displays the selective removal criteria utilized in the population model for all the Alternatives.

**Removal Criteria – Based on WO IM 2005-206**

Age	Percentages for Removals	
	Females	Males
Foals	100	100
1	100	100
2	97	99
3	97	99
4	97	99
5	97	99
6	2	1
7	2	1
8	1	1
9	1	1
10 -14	1	1
15 – 19	1	1
20 +	1	1

**Population Modeling Criteria**

The following summarize the population criteria unique to the Proposed Action:

- 100% of the release mares were treated with fertility control.

The following summarizes the population modeling criteria common to the action alternatives:

- Starting Year: 2005
- Initial gather year: 2005
- Gather intervals: 4 year gather cycle
- Sex ratio at birth: 57% females and 43% males (based on foal sex ratio from 2003 gather)
- Percent of population to be gathered: 90%
- Minimum age for long-term holding facility horses: 10 years old
- Foals included in AML? Yes
- Simulations were run for 10 years with 100 trials each

The following summarizes the population modeling criteria for the No Action Alternative:

- Starting Year: 2005
- Sex ratio at birth: 57% females and 43% males
- Simulations were run for 10 years with 100 trials each

**Additional Population Parameters**

Parameter	Alternative 1 Proposed Action	Alternative 2	Alternative 3 No Action
AML Range	Yes	Yes	Yes
Mgmt by removal only	No	Yes	N/A
Mgmt by removal and fertility control	Yes	No	N/A
Gather when population exceeds “X” horses	High AML/HMA	High AML/HMA	N/A
Reduce population to “X” horses	Low AML/HMA	Low AML/HMA	N/A
Gather for fertility control regardless of pop.	No	N/A	N/A
Gather continues after removals to treat additional females	No	N/A	N/A
Effectiveness of Fertility control: year 1	94%	N/A	N/A
Effectiveness of Fertility control: year 2	82%	N/A	N/A
Effectiveness of Fertility control: year 3	68%	N/A	N/A

**Population Modeling Results**

All Blue Wing Complex HMAs were combined and run as one. A 10 year simulation was run for each alternative with wild horses. No population modeling was done for burros. The Proposed Action, Alternative 1, modeled the effects of removal and fertility control management actions on wild horse populations based on a four-year gather cycle; Alternative 2 modeled the effects of removal actions only on the horse population based on a four-year gather cycle; Alternative 3, the No Action Alternative, modeled wild horse populations with no management actions or gathers.

**Minimum (Median) Population Size for Each Alternative**

Whole Blue Wing Complex	Proposed Action, Alternative 1	Alternative 2	No Action, Alternative 3
	357	359	880

**Average (Median) Population Size for Each Alternative**

Whole Blue Wing Complex	Proposed Action, Alternative 1	Alternative 2	No Action, Alternative 3
	506	518	2640



**Maximum (Median) Population Size for Each Alternative**

Whole Blue Wing Complex	Proposed Action, Alternative 1	Alternative 2	No Action, Alternative 3
	881	880	5533

The tables above reflect the population numbers developed by the model for the median trial sizes for the minimum, average, and maximum population sizes for each alternative at the end of a ten year period. It indicates a population “crash” would not occur if any of the alternatives were implemented. The model indicated the lowest trial minimum population, using fertility control, would be 215 wild horses and the highest trial maximum population, using no management whatsoever, would be 8268 wild horses in the Blue Wing Complex. All other trials for all treatments fall between the 215 and 8268 range for wild horses.

Growth rate trials include 0.5%, 8.0%, and 12.7% for the lowest, median, and highest trials, respectively, for the Proposed Action; 9.2%, 15.0%, and 20.5% respectively for Alternative 2; and 14.5%, 21.0%, and 23.9% respectively for Alternative 3, the No Action Alternative.

**Population Modeling Summary**

To summarize the population modeling results for the Blue Wing Complex proposed gather, the original questions and be addressed and answered.

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

The model indicates that none of the alternatives would result in a population crash. Minimum population numbers and growth rates for all alternatives indicate that a genetically viable population of over 150 horses would be maintained in the Blue Wing Complex HMAs.

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

Fertility control, as indicated in the Proposed Action, is administered with the intention of slowing population growth. The model indicates that fertility control implementation reflects the lowest overall growth rate (see above growth rate percentages). If enough horses are gathered and enough mares are treated with PZP, eventually, the time between gathers may lengthen.

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

The effect on the average population size as a result of implementing any of the alternatives can be seen in the tables above.

## **12.0 Appendix D Reference Material: EA# NV-020-00-50 Excerpts**

### **Environmental Consequences (Proposed Action & Alternatives)**

(Page 15 and 16 of EA# NV-020-00-50).

#### **Wild Horses**

Impacts to wild horses under the proposed action or alternatives may occur to either individual animals or the population as a whole. These impacts include handling stress associated with the herding, capture, processing, and transportation of animals from temporary trap sites to temporary holding facilities, and from the temporary holding facilities to an adoption preparation facility. Following administration of the immunocontraceptive fertility control vaccines, 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 vary by individual, and are indicated by behaviors ranging from nervous agitation to physical distress. Mortality of wild horses captured during a gather does occur, however it is infrequent and typically is no more than one half to one percent of the animals captured.

Impacts which can 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 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.

Population wide impacts can occur during or immediately following implementation of the proposed action or alternatives. They include the 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, reestablishment 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.

The effect of removing wild horses from the population would not be expected to have a significant 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 includes modification of age or sex ratios to favor a particular class of animal.

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. This flexible procedure...would allow for correction of any existing discrepancies in herd demographics which could predispose a population to increased chances for catastrophic impacts. The proposed action would also establish a standard for selection which 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 are 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's are achieved, and potential genetic issues regarding the control of contributions of mares to the gene pool, especially in small populations. Again, with implementation of the proposed action, these impacts would be expected to be mitigated by an overall lessening of the need to impose fertility control treatments on a high proportion of the mare population, and all mares would be expected to successfully recruit some percentage of their offspring into the population.

### 13.0 Appendix E Minimum Requirement/Tool Worksheets

#### Step 1- Determining the Minimum Requirement (a two-part process)

Part A. Minimum Requirement Key to making determinations on wilderness management proposals  
 (This flow chart will help you assess whether the project is the minimum required action for the administration of the area as wilderness. Answering these questions will determine *if* this proposed action really is the *minimum required* action in wilderness.)

<u>Guiding Questions</u>	<u>Answers and explanations</u>
<p><b>1. <u>Is this an emergency?</u></b> (i.e. a situation that involves an inescapable urgency and temporary need for speed beyond that available by primitive means, such as fire suppression, health and safety of people, law enforcement efforts involving serious crime or fugitive pursuit, retrieval of the deceased or an immediate aircraft accident investigation)</p> <p><b>If Yes&gt;</b> Document the rationale for line officer approval using the minimum tool form and proceed with action.</p> <p><b>If No&gt;</b> Go to question 2</p>	<p><b>No.</b> The proposed action is not considered an emergency.</p>
<p><b>2. <u>Does the project or activity conflict with the stated management goals, objectives and desired future conditions of applicable legislation, policy and management plans?</u></b></p> <p><b>If Yes&gt;</b> Do not proceed with the proposed project or activity.</p> <p><b>If No&gt;</b> Go to question 3</p>	<p><b>No.</b> Currently no approved wilderness management plan exists for the involved Wilderness Study Areas. Management is based on law, regulation, and policy. BLM wilderness policy provides for the use of motorized and mechanized equipment, including aircraft use to remove wild horses and burros when it is considered the minimum tool that can accomplish the task with the least lasting impact to wilderness values.</p>
<p><b>3. <u>Is there any less intrusive actions that should be tried first?</u></b>( i.e. signing, visitor education, or information)</p> <p><b>If yes&gt;</b> Implement other actions using the appropriate process.</p> <p><b>If No&gt;</b> Go to question 4</p>	<p><b>No.</b> The only way to reduce the population of wild horses and burros in the Wilderness Study Areas to the Appropriate Management Level (AML) is to physically remove the horses and burros from the area.</p>
<p><b>4. <u>Can this project or activity be accomplished outside of wilderness and still achieve its objectives?</u></b>(such as some group events)</p> <p><b>If Yes&gt;</b> Proceed with action outside of wilderness using the appropriate process.</p> <p><b>If No&gt;</b> Go to question 5</p>	<p><b>No.</b> Conducting the horse and burro gather outside of Wilderness Study Area could possibly allow BLM to reach AML in the overall Herd Management Areas, but it would not reduce the impacts that the horses and burros are having on the Wilderness Study Areas. The temporary corrals/traps however will be located outside of the Wilderness Study Areas boundaries.</p>
<p><b>5. <u>Is this project or activity subject to valid existing rights?</u></b> (such as mining claims or right of way</p>	<p><b>No.</b> Valid existing rights are not associated with the proposed action.</p>

<p>easements)</p> <p><b>If Yes&gt;</b> Proceed to Minimum Tool Analysis</p> <p><b>If No&gt;</b> Go to question 6</p>	
<p><b>6. <u>Are their special provisions in legislation (the Wilderness Act of 1964) that allow this project or activity?</u></b></p> <p><b>If Yes&gt;</b> the proposed project or activity should be considered but is not necessarily <u>required</u> just because it is mentioned in legislation. <b>Go to part B</b></p> <p><b>If No&gt;</b> <b>Go to Part B</b></p>	<p><b>No.</b> There are no special provisions dealing with wild horses or burros in the legislation.</p>

Part B- Determining the Minimum Requirement

Responsive Questions for Minimum Requirement Analysis: Explain your answer in the response column. If your responses indicate potential adverse affects to wilderness character, evaluate whether or not you should proceed with the proposal. If you decide to proceed, begin developing plans to mitigate impacts, and complete a Minimum Tool Analysis. Some of the following questions may not apply to every project.

**Effects on Wilderness Character**

**Responses**

<p><b>1. How does this project/activity benefit the wilderness as a whole as opposed to one resource?</b></p>	<p>The objective of the proposed action is to remove all wild horses and burros from the Selenite Range HA, which includes two Wilderness Study Areas. Wild horses and burros can have a negative impact to the naturalness of the Wilderness Study Areas, by competing with the areas native populations of wildlife, overgrazing riparian areas, and trampling springs. The proposed action would maintain and enhance the naturalness of the Wilderness Study Areas by removing the horses and burros and the impacts they cause to the overall naturalness of the areas.</p>
<p><b>2. If this project/activity were not completed, what would be the beneficial and detrimental effects to the wilderness resources?</b></p>	<p>If the proposed action were not conducted the horses and burros would continue to compete with native wildlife and impact the vegetative resources of the Wilderness Study Areas. The impacts to solitude and primitive recreation that would be associated with the gather operations would not occur if the proposed action was not completed.</p>
<p><b>3. How would the project or activity help ensure that the wilderness provides outstanding opportunities for solitude or a primitive and unconfined type of recreation? (e.g. does the project/activity contribute to the people’s sense that they are in a remote place with opportunities for self discovery, adventure, quietness, connection with nature, freedom, etc.)</b></p>	<p>The project would not enhance the opportunities for solitude or for primitive and unconfined recreation. During the time frame that the crews would be conducting the gather the opportunities for solitude and primitive recreation would be reduced, but the impact would be temporary and relatively short in duration. The impacts to these opportunities will also be mitigated by conducting the gather operations during a time of the year when the Wilderness Study Areas receive very little visitation.</p>

<p><b>4. How would the project/activity help ensure that human presence is kept to a minimum and that the area is affected primarily by the forces of nature rather than being manipulated by humans?</b></p>	<p>Wild horses and burros are human introductions into the Wilderness Study Areas and can impact the naturalness of the areas. Removing them would maintain and enhance the naturalness of the areas and allow the area to be affected primarily by the forces of nature.</p>
<p><b>Management Situation</b>  <b>5. What does your management plan, policy, and legislation say to support proceeding with this project?</b></p>	<p>The Selenite Range was designated in the Winnemucca Field Offices Land Use Plan, signed July 9, 1982, as a Herd Area where wild horses and burros would neither be maintained nor managed. BLM wilderness policy provides for the use of motorized and mechanized equipment, including aircraft use to remove wild horses and burros when it is considered the minimum tool that can accomplish the task with the least lasting impact to wilderness values.</p>
<p><b>6. How did you consider wilderness values over convenience, comfort, political, economic or commercial values while evaluating this project/activity?</b></p>	<p>The purpose of the proposed action is to enhance the naturalness of the Wilderness Study Areas by removing horses and burros, and alleviating the impacts that they are having on the naturalness of the areas.</p>
<p><b>7. Should We Proceed?</b></p>	<p><b>Yes</b>                  Go to step 2                  (Minimum Tool Analysis)</p>

**Step 2 - Determining the Minimum Tool (the Minimum Tool Analysis)**

These questions will assist you in determining the appropriate tool(s) to accomplish the project or proposed activity with the least impact to the wilderness resource.

Develop several alternate approaches to implementing the project or activity. At a minimum consider the following three alternatives.

<p>Alt#1 An alternative using motorized equipment or mechanized transport</p>	<p>Alt#2 An alternative using non-motorized equipment or non-mechanized transport</p>	<p>Alt#3 Variations of methods 1 and 2, as appropriate</p>
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Describe the alternatives. Be specific and provide detail.

- What is proposed?
- Why is it being proposed in this manner?
- Who is the proponent?
- When will the project take place?
- Where will the project take place?
- How will it be accomplished? (What methods and techniques)

<p>Alt#1                  To remove wild horses and burros from Selenite Range HA. The horses and burros would be gathered using helicopters to herd the horses and burros to traps outside of the Wilderness</p>	<p>Alt#2                  Same as 1, but horses would only be herded by wranglers on horseback to traps located outside the Wilderness Study Areas.</p>	<p>Alt#3                  Same as 1, but the horses and burros would be gathered by setting up bait/water traps. To successfully remove horses and burros from the Wilderness Study Areas the traps would need to be</p>
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<p>Study Areas. Helicopter assisted roping methods could also be used if required.</p> <p>Gathering horses and burros using these methods would require low level helicopter flights over the involved Wilderness Study Areas. Helicopters would only land in the Wilderness Study Areas in emergency situations.</p> <p>The action is being proposed in this manner because it is the most efficient way to gather horses and burros from the type of terrain found in the Wilderness Study Areas.</p> <p>The proponent is the Winnemucca Field Office, BLM.</p> <p>The project would take place during November of 2005.</p> <p>The project would be conducted in the Selenite Range HA, which includes the Selenite Mountains and the Mt. Limbo Wilderness Study Areas.</p> <p>The horses and burros would be gathered by herding them with a helicopter to temporary corrals located outside of Wilderness Study Areas.</p>		<p>set up inside the Wilderness Study Areas. Traps would be transported to the sites by helicopter or by motorized vehicle using existing ways in the areas.</p> <p>Once the horses and burros were trapped they would need to be transported out of the Wilderness Study Areas by truck. Motorized vehicle use would only be authorized on existing ways.</p>
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Utilize the following criteria to assess each alternative (a brief statement should suffice)

Biophysical effects

- Describe the environmental resource issues that would be affected by the proposed action.
- Describe any effects this action will have on protecting natural conditions within the regional landscape, (i.e. non-native insects and disease, or noxious weed control)
- Include both biological and physical effects.

<p>Alt#1 The proposed action would have minimal impacts on the biophysical characteristics of the Wilderness Study Areas. There may be some trampling of vegetation and soil, as well as dust temporarily raised by the herding of the horses, but these impacts would be similar to</p>	<p>Alt#2 Same as 1</p>	<p>Alt#3 The trap sites would see an increase in soil and vegetation trampling due to the increase in horse numbers in the vicinity of the traps. The likelihood of transferring noxious weeds into the wilderness areas would increase by allowing the motorized vehicles to drive in and transport the horses out of the</p>
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those associated with the normal movement of large ungulates.		wilderness.
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Social/recreation/experiential effects

- Describe how the wilderness experience may be affected by the proposed action
- Include effects to recreation use and wilderness character
- Consider the possible effect the proposal may have on the public and their opportunity for discovery, surprise and self-discovery.

<p>Alt#1 Solitude would be impacted for the duration of the actual gather. The sites and sounds associated with a low flying helicopter would be heard and seen for long distances in the Wilderness Study Areas and would have an impact on the wilderness experience of visitors. This impact would be temporary and relatively short in duration, and would be mitigated because the gather will occur during a low visitor use season.</p>	<p>Alt#2 Solitude would be impacted for the duration of the actual gather. This alternative would have the least impact on solitude and the wilderness experience. The use of wranglers on horseback to herd the horses to traps would be less intrusive and would only impact the immediate area.</p>	<p>Alt#3 Solitude would be impacted for the duration of the actual gather. The site of the traps set up in the Wilderness Study Areas would impact the wilderness experience of visitors. The use of helicopters or motorized vehicles to transport the traps, horses, and burros would impact the solitude of the area. This alternative would take the longest time to accomplish the task and would therefore impact the solitude of the areas for the longest time. Using motorized vehicles on the existing routes would probably increase the amount of motorized trespass along them.</p>
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Societal/political effects

- Describe any political considerations, such as MOUs, agency agreements, local positions that may be affected by the proposed action.
- Describe relationship of method to applicable laws

<p>Alt#1 BLM made a commitment through a Stipulated Agreement approved in 1999 between the BLM and C-Punch (permittee in the Selenite Range) to remove wild horses and burros from the Selenite Range HA upon completion of the Selenite Fence. The fence was completed earlier this year.</p> <p>BLM wilderness policy provides for the use of motorized and mechanized equipment, including aircraft use to remove wild horses and burros when no other alternatives exist.</p>	<p>Alt#2 Same as 1</p>	<p>Alt#3 Same as 1</p>
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Health and safety concerns

*-Describe and consider any health and safety concerns associated with the proposed action. Consider the types of tools used, training, certifications and other administrative needs to ensure a safe work environment for employees. Also consider the effect the proposal may have on the health and safety of the public.*

<p>Alt#1 Using low flying helicopters to herd horses and burros can pose some safety concerns. Only experienced contractors with a good safety record would be allowed to conduct the work. The general public would not be put at risk by the project.</p>	<p>Alt#2 Under this alternative all herding would be done by wranglers on horseback. This type of herding also has safety concerns such as; being thrown from a horse, horses falling over on riders, etc. The risk associated with this work would be increased because of the remoteness of the areas where the horses and burros would be herded. The general public would not be put at risk by the project.</p>	<p>Alt#3 Under this alternative risks would involve those normally associated with driving motorized vehicles on rough terrain, and sling loading materials by helicopter. The general public would not be put at risk by the project.</p>
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Economic and timing considerations

*-Describe the costs and timing associated with implementing each alternative*

*-Assess the urgency and potential cumulative effect from this proposal and similar actions*

<p>Alt#1 This alternative would greatly decrease the amount of time that would be required for the project because the horses and burros could be located quickly, and immediately herded to the corrals. In order to prevent the equines from going through another winter and the dangers associated with that, the gather must be completed before heavy snow sets in.</p>	<p>Alt#2 This alternative would take a much longer time to accomplish the goal of equine removal. The animals would need to be located and then herded by the wranglers, which would take a considerable amount of time. Dangers to the equines, associated with winter, would be alleviated.</p>	<p>Alt#3 This alternative would take much longer to achieve total removal than alternative 1 or 2. Because the traps would only hold a small number of horses or burros, it would potentially take months to remove all the wild equines from the HA. Animals would enter winter in the HA and, depending on the intensity of the season, might suffer numerous ill effects including death.</p>
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Formulate a preferred alternative from the above alternatives and describe in detail below.

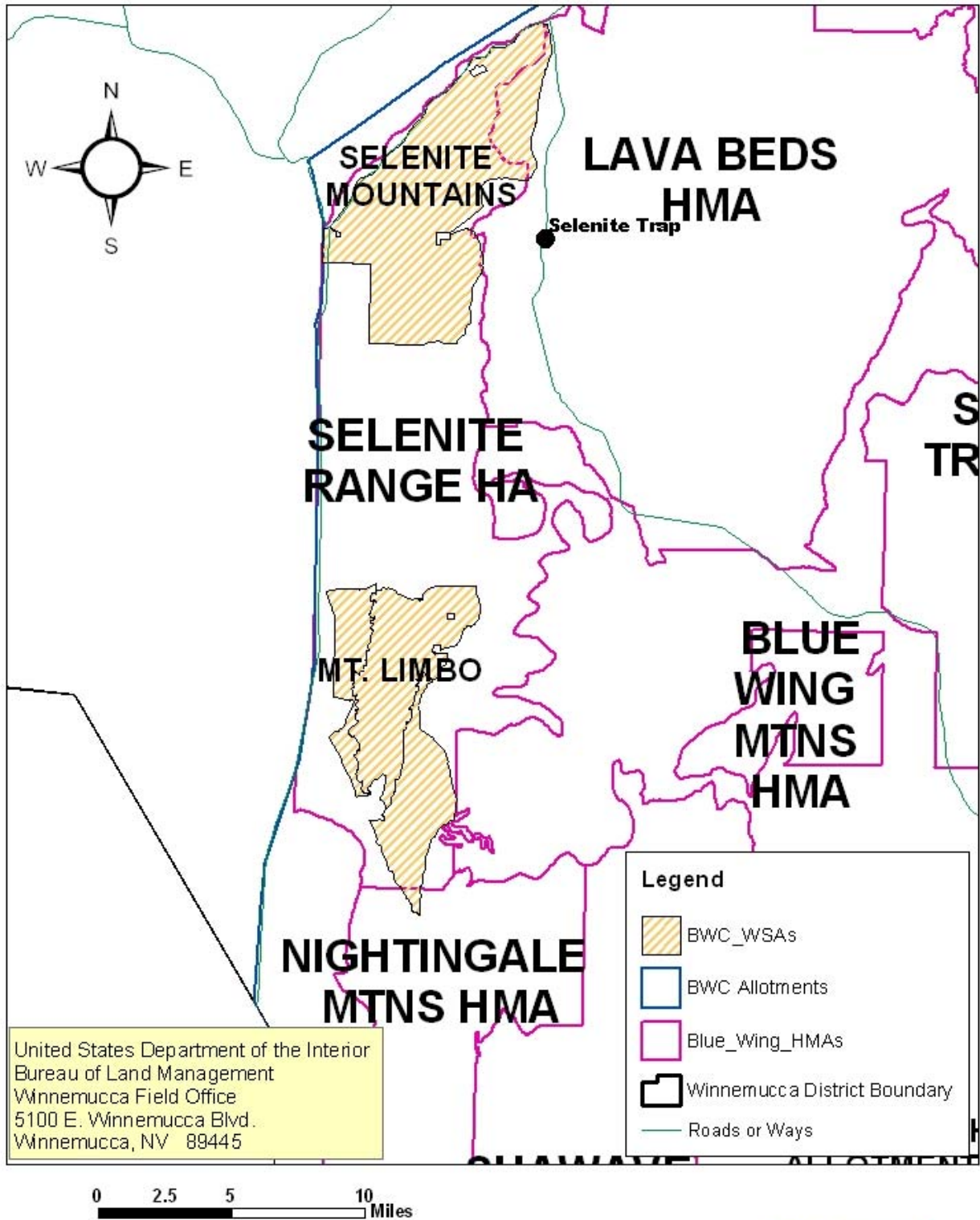
The preferred alternative is Alternative 1, the Proposed Action. This alternative would allow BLM to effect a total removal of equines from the HA, while minimizing the impacts to solitude and primitive recreation and decreasing the amount of time that would be required for the gather. Helicopters would be used to herd the horses and burros to trap sites located outside of wilderness. No landing of aircraft would occur in the Wilderness Study Areas other than for emergency purposes, and no motorized vehicles would be used in the Wilderness Study Areas.

Further refine the alternative to minimize impacts to wilderness

<p><i>-What will be the specific operating requirements?</i></p>	<p>All trap sites would be located outside of the Wilderness Study Areas. No motorized vehicles would be used inside the Wilderness Study Areas. No landing of aircraft would occur except in the case of an emergency.</p>
<p><i>-What are the maintenance requirements?</i></p>	<p>Census flights would occur after the gathers to determine if a total removal was successful.</p>
<p><i>-What standards and designs will apply?</i></p>	<p>Standard operating procedures found in the EA would be used.</p>
<p><i>-Develop and describe any mitigation measures that apply?</i></p>	<p>Gather activities would avoid weekends or holidays to minimize the likelihood of impacting wilderness visitors.</p>
<p><i>-What provisions have been made for monitoring and feed back to strengthen future efforts and/or prevent the need for recurring future actions?</i></p>	<p>A monitoring plan was prepared with the EA that describes the methods that will be used.</p>

The following map shows the location of the Capture Trap (Selenite Trap Site) in relation to the Selenite Range HA. As can be seen, the trap is located outside of the WSAs, it is even outside the HA boundary.

Map 4. Trap Sites and the affected WSAs



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.



## 14.0 Appendix F Nevada State Noxious Weed List

### DEFINITIONS

Category "A": Weeds not found or limited in distribution throughout the state; actively excluded from the state and actively eradicated wherever found; actively eradicated from nursery stock dealer premises; control required by the state in all infestations

Category "B": Weeds established in scattered populations in some counties of the state; actively excluded where possible, actively eradicated from nursery stock dealer premises; control required by the state in areas where populations are not well established or previously unknown to occur

Category "C": Weeds currently established and generally widespread in many counties of the state; actively eradicated from nursery stock dealer premises; abatement at the discretion of the state quarantine officer

Common Name	Scientific Name	Weed Symbol
<b>Category A Weeds:</b>		
<u>African Rue</u>	Peganum harmala	AR
Austrian fieldcress	Rorippa austriaca	AF
<u>Austrian peaweed</u>	Sphaerophysa salsula / Swainsona salsula	AP
Camelthorn	Alhagi camelorum	CT
Common crupina	Crupina vulgaris	CC
Dalmation Toadflax	Linaria dalmatica	DTF
Dyer's woad	Isatis tinctoria	DW
Eurasian water-milfoil	Myriophyllum spicatum	EWM
Giant Salvinia	Salvinia molesta	
Goats rue	Galega officinalis	GR
Houndstongue	Cynoglossum officinale	HT
Hydrilla	Hydrilla verticillata	HYD
Iberian Star thistle	Centaurea iberica	IST
Klamath weed	Hypericum perforatum	KW
Leafy spurge	Euphorbia esula	LS
Malta Star thistle	Centaurea melitensis	
Mayweed chamomile	Anthemis cotula	MC
Mediterranean sage	Salvia aethiopis	MS
Purple loosestrife	Lythrum salicaria, L.virgatum and their cultivars	PL
Purple Star thistle	Centaurea calcitrapa	PST
Rush skeletonweed	Chondrilla juncea	RS
Sow Thistle	Sonchus arvensis	SWT

Blue Wing Complex Gather Plan

Spotted Knapweed	<i>Centaurea masculosa</i>	SPK
Squarrose star thistle	<i>Centaurea virgata</i> Lam. Var. <i>squarrose</i>	SQK
Sulfur cinquefoil	<i>Potentilla recta</i>	SC
Syrian Bean Caper	<i>Zygophyllum fabago</i>	
<u>Yellow Starthistle</u>	<i>Centaurea solstitialis</i>	YST
Yellow Toadflax	<i>Linaria vulgaris</i>	YTF
<b>Category B Weeds:</b>		
Carolina Horse-nettle	<i>Solanum carolinense</i>	CHN
Diffuse Knapweed	<i>Centaurea diffusa</i>	DFK
Medusahead	<i>Taeniatherum caput-medusae</i>	MH
Musk Thistle	<i>Carduus nutans</i>	MKT
Russian Knapweed	<i>Acroptilon repens</i>	RSK
Scotch Thistle	<i>Onopordum acanthium</i>	SCT
White Horse-nettle	<i>Solanum elaeagnifolium</i>	WHN
<b>Category C Weeds:</b>		
<u>Black henbane</u>	<i>Hyoscyamus niger</i>	BH
Canada Thistle	<i>Cirsium arvense</i>	CAT
Green Fountain grass	<i>Pennisetum setaceum</i>	
Hoary cress	<i>Cardaria draba</i>	HC
Johnson grass	<i>Sorghum halepense</i>	
Perennial pepperweed	<i>Lepidium latifolium</i>	
Poison Hemlock	<i>Conium maculatum</i>	PNH
Puncture vine	<i>Tribulus terrestris</i>	PV
Salt cedar (tamarisk)	<i>Tamarix</i> spp	TA
Water Hemlock	<i>Cicuta maculata</i>	WRH
[Dep't of Agriculture, No. 55.11, eff.5-25-62; A 5-1-68]--(NAC A by St. Quarantine Officer, 8-9-94; R191-99, 8-7-2000; R097-01m 5-1-2002; R003-03, 9-24-2003)		



United States  
Department  
of the Interior

Bureau of  
Land  
Management

**FINAL**  
September 2005

# ENVIRONMENTAL ASSESSMENT

for the  
**McGee Mountain Wild Burro Capture Plan**  
EA Number NV-020-05-23

**Winnemucca Field Office, Nevada BLM**  
**Humboldt County, Nevada**



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## **1.0 INTRODUCTION**

### **1.1 Background Information**

The Bureau of Land Management (BLM) Winnemucca Field Office (WFO) is proposing to capture about 90 wild burros (90% of current population estimates) and remove about 75 excess wild burros from the McGee Mountain HMA. The proposal also includes capturing and removing approximately 40 wild burros from outside the McGee Mountain HMA in the adjoining Alder and Knott Creek Allotments. Burros in this area are outside of the HMA which is not managed for wild burros.

The gather is proposed to start in December 2005 and is anticipated to last no more than one week. Past capture, census, and distribution data indicate some inter-movement of burros between the McGee Mountain HMA and the Sheldon Wildlife Refuge.

The McGee Mountain HMA is located 120 miles northwest of Winnemucca, within Humboldt County, Nevada. The HMA is approximately 41,572 acres in size. Refer to Map 1 (McGee Mountain Map) for additional location information.

Appropriate Management Level (AML) is defined as the number of wild burros that can be sustained within a designated HMA which achieves and maintains a thriving natural ecological balance keeping with the multiple-use management concept for the area. AML for the McGee Mountain HMA is 41 burros and was established through an allotment evaluation and Final Multiple Use Decision (FMUDs) for the Alder Creek Allotment dated January 27, 1994.

Excess wild burros were last gathered from the McGee Mountain HMA in 1999 (21 head) and also in 1997 (57 head).

The McGee Mountain HMA was aerially censused in September 2002, which resulted in a population estimate of 67 burros. Typically, aerial census techniques for burros are not as accurate as those for wild horses, due to the cryptic coloration and behavior of burros. Ground observations generally yield the best estimates of burro numbers within a given area. Observations within the HMA during 2004 and 2005 have consistently resulted in burro counts between 90-100 head. Therefore, the current estimated wild burro population is 100 head or 59 head higher than the AML.

In addition to the population estimates, analysis of 2004 and 2005 field monitoring data (burro observations and vegetative) demonstrate an excess of wild burros in the McGee Mountain HMA. The multiple-use decision identifies a 50% allowable annual upland utilization for wild burros, livestock and wildlife in key areas within the Alder Creek allotment at the end of the livestock grazing period.

Measurements of upland utilization on key forage species range from light to heavy (20-78%) with combined livestock/burro use. Wildlife utilization of grasses is minimal, but more significant on browse and forb species due to foraging preferences.



Available waters are scarce which results in forage depletion within the vicinity of water sources within this HMA. Trailing and soil impacts are evidenced by the development of extensive trails between forage and water sites.

There are concerns about limited water availability for wild burros, livestock, and wildlife due to continuing drought; the heavy use and trampling of forage near available water sources; and, competition between wild burros, livestock, and wildlife for the limited forage and water within the HMA.

Upland utilization levels by wild burros have been recorded as high as 78% when livestock are not present. Actual use in the McGee Mountain HMA by wild burros has exceeded allowable levels by 28% (in excess of livestock utilization levels). Over-utilization and trampling in key areas is currently impacting plant productivity and health. Desirable grass species are particularly vulnerable due to long-term drought-related stress and reduced vegetative production. Wild burros, due to their free-roaming nature and preferred foraging areas, may graze individual plants numerous times during a growing season, reducing plant vigor, seed production, and potential for re-growth. Burros can remove more material per plant than other ungulates, due to having both upper and lower incisors. These data, together with surpassing of the established AML for the HMA, indicate that the current AML of wild burros is appropriate and that a current excess of wild burros exists.

## **1.2 Need for the Proposal**

Wild burro population estimates and analysis of vegetative data and burro observation monitoring data from the 2004 and 2005 field seasons demonstrate an excess of wild burros in the McGee Mountain HMA. Current population estimates are 100 head. The low range of AML is 25 head and the high range is 41 head. Current populations are more than double the high AML and four times the low AML. Prolonged drought, light to heavy (severe near limited water sources) utilization, reduced forage production (cheat grass conversion and weed infestations) could cumulatively result in extensive winter mortality of wild burros and wildlife within the HMA.

The Proposed Action is needed to remove about 75 wild burros in December 2005 to restore wild burro herd numbers to levels consistent with AML. Lower burro densities would allow vegetative resources and other natural resources time to rest and recover from forage utilization, water usage, and hoof impacts.

Over-utilization and resource damage is occurring and is likely to continue to occur without immediate action. Livestock use has remained relatively constant and is in compliance with permitted grazing systems, which have provided periodic rest and deferment of key range sites from livestock grazing. The proposed capture and removal is needed at this time in order to achieve a thriving natural ecological balance between wild burro populations, wildlife, livestock and vegetation, and to protect the range from the deterioration associated with overpopulation of wild burros as 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.

### **1.3 Conformance with Existing Land Use Plans (LUPs)**

The Paradise Denio Management Framework Plan issued on July 9, 1982 and guides public land management activities within the McGee Mountain HMA. Applicable decisions and goals are: to reserve AUMs within the McGee Mountain HMA for wild burros and to conduct gathers that will maintain herd numbers within the AML range. The McGee Mountain HMA was designated as being suitable for long-term sustained wild burro use within this plan. The Proposed Action has been determined to be in conformance with this plan as required by regulation (43 CFR 1610.5-3(a)).

### **1.4 Conformance with Rangeland Health Standards**

The affected allotments have not been assessed for conformance with the Rangeland Health Standards and Guidelines.

### **1.5 Relationship to Statutes, Regulations, or Other Plans**

The Proposed Action is in conformance with the Wild Free-Roaming Horse and Burro Act of 1971 (PL 92-195 as amended) and with all applicable regulations at 43 CFR (Code of Federal Regulations) 4700 and policies.

The carrying capacity for livestock, wildlife and wild burros; multiple-use management objectives; and, the Terms and Conditions for livestock grazing within the Alder Creek Allotment was established in conformance with the Land Use Plan and BLM policy, and the Sierra Front-Northwest Great Basin Resource Advisory Council Area Standards and Guidelines (RAC).

Environmental analyses (EA) have been conducted during past years which analyzed the impacts of various gather methods on wild burros and their effects on the human environment. The following documents are available for public review at the Winnemucca Field Office:

- 1) Winnemucca District Wild Horse/Burro Removal Programmatic Environmental Assessment, EA No. NV-020-7-24, August 1987.

### **1.6 Issue Identification**

The following concerns were identified as a result of internal and external scoping regarding the proposed removal of wild burros from the McGee Mountain HMA.

- ❖ Wild burro utilization is exceeding allowable levels by 28%
- ❖ Five years of consecutive drought have decreased plant health, vigor, and forage production;
- ❖ Wild burro densities contribute to burros moving outside the HMA along highway corridors, posing a safety risk to highway travelers and to wild burros
- ❖ Over-utilization contributes to the loss of and/or the reduced health, density, and vigor of native bunch grasses and browse species, encouraging weed infestation and conversion of desirable plant communities to undesirable plant communities;

- ❖ Heavy trailing impacts due to animals traveling between forage and limited water sites have contributed to reduced vegetative cover, loosening of topsoil, increased erosion, and hummocking (reduced functionality) of riparian areas;
- ❖ Wild burro populations are not in balance with established AMLs or with the land's current ability to sustain and provide habitat for them and for other multiple-uses of the land to achieve a "thriving natural ecological balance."

## **2.0 ALTERNATIVES**

This chapter describes the Proposed Action and alternatives, including any that were considered but eliminated from detailed analysis. Alternatives analyzed in detail include the following:

- Alternative 1: Proposed Action (Gather to Low Range AML)
- Alternative 2: Gather to High Range AML
- Alternative 3: No Action (Delay Gather/Removal of Wild Burros)

Alternatives 1 and 2 were developed based on the need to remove excess animals in order to manage the range in a thriving natural ecological balance and multiple-use relationship, to prevent rangeland health deterioration, and to insure healthy self-sustaining wild burro populations. In addition, these alternatives address the concern over the current state of the environment as evidenced by monitoring and other data (presented previously). The management objective is to reduce gather frequency and herd disturbance yet maintain herd viability and sustainability. Alternative 3 does not comply with the 1971 Act nor meet the purpose and need for this action. However, it is included as a basis for comparison and for assessment of the impacts in the event that a gather does not occur at this time.

### **2.1 Actions Common to Alternatives 1 and 2**

The following actions are common to both Alternatives 1 and 2:

- Gather operations would be conducted in accordance with the Standard Operating Procedures (SOPs) described in the Nevada Wild Horse Gather Contract, Appendix A. The helicopter drive method would be used for this gather and would include multiple gather sites (approximately two). To the extent possible, gather sites (traps) would be located in previously disturbed areas and released animals would be returned to the same general area from which they were gathered.
- The BLM would be responsible for compliance whether a contractor or BLM personnel conduct the gather.
- Blood samples would be acquired to monitor genetic health and diversity. Other data including sex and age distribution, reproduction, body condition, color, size, etc. may also be recorded, along with the disposition of that animal (removed or released).
- Excess wild burros would be sent to Bureau facilities for adoption or long-term holding.

## **2.2 Proposed Action and Alternatives**

### **2.2.1 Proposed Action (Gather to Low Range AML)**

Alternative 1, the Proposed Action, would continue implementation of a population management strategy for the McGee Mountain HMA in which wild burros would be managed at the low AML range of 25 head. The Proposed Action would be to capture about 90 of the 100 animals within the area, remove about 75 wild burros, and release between 15-25 burros back into the HMA.

### **2.2.2 Gather to High Range AML**

Alternative 2 would continue implementation of a population management strategy for the McGee Mountain HMA in which wild burros would be managed at the high AML range of 41 head. This alternative would be to capture about 90 animals, remove about 59 wild burros, and release about 31 burros back into the HMA.

### **2.2.3 No Action Alternative (Delay Gather/Removal of Wild Burros)**

Alternative 3, No Action, would continue existing management and excess wild burros would not be gathered at this time. Wild burro populations are reported to increase by 11 percent or more per year. Populations may eventually reach equilibrium by regulating their numbers through periodic elevated mortality rates caused by drought, insufficient forage, water and/or space availability, disease, predation, or a combination of these environmental factors. Or, a management action to reduce herd numbers may be evaluated and implemented at another time, possibly due to an emergency situation.

## **3.0 AFFECTED ENVIRONMENT**

This chapter describes the affected environment and will assess the environmental impacts on the components of the human environment either affected or potentially affected by the Proposed Action and alternatives.

Table 1 below summarizes the presence of the critical elements of the human environment and other resources of concern within the project area. Elements marked as being present are discussed in the corresponding referenced section below.

**Table 1. Summary of Critical and Other Elements of the Human Environment.**

Critical Elements	Present	Affected	Reference Section
Air Quality	No	No	--
Areas of Environmental Concern	No	No	--
Cultural Resources	Yes	Yes	3.1
Environmental Justice	No	No	--
Floodplains	No	No	--
Invasive, Non-native Species	Yes	Yes	3.2
Migratory Birds	Yes	Yes	3.3
Native American Religious Concerns	No	No	--
Prime/Unique Farmlands	No	No	--

Threatened or Endangered Species	Yes	Yes	3.4
Waste, Hazardous or Solid	No	No	--
Water Quality (Surface & Ground)	No	No	--
Wetland/Riparian Zones	No	No	--
Wild & Scenic Rivers	No	No	--
Wilderness/Wilderness Study Area (WSA)	No	No	--
<b>Other Priority Elements</b>	<b>Present</b>	<b>Affected</b>	<b>Reference Section</b>
Livestock Grazing	Yes	Yes	3.6
Recreation	No	No	--
Special Status Species	Yes	Yes	3.5
Vegetation	Yes	Yes	3.7
Wild Burros	Yes	Yes	3.8
Wildlife	Yes	Yes	3.9

### 3.1 Cultural Resources

#### Affected Environment

Very little inventory in the McGee Mountain HMA has been completed. Prehistoric sites may include temporary camp sites used for hunting and other resource procurement. Historic sites associated with ranching and mining may occur in the area.

### 3.2 Invasive, Non-Native Species

#### Affected Environment

Noxious weed and invasive non-native species introduction and proliferation are of growing concern among local and regional interests. Nevada Revised Statutes, Chapter 555.05 defines “noxious weeds” and mandates land owners and land management agencies to include control of noxious weeds on lands under their jurisdiction. Nevada has listed 42 non-native invasive plant species that require control. A complete list of these weeds is attached (See Appendix B).

Noxious weed surveys including invasive and non-native species in the McGee Mountain HMA have been initiated and are ongoing. These surveys indicate that the following state listed noxious weeds occur:

**Table 2. Invasive, Non-Native Plant Species.**

Common Name	Scientific Name
Bull Thistle	<i>Cirsium vulgare</i>
Perennial Pepperweed	<i>Lepidium latifolium</i>
Scotch thistle	<i>Onopordum acanthium</i>
Russian Knapweed	<i>Centaurea repens</i>
Saltcedar	<i>Tamarix ramosissima</i>
Hoary Cress	<i>Cardaria draba</i>

These weeds occur in a variety of habitats including road side areas, rights-of-way, wetland meadows, as well as undisturbed upland rangelands.

### **3.3 Migratory Birds**

#### Affected Environment

Neo-tropical migrant bird species are those species that breed in the temperate portions of North America and winter in the tropics in either North or South America. They are protected by international treaty and additional emphasis on maintaining or improving their habitats is provided by Executive Order #13186. Within the Great Basin and the project area, quality riparian habitats and healthy sagebrush communities with inclusions of trees and shrubs are required for healthy neo-tropical migrants' populations. The Western Snowy Plover (*Charadrius alexandrinus nivosus*), a BLM sensitive species, has been recorded at Gridley Lake which is within the project area.

### **3.4 Threatened or Endangered Species**

#### Affected Environment

No on-the-ground field observations have been conducted for sensitive/protected animal species. However, according to the US Fish and Wildlife Service (September 13, 2005) the following species may occur in the project area on a seasonal or yearlong basis: the bald eagle (*Haliaeetus leucocephalus*) a federally threatened species and the yellow-billed cuckoo (*Coccyzus americanus*) a federal candidate species.

### **3.5 Special Status Species**

#### Affected Environment

One population management unit (PMU) for Greater Sage-grouse (*Centrocercus urophasianus*), a BLM sensitive species, exists in the McGee Mountain HMA (Sheldon PMU; 22,000 acres). No active leks have been identified within the HMA.

Potential habitat exists for the pygmy rabbit (*Brachylagus idahoensis*) and western burrowing owl (*Athene cunicularia hypugea*), both of which are BLM sensitive species. However, at this time, no known populations of these species are known to exist within the McGee Mountain HMA.

### **3.6 Livestock Grazing**

#### Affected Environment

Reference section 3.7 Wild Burros for information regarding livestock grazing systems within the project area.

### **3.7 Vegetation**

#### **Affected Environment**

Vegetation varies from salt desert shrub communities at lower elevations to big sagebrush/bunch grass communities at higher elevations. Typical species at lower elevations include shadscale, bud sage, winterfat, black greasewood, squirreltail, and Sandberg's bluegrass. Species typical in higher elevations include low sage, Wyoming sagebrush, bitterbrush, rabbitbrush, needlegrass, blue bunch wheatgrass, basin wildrye, squirreltail, Indian paintbrush, and phlox.

### **3.8 Wild Burros**

#### **Affected Environment**

#### **3.8.1 McGee Mountain HMA (NV-210)**

The McGee Mountain HMA (approx. 41,572 acres) located within the Alder Creek Allotment (Map 1), is designated as about 99% public and 1% private lands. The north and west sides of the HMA are unfenced and burros can move to the Sheldon Wildlife Refuge. Climate is characterized by warm dry days, cool nights, and annual precipitation amounts that range from 6 to 8 inches.

Numerous dirt catchments (relying on annual runoff events) provide drinking water, developed waters are minimal and perennial waters are few. Livestock use is during the spring (April-May) and winter (October-February). The livestock grazing systems are characterized as cow-calf pair or yearling operations.

The HMA is managed for an AML range from 25 to 41 head as established in the 1994 FMUD and the BLM's 2001 Wild Horse Strategy. This strategy outlines a 4 year gather cycle Bureau wide. The plan is to implement population management for each HMA and manage the herds from 40% below AML to AML, with AML being the maximum number of burros for the HMA. The current population is estimated at 100 head (75 head over the low range AML). Refer to section 1.1 Background Information for additional details.

Burros are descendants of pack animals used by miners and sheep ranchers. Burros mainly exhibit gray and brown coat colors.

### **3.9 Wildlife**

#### **Affected Environment**

Typical wildlife species found in the McGee Mountain HMA include mule deer, pronghorn antelope, sage-grouse, chukar partridge, coyote, and various rodents.

## **4.0 ENVIRONMENTAL IMPACTS**

### **4.1 Cultural Resources**

#### Environmental Impacts

##### Alternatives 1 and 2

Direct impacts to cultural resources are not anticipated to occur because gather sites and temporary holding facilities would be inventoried for cultural resources; if cultural resources are encountered, these locations would not be used unless they could be modified to avoid impacts.

Indirect impacts to cultural resources could occur from the potential for concentrated trampling and increased erosion.

##### Alternative 3: No Action (Delay Gather/Removal)

No direct impacts are expected under this alternative. However indirect adverse impacts to cultural resource sites from overgrazing and trampling may occur as wild burro populations continue to increase and concentrate. Areas in the vicinity of permanent and intermittent water sources have the highest potential for damage. As wild burro numbers increase these impacts include, but are not limited to, the modification and displacement of artifacts and features as well as erosion of organic middens containing valuable information. Areas in the vicinity of permanent and intermittent water sources (i.e., riparian areas) have the highest potential for cultural resource sites. As wild burro numbers increase and begin to concentrate within riparian area, potential adverse impacts to cultural resources from trampling and erosion would also increase.

### **4.2 Invasive, Non-Native Species**

#### Environmental Impacts

##### Alternatives 1 and 2

Direct impacts include potential importation or transportation of new species of weeds to the area, spread of existing noxious weed seeds and plant parts to new areas, and increases in the size of existing weed infestation sites. These impacts would potentially be accomplished by contractor vehicles and livestock entering the project area and through feeding of contaminated hay to captured burros which are released before seeds pass through their digestive system. Indirect impacts would be related to burro population densities and the degree of utilization on desired forage species. Existing sites may spread more rapidly if desired plant communities are degraded. Upon removal of wild burros, fewer disturbances to vegetation would occur, thus, reducing the chance of weed invasions or the rate of spread from existing populations.

##### Alternative 3: No Action (Delay Gather/Removal)

No direct impacts are expected under this alternative. Indirect impacts would include the potential increase in noxious weeds from increased utilization levels and ground disturbance related to increased wild burro population numbers. Noxious weeds can increase with overuse of the range by grazing animals or through surface disturbance. Reduced vegetative vigor, health, and reproductive potential of desired vegetation would favor the increase of non-native invasive species.



### **4.3 Migratory Birds**

#### Environmental Impacts

##### Alternatives 1 and 2

The project area does have sagebrush habitats, therefore potential impacts to neo-tropical migrants may occur. Neither alternative would directly impact migratory bird populations with the exception of possible displacement from small areas of their habitat. This impact would be minimal, temporary, and short-term in nature. Indirect impacts would be related to wild burro densities and patterns of use. Reduction of current wild burro populations would provide opportunity for vegetative communities to progress toward achieving a thriving natural ecological balance. Either alternative would result in a positive impact to migratory bird habitat by promoting a diverse vegetative structure through improvement and maintenance of healthy populations of native perennial plants. Thus, reducing wild burro populations would potentially improve the habitat for migratory birds such as the Western Snowy Plover.

##### Alternative 3: No Action (Delay Gather/Removal)

No direct impacts are expected under this alternative. Indirect impacts would be linked to the increasing inability of the rangelands to support healthy populations of native perennial plants. Indirect impacts to vegetative communities would increase each year that a gather is postponed which would potentially negatively impact migratory bird species and their habitats.

### **4.4 Threatened and Endangered Species**

#### Environmental Impacts

##### Alternatives 1 and 2 (Gather to Low Range AML)

The potential direct and indirect impacts associated with Alternatives 1 or 2 to Threatened or Endangered species would be related to the wild burro population size. Reduction of the current wild burro population provides the best opportunity for conservation, protection, and preservation of threatened species and their habitat. Implementation of Alternative 1 would provide the greatest opportunity for the conservation, protection, and preservation of any threatened or endangered species and their habitat. The opportunity for improvement decreases slightly with Alternative 2.

##### Alternative 3: No Action (Delay Gather/Removal)

Implementation of the No Action alternative would allow potential impacts to threatened or endangered species populations and their habitat to increase each year that a gather is postponed.

### **4.5 Special Status Species**

#### Environmental Impacts

##### Alternatives 1 and 2 (Gather to Low Range AML)

Potential direct impacts include trampling of sagebrush habitat as burros are gathered. Collapse of rabbit or owl burrows from burros or equipment may occur. Indirect impacts would be related to wild burro population size and concentrations. Wild burro reductions would positively impact

sage-grouse habitat by reducing upland utilization and reducing trampling impacts to sage-grouse cover/forage species. Positive indirect impacts to potential pygmy rabbit and burrowing owl habitat would also occur due to fewer trampling impacts.

#### Alternative 3: No Action (Delay Gather/Removal)

No direct impacts are expected under this alternative. Indirect impacts would include increasing negative impacts to sage-grouse and potential pygmy rabbit and burrowing owl habitats as wild burro populations increase each year that a gather is postponed.

### **4.6 Livestock Grazing**

#### Environmental Impacts

##### Alternatives 1 and 2

The direct impact in the McGee Mountain HMA would be the minor short-term displacement of livestock from gather activities and increased vehicle traffic in the project area. The indirect impacts would be beneficial and include an increase in the forage availability and quality, reduced competition for water and forage, and improved vegetative resources that will lead to a thriving ecological condition. Indirect beneficial impacts would be slightly greater for the Proposed Action than for Alternative number 2, since burro numbers would be further reduced.

##### Alternative 3: No Action (Delay Gather/Removal)

There would be no direct impacts of this alternative to the livestock operators or livestock operation. The indirect impacts would be continued resource deterioration resulting from competition between wild burros and livestock for water and forage, reduced quantity and quality forage, and undue hardship on the livestock operators through a lack of livestock forage on public lands.

### **4.7 Vegetation**

#### Environmental Impacts

##### Alternatives 1 and 2

Direct impacts would consist of disturbance to vegetation and soils immediately in and around the temporary gather site(s) and holding facilities. Impacts would be created by vehicle traffic, hoof action as a result of concentrating burros, and could be locally severe in the immediate vicinity of the gather sites and holding facilities. Generally, these sites would be small (less than one half acre) in size. Any impacts would remain site specific and isolated in nature. In addition, most gather sites and holding facilities would be selected to enable easy access by transportation vehicles and logistical support equipment. Normally, they are located near or on roads, pullouts, water haul sites, or other flat areas which have been previously disturbed. These common practices would minimize the cumulative effects of these impacts.

Indirect impacts would be the opportunity for vegetative communities to progress toward achieving a thriving natural ecological balance. Reduced concentrations of wild burros would contribute to the improvement of vegetative resources. Forage utilization levels would be reduced which would improve forage availability, resulting in increased density, cover, plant vigor, seed production, seedling establishment, and forage production.

### Alternative 3: No Action (Delay Gather/Removal)

No direct impacts are expected under this alternative. Indirect impacts include increased competition for forage among multiple-uses as wild burro populations continue to increase. Forage utilization would exceed the capacity of the range resulting in a loss of desired forage species from plant communities as plant health and watershed conditions deteriorate. Soil loss from wind and water erosion, and invasion of undesired plant species would occur. Abundance and long-term production potential of desired plant communities may be compromised.

## **4.8 Wild Burros**

### Environmental Impacts

#### Impacts Common to Alternatives 1 and 2

Direct impacts to individual burros and population-wide impacts as a result of the stresses associated with the herding, capture, processing and transportation of animals from the gather sites to an adoption preparation facility are common to any wild horse or burro gather. Impacts include handling stress, nervous agitation, and physical distress. Traumatic injuries are rare but may occur and include bruising or swelling due to kicking or biting.

#### Alternative 1: Proposed Action (Gather to Low Range AML)

The direct impacts of the Proposed Action would include capturing about 90 wild burros, removing approximately 75 head, and releasing 15-25 back to the range following the gather.

The indirect impacts of removing 75 head of excess wild burros before range conditions further deteriorate include reducing the demand for water at available water sources, decreasing competition for available forage, and reducing negative impacts to riparian habitat. Decreased competition should result in improved health and condition of jennies and foals and in maintaining healthy range conditions over the long-term.

#### Alternative 2: Gather to High Range AML

The direct impacts of this action would include capturing about 90 wild burros, removing 59 head, and releasing 31 animals back to the range following the gather.

The indirect impacts of removing 59 head of excess wild burros before range conditions further deteriorate include reducing the demand for water at available water sources, decreasing competition for available forage, and reducing negative impacts to riparian habitat. Decreased competition should result in improved herd health and body condition of individuals.

#### Alternative 3: No Action (Delay Gather/Removal of Wild Burros)

The direct impacts of not removing 59-75 excess wild burros would affect current and future herd population numbers. Populations would continue to grow annually by 11 percent or more within the HMA. Within 4 years the estimated population would be 163 burros which would exceed the low range of AML by 138 head and the high range by 122 head.

Indirect impacts may include high burro mortality rates, thin body conditions, and poor health as habitat resources are diminished by increasing burro populations. Older and younger age classes and lactating jennies would be most affected by nutritional deficiencies and stress. Nutritional

deficiencies would negatively affect growing animals and may limit their potential growth. Parasites and disease would increase as population densities continue to increase. Burros would move outside established HMAs in search of habitat as demands on resources within HMAs increase. Fewer resources would be available for wildlife and livestock.

#### **4.9 Wildlife**

##### **Environmental Impacts**

###### **Alternatives 1 and 2**

Direct impacts would consist primarily of disturbance and displacement to wildlife by the low-flying helicopter. Typically, the natural survival instinct to this type of disturbance results in fleeing from the perceived danger. Some mammals, reptiles, and birds may be temporarily displaced by the construction and use of temporary gather sites and holding facilities. These impacts would be minimal, temporary, and of short duration. There is a slight possibility that non-mobile or site-specific animals would be trampled. Indirect impacts would be related to wild burro densities. A reduction in the number of wild burros from current levels would decrease competition for available cover, space, forage, inter-specific stress and competition, and water. Wild burros often display dominant behavior over wildlife species and livestock at water sites forcing animals to wait or go elsewhere for water. Reduced utilization levels should produce increased plant vigor, seed production, seedling establishment, and ecological health of the habitat.

###### **Alternative 3: No Action (Delay Gather/Removal)**

No direct impacts are expected under this alternative. Indirect impacts include increased competition between burros and wildlife species and also diminished habitat conditions. Wild burro populations would increase each year that the gather is postponed, which would impact ecological conditions, wildlife populations, livestock production, and other resource values.

### **5.0 CUMULATIVE IMPACTS**

#### **Definition of Cumulative Impacts**

The Council of Environmental Equality (CEEQ) regulations defines cumulative impacts as: "...[T]he impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Please see Map 1 for the map of the cumulative impact assessment area for this environmental assessment. The cumulative impact assessment area includes about total 41,572 acres, of which approximately 99% is public land.

**Past, Present, and Reasonable Foreseeable Future Actions** occurring within the assessment area include; wild burro grazing, livestock grazing, and wildland fire.

## Cumulative Impacts

### Alternatives 1 and 2 (Gather to Low Range AML)

Implementation of Alternatives 1 or 2 would remove about 59-75 head of excess wild burros. This would reduce competition for available water and forage, and prevent further deterioration of the rangeland and herd health.

Past, present, and reasonably foreseeable activities which would be expected to contribute to the cumulative impacts of implementing the proposed action include: continued livestock grazing, and increased recreational uses. These activities may influence the habitat quality, abundance, and continuity for wild burros. Impacts would be expected to occur slowly over time. BLM would identify these impacts as they occur and mitigate them as needed on a project specific basis to maintain a thriving natural ecological balance and maintain acceptable levels of herd health. Additionally, wild burros would continue to adapt to changes in the environment. The Proposed Action would contribute to the cumulative impacts of future actions by maintaining wild horse populations within AML ranges. Monitoring and management actions establish a process whereby biological and/or genetic issues would be identified and resolved over time.

### Alternative 3: No Action (Delay Gather/Removal)

Under the No Action alternative, excess animals would not be removed at this time and the wild burro population would continue to grow at 11% or more per year. Cumulative impacts associated with livestock grazing and recreation use would continue. Unmanaged wild burro populations and failure to remove excess animals would result in animal mortality and diminished health; over-utilization and damage to forage, riparian, and water resources; and, increased competition/conflicts between other uses, including wildlife, livestock, and recreation uses. A thriving natural ecological balance and multiple-use relationship would not be maintained nor would a healthy, self-sustaining wild horse population be supported.

## **6.0 PROPOSED MITIGATION AND MONITORING**

### **Mitigation**

No additional mitigation measures beyond the SOP's in Alternative 1 & 2 were identified within the impact analysis section of this document.

### **Monitoring**

Noxious weed monitoring at trap sites and temporary holding facilities will be conducted in the spring and summer of 2006 by a BLM biologist. Treatment will be provided, if necessary, following guidance from the Noxious Weed Control EA# NV-020-02-19.

The BLM Contracting Officer Representative (COR) assigned to the McGee Mountain gather would be responsible for insuring contract personnel abide by contract specifications and SOPs to insure inhumane treatment does not occur.

## **7.0 CONSULTATION AND COORDINATION**

The US Fish and Wildlife Service were consulted during preparation of this EA.

A copy of the McGee Mountain Gather Plan EA will be available from the Winnemucca Field Office for a 30 day public review and comment period.

## **8.0 LIST OF PREPARERS**

Heidi Hopkins	Wild Horse and Burro Specialist (Lead)
Matthew Varner	Supervisory Fish & Wildlife Biologist (Acting)
Lynn Harrison	Environmental Coordinator
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## 9.0 APPENDICES

### Appendix A. Standard Gather Operation Operating Procedures (SOPs)

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

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

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

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

#### A. Capture Methods Used in the Performance of a Gather

##### 1. Helicopter Drive Trapping

This capture method involves utilizing a helicopter to herd wild horses and burros into a temporary trap. The following stipulations apply:

- 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 BLM. Under no circumstances shall animals be tied down for more than one hour.
- b. The Contractor shall assure that bands remain together, and that foals shall not be left behind.
- c. Domestic saddle horses may be used as a pilot (i.e. Judas) horse to lead the wild horses into the trap. Individual ground hazers may also be used to assist in the gather.

##### 2. Helicopter Assisted Roping

This capture method involves utilizing a helicopter to herd wild horses or burros to ropers. The following stipulations apply:

- a. Under no circumstances shall animals be tied down for more than one hour.
- b. Roping shall be performed in such a manner that bands will remain together. Foals shall not be left behind.

##### 3. Bait Trapping

This capture method involves utilizing bait (water or feed) to lure wild horses or burros into a temporary trap. The following stipulations apply:

- a. Finger gates shall not be constructed of materials that may be injurious to animals such as; "T" posts, sharpened willows, etc.

- b. All trigger and/or trip gate devices must be approved by the BLM prior to capture of animals.
- c. Traps shall be checked a minimum of once every 10 hours.

## **B. Trapping and Care**

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

1. All trap and holding facility locations must be approved by the BLM prior to construction. The Contractor may also be required to change or move trap locations as determined by the BLM. All traps and holding facilities not located on public land must have prior written approval of the land owner. Prior to setting up a trap or temporary holding facility, BLM will conduct all necessary clearances (archaeological, T&E, etc.).
2. Proposed trap sites and holding facility sites would be examined for the presence of noxious weeds prior to construction. If noxious weeds were found, the trap/holding facility location would be moved to an alternate location.
3. The rate of movement and distance the animals travel shall not exceed limitations set by the BLM, who will consider terrain, physical barriers, weather, condition of the animals, and other factors.
4. All traps, wings, and holding facilities shall be constructed, maintained and operated to handle animals in a safe and humane manner and be in accordance with the following:
  - a. Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and holding facilities shall be oval or round in design.
  - b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered with plywood (without holes) or like material.
  - c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for burros, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet for burros and 1 foot to 6 feet for horses. The location of the government furnished portable restraining chute used to restrain, age, or to provide additional care for animals shall be placed in the runway in a manner as instructed by or in concurrence with the BLM.
  - 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, snow fence etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses. Eight linear feet of this material shall be capable of being removed or let down to provide a viewing window.
  - e. All pens and runways used for the movement and handling of animals shall be connected with hinged self-locking gates.
5. No fence modifications will be made without authorization from the BLM. The Contractor shall be responsible for restoration of any fence modification, which he has made.
6. When dust conditions occur within or adjacent to the trap or holding facility, the Contractor shall be required to wet down the ground with water.
7. Alternate pens, within the holding facility, shall be furnished by the Contractor to separate mares or jennies with small foals, sick and/or injured animals, and strays 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 procedure. In these instances, a portable restraining chute will be provided by the government. Alternate pens shall be furnished by the Contractor to hold animals if the specific gathering requires the animals to be released back into the capture area(s). In areas requiring one or more trap sites, and when 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 BLM.

8. The Contractor shall provide animals held in the traps and/or holding facilities with a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day. Separate water troughs shall be provided at each pen where animals are being held. Water troughs shall be constructed of such material (e.g. rubber, galvanized metal with rolled edges, rubber over metal) so as to avoid injury to the animals.
9. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than 2 pounds of hay per 100 pounds of estimated body weight per day. The contractor together with the on-site BLM representative would examine hay for noxious weed seeds or plant parts prior to initiating the gather. If noxious weed seeds or plant parts are found in the hay, the hay would be removed from the area.
10. It is the responsibility of the Contractor to provide security to prevent loss, injury or death of captured animals until delivery to final destination.
11. The Contractor shall restrain sick or injured animals if treatment is necessary. The BLM will determine if injured animals must be destroyed and provide for destruction of such animals. A veterinarian may be called to make a diagnosis and final determination for the disposition of sick or injured animals. The contractor may be required to dispose of the carcasses as directed by the BLM. Destruction shall be done by the most humane method available, in accordance with BLM policy outlined in Washington Office Instruction Memorandum No. 2001-165 which states; A BLM authorized officer may authorize the euthanasia of a wild horse or burro with any of the following conditions:
  - a. Displays a hopeless prognosis for life;
  - b. Suffers from a chronic or incurable disease or serious congenital defect;
  - c. Requires continuous treatment for the relief of pain and suffering; or
  - d. Is incapable of maintaining a Henneke body condition score greater than 2, in a normal rangeland environment.
12. Animals shall be transported to final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the BLM 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 BLM. Animals shall not be held in traps and/or temporary holding facilities on days when there is no work being conducted except as specified by the BLM. 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 BLM. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the BLM.
13. Branded or privately owned animals captured during gather operations will be handled in accordance with state estray laws and existing BLM policy.

### **C. 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 BLM 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 vehicle 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 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 at the minimum a 5 foot wide swinging gate. The use of double deck trailers is unacceptable and will 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 the trailer 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 BLM.
5. Floors of tractor-trailers, stock trailers, and the loading chute 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 BLM 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/adult horse (1.4 linear feet in an 8 foot wide trailer)
  - 8 square feet/adult burro (1.0 linear feet in an 8 foot wide trailer)
  - 6 square feet/horse foal (0.75 linear feet in an 8 foot wide trailer)
  - 4 square feet/burro foal (0.50 linear feet in an 8 foot wide trailer)
7. The BLM 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 BLM shall provide for any brand and/or inspection services required for the captured animals.
8. If the BLM determines that dust conditions are such that the animals could be endangered during transportation, the Contractor will be instructed to adjust speed.
9. The contractor together with the on-site BLM representative would examine vehicles for noxious weed seeds or plant parts prior to initiating the gather. If noxious weed seeds or plant parts are found on vehicles, the vehicle would be cleaned.

#### **D. Safety and Communications**

1. The Contractor shall have the means to communicate with the BLM and all contractor personnel engaged in the capture of wild horses and burros utilizing a VHF/FM Transceiver or VHF/FM portable Two-Way radio. If communications are ineffective the government will take steps necessary to protect the welfare of the animals.
2. 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 BLM, 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 BLM.
3. All accidents occurring during the performance of any delivery order shall be immediately reported to the BLM.

4. The Contractor must operate in compliance with all applicable Federal, State, and Local laws and regulations.
5. Fueling operations shall not take place within 1,000 feet of animals.

#### **E. Public Participation**

Opportunities for public viewing (i.e. media, interested public) of gather operations will be made available to the extent possible, however the primary consideration will be to protect the health and welfare of the animals being gathered. The public must adhere to guidance from the on site BLM representative. It is BLM policy that the public will not be allowed to come into direct contact with wild horses and burros held in a BLM facility. Only BLM or contractor personnel may enter the trap site or temporary holding facility corrals. The general public may not directly handle the animals at any time or for any reason during gather operations.

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

The Contracting Officer's Representative, and Project Inspectors, from the Winnemucca Field Office, will have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. All employees involved in the gathering operation will keep the best interests of the animals at the forefront at all times.

The Assistant Field Manager for Renewable Resources and the Field Manager will take an active role to ensure that appropriate lines of communication are established between the field, Field Office, Nevada State Office, National Wild Horse and Burro Program Office, and the Palomino Valley Wild Horse and Burro Center. All publicity, formal public contact and inquiries will be handled through the Assistant Field Manager for Renewable Resources.

#### **G. Cultural Resources**

Personnel working at gather sites will be advised of illegality of collecting artifacts.

Prior to implementation of gather operations, trap sites and temporary holding facilities would be evaluated for cultural resources. Gather sites and temporary holding facilities would not be constructed on wetlands or riparian zones.

## Appendix B Nevada State Noxious Weed List

### DEFINITIONS

Category "A": Weeds not found or limited in distribution throughout the state; actively excluded from the state and actively eradicated wherever found; actively eradicated from nursery stock dealer premises; control required by the state in all infestations

Category "B": Weeds established in scattered populations in some counties of the state; actively excluded where possible, actively eradicated from nursery stock dealer premises; control required by the state in areas where populations are not well established or previously unknown to occur

Category "C": Weeds currently established and generally widespread in many counties of the state; actively eradicated from nursery stock dealer premises; abatement at the discretion of the state quarantine officer

Common Name	Scientific Name	Weed Symbol
<b>Category A Weeds:</b>		
<u>African Rue</u>	Peganum harmala	AR
Austrian fieldcress	Rorippa austriaca	AF
<u>Austrian peaweed</u>	Sphaerophysa salsula / Swainsona salsula	AP
Camelthorn	Alhagi camelorum	CT
Common crupina	Crupina vulgaris	CC
Dalmation Toadflax	Linaria dalmatica	DTF
Dyer's woad	Isatis tinctoria	DW
Eurasian water-milfoil	Myriophyllum spicatum	EWM
Giant Salvinia	Salvinia molesta	
Goats rue	Galega officinalis	GR
Houndstongue	Cynoglossum officinale	HT
Hydrilla	Hydrilla verticillata	HYD
Iberian Star thistle	Centaurea iberica	IST
Klamath weed	Hypericum perforatum	KW
Leafy spurge	Euphorbia esula	LS
Malta Star thistle	Centaurea melitensis	
Mayweed chamomile	Anthemis cotula	MC
Mediterranean sage	Salvia aethiopsis	MS
Purple loosestrife	Lythrum salicaria, L.virgatum and their cultivars	PL
Purple Star thistle	Centaurea calcitrapa	PST
Rush skeletonweed	Chondrilla juncea	RS
Sow Thistle	Sonchus arvensis	SWT
Spotted Knapweed	Centaurea masculosa	SPK

Squarrose star thistle	<i>Centaurea virgata</i> Lam. Var. squarrose	SQK
Sulfur cinquefoil	<i>Potentilla recta</i>	SC
Syrian Bean Caper	<i>Zygophyllum fabago</i>	
<u>Yellow Starthistle</u>	<i>Centaurea solstitialis</i>	YST
Yellow Toadflax	<i>Linaria vulgaris</i>	YTF

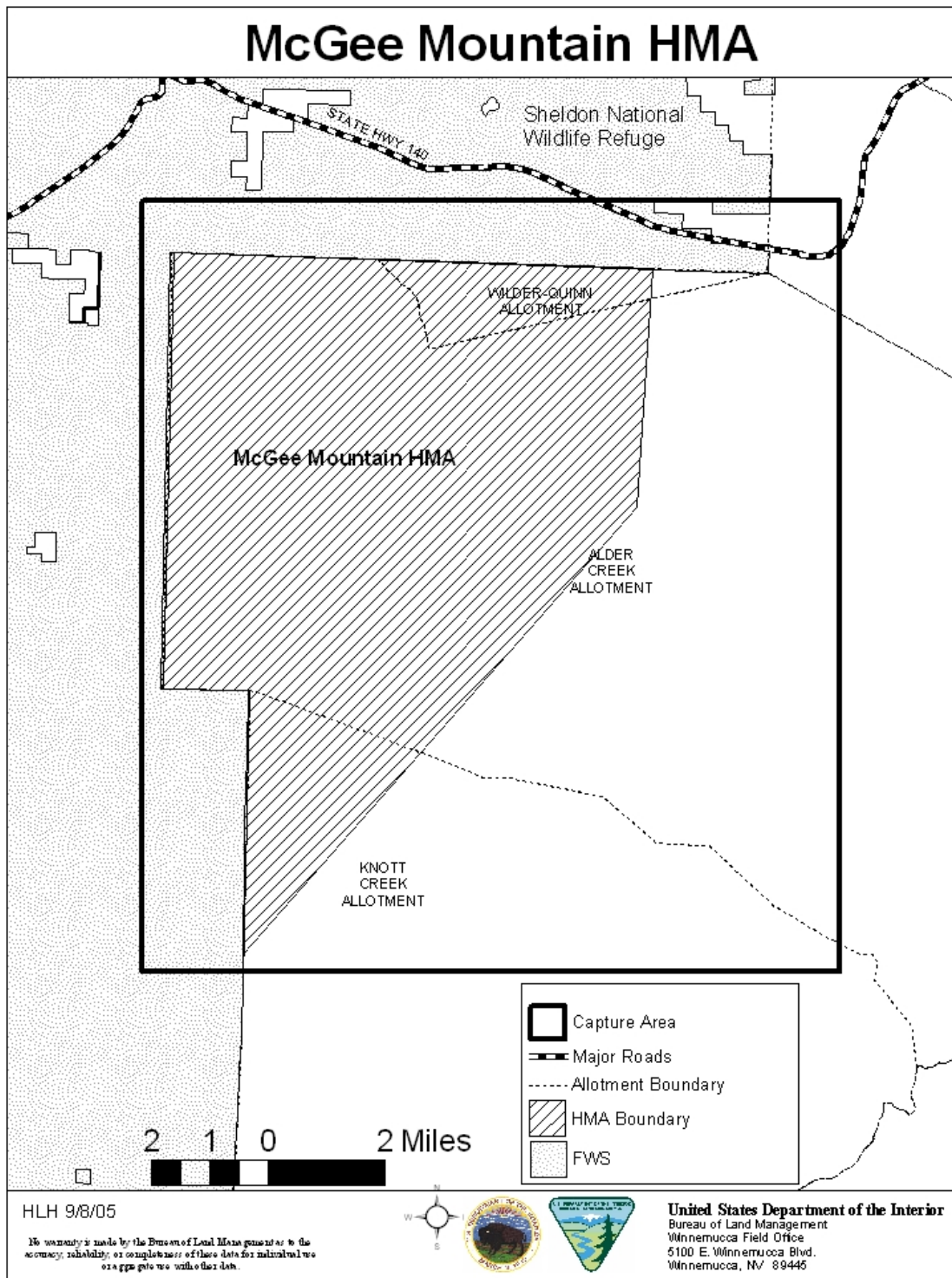
**Category B Weeds:**

Carolina Horse-nettle	<i>Solanum carolinense</i>	CHN
Diffuse Knapweed	<i>Centaurea diffusa</i>	DFK
Medusahead	<i>Taeniatherum caput-medusae</i>	MH
Musk Thistle	<i>Carduus nutans</i>	MKT
Russian Knapweed	<i>Acroptilon repens</i>	RSK
Scotch Thistle	<i>Onopordum acanthium</i>	SCT
White Horse-nettle	<i>Solanum elaeagnifolium</i>	WHN

**Category C Weeds:**

<u>Black henbane</u>	<i>Hyoscyamus niger</i>	BH
Canada Thistle	<i>Cirsium arvense</i>	CAT
Green Fountain grass	<i>Pennisetum setaceum</i>	
Hoary cress	<i>Cardaria draba</i>	HC
Johnson grass	<i>Sorghum halepense</i>	
Perennial pepperweed	<i>Lepidium latifolium</i>	
Poison Hemlock	<i>Conium maculatum</i>	PNH
Puncture vine	<i>Tribulus terrestris</i>	PV
Salt cedar (tamarisk)	<i>Tamarix spp</i>	TA
Water Hemlock	<i>Cicuta maculata</i>	WRH

[Dep't of Agriculture, No. 55.11, eff.5-25-62; A 5-1-68]--(NAC A by St. Quarantine Officer, 8-9-94; R191-99, 8-7-2000; R097-01m 5-1-2002; R003-03, 9-24-2003)



**Map 1: McGee Mountain Map**