

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

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**Preliminary Environmental Assessment  
Humboldt Herd Area Wild Horse Gather Plan Environmental  
Assessment**

**DOI-BLM-NV-W010-2013-0024-EA**



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# **Preliminary Environmental Assessment**

## **Humboldt Herd Area Wild Horse Gather Plan Environmental Assessment**

**Mission Statement: It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.**

**DOI-BLM-NV-W010-2013-0024-EA  
BLM/NV/WN/EA/13-14+1792**

# Table of Contents

<b>1. Introduction .....</b>	<b>1</b>
1.1. Identifying Information: .....	1
1.1.1. Title, EA number, and type of project: .....	1
1.1.2. Location of Proposed Action: .....	1
1.1.3. Name and Location of Preparing Office: .....	1
1.1.4. Identify the subject function code, lease, serial, or case file number: .....	1
1.1.5. Applicant Name: .....	1
1.2. Background .....	1
1.3. Purpose and Need for Action: .....	2
1.4. Scoping, Public Involvement and Issues: .....	2
<b>2. Proposed Action and Alternatives .....</b>	<b>5</b>
2.1. Description of the Proposed Action: .....	6
2.2. Description of the No Action Alternative .....	9
2.3. Description of Alternatives Considered but not Analyzed in Detail .....	9
2.4. Conformance .....	10
2.4.1. Land Use Plan Conformance .....	10
2.4.2. Relationship to Laws, Regulations, and Other Plans .....	11
2.4.3. Conformance with Rangeland Health Standards and Guidelines .....	11
2.5. Decision to be Made .....	11
<b>3. Affected Environment: .....</b>	<b>12</b>
3.1. Affected Environment: .....	13
3.1.1. General Description of the Affected Environment .....	13
3.1.2. Supplemental Authorities .....	13
3.1.2.1. Cultural Resources .....	14
3.1.2.2. Invasive-Nonnative Species .....	14
3.1.2.3. Migratory Birds .....	15
3.1.2.4. Native American Religious Concerns .....	16
3.1.2.5. Threatened and Endangered Species .....	17
3.1.2.6. Water Quality (surface and ground) .....	17
3.1.2.7. Wetlands and Riparian Zones .....	18
3.1.3. Additional Affected Resources .....	18
3.1.3.1. Fire Resources — Fire Management and Emergency Stabilization and Rehabilitation (ESR) .....	19
3.1.3.2. Fisheries .....	19
3.1.3.3. Paleontology .....	20
3.1.3.4. Public Health and Safety .....	20
3.1.3.5. Rangeland Management .....	20
3.1.3.6. Soils .....	22
3.1.3.7. Special Status Species .....	22
3.1.3.8. Vegetation .....	26
3.1.3.9. Wild Horses .....	26

3.1.3.10. Wildlife ..... 26

**4. Environmental Effects: ..... 28**

4.1. Environmental Effects: ..... 29

4.1.1. Cultural Resources ..... 29

4.1.2. Invasive-Nonnative Species ..... 29

4.1.3. Migratory Birds ..... 30

4.1.4. Native American Religious Concerns ..... 31

4.1.5. Water Quality (surface and ground) ..... 31

4.1.6. Wetlands and Riparian Zones ..... 33

4.1.7. Fire Resources — Fuels and Emergency Stabilization and Rehabilitation ..... 34

4.1.8. Fisheries ..... 34

4.1.9. Paleontology ..... 34

4.1.10. Public Health and Safety ..... 35

4.1.11. Rangeland Management ..... 36

4.1.12. Soils ..... 36

4.1.13. Special Status Species ..... 37

4.1.14. Vegetation ..... 38

4.1.15. Wild Horses ..... 39

4.1.16. Wildlife ..... 45

4.2. Cumulative Effects ..... 46

4.2.1. Past and Present Actions ..... 46

4.2.2. Reasonably Foreseeable Future Actions ..... 48

4.2.3. Cumulative Impacts ..... 49

4.2.3.1. Cultural Resources ..... 49

4.2.3.2. Invasive-Nonnative Species ..... 50

4.2.3.3. Migratory Birds, Special Status Species and Wildlife ..... 51

4.2.3.4. Native American Religious Concerns ..... 53

4.2.3.5. Water Quality (surface and ground) ..... 54

4.2.3.6. Wetlands and Riparian Zones ..... 57

4.2.3.7. Fire Resources — Fuels and Emergency Stabilization and Rehabilitation ..... 59

4.2.3.8. Fisheries ..... 60

4.2.3.9. Public Health and Safety ..... 60

4.2.3.10. Rangeland Management ..... 60

4.2.3.11. Soils ..... 61

4.2.3.12. Vegetation ..... 62

4.2.3.13. Wild Horse ..... 63

**5. Monitoring and Mitigation Measures ..... 65**

**6. Tribes, Individuals, Organizations, or Agencies Consulted: ..... 67**

**7. List of Preparers ..... 69**

**8. List of References ..... 71**

<b>9. Maps .....</b>	<b>73</b>
<b>Appendix A. Standard Operating Procedures (Gather Operation) .....</b>	<b>75</b>
<b>Appendix B. Wild Horse Gather Public Observation Protocol .....</b>	<b>82</b>

**List of Maps**

Map 1. Humboldt HA and Cumulative Assessment Area ..... 74  
Map 2. Grazing Allotments within the Humboldt Herd Area ..... 74  
Map 3. Humboldt Herd Area Ecological Site Descriptions ..... 74

**List of Tables**

Table 3.1. Supplemental Authorities (Critical Elements of the Human Environment) ..... 13

Table 3.2. Additional Affected Resources ..... 18

Table 3.3. Humboldt Herd Area Acres within Allotments ..... 21

Table 3.4. Livestock Use (AUMs) Authorized within Allotments Overlapping the Humboldt  
Herd Area. .... 21

Table 3.5. Grazing Use (AUMs) by Grazing Year ..... 22

Table 7.1. List of Preparers ..... 70

# **Chapter 1. Introduction**

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## **1.1. Identifying Information:**

### **1.1.1. Title, EA number, and type of project:**

Humboldt Herd Area Wild Horse Gather Plan Environmental Assessment

DOI-BLM-NV-W010-2013-0024-EA

### **1.1.2. Location of Proposed Action:**

Humboldt Herd Area, Pershing County, Nevada

### **1.1.3. Name and Location of Preparing Office:**

Lead Office - Humboldt River Field Office (W010)

5100 E. Winnemucca Blvd., Winnemucca Nevada 89445

### **1.1.4. Identify the subject function code, lease, serial, or case file number:**

Subject Function Code: 4700

### **1.1.5. Applicant Name:**

Bureau of Land Management

## **1.2. Background**

The Winnemucca District Office (WD) is proposing to gather excess wild horses within the Humboldt Herd Area (HA) beginning July 1, 2013 or as soon as funding and holding space allows. The gather area is comprised of 431,544 acres of both private and public lands ([Map 1](#)). The HA is located in Pershing County about 30 miles south of Winnemucca, NV and extends along the eastside of Interstate 80 to Lovelock, Nevada.

HAs were identified in Land Use Plans (LUPs) and were limited to areas of the public land used as habitat by wild horses and burros at the time the Wild Free Roaming Horses and Burros Act (WFRHBA) was enacted (December 15, 1971). The HAs where wild horses and burros could be managed for the long term were designated as Herd Management Areas (HMAs) in 1982 through the land-use planning process. The Humboldt HA was not designated for the long term management of the wild horses in the Sonoma-Gerlach Management Framework Plan (SG-MFP) due to the checkerboard land pattern found within the HA and therefore, is not currently managed for wild horses and burros. Based on field observations and counts conducted by the BLM in 2011 and an annual recruitment rate of 15%, the wild horse population within the Humboldt HA is estimated to be 161 animals including the 2013 foal crop. The exact origin of these wild horses

has not been determined. However, some animals may have been missed in the initial gather to remove wild horses from the area in 1985, analyzed in the Humboldts/West Humboldts/East Range Herd Use Area Gathering Plan NV-020-5-12. Other wild horses may have migrated into the Humboldt HA from adjacent HMAs. Since this area is not an HMA managed for wild horses, these wild horses are excess horses that need to be removed.

The last gather was conducted in 1993 when 173 wild horses were captured and removed from the Humboldt HA. The environmental consequences were analyzed under Environmental Assessment for Wild Horse Relocation-Kamma Mountains HMA, NV-020-03-31. Since the last gather, it has been documented that wild horses have returned to the Humboldt HA and the presence of wild horses within the HA has led to unnecessary horse fatalities and damage to private property. Between 1999 and 2010, eleven nuisance wild horses were removed at the private land owners' request and four wild horses were euthanized as an act of mercy after being hit by vehicles on the roads. In 2011, four wild horses were removed and two were euthanized after being hit by vehicles. Because of the wild horse fatalities caused by the presence of wild horses within the Humboldt HA, damage to human property, and the potential for the loss of human life from collisions with wild horses along county roads; there is an urgent need to remove wild horses from the HA.

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

### **1.3. Purpose and Need for Action:**

The purpose of the Proposed Action is to gather and remove all excess wild horses from the Humboldt HA (which is not managed for wild horses due to the checkerboard land ownership pattern) and to maintain a zero population of wild horses within the HA over the long-term. The need for action is based upon the BLM's obligation under Section 3, as amended, of the Wild-Free-Roaming Horses and Burros Act of 1971 (WFRHBA). Section 3 of the WFRHBA requires the BLM to remove excess wild horses when it determines that an overpopulation exists and that the excess horses need to be removed. Code of Federal Regulations, CFR 43 Part 4700, Subpart 4710.1 directs that "Management activities affecting wild horses and burros, including the establishment of herd management areas, shall be in accordance with approved land use plans prepared pursuant to part 1600 of this title."

### **1.4. Scoping, Public Involvement and Issues:**

Issues were identified through internal scoping relative to the BLM's proposed gather of wild horses from the HA. Due to the similarity between the Proposed Action and other gathers conducted in WD HAs, the BLM staff is familiar with issues commonly raised during public scoping. Therefore, although public scoping has not occurred for this EA, the BLM has captured the concerns that are generally expressed by potentially interested publics. The interested public will also have the opportunity to comment on the proposed action as part of the EA process.

#### **Cultural and Native American Religious Concerns**

- How would placement and design of temporary gather sites, including water/bait trapping sites, and holding sites impact cultural resources or Native American sacred sites or Traditional Cultural Properties (TCPs)
- How would the removal of wild horses impact cultural resources, or Native American sacred sites or TCPs?
- How would the use of helicopters impact TCPs/ Native American sacred sites?

### **Migratory Birds, T&E, Fisheries, Sensitive Species, and Wildlife**

- How would the use of helicopters and the placement and design of temporary gather and holding sites impact the health, habitat, and activity of sage grouse, threatened and endangered wildlife, fisheries, migratory birds, and general wildlife?
- How would bait/water trap sites impact the health, habitat, and activity of sage grouse, threatened and endangered wildlife, fisheries, migratory birds, and general wildlife?
- How would the removal of wild horses the impact the health, habitat, and activity of sage grouse, threatened and endangered wildlife, fisheries, migratory birds, and general wildlife?

### **Water Quality**

- How would placement and design of temporary gather or holding facilities impact surface water quality?
- How would movement of horses via helicopter drives impact surface water quality?
- How would the removal of wild horses impact surface water quality?
- How would water trapping and the removal of wild horses impact existing water rights?

### **Wetlands and Riparian**

- How would movement of horses via helicopter drives impact riparian and wetland zones?
- How would the removal of wild horses impact riparian and wetland zones?

### **Wild Horses**

- How would stress from helicopter driving, handling, and time spent in holding facilities (temporary or long term) impact the health of individual animals?

### **Fire**

- How would the removal of wild horses impact emergency stabilization and rehabilitation of areas impacted by wildfire?

### **Public Health & Safety**

- How would placement and design of temporary gather and holding facilities impact vehicle traffic?
- How would the movement of horses via helicopters impact vehicle traffic?

- How would the removal of wild horses impact vehicle traffic?
- How would gather activities, in general, impact individuals interested in observing the BLM's actions?

### **Rangeland Management**

- How would the removal of wild horses impact the amount of forage available for livestock?
- How would the placement and design of temporary gather and holding sites impact the management of grazing within allotments that intersect or lie within the gather area?
- How would the use of helicopters impact the health, management, and activity of cattle?
- How would bait/water trap sites impact the health, management, and activity of cattle?

### **Soils and Vegetation**

- How would the removal of wild horses impact soils and upland vegetative communities?
- How would placement and design of temporary gather and holding sites and bait/ water trap sites impact soils within the gather area?
- How would ground based gather activities impact the distribution and density of non-native or noxious plants?

Consultation has occurred with United States Fish and Wildlife Service (USFWS) and with the following tribes: Battle Mountain Band Tribal Council, Fallon Paiute Shoshone Tribe, Lovelock Paiutes, Pyramid Lake Paiutes, and Winnemucca Indian Colony. No issues were identified through this coordination.

# **Chapter 2. Proposed Action and Alternatives**

This section of the EA describes the Proposed Action and No Action Alternatives, including any that were considered but eliminated from detailed analysis. The Proposed Action was developed to remove excess wild horses from the HA in conformance with 43 CFR § 4720. The No Action Alternative would not achieve the identified Purpose and Need, nor would it be in compliance with the land-use plan or with 43 CFR § 4710.1; however, it is analyzed in this EA to provide a basis for comparison with the other action alternatives, and to assess the effects of not conducting a gather at this time.

## 2.1. Description of the Proposed Action:

The Proposed Action would achieve and maintain a population of zero wild horses within the Humboldt HA ([Map 1](#)).

An initial helicopter drive would occur outside of the established spring closure period for helicopter gathers associated with the peak of foaling (March 1 to June 30) and take approximately ten days to complete. Depending on the efficiency of the helicopter drive, supplemental / follow-up gather methods may be used (described below) over a period of ten years. Several factors such as animal condition, herd health, weather conditions, or other considerations could result in adjustments in the gather schedule. Gather operations would be conducted in accordance with the Standard Operating Procedures (SOPs) described in the National Wild Horse and Burro Gather Contract ([Appendix B, Wild Horse Gather Public Observation Protocol](#)).

Due to an extremely large operational area, a helicopter drive would be the primary gather mechanism within the HA. The BLM would utilize a contractor to perform the gather activities in cooperation with BLM and other appropriate staffs. The contractor would be required to conduct all helicopter operations in a safe manner and in compliance with Federal Aviation Administration (FAA) regulations 14 CFR § 91.119 and BLM Instruction Memorandum (IM) No. 2010-164. The Proposed Action would be in conformance with BLM policy which prohibits the gathering of wild horses with a helicopter (unless under emergency conditions) during the period of March 1 to June 30 which includes and covers the six weeks that precede and follow the peak of foaling (mid-April to mid-May).

If helicopter drive gather methods do not achieve the desired goals of the Proposed Action or if a helicopter gather has to be delayed, water or bait trapping may be utilized during the time period analyzed in this EA as a supplemental or interim measure to assist in the removal of wild horses and maintenance of zero wild horse population within the HA. For example, water or bait trapping could be used when trying to remove wild horses from a small distinct geographic area when weather or environmental conditions are not conducive to helicopter gather techniques. Any water/bait trapping activities would be scheduled in locations and during time periods that would be most effective to gather sufficient numbers of animals to achieve management goals. Existing watering sites would be preferred. In rare instances new troughs may be used and would be subject to the Standards and Guidelines for Nevada's Sierra Front-Great Basin Area and Northeastern Great Basin Area (e.g. installation of bird ladders). Use of water at trap sites would comply with Nevada water law. The use of roping from horseback would also be used if necessary or appropriate.

Multiple temporary trap sites (gather sites), including helicopter drive and water/bait trapping sites, as well as temporary holding sites, would be used to accomplish the goals of the Proposed Action. In addition to public lands, private property may be utilized for gather sites and temporary holding facilities due to greater accessibility and/or prior disturbance or if necessary to ensure

successful gathers. Use of private land would be subject to Standard Operating Procedures (SOPs) set forth in [Appendix A, Standard Operating Procedures \(Gather Operation\)](#) and would be in written approval/authorization of the landowner. Helicopter drive and temporary holding sites could be in place up to 30 days. Bait or water trapping sites could remain in place up to one year for periodic use. The exact location of the gather sites and holding sites would not be determined until immediately prior to the gather because the location of the animals on the landscape is variable and unpredictable. The BLM would make every effort to place temporary gather and holding sites in previously disturbed areas and in areas that have been inventoried and have no cultural resources, TCPs, sacred sites or paleontological sites. If a new gather or holding site is needed, a cultural inventory would be completed prior to using the new sites. If cultural resources are encountered, the location of the gather/holding site would be adjusted to avoid all cultural resources. Once the specific locations of proposed gather/holding sites have been identified, the WD Paleontological database would be checked to insure that all known paleontological localities are avoided.

No gather or holding sites would be set up near greater sage-grouse leks, known populations of sensitive species, or in riparian areas, TCPs, sacred sites, paleontological or cultural resource sites. Prior to setting up gather sites within potential habitat for special status plants, a plant survey would be conducted by a qualified botanist. Should a sensitive plant species occur, the habitat for the species would be mapped out and no surface disturbance would occur within that area. The BLM would make every effort to place gather sites outside of areas known to contain noxious species. In order to avoid potential impacts to breeding migratory birds from gather sites, a nest survey would be conducted by BLM personnel within potential breeding habitat prior to any surface disturbance proposed during the avian breeding season (March 1st through August 31st). Surveys would be conducted no more than 10 days and no less than 3 days prior to initiation of disturbance. All gather and handling activities would be conducted in accordance with the SOPs in [Appendix A, Standard Operating Procedures \(Gather Operation\)](#).

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

Maintenance gathers (helicopter drive or water/bait trapping) to remove any wild horses that may have been missed and to maintain a zero population within the Humboldt HA may be conducted for the next 10 years following the date of the decision and would also be conducted in accordance with Standard Operating Procedures (SOPs) in [Appendix A, Standard Operating Procedures \(Gather Operation\)](#) or current guidance.

Opportunities for public observation of the gather activities on public lands would be provided and would be consistent with BLM IM No. 2013-058 and the Humboldt HA Wild Horse Observation Protocol found in [Appendix B, Wild Horse Gather Public Observation Protocol](#). This protocol is intended to establish observation locations that reduce safety risks to the public (e.g., from helicopter-related debris or from the rare helicopter crash landing, or from the potential path of gathered wild horses), to the wild horses (e.g., by ensuring observers would not be in the line of vision of wild horses being moved to the gather site), and to contractors and BLM employees who must remain focused on the gather operations and the health and well-being of the wild horses. Observation locations would be located at gather or holding sites and would be subject to the same cultural resource requirements as those sites.

The Humboldt HA Wild Horse Gather Observation Protocol would provide the public with the opportunity to safely observe the gather operations. Every attempt would be made to identify one or more observation sites at the gather location that offer good viewing opportunities, although there may be circumstances (flat terrain, limited vegetative cover, private lands, etc.) that require viewing locations to be at greater distances from the gather site due to public visitor access or to ensure safe gather operations.

Data, including sex and age distribution, body condition score (BCS) (using the Henneke rating system), color, size and other information may be recorded for all gathered wild horses.

BLM would assure that an Animal and Plant Health Inspection Service (APHIS) veterinarian or contracted licensed veterinarian would be on site during the gather to examine animals and make recommendations to BLM for care and treatment of wild horses. BLM staff would also be present during gather operations to observe animal condition, ensure humane treatment of wild horses, and ensure contract requirements for the gather operations are met. Additionally, animals transported to BLM holding facilities would be inspected by facility staff and on-site contract veterinarians to observe health and ensure the animals are being cared for humanely.

Any weaned foals that cannot survive on their own or orphan foals would be removed and would be made available for adoption to qualified individuals. Any old, sick or lame horses unable to maintain an acceptable body condition (greater than or equal to a Henneke BCS of 3) or with serious physical defects would be humanely euthanized as an act of mercy. Decisions to humanely euthanize animals in field situations will be made in conformance with BLM policy (Washington Office Instruction Memorandum 2009-041). Conditions requiring humane euthanasia occur infrequently and are described in more detail in [Section 4.1.15, “Wild Horses”](#).

Noxious weed monitoring at gather and holding sites would be conducted by the BLM resource specialist during the growing season preceding the initial gather and each subsequent gather. Any sites used that have previously been documented to have noxious weeds present would be managed to minimize or eliminate risk of noxious weed seed transport, and would result in a requirement to wash equipment prior to leaving the site if gather operations are conducted when soils are wetted and there is a significant risk of contaminated soil transport. In order to minimize noxious weed spread, on-road use would be promoted and off-road travel would be limited. Following gather operations; gather sites would be monitored by BLM personnel for a minimum of two seasons to determine if noxious weeds have been introduced to the site. If it were determined that the gather activities introduced noxious weeds to a site, appropriate treatment would be applied. Treatments would be consistent with the Noxious Weed Control EA# NV-020-02-19 and the Programmatic Environmental Assessment of Integrated Weed Management on Bureau of Land Management Lands, EA# NV-020-08-11. Following gather operations, disturbed soils at gather sites would be seeded with site-adapted native grasses, shrubs, and forbs.

Aerial population inventories would continue. If subsequent observations show that wild horses remain in the Humboldt HA after the initial helicopter gather or that wild horses have moved into the HA from adjacent areas, the WD would return to the HA to remove those excess wild horses. The follow-up gather activities would include helicopter drives or water/bait trapping as described above. Follow-up gathers could be implemented up to ten years after the initial gather and may require periods of delay between gathers if any remaining horses develop a heightened response to human presence and become more difficult to gather. Funding limitations and competing priorities could also require delaying the follow-up gather component of the Proposed Action.

## 2.2. Description of the No Action Alternative

Under the No Action Alternative, no gather would occur and no wild horses would be removed from the Humboldt HA at this time. As stated in the Introduction, unnecessary horse fatalities and damage to property due to the presence of excess wild horses within the HA has been documented and would continue to be an issue. The No Action Alternative would not achieve the identified Purpose and Need and is contrary to the WRFHBA and 43 CFR Part 4700; however, it is analyzed in this EA to provide a basis for comparison with the other action alternatives, and to assess the effects of not conducting a gather at this time.

Excess wild horses would remain on public and private lands within the Humboldt HA, an area that – consistent with the LUP -- is not being managed for wild horses. BLM would continue to address safety issues regarding wild horses in and near the Humboldt HA on an ad hoc basis only.

## 2.3. Description of Alternatives Considered but not Analyzed in Detail

### Water/Bait Trapping as Sole Gather Method

This alternative would remove all excess wild horses from the Humboldt HA with water/bait trapping methods only (i.e. no use of helicopters). Bait trapping as the primary or sole gathering method would take a significant period of time and could only be done if the proper conditions exist. A number of animals have already been hit by vehicle traffic on Rochester Road. These collisions have proven to be fatal to the horses and have the potential to cause a loss of human life. Because there is a need for a more efficient gather method to remove the potential for the loss of human life and for wild horses' fatalities, this alternative was considered but dismissed as a primary or sole method of gathering and removing excess wild horses. However, bait trapping, as described in the Proposed Action, may be used as a supplementary approach to achieve desired goals of the Proposed Action.

### Remove or Reduce Livestock within the HA

This alternative would reduce or eliminate cattle grazing on all or portions of the grazing allotments that intersect or fall within the Humboldt HA. Because this area is designated as an HA (see discussion in [Section 1.2, "Background"](#)), BLM must attempt to remove excess wild horses. Removal or reduction of livestock would not result in the removal of excess wild horses.

Removal or reduction of livestock would not meet the purpose and need as identified in [Section 1.3, "Purpose and Need for Action."](#), would be inconsistent with the Sonoma-Gerlach MFP, and would require amendment to the MFP which is outside the scope of this EA. For the reasons stated above, this alternative was dropped from detailed analysis.

### Use of Alternative Capture Techniques Instead of Helicopter Capture

This alternative would utilize some method of gathering (other than helicopters or water/bait trapping) to remove all excess wild horses from the Humboldt HA. Alternative capture methods have been suggested by some members of the public, but no specific alternative methods have been identified. The BLM has identified chemical immobilization, net gunning, and wrangler/horseback drive trapping as the most likely alternative potential methods for gathering wild horses.

Net gunning techniques normally used to capture big game animals also rely on helicopters. Chemical immobilization is a very specialized technique and strictly regulated. Currently the BLM does not have sufficient expertise to implement either of these methods and it would be impractical to use given the size of the project area, access limitations, and difficulties in approaching wild horses.

Use of a wrangler(s) on horseback drive-trapping to remove excess wild horses can be fairly effective on a small scale. However; given the large geographic size of the Humboldt HA gather area, rough terrain, access limitations, and difficulties in approaching the wild horses; this technique would be ineffective and impractical. Horseback drive-trapping is also very labor intensive and can be very dangerous to the domestic horses and the wranglers used to herd the wild horses. Domestic horses can easily be injured while covering rough terrain and the wrangler could be injured if he/she falls off.

Utilizing one of the methods above as the primary or sole gathering method would take a significant period of time and could only be done if the proper conditions exist. A number of animals have already been hit by vehicles on Rochester Road. These collisions have proven to be fatal to the horses and also have the potential to result in the loss of human life. Because there is a need for a more efficient gather method to remove the potential for the loss of human life and impacts to wild horses and because of the reasons described above, this alternative was considered but eliminated from further consideration as a primary or sole method of gathering.

## **2.4. Conformance**

### **2.4.1. Land Use Plan Conformance**

The Proposed Action is in conformance with the Sonoma-Gerlach Management Framework Plan (July 9, 1982) and amendment (1988).

MFP-III Decision WH&B 1.3 (update: 1988)

Remove wild horses and burros from the checkerboard Horse Use Areas (HUAs) listed below unless a cooperative agreement providing for the retention and protection of wild horses and burros is consummated with the affected private landowner(s). Cooperative agreements have not been obtained on the following areas and wild horses should be removed.

1. Sonoma
2. Humboldt
3. Trinity
4. East Range
5. Antelope
6. Truckee

Planned Actions or Modifications

All HAs will be closely monitored, and if an unacceptable number of either wild horses or burros migrate back into a particular HA, these animals will be removed.

## 2.4.2. Relationship to Laws, Regulations, and Other Plans

### Statutes and Regulations

The Proposed Action is in conformance with the Wild Free Roaming Horses and Burros Act (WFRHBA) (1971) (as amended), applicable regulations at 43 Code of Federal Regulations (CFR) § 4700 and BLM policies. Applicable regulations and BLM policies include:

- **43 CFR § 4710.1: Land Use Planning.** Management activities affecting wild horses and burros, including the establishments of herd management areas, shall be in accordance with approved land use plans prepared pursuant to part 1600 of this title.
- **43 CFR § 4740.1: Use of motor vehicles or aircraft.** (a) Motor vehicles and aircraft may be used by the authorized officer in all phases of the administration of the Act, except that no motor vehicle or aircraft, other than helicopters, shall be used for the purpose of herding or chasing wild horses or burros for capture or destruction. All such use shall be conducted in a humane manner. (b) Before using helicopters or motor vehicles in the management of wild horses or burros, the authorized officer shall conduct a public hearing in the area where such use is to be made.

## 2.4.3. Conformance with Rangeland Health Standards and Guidelines

The Proposed Action is consistent with making significant progress towards or meeting 1997 *Standards and Guidelines for Rangeland Health Sierra Front-Northwestern Great Basin Resource Advisory Council* and conforms to the recommendations presented in the March 2007 *Standards and Guidelines for Management of Wild Horses and Burros of the Sierra Front-Northwest Great Basin Area*.

## 2.5. Decision to be Made

The authorized officer will determine whether or not to implement the Proposed Action.

The No Action Alternative would not achieve the identified Purpose and Need. However, it is analyzed in this EA to provide a basis for comparison with the other action alternatives, and to assess the effects of not conducting a gather at this time. A decision to select the No Action Alternative for implementation would be contrary to the requirement under the WFRHBA that the Secretary remove excess wild horses from the range, would be contrary to the land-use plan, and would also not in conformance with regulatory provisions for management of wild horses as set forth at 43 CFR § 4700.

## **Chapter 3. Affected Environment:**

### 3.1. Affected Environment:

In accordance with the BLM's National Environmental Policy Act (NEPA) Handbook (H-1790) (BLM, 2008) internal scoping was conducted by an interdisciplinary team to identify potential natural resources and Supplemental Authorities that may or may not be impacted by the consequences of the Proposed and No Action alternatives. Relevant components of the human environment which would be either affected or potentially affected by the Proposed Action or No Action alternatives are briefly discussed below.

#### 3.1.1. General Description of the Affected Environment

The Humboldt HA Wild Horse Gather Plan encompasses an area of 431,544 acres of which 219,085 acres are public lands. The gather area is located in Pershing County with the north boundary being about 30 miles south of Winnemucca, NV and extends along the eastside of Interstate 80 to Lovelock, Nevada. The HA is bordered to the northeast by the East Range HA and by the North Stillwater HMA to the southeast ([Map 1](#)). The elevation ranges from 3930 feet in Packard Wash to 8,917 feet at Indian Peak. Temperatures range from lows around -20°F to highs of around 105°F. Annual precipitation averages from 4 to 6 inches at the lower elevations and around 15 inches at upper elevations.

#### 3.1.2. Supplemental Authorities

To comply with the NEPA, the following elements of the human environment are subject to requirements specified in statute, regulation, or executive order and must be considered.

**Table 3.1. Supplemental Authorities (Critical Elements of the Human Environment)**

Supplemental Authorities	Present	Potentially Affected	Rationale
Air Quality	YES	NO	The proposed gather area is not within an area of non-attainment or areas where total suspended particulates exceed Nevada air quality standards. Areas of disturbance would be small and temporary in nature.
Areas of Critical Environmental Concern (ACECs)	NO	NO	Not present.
Cultural Resources	YES	YES	Analyzed below.
Environmental Justice	NO	NO	Not present.
Floodplains	NO	NO	Not present.
Invasive, Nonnative Species	YES	YES	Any noxious weeds or non-native invasive weeds would be avoided when establishing gather sites and/or holding facilities, and would not be driven through. Noxious weed monitoring at gather/holding sites would be conducted and applicable treatment of weeds would occur per Noxious Weed Control EA#NV-020-02-19 as needed.
Migratory Birds	YES	YES	Analyzed below.
Native American Religious Concerns	YES	YES	Analyzed below.

Supplemental Authorities	Present	Potentially Affected	Rationale
Prime or Unique Farmlands	NO	NO	Not present.
Threatened & Endangered Species	NO	NO	Discussion below.
Wastes, Hazardous or Solid	NO	NO	Not present.
Water Quality (Surface/Ground)	YES	YES	Analyzed below.
Wetlands and Riparian Zones	YES	YES	Analyzed below.
Wild and Scenic Rivers	NO	NO	Not present.
Wilderness	NO	NO	Not present.

### 3.1.2.1. Cultural Resources

A range of prehistoric and historic sites are located within the Humboldt HA and adjoining territory. Cultural resource sites in and near the HA date from as early as 10,000 years ago to recent historic times. Prehistoric sites in and near the HA include lithic scatters, rock art, and rock shelters while historic sites include the California Emigrant Trail, the Rochester National Register Eligible District (a historic mining district), as well as many other historic mining and ranching sites. There was also a historic Chinatown in Lovelock (just outside the HA) and there are Chinese mining sites in American Canyon and elsewhere in the HA.

Since the locations of the proposed gather sites, and holding corrals, and observation localities are currently unknown, as they would be dependent on where the horses are located prior to gather, they cannot be checked for conflicts with known cultural resources, but would be checked and inventoried as needed in accordance with the proposed action prior to construction.

### 3.1.2.2. Invasive-Nonnative Species

An “invasive species” is defined as a species that is non-native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm, or harm to human health (Executive Order 13112). Invasive species are species that are highly competitive, highly aggressive, and capable of widespread dispersal. They include plants designated as “noxious” and animals designated as “pests” by federal or state law.

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 47 non-native invasive plant species that require control. Of these 47 species, 14 have been identified within the boundaries of the WD.

Noxious weeds and other invasive plants generally infest disturbed mineral soils, which occur intermittently or permanently as a result of natural or human-caused events. Exceptions to this generality include invasive plants which spread primarily through rhizome expansion and are therefore not dependent on disturbance conditions which are conducive to seed germination. Natural disturbance events would include wildfire, landslides, animal use corridors, or seasonal streambank disturbance. Human caused disturbances are extremely numerous and variable, and would include the construction of roads, trails, and right-of-way corridors. Invasive species documented within the proposed project area include clasping pepperweed (*Lepidium*

*perfoliatum*), tumble mustard (*Sisymbrium altissimum*), and cheatgrass (*Bromus tectorum*); see [Section 3.1.3.8, “Vegetation”](#) for additional information on cheatgrass. Noxious weeds known to be present within the proposed project area include Scotch thistle (*Onopordum acanthium*), a Nevada Category B weed, hoary cress (*Cardaria draba*), a Nevada Category C weed, Russian knapweed (*Acroptilon repens*), a Nevada Category B weed, perennial pepperweed (*Lepidium latifolium*), a Nevada Category C weed, and saltcedar (*Tamarix spp.*), a Nevada Category C weed. 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 Category B weeds are “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”. Nevada Category C weeds are defined by NAC 555.010 as “weeds that are generally established and generally widespread in many counties of the State.”

### 3.1.2.3. Migratory Birds

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.

All birds in the WD are considered migratory birds with the exception of gallinaceous birds such as the California quail (*Lophortyx californicus*), Chukar (*Alectoris graeca*), and Sage-Grouse (*Centrocercus urophasianus*). Migratory birds may be found in any area of the district as either seasonal residents or as migrants. Migratory bird species that may occur in the habitat types of the HA are shown below relative to habitat types.

Montane riparian areas may include the following migratory bird species: MacGillivray's warbler (*Oporornis tolmiei*), Wilson's warbler (*Wilsonia pusilla*), warbling vireo (*Vireo gilvus*), Lewis' woodpecker (*Melanerpes lewis*), red-naped sapsucker (*Sphyrapicus nuchalis*), Virginia's warbler (*Vermivora virginiae*), calliope hummingbird (*Stellula calliope*), broad-tailed hummingbird (*Selasphorus platycercus*), orange-crowned warbler (*Vermivora celata*), fox sparrow (*Passerella iliaca*), song sparrow (*Melospiza melodia*), dark-eyed junco (*Junco hyemalis*), Lincoln's sparrow (*Melospiza lincolnii*), wouldow flycatcher (*Empidonax traillii*), dusky flycatcher (*Empidonax oberholseri*), brown-headed cowbird (*Molothrus ater*), American robin (*Turdus migratorius*), house finch (*Carpodacus mexicanus*), and Cassin's finch (*Carpodacus cassinii*) (GBBO 2003).

Lowland riparian areas may include: American robin, bank swallow (*Riparia riparia*), barn swallow (*Hirundo rustica*), Bewick's wren (*Thryomanes bewickii*), black-chinned hummingbird (*Archilochus alexandri*), black-headed grosbeak (*Pheucticus melanocephalus*), broad-tailed hummingbird (*Selasphorus platycercus*), brown-headed cowbird, downy woodpecker (*Picoides pubescens*), house finch, house wren (*Troglodytes aedon*), lazuli bunting (*Passerina amoena*), lesser goldfinch (*Carduelis psaltria*), northern flicker (*Colaptes auratus*), northern mockingbird (*Mimus polyglottos*), Bullock's oriole (*Icterus bullockii*), northern rough-winged swallow (*Stelgidopteryx serripennis*), song sparrow (*Melospiza melodia*), spotted sandpiper (*Actitis macularia*), tree swallow (*Tachycineta bicolor*), violet-green swallow (*Tachycineta thalassina*), warbling vireo (*Vireo gilvus*), western kingbird (*Tyrannus verticalis*), western wood-pewee

(*Contopus sordidulus*), wouldow flycatcher, yellow-breasted chat (*Icteria virens*), and yellow warbler (*Dendroica petechia*) (GBBO 2003).

Sagebrush and salt desert shrub areas may include: black-throated sparrow (*Amphispiza bilineata*), Brewer's blackbird (*Euphagus cyanocephalus*), Brewer's sparrow (*Spizella breweri*), canyon wren (*Catherpes mexicanus*), gray flycatcher (*Empidonax wrightii*), green-tailed towhee (*Pipilo chlorurus*), loggerhead shrike (*Lanius ludovicianus*), rock wren (*Salpinctes obsoletus*), sage sparrow (*Amphispiza belli*), sage thrasher (*Oreoscoptes montanus*), western meadowlark (*Sturnella neglecta*), and vesper sparrow (*Pooecetes gramineus*) (GBBO 2003).

Several species of raptors may also utilize the project area including bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), Ferruginous hawk (*Buteo regalis*), northern goshawk (*Accipiter gentilis*), prairie falcon (*Falco mexicanus*), northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), and sharp-shinned hawk (*Accipiter striatus*).

The bald eagle, golden eagle, burrowing owl, northern goshawk, Brewer's sparrow, loggerhead shrike, and sage thrasher are BLM designated sensitive species and are discussed in [Section 3.1.3.7, "Special Status Species"](#).

#### **3.1.2.4. Native American Religious Concerns**

Numerous laws and regulations require consideration of Native American concerns. These include the National Historic Preservation Act of 1966 as Amended (NHPA), the American Indian Religious Freedom Act of 1978 (AIRFA) as amended, Executive Order 13007 (Indian Sacred Sites), Executive Order 13175 (Consultation and Coordination with Tribal Governments), the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), Secretarial Order 3317, the Archaeological Resources Protection Act of 1979 (ARPA) as well as NEPA and FLPMA.

Native Americans utilize a variety of plants for medicinal and other uses. They also consider all water to be sacred. Several springs are located within the gather area. Both of these resources can be adversely affected by domestic and wild horses.

Horses are believed to have been introduced into the Paiute and Shoshone societies from trade with the Comanche and other Plains groups (Shimkin 1986). By the mid-19th century, the horse had a significant impact on the political organization of the Paiute and Shoshone, plus their subsistence and trade. The ethnographic literature presents no clear cut trend on whether horses were used as food for subsistence by the Northern Paiutes and Shoshone.

Letters requesting consultation meetings were sent to the following tribes in January 2012: Battle Mountain Band Tribal Council, Fallon Paiute-Shoshone Tribe, Lovelock Paiutes, Pyramid Lake Paiutes, and Winnemucca Indian Colony. Battle Mountain Band Tribal Council, Lovelock Paiutes, and Pyramid Lake Paiutes have not responded to requests for consultation on this proposed action. The letter to the Winnemucca Indian Colony was returned by the US Postal Service as undeliverable.

### 3.1.2.5. Threatened and Endangered Species

A list of federally listed, proposed or candidate species was requested from the U.S. Fish and Wildlife Service (USFWS) for the proposed project area on November 26, 2012. A response from USFWS was received on December 10, 2012. Based on coordination with the USFWS, the greater sage-grouse was the only federally listed, proposed, or candidate species. There are no other known Threatened or Endangered species in the proposed project area present within the area of analysis.

The greater sage-grouse was determined to be a candidate species in 2010, but its listing has been precluded by other species. Impacts to the greater sage-grouse are analyzed in [Section 3.1.3.7, “Special Status Species”](#).

Since no threatened or endangered species have been identified in the project areas, this resource is dismissed from further analysis.

### 3.1.2.6. Water Quality (surface and ground)

Surface water sources within the Humboldt HA exist in the form of springs and small streams which may be perennial, ephemeral, intermittent, or interrupted. These small streams originate in the Humboldt Range and flow down onto the surrounding valley floors. Stream reaches with perennial flow are fed by snow melt and shallow groundwater. Most water draining from the Humboldt Range will percolate into the subsurface prior to reaching a larger system. Infrequent high flows may allow surface water to reach the Humboldt River to west of the Humboldt Range or the playa found in Buena Vista Valley to the east.

According to data recorded in the National Hydrography Dataset, available from the USGS, there are approximately 2,220 miles of perennial, intermittent, or ephemeral streams within the HA. Approximately 1,140 miles (~51%) of these mapped drainages are located on lands managed by the BLM. A BLM water source inventory conducted in the early 1980s indicates that 381 spring and seep sources exist on lands managed by the BLM within the HA.

Sub-surface water in the HA is found either in shallow alluvial/ colluvial sediments on the slopes of the Humboldt Range, in deeper lacustrine sediments of the valley floors, or in more complex bedrock aquifers.

Water, both surface and subsurface, within the HA has been developed for a wide range of uses. According to the Nevada Division of Water Resources, there are 221 active water rights in the HA (~60% on private land and ~40% on lands managed by the BLM). The published beneficial uses for these water rights are mining/ milling/ dewatering (30%), irrigation (23%), stock water (22%), municipal (9%), and less than 5% each of commercial, industrial, other (including BLM public water reserves), quasi-municipal, domestic, environmental, as decreed, and construction. Of the active water rights, 52% are from an underground source (wells, geothermal, etc.) and 48% are from a surface source (springs, streams, etc.).

There is a wide range of water quality in the HA. Headwater streams, in general, are of very high quality with low temperatures, low dissolved solids, and minimal biological contaminants or pathogens. Stream water tends to experience an increase in all of these water quality parameters as water moves toward the valleys. This is due to increased contact time with parent rock materials, increased exposure to biological activity (including impacts from wildlife and domestic

animals), and increased exposure to direct sunlight. Water quality at springs may vary among sites, but is roughly correlated to a spring's landscape location. As with streams, springs at higher elevation or steeper slopes generally have higher quality water than those closer to valley floors.

Surface water quality is often strongly associated with the functionality of its associated riparian habitat. See below for a description of the riparian habitat in the gather area.

### 3.1.2.7. Wetlands and Riparian Zones

Approximately 1,700 acres of wetland and riparian habitat occur within the HA (based on land cover types within the SynthMap data compiled by the Nevada Department of Conservation and Natural Resources). Approximately 1,060 acres (~62%) of these areas are located on lands managed by the BLM. These areas are comprised of both lentic and lotic habitat. Lentic habitat within the HA is comprised of spring sources and wet meadows. Lotic habitat within the HA is comprised of small streams that originate in the Humboldt Range and flow down onto the valley floors around the Humboldt Range.

Between 1993 and 2012 the BLM has conducted Proper Functioning Condition (PFC) assessments on 73.5 miles of lotic riparian habitat. Of the habitat assessed; 68% was rated properly functioning, 2% was rated functioning at risk with an upward trend, 20% was rated functioning at risk with no apparent trend, and 10% was rated non-functional. It should be noted that the PFC protocol is qualitative and is not intended to be used as a monitoring tool or a measure to determine management decisions. It does, however, afford the BLM an opportunity to discuss the relative health of riparian habitats using basic functionality characteristics.

Wetland and riparian habitats play a critical role for wildlife and domestic animals in northern Nevada. Even though riparian areas make up less than 1% of the HA, the majority of wildlife (including wild horses) relies on riparian habitat for food, water, and shelter. Livestock are also heavily dependent on riparian areas when supplemental water is not available or when other forage is less palatable than herbaceous riparian vegetation. The majority of riparian habitat within the WD shows some level of use or disturbance by cattle or wild horses. With 70% of the riparian habitat assessed determined to be properly functioning or trending toward that status, there is an indication that utilization of riparian habitats by cattle and wild horses in the HA is generally within the ability of the ecosystems to recover.

### 3.1.3. Additional Affected Resources

In addition to the supplemental authorities listed above, the following resources are present and may be affected by the Proposed Action and/or the No Action alternative: Fire resources – Fuels and Emergency Stabilization and Rehabilitation, Fisheries, Health and Safety, Paleontology, Rangeland Management, Soils, Special Status Species, Vegetation, Wild Horses, and Wildlife.

**Table 3.2. Additional Affected Resources**

Additional Affected Resources	Present	Potentially Affected
Fire Resources - Fuels and Emergency Stabilization & Rehabilitation	YES	YES
Fisheries	YES	YES
Lands With Wilderness Characteristics	NO	NO
Paleontology	YES	YES

Additional Affected Resources	Present	Potentially Affected
Public Health and Safety	YES	YES
Rangeland Management	YES	YES
Soils	YES	YES
Special Status Species	YES	YES
Vegetation	YES	YES
Wild Horses	YES	YES
Wildlife	YES	YES
Wilderness Study Areas	NO	NO

### 3.1.3.1. Fire Resources — Fire Management and Emergency Stabilization and Rehabilitation (ESR)

There are six communities-at-risk (CAR) on the federal register of urban wildland interface communities within the vicinity of the Humboldt HA that are at high risk from wildfire (Federal Register 2001, Document 1-52, pg. 751-777) and one other communities-of-interest (COI) that are located within the project area. The six CARs are Humboldt, Imlay, Lovelock, Mill City, Oreana, and Unionville; Rye Patch is the COI. Subsequent community wildfire protection plans for Pershing County have identified Unionville at extreme risk from wildfire, Humboldt at high risk and the other communities at moderate risk (Nevada Community Wildfire Risk/Hazard Assessment Project: Pershing County 2004). Two fuels treatments (i.e., fuel breaks) have been established within the project area that are intended to help limit wildland fire size and/or severity by directly reducing fire behavior and indirectly by facilitating suppression (Finney 2001, www.NFPORS.gov accessed 26 February 2013). One fuels treatment, or fuel break, is located near the community of Imlay and the other is located at Unionville. Fuels conditions are primarily influenced by weather/climate and indirectly by grazing from native/non-native ungulates.

Approximately 15% or 62,388 acres of the Humboldt Herd Area has been impacted by wildfire since 1993. Emergency Stabilization and Rehabilitation (ESR) seeding projects were conducted within approximately 48% of all burned acres. Of the approximately 62,388 acres of BLM land that have burned within the Humboldt HA since 1993, 4,050 acres were drill seeded utilizing drill seed mixes that were composed of crested wheatgrass, Siberian wheatgrass, Sandberg's bluegrass, snake river wheatgrass, intermediate wheatgrass, triticale, forage kochia, alfalfa, and flax. Also, approximately 15,800 acres of burned areas were aerially seeded with triticale, crested wheatgrass, snake river wheatgrass, Sandberg's bluegrass, four-wing saltbush, Alfalfa, Wyoming big sagebrush, forage kochia, flax, basin wildrye, and thickspike wheatgrass. ESR projects were implemented in response to the Unionville Fire (1999), the Rochester Fire (1999), the Prince Royal Fire (2000), and the Cottonwood Fire (2010).

### 3.1.3.2. Fisheries

The Humboldt HA contains six perennial fishery streams: Buena Vista Creek, Cottonwood Creek, Coyote Creek, Indian Creek, Rocky Canyon Creek, and Star Creek. The six streams are within the Humboldt Range, with Rocky Canyon Creek on the west side of the Humboldt Range and the other five streams on the east side of the Humboldt Range. Fish surveys show that rainbow trout (*Oncorhynchus mykiss*), brook trout (*Salvelinus fontinalis*), and brown trout (*Salmo trutta*) are the salmonids found in the Humboldt Range (NDOW 2012). Stream surveys were completed for most of these streams in 1992, and the overall stream condition for the streams ranged from poor to excellent (NDOW 2012).

### **3.1.3.3. Paleontology**

The HA was analyzed utilizing the Potential Fossil Yield Classification (PFYC) System and consultation of known fossil localities in the WD paleontological database. The HA includes all classes of paleontological potential ranging from Class 1—Low to Class 5—High. While the majority of the HA is rated moderate, the Humboldt Range and the West Humboldt Range include 49 known fossil localities and portions of these ranges are rated 4—high and 5—very high. Fossil Hill is one of the more notable paleontological localities in the HA.

### **3.1.3.4. Public Health and Safety**

In recent gathers, members of the public have increasingly traveled to the public lands to observe BLM's gather operations. While most members of the public follow BLM's directions which are necessary to ensure the safety of the public, BLM staff, contractors and wild horses during the gathers, a few members of the public have actively taken or attempted to take actions to obstruct or interfere with the wild horse gather operations. These actions consist of driving into unauthorized areas or attempting to enter into or be close to the pens where wild horses are being held following the gather. Members of the public can also inadvertently wander into areas that put them in the path of wild horses that are being herded or handled during the gather operations. Such activities, whether intentional or accidental, not only hamper the gather operations, but more importantly, create the potential for injury to the wild horses and to the BLM employees and contractors conducting the gather and/or handling the horses as well as to the public themselves. Because these horses are wild animals, there is always the potential for injury when individuals get too close to or inadvertently get in the way of gather activities.

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

Public observation of the gather activities on public lands would be allowed, subject to restrictions necessary to ensure the health and safety of the public, BLM employees and contractors and the wild horses, and would be consistent with BLM IM No. 2013-058.

Private property has been utilized in previous gathers for gather sites and temporary holding facilities and may be used during this gather if necessary. If private property is utilized during the gather operations BLM would seek to obtain the permission of the private land owner so that BLM personnel can escort public observers to these trap sites.

### **3.1.3.5. Rangeland Management**

Based on escalating drought conditions across much of the WD, all grazing permittees in the district have been notified that the 2013 grazing year is a drought year and they should prepare

for temporary changes to their grazing use. Permittees have been asked to continue to observe conditions and speak with their Rangeland Management Specialist on a regular basis to help mitigate the effects of drought. Many of the permittees that have grazing allotments within the Humboldt HA are aware of the current situation and have been voluntarily making livestock adjustments to reduce their level of grazing in the 2012-2013 grazing years.

The Coal Canyon-Poker, Humboldt House, Prince Royal, Rawhide, Rye Patch, South Rochester, and Star Peak Allotments are managed for livestock grazing. Portions of these allotments were occupied by wild horses when the WFRHBA was passed in 1971. Consequently those areas became designated as the Humboldt Herd Area (HA).

**Table 3.3. Humboldt Herd Area Acres within Allotments**

Allotment	Acres of Allotments within Humboldt Herd Area	Total Acres for Allotment	% of Allotment within Herd Area
Coal Canyon-Poker	84,322	176,131	47.9%
Humboldt House	24,355	60,659	40.2%
Prince Royal	20,816	20,833	99.9%
Rawhide	50,408	157,956	31.9%
Rye Patch	18,440	67,237	27.4%
South Rochester	131,091	254,863	51.4%
Star Peak	80,773	171,519	47.1%

As shown in Table 1 and [Map 2](#), allotment acreages do not correspond with the HA acreages, as these areas do not share identical boundaries.

The Sonoma-Gerlach (SG) and Paradise-Denio (PD) Management Framework Plans (MFP) (1982) identified the level of livestock grazing authorized for the allotments within the Coal Canyon-Poker, Humboldt House, Prince Royal, Rawhide, South Rochester, Rye Patch, and Star Peak Allotments. All of these allotments are in the Sonoma-Gerlach Resource Area.

There are a total of eleven livestock operators (permittees) currently authorized to graze livestock in these allotments annually, many running in common on several allotments. Each allotment has several permittees, but their AUMs for each type of use is combined for each allotment in [Table 3.4, “Livestock Use \(AUMs\) Authorized within Allotments Overlapping the Humboldt Herd Area.”](#) The annual total permitted use for these permittees combined is 15,009 Animal Unit Months (AUMs) in the seven allotments (including on non-HA lands). An AUM is the amount of forage needed to sustain one cow or its equivalent for one month. All of these allotments consist of various use areas or pastures that are grazed seasonally following established grazing systems; however, the season of use may vary (by one to two weeks) annually based upon forage availability, drought conditions and other management criteria.

**Table 3.4. Livestock Use (AUMs) Authorized within Allotments Overlapping the Humboldt Herd Area.**

Allotment	Type of Use	Active Preference (AUMs)	Season of use
Coal Canyon-Poker	Cattle	2,650	3/1-2/28
	Sheep	495	3/20-3/31 & 10-1/10/26
Humboldt House	Cattle	616	10/15-4/30
	Sheep	106	7/16-8/5
Prince Royal	Cattle	60	11/1-4/30
	Sheep	100	6/5-6/14

Allotment	Type of Use	Active Preference (AUMs)	Season of use
Rawhide	Cattle	2,742	3/1-2/28
Rye Patch	Cattle	1,809	11/1-4/30
	Sheep	171	8/6-8/31
South Rochester	Cattle	1,777	3/1-2/28
	Sheep	1,409	3/1-2/28
Star Peak	Cattle	2,102	4/1-12/31
	Sheep	972	4/25-9/30
<b>Total</b>	-	<b>15,009</b>	-

[Table 3.5, “Grazing Use \(AUMs\) by Grazing Year”](#) shows the combined grazing use for the permittee’s within the Humboldt HA. An estimate for the 2013 grazing year has not been included because many of the permittees’ have fall turnout dates; therefore they have not yet made application for their fall/winter grazing.

**Table 3.5. Grazing Use (AUMs) by Grazing Year**

Allotment	Actual Use 2010 <sup>1</sup>	Actual Use 2011 <sup>1</sup>	Actual Use 2012 <sup>1</sup>
Coal Canyon-Poker	3,319	3,204	2,615
Humboldt House	587	980	572
Prince Royal	139	309	309
Rawhide	1,882	1,882	1,714
Rye Patch	1,371	1,678	1,335
South Rochester	758	2,048	2,015
Star Peak	3,319	3,074	3,074
<b>Total</b>	<b>11,375</b>	<b>13,175</b>	<b>11,634</b>

<sup>1</sup> Based on paid bills or submitted actual use for each year.

### 3.1.3.6. Soils

A wide range of soils occur within the Humboldt HA, ranging from saline-alkaline soils associated with valley bottoms to deep loamy soils at higher elevations in the mountain ranges. Typically the ecological sites in this area are characterized by loamy soils although they may experience a wide range of precipitation zones, see [Map 3](#). Soil development generally occurred under low precipitation regimes resulting in relatively shallow soils.

Trailing and hoof action by wild horses has the potential of accelerating erosion following intense storms or snow melt. Erosion hazard potential for water and wind are grouped into broad classes based on landforms. Erosion hazard potential is slight for water and moderate for wind in lake plains and lake terraces soils; moderate for water erosion and slight for wind in fan piedmonts soils; and moderate or high for water and slight for wind in mountains soils.

Potential for biological soil crusts occurrence is highest on the upper lake plain terraces. Potential biological soil crusts occurrence is lowest on the lower lake plains terrace and mountain slopes. Fan piedmonts have moderate occurrence of biological soil crusts.

### 3.1.3.7. Special Status Species

Both Threatened and Endangered Species ([Section 3.1.2.5, “Threatened and Endangered Species”](#)) and Sensitive Species (addressed below) are considered Special Status Species. The Nevada

Natural Heritage Program (NNHP) database (January 2013) and the NDOW Diversity database (January 2013) were consulted for the possible presence of endangered, threatened, candidate and/or sensitive plant or animal species. NDOW data shows observations of bald eagle, golden eagle, prairie falcon, northern goshawk, and several bat and spring snail species. The NNHP data shows observations of Owyhee prickly phlox (*Leptodactylon glabrum*), western snowy plover (*Charadrius alexandrinus nivosus*) wind loving buckwheat (*Eriogonum anemophilum*), Lahontan beardtongue (*Penstemon palmeri* var. *macranthus*), Goodrich biscuitroot (*Cymopterus goodrichii*) Holmgren smelowskia (*Holmgren smelowskia*) and obscure scorpion flower (*Phacelia inconspicua*). USFWS indicated potential for greater sage grouse.

Based upon the above queries, the following special status species have been documented within or are likely to occur within the Humboldt HA.

Bald Eagle – The bald eagle may potentially occur incidentally as a very rare migrant in the analysis area; however, no known foraging, nesting or roosting areas occur locally. For this reason, proposed activities are judged to have no effect on this species or its habitats and it will be dismissed from further analysis.

Bats - Several species of bats may occur in this area. Most bats in Nevada are year-round residents. In general terms, bats eat insects and arthropods during the warmer seasons and hibernate in underground structures during the cooler seasons. The cliffs, talus, caves; rock crevices; trees; ephemeral, intermittent and perennial drainages, and mine shafts and adits provide potential bat roost sites within the Humboldt HA. Bats may eat flies, moths, beetles, ants, scorpions, centipedes, grasshoppers, and crickets. Bats thrive where the plant communities are healthy enough to support a large population of prey (Bradley et al. 2006). Healthy riparian communities with high water tables and tall vegetation leading to high flying insect populations creates favorable foraging habitat for bats.

Brewer's Sparrow - The Brewer's sparrow may be found in this area since it typically inhabits sagebrush communities. The Brewer's sparrows tend to favor areas dominated by shrubs rather than grass. They thrive where extensive areas of sagebrush habitat are maintained with shrubs occurring in tall, clumped, and vigorous stands. They place their nests low in sagebrush (preferred), other shrubs, or cactus, from a few centimeters to about one meter from ground. They would also place nests higher in taller sagebrush (Rich 1980). The Brewer's sparrow mainly forages for insects on the ground.

Burrowing Owl - Burrowing owls prefer open, arid, treeless landscapes with low vegetation. They are dependent upon burrowing mammal populations for maintenance of nest habitat and choose nesting areas based on burrow availability (Floyd et al. 2007). These birds are highly adaptable and readily nest in open, disturbed areas such as golf-courses, runways, and industrial areas that border suitable habitat (Neel, 1999). Dense stands of grasses and forbs within owl home ranges support populations of rodent and insect prey. Urbanization is the biggest threat to this species as suitable habitat is converted to non-habitat by human use (Floyd et al. 2007).

Golden Eagle - Golden eagles are primarily cliff nesters and would utilize the area to forage for prey species such as jackrabbits and other small mammals. Golden eagles are protected under the Bald and Golden Eagle Protection Act. Nevada's golden eagle population is thought to be stable to increasing. They are widespread and frequently encountered (Floyd et al. 2007).

Goodrich biscuitroot - This plant is found in Lander, Nye and Pershing counties in Nevada, with the only documented occurrences on the Toiyabe and Humboldt Ranges. It is found on moderate

to steep scree and talus slopes of dark angular slate or limestone in the upper subalpine and lower alpine zones (Nevada Natural Heritage Program (NNHP) 2001).

Holmgren Smelowskia – Holmgren smelowskia is a perennial herb that is found on crevices, ledges, rubble or small soils pockets on rock outcrops, cliffs and ridges in the high elevations. In lower elevations it is normally found on north facing walls and various rocky substrates in the pinyon-juniper, mountain sage, lower and sub-alpine vegetation types (NNHP 2001).

Lahontan Beardtongue - The Lahontan beardtongue is a perennial herb with wand-like stems and showy pink flowers. It is found along washes, roadsides and canyon floors, particularly on carbonate-containing substrates, usually where subsurface moisture is available throughout most of the summer. Little survey attention has been given to this rare plant but it is presumed extant (NNHP 2001).

Loggerhead Shrike - Loggerhead shrikes may be found in sagebrush/bunchgrass and salt desert scrub vegetative communities, so it is possible that they occur on these allotments. Loggerhead shrikes tend to favor arid, open country with just a few perches or lookouts. They nest in isolated trees and large shrubs and feed mainly on small vertebrates and insects. The species is relatively common and well distributed across the state (Neel, 1999). These birds benefit from habitat with a diverse structure and species composition. Healthy sagebrush communities provide these habitat characteristics. According to Paige and Ritter (1999), “Long-term heavy grazing may ultimately reduce prey habitat and degrade the vegetation structure for nesting and roosting. Light to moderate grazing may provide open foraging habitat”.

Northern Goshawk - The Northern goshawk is an opportunistic hunter, preying on a wide variety of vertebrates and, occasionally, insects. Prey is taken on the ground, in vegetation, or in the air. It forages in both heavily forested and relatively open habitats. In Nevada, it forages in open sagebrush (*Artemisia* spp.) adjacent to riparian aspen stands. It nests in a wide variety of forest types including deciduous, coniferous, and mixed forests. Western birds also nest in deciduous forests dominated by aspen (*Populus tremuloides*), paper birch (*Betula papyrifera*), or willow (*Salix* spp.) (NatureServe 2012).

Obscure Scorpionflower – This plant is only known from the Humboldt Range in northern Nevada. It is found in relatively deep, undisturbed, organic-rich soils on fairly steep, concave, on north to northeast facing slopes where snow drifts persist well into spring. It is often located on small, barren soil terraces or in small clearings in shrub fields dominated by mountain big sage (*Artemisia tridentata vaseyana*) in association with small-leaved cream bush (*Holodiscus microphyllus*), roundleaf snowberry (*Symphoricarpos rotundifolius*), and Great Basin wild rye (*Leymus cinereus*) (NNHP 2001).

Owyhee Prickly Phlox - This species can be found in Nevada and Idaho, in crevices in steep to vertical, coarse-crumbling volcanic canyon walls at 2600-4000 m elevation. It is intolerant of water paths or seeps that may form in the rock crevices. It is a shrubby, highly branched, perennial herb, 2-3 dm tall, with deeply lobed leaves and funnel-shaped flowers which appear in May-June (NNHP 2001).

Prairie Falcon - The prairie falcon may be found foraging in sagebrush habitats that have cliffs in close proximity for nesting. They prey on small mammals and birds, especially horned lark. Populations experienced declines in the 60's and 70's but appear to be stable now in the West (Paige and Ritter, 1999).

Pygmy Rabbit - In the Great Basin, the pygmy rabbit is typically restricted to the sagebrush-grass complex. A dietary study of pygmy rabbits showed that they are dependent on sagebrush year round. Sagebrush was eaten throughout the year as 51% of the diet in summer and 99% in the winter. They also showed a preference for grasses and to lesser extent forbs in the summer (Green and Flinders, 1980).

Sage-Grouse - The sage-grouse is a sagebrush obligate species and is strictly associated with sagebrush/grasslands. Sage-grouse may eat a variety of grasses, forbs and insects during the breeding season. However, they feed almost entirely on sagebrush during the winter months, selecting shrubs with high protein levels (Paige and Ritter, 1999),

The Humboldt Population Management Unit (PMU) for sage-grouse lies entirely within the project area. The sage-grouse habitat has been classified as nesting, summer and winter range. These ranges all overlap and the majority of the habitat occur within the higher elevations of the project area. There are four known leks within this PMU.

Sage Thrasher - Sage thrashers may be found in the project area as well. They thrive where sagebrush habitat is maintained, with shrubs occurring in tall, clumped, and vigorous stands. They tend to prefer tall shrubs for nesting or song perches. Primarily a ground forager, sage thrasher foraging success may be reduced by continuous cover of crested wheatgrass, cheatgrass or other non-native grasses (Paige and Ritter 1998).

Springsnails – Springsnails are freshwater mollusks (genus *Pyrgulopsis* [Pyrg]). While some species are montane, springsnails generally occur on valley floors or along the base of mountain blocks at springs less than 2400 m (~8000 ft) elevation (Hershler 1998, Sada 2008). Pyrgs generally inhabit springs with medium (10-21°C) to thermal (greater than 21°C) temperatures (Hershler 1998). Modifications to springs that negatively impact *Pyrgulopsis* species include livestock grazing (which tramples vegetation and pollutes the spring with excrement), recreational activities (such as bathing), diversion of the water source, and introduction of non-native or invasive species (Hershler 1998, Sada and Vinyard 2002).

Vesper Sparrow - The vesper sparrow may be found in the project area since it typically inhabits sagebrush-grass vegetative communities at the higher elevations. The vesper sparrow responds negatively to heavy grazing in sagebrush/grasslands. It prefers mixed grass and sagebrush habitat where shrub cover is limited and bare ground is often present (Floyd et al. 2007). It forages on the ground and eats mostly seeds from grasses and forbs and will also eat insects when they are available. In these habitats, it benefits from open areas with scattered shrubs and a cover of good bunchgrasses for nest concealment, since it is a ground nester (Paige and Ritter, 1999).

Western Snowy Plover - This species is part of the migratory inland breeding population and is considered a distinct population segment from the coastal western snowy plover, which is listed as a threatened species. These birds are typically found nesting on open salt flats, where vegetation is sparse or absent. The nesting success of western snowy plovers is impacted by general human disturbance, and loss of suitable habitat. (Nature Serve 2013).

Windloving Buckwheat - This is a low perennial herb with leafless flower stalks rising about 6.5 cm above clumps of white-hairy leaves. The stalks bear a terminal, globular cluster of white flowers. It blooms in late June and July. At high elevations, it inhabits dry, exposed, relatively barren and undisturbed, gravelly, limestone or volcanic ridges and ridgeline knolls, on outcrops or shallow rocky soils over bedrock. At low elevations it inhabits dry, relatively barren and

undisturbed knolls and slopes of light-colored, platy volcanic tuff weathered to form stiff clay soils, on all aspects (NNHP 2001).

### 3.1.3.8. Vegetation

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 saltbush (*Atriplex confertifolia*), bud sage (*Picrothamnus desertorum*), winter fat (*Krascheninnikovia lanata*), black greasewood (*Sarcobatus vermiculatus*), squirreltail (*Elymus elymoides*), and Sandberg's bluegrass (*Poa secunda*). Species typical in higher elevations include Wyoming big sagebrush (*Artemisia tridentate wyomingensis*), mountain big sagebrush (*Artemisia tridentate vaseyana*), bitterbrush (*Purshia tridentata*), rabbit brush (*Chrysothamnus viscidiflorus*), Utah juniper (*Juniperus osteosperma*), bluebunch wheatgrass (*Pseudoroegneria spicata*), basin wildrye (*Leymus cinereus*) and long leaf phlox (*Phlox longifolia*).

Cheatgrass (*Bromus tectorum*) is present on these allotments. Cheatgrass composition is greatest on the fan piedmonts, generally ranging from 11 to 30 percent cover. Cheatgrass cover decreases on the lake plains (greasewood sites), generally ranging from 0 to 10 percent. Higher elevations cheatgrass cover is generally 0 to 5 percent.

Ecological sites can also describe habitat types by their key species. The majority of the habitat types include a shrub component which is typical of Northern Nevada.

### 3.1.3.9. Wild Horses

The majority of the wild horses have been observed utilizing the area on the southern end of the HA between the Humboldt River Ranch community and Packard Flats. No AML has been set by the BLM for the Humboldt HA as this area was not designated in the Sonoma-Gerlach MFP for the long term management of wild horses due to the checkerboard pattern of land ownership within the HA.

Annual rates of wild horse population increase are compiled to take into account both mortality and foaling and are estimates used to project population growth during years when an aerial population count is not completed. A 15% projected annual recruitment rate has been established for the Humboldt HA. The current 2013 estimated population of wild horses within the Humboldt HA is 161 horses based on previous surveys and the 15% projected rate of increase.

An aerial flight for surveying distribution of wild horses was conducted September 25, 2012. BLM staff observed 72 horses within the HA. This flight was conducted using a fixed-wing aircraft.

### 3.1.3.10. Wildlife

Terrestrial wildlife resources in the project area are typical of the Northern Great Basin. A wide variety of wildlife species common to the Great Basin ecosystem can be found within the project area. Common large and small wildlife species occurring in the area include mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), coyote (*Canis latrans*), blacktail jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus auduboni*), bobcat (*Lynx rufus*), mountain lion (*Felis concolor*) reptiles, and other small mammal species.

Mule Deer - The Humboldt Range provides mule deer with crucial summer and crucial winter habitat within the project area. Mule deer generally feed on forbs, grasses, and shrubs depending on the time of year. Forbs and grasses are most important in spring and summer while shrubs are most utilized during winter and dry summer months.

Pronghorn Antelope – There are areas of year-round pronghorn habitat around the perimeter of the project area and winter range located along the top of the range from Spring Valley to Coal Canyon. Rangelands with a mixture of grasses, forbs, and shrubs provide the best habitat for pronghorn. Pronghorn seem to prefer habitats with shrub heights between 10-25 inches.

# **Chapter 4. Environmental Effects:**

## 4.1. Environmental Effects:

Direct impacts are those that result from the actual gather and removal of excess wild horses. Indirect impacts are those impacts that occur once the excess animals are removed. Direct impacts and indirect impacts regarding the Proposed Action (Action Alternatives) and Alternative 2 (No Action) are discussed in each resource section below.

### 4.1.1. Cultural Resources

#### Proposed Action

The following actions would have little to no impact to cultural resources: helicopter activity, roping from horseback, and transportation of gathered horses. Gather sites, including bait/water trapping sites if used, temporary holding areas and observation areas are the locations that could potentially impact cultural resources. Direct impacts to cultural resources would not be anticipated because gather sites, temporary holding facilities, and observation areas would be placed in previously disturbed areas, previously inventoried areas with no cultural resources, or would be inventoried for cultural resources prior to construction. Any location where cultural resources are encountered would not be utilized unless the trap or holding site configuration could be repositioned to avoid impacts to cultural resources.

Areas in the vicinity of permanent and intermittent water sources (i.e., riparian areas) have the highest potential for cultural resource sites. Since wild horses concentrate in these areas, soils are most likely to be compacted, increasing runoff and subsequently increasing erosion. Under the proposed action, the removal of excess wild horses would lead to improvements in areas in the vicinity of permanent and intermittent water sources. This would reduce indirect impacts to cultural resources and help to alleviate potential damage in riparian zones where concentrations of wild horses can lead to damage and displacement of artifacts and features as well as erosion of surface cultural deposits containing valuable information. Gather sites and holding areas would not be placed in riparian zones, therefore culturally sensitive areas would not be impacted by these temporary sites.

#### Alternative 2. No Action

There would be no direct impacts under this alternative. However indirect impacts described above may increase as wild horse populations continue to increase and as higher numbers of wild horses concentrate at riparian areas, thereby disturbing or destroying cultural resources that may be present in these areas.

### 4.1.2. Invasive-Nonnative Species

#### Proposed Action

Implementation of the proposed action would have little or no impact to natural resources as a result of increased noxious weed infestation. Soil disturbance associated with gather sites, including bait/water trapping sites, temporary holding areas, and observation areas would provide the principal opportunities for spread of noxious weeds, and these areas would be monitored and managed for noxious weed infestations. Disturbed soils would be re-vegetated following gather operations which would accelerate recovery of the disturbed site and reduce or eliminate

opportunity for noxious weeds to infest the gather operations sites. Wild horses are capable of transporting weed seeds and creating disturbed soils which are conducive to germination and establishment of noxious weeds, and their removal from the Humboldt HA would remove a potential vector of noxious weed spread. Disturbance associated with gather operations would be temporary and would occur in a controlled and managed fashion with a weed management component. Due to the continued presence of other major transport vectors in the area, such as continued livestock use, public vehicle traffic on native surface roads, and current and historical mining disturbances, the removal of wild horses from the Humboldt HA would have a negligible effect on dispersal of invasive species and/or noxious weeds.

### Alternative 2. No Action

By not implementing the proposed action, the number of horses within the Humboldt HA would continue to increase over time, eventually leading to overpopulation of the range's carrying capacity with correlated increased impacts to natural vegetation through elevated wild horse grazing levels, and increased disturbance due to increased wild horse traffic. Increased disturbance, particularly in riparian areas, and increased wild horse grazing of existing perennial vegetation would subsequently increase opportunities for noxious weeds and invasive species to further establish and spread within the Humboldt HA. Increased disturbance as a result of unchecked wild horse population growth would be widely dispersed and unmanaged, creating the potential for increased presence of noxious weeds within the Humboldt HA without a responsive weed management strategy.

## **4.1.3. Migratory Birds**

### Proposed Action

The project area contains riparian and sagebrush habitats, therefore potential impacts to neo-tropical migrants may be expected. If gather operations are conducted in July or August, nesting birds may be disturbed and abandon their nests. If gather operations are completed September through February, this alternative would not directly impact most migratory birds since the nesting season has been completed. In order to avoid potential impacts to breeding migratory birds from gather sites, a nest survey would be conducted by BLM personnel within potential breeding habitat prior to any surface disturbance proposed during the avian breeding season (March 1st through August 31st), therefore, there would be no direct impacts to nesting birds from the proposed action.

Small areas of migratory bird habitat would be impacted by trampling at trap sites and holding facilities. This impact would be minimal (generally less than 0.5 acre/trap site), temporary, and short-term (two weeks or less) in nature. Birds may be temporarily displaced in areas of noise and activity associated with the horse gather. Indirect impacts would be related to wild horse densities and patterns of use. Removal of the excess wild horse population would provide opportunity for vegetative communities to progress toward achieving a thriving natural ecological balance. The proposed action would support a more diverse vegetative composition and structure through improvement and maintenance of healthy populations of native perennial plants. Habitat improvements would result for migratory bird species including loggerhead shrikes, Brewer's sparrows, sage thrashers, burrowing owls and migratory and resident raptor species. According to Paige and Ritter (1999), "Long-term heavy grazing may ultimately reduce prey habitat and degrade the vegetation structure for nesting and roosting. Light to moderate grazing may provide

open foraging habitat.” These actions are expected to improve habitat for migratory birds by reducing wild horse impacts to rangeland resources.

Competition with wild horses for water at artificial pit reservoirs and water catchments, or natural catchments, would be removed and more water would be available for a longer period of time for the wildlife species dependent on the same source(s).

#### Alternative 2. No Action

This alternative would have no direct impacts. Indirect impacts would be the continued impacts to vegetative communities by wild horses in the HA. There would also be an increase in herd size within the HA each year that the HA is not gathered and therefore, increasingly heavier impacts to and potential degradation of migratory bird habitat.

### **4.1.4. Native American Religious Concerns**

None of the tribes contacted requested consultation on this proposed action. On past horse gathers, the Fallon and Pyramid lake tribes have been supportive of the gathers since the gathers help improve the health of the range. One concern in past consultation was that the gathers be conducted in the winter or spring before the foaling season. Due to the potential lack of water, they have previously expressed concerns about horse gathers in summer and fall. The Proposed Action would be in conformance with BLM policy which prohibits the gathering of wild horses with a helicopter (unless under emergency conditions) during the period of March 1 to June 30 which includes and covers the six weeks that precede and follow the peak of foaling (mid-April to mid-May). The impacts from the timing of the gather are addressed further in [Section 4.1.15, “Wild Horses”](#).

#### Proposed Action

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

#### Alternative 2. No Action

There would be no direct impacts under this alternative. Wild horses would continue to inhabit areas within the HA. As the wild horse population continues to increase and as greater numbers of wild horses concentrate at riparian areas, this could have adverse impacts on plants in riparian zones that are used by Native Americans.

### **4.1.5. Water Quality (surface and ground)**

#### Proposed Action

Implementation of the proposed action would cause direct and indirect impacts to water quality and quantity.

Movement of wild horses across streams and springs as they are herded to temporary gather sites is a direct impact and can cause increased sediment loading to surface waters. Effects would be very short term (on the order of minutes), may occur multiple times during the duration of

helicopter drives (depending on where horses are moving), and would likely be negligible relative to natural variations in the affected environment. Because the BLM cannot predict the exact course of movements of wild horses during herding, the BLM cannot identify the number of surface water sources or the number of miles of stream that may be impacted.

Removal of wild horses would have direct and indirect impacts to surface water quality. Effects would be long term (the duration of the time period analyzed in this EA) and occur throughout the HA. Removal of wild horses would eliminate a source of biological contaminants (feces, urine, etc.) for surface water sources. Removal of wild horses would also eliminate the utilization and alteration of riparian habitats by wild horses. While PFC data do not indicate a large degree of degradation of riparian habitats in the HA, it is likely that these habitats would experience a degree of improvement. Improvement of these habitats would lead to increased water quality by increasing shading, which helps moderate water temperature variations, as well as decreasing erosion, which decreases sediment loads. While there is potential for this impact to occur at all of the springs and streams identified throughout the HA, it is likely to mainly occur in localized areas where wild horses have been concentrated.

Removal of wild horses would have indirect impacts to water quantity. Effects would be long term (the duration of the time period analyzed in this EA) and occur throughout the HA. Removal of wild horses would eliminate the use of stock water by wild horses. With an estimated consumption rate of 10 gallons per adult horse per day, this would reduce consumption of water in the HA by approximately 1,400 gallons per day. While there is potential for this impact to occur at all 48 stock water right locations throughout the HA, it is likely to mainly occur at water sources in localized areas where wild horses have been concentrated.

Water trapping of wild horses would have a direct impact on water quantity. Effects would be short term (one year or less per site used) and be of low magnitude and would occur at each site chosen to be a water trap site. BLM would utilize water (surface or ground) at a rate sufficient to encourage horse use. Because water trapping is expected to be used to gather smaller numbers of wild horses at any given time, large volumes of water would not be required. Water use for the purpose of trapping would not interfere with other water uses permitted by the Nevada State Engineer.

### Alternative 2. No Action

Implementation of the No Action Alternative would have indirect impacts on water quality and quantity.

Allowing wild horses to remain within the HA could cause indirect impacts to surface water quality throughout the entire HA. It is expected that the wild horse population within the HA would continue to increase over time. Increasing populations of wild horses can lead to elevated levels of riparian degradation. Riparian degradation within the HA would lead to increased sediment loading (through bank alteration and loss of soil stabilizing vegetation), increased contaminant loading (through introduction of feces or urine), and increased water temperature fluctuations (from loss of vegetative shading).

Implementation of the No Action Alternative would not cause impacts related to additional movement of horse across surface waters during gather operations or cause impacts related to construction or use of temporary gather and holding sites.

Allowing wild horses to remain within the HA could cause indirect impacts to water quantity throughout the entire HA. It is expected that the wild horse population within the HA would continue to increase over time. As the wild horse population increased, the use of water by wild horse would increase. The use of water currently permitted for other uses would also increase, leading to increased public concern. Because the area is managed as an HA it is unlikely that the BLM would be able to obtain permitted water rights to set aside water for wild horse use.

Implementation of the No Action Alternative would not cause impacts related to removal of horses or utilization of water for trapping.

#### **4.1.6. Wetlands and Riparian Zones**

##### Proposed Action

Implementation of the proposed action would cause direct and indirect impacts to riparian and wetland zones.

Movement of horses by helicopter could have direct impacts to riparian and wetland zones. Effects would be short term, may occur multiple times during helicopter drives (depending on where horses are moving), and could occur in any of the riparian or wetland zones within the HA. Herding horses with a helicopter may lead to increased rates of riparian and wetland trampling as horses move across the landscape. This additional trampling would vary in magnitude and the soils and vegetation may be able to recover immediately or may require a full growing season to recover. Because the BLM cannot predict the exact course of movements of wild horses during herding, the BLM cannot specify the number of acres of wetland and riparian zones that may be impacted. While there is potential for this impact to occur at all of the wetland and riparian zones identified throughout the HA, it is likely to mainly occur in localized areas where wild horses have been concentrated.

Removal of wild horses would have direct and indirect impacts to riparian and wetland zones. Effects would be long term (the duration of the time period analyzed in this EA) and occur throughout the HA. Removal of wild horses would eliminate the utilization and alteration of riparian habitats by wild horses. While PFC data do not indicate a large degree of degradation of riparian habitats in the HA, it is likely that these habitats would experience a degree of improvement. This improvement would include recovery of riparian vegetative communities and their soil stabilizing root structures and recovery of natural hydrologic processes. While there is potential for this impact to occur at 1,700 acres of wetland and riparian zones throughout the HA, it is likely to occur mainly in localized areas where wild horses have been concentrated.

##### Alternative 2. No Action

Implementation of the No Action Alternative would have indirect impacts on wetland and riparian zones.

Allowing wild horses to remain within the HA could cause indirect impacts to wetland and riparian zones throughout the entire HA. It is expected that the wild horse population within the HA would continue to increase over time. Increasing populations of wild horses can lead to elevated levels of riparian degradation. Riparian degradation within the HA could include loss of riparian vegetation, alteration of natural hydrologic flow regimes (from soil compaction, digging at spring sources, stream bank alteration, hummocking, or altered erosion/ deposition patterns), and loss of wetland and riparian soils.

Implementation of the No Action Alternative would not cause impacts related to additional movement of wild horses across riparian and wetland zones during gather operations or cause impacts related to activities associated with the gather and removal of wild horses.

### **4.1.7. Fire Resources — Fuels and Emergency Stabilization and Rehabilitation**

#### Proposed Action

The removal of wild horses would have no direct impacts on fire suppression, fire prevention, fuels management or emergency stabilization and rehabilitation (ES&R). Indirectly, wild horse removal would reduce impacts to ES&R treatments in burned areas where those animals are removed. Native ungulates, cows and wild horses are known to remove forage disproportionately in recently burned and seeded locations. By removing wild horses, fire rehabilitation treatments would receive less impacts from grazing and improved rehabilitation success should occur. Successful fire rehabilitation treatments should lead to improved condition of vegetation over time. There would be no new impacts within treated areas from those ongoing at the time of the gather as the wild horse population would be removed.

#### Alternative 2. No Action

Wild horse populations would continue to expand and seeded areas would be more vulnerable to over grazing as the excess horse population increases. The severity and extent of impacts would depend on when horses are gathered.

### **4.1.8. Fisheries**

#### Proposed Action

Direct impacts to fisheries would be minimal, due to the short term duration of the wild horse gather and the minimal fisheries habitat that would be crossed by wild horses during the gather operations. If streams are crossed by the wild horses during the gather, the stream banks could receive greater impacts than under normal wild horse movement crossing a stream due to the speed at which the horses might cross the stream when being herded by the helicopter. Indirect impacts with the removal of the wild horse herd would be a reduction in the long-term impacts of stream bank trampling to the fisheries habitat.

#### Alternative 2. No Action

With the No Action Alternative, there would be no direct impacts on fisheries from gather operations. Indirect impacts resulting from the wild horses, however, would persist. This population could impact fisheries through stream bank trampling, increased sedimentation, reduced vegetation (herbaceous and woody) cover, and overall reduced riparian/stream habitat condition.

### **4.1.9. Paleontology**

#### Proposed Action

Direct impacts to paleontological resources from the gather would be avoided by placing proposed gather sites, holding areas and observation in areas where there are no known paleontological sites. Indirect impacts from removal of the horses would be minimal since the horses aren't known to concentrate in areas where paleontological localities are located. Due to the minimal nature of impacts, this resource is not carried forward for further analysis.

#### Alternative 2. No Action

There would be no impacts to paleontological resources from gather operations. Impacts from trampling and erosion are anticipated to be minimal because concentrations of horses in paleontological localities are not anticipated.

### **4.1.10. Public Health and Safety**

#### Proposed Action

Public safety, as well as that of the BLM staff and contractor staff, is a concern during gather operations and is addressed through the implementation of Humboldt HA Gather Observation Protocol (see [Appendix B, Wild Horse Gather Public Observation Protocol](#)) that has been used in recent gathers to ensure public safety and to not impede gather operations. Appropriate BLM staffing (public affair specialists and law enforcement officers) would be present to assure compliance with visitation protocols at the site. These measures minimize the risks to the health and safety of the public, BLM staff and contractors, and to the wild horses themselves during the gather operations.

When the helicopter is working close to the ground, the rotor wash of the helicopter is a safety concern for members of the public by potentially causing loose vegetation, dirt, and other objects to fly through the air, and can strike or land on anyone in close proximity as well as cause decreased vision. Should a helicopter crash or have a hard landing it is possible that pieces of the helicopter can travel significant distances through the air, which can strike or land on anyone in close proximity. All helicopter operations must therefore be in compliance with distance restrictions set forth in FAA regulations at 14 CFR § 91.119.

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

Disturbances in and around the gather and holding corral have the potential to injure the BLM and contractor staff who are trying to sort, move and care for the wild horses by causing them to be kicked, struck, and possibly trampled by the animals trying to flee. Such disturbances also have the potential to harm members of the public if they are in too close in proximity to the wild horses or cause a horse to get spooked and injure itself as it reacts to such disturbances.

#### Alternative 2. No Action

Under the No Action Alternative, the gather would be deferred. There would be no safety concerns to BLM employees, contractors and the general public as no gather activities would occur.

## 4.1.11. Rangeland Management

### Proposed Action

Under the Proposed Action removal of excess wild horses would provide a greater opportunity for water and vegetative resources to recover relative to the No Action Alternative. Another direct impact to livestock from the Proposed Action is gather activities and operations could disturb or disperse livestock in order to keep them out of the water/bait trap. This direct impact would be minor and short-term in nature. Indirect impacts of the Proposed Action on livestock would be reduced competition for forage and water resources due to the absence of excess wild horses in the HA.

### Alternative 2. No Action

There would be no direct impacts to livestock from gather operations under the No Action Alternative. Utilization by authorized livestock would continue to be directly impacted by excess wild horses inside the Humboldt HA. The indirect impacts of the No Action Alternative would consist of continued resource deterioration resulting from competition between wild horses and livestock for water and forage, reduced quantity and quality of forage, and undue hardship on the livestock operators, due to the inability to graze livestock on public lands within the grazing allotments as a result of competition for limited waters or the consumption by excess wild horses of forage allocated to livestock under the operative land-use plans and prior multiple use decisions.

## 4.1.12. Soils

### Proposed Action

Direct impacts associated with the action alternatives would consist of disturbance to soil surfaces immediately in and around the temporary bait/water trap site(s) and holding facilities. Impacts would be created by vehicle traffic and hoof action as a result of concentrating horses, and could be locally high in the immediate vicinity of the temporary bait/water trap site(s) 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 temporary bait/water trap sites and holding facilities would be selected to enable easy access by transportation vehicles and logistical support equipment. Normally, these gather sites 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 potential impacts to soils.

Indirect impacts of implementing the proposed alternative and from reduced concentrations of wild horses would be reduced soil erosion within the Humboldt HA. This reduction in soil erosion would be most notable and important in the vicinity of riparian zones.

### Alternative 2. No Action

No direct impacts are expected under this alternative. Indirect impacts are expected since herd areas are not managed for wild horses; therefore, there are no resources allocated for their use. As the wild horse population increases in the Humboldt HA, soil loss from wind and water erosion and invasion of undesired plant species could result from heavy trailing and over-utilization of vegetation as perennial native grasses are unable to survive. This loss would be most notable in the vicinity of small spring meadows and other water sources with high levels of wild horse use.

### 4.1.13. Special Status Species

#### Proposed Action

Special Status Migratory Birds and Raptors - Impacts to special status migratory birds (including raptors) would be the same as those discussed under Chapter 4.3 Migratory Birds.

Bats – The proposed action would have positive indirect impacts to bats that depend upon flying insects primarily associated with riparian zones. Flying insect populations would be expected to increase as riparian meadows become more productive and stubble heights increase, creating favorable micro sites for insects. Increased insect production would be expected to provide increased foraging opportunities for resident and migratory bats. No direct impacts are expected for bats under these alternatives.

Special Status Plants – The three of the special status plants (Goodrich biscuitroot, Holmgren smelowskia, and Owyhee prickly phlox) are found on steep rocky substrates and would not be impacted by the proposed action as they grow in areas that are most likely inaccessible by wild horses. These plants would not be affected by temporary trap sites either as the terrain where they are located is considered to be inaccessible for trap sites.

Lahontan beardtongue, windloving buckwheat and obscure scorpionflower may benefit from the proposed action as removing wild horses would remove a source of disturbance (trampling and grazing) for these species. This is especially critical for the obscure scorpionflower which is only known to occur on the Humboldt Range in northern Nevada. Since a special status plant inventory would be required prior to setting up a trap site in known habitat for these three species, no direct impacts from constructing traps are expected.

Pygmy Rabbit - A slight chance of damage to pygmy rabbits and their burrows could occur due to trampling by wild horses. Rabbit behavior may be disrupted due to noise from the low-flying helicopter and running wild horses. Potential indirect impacts to pygmy rabbits would include increased herbaceous cover under existing stands of big sagebrush used as pygmy rabbit habitats. Removal of wild horses would decrease physical damage to tall sage-brush plants that screen rabbit burrows and decrease hoof damage to burrows.

Sage-Grouse - During proposed gather dates, sage grouse would have completed chick-rearing and would have moved to their wintering habitats. Temporary disturbance to sage grouse associated with helicopter over flights and cowboys on horseback may occur but would have no measurable impacts. Therefore, no direct impacts are anticipated.

Increased herbaceous cover would result from decreased forage usage by excess wild horses. Herbaceous cover is needed for screening of sage-grouse nests and to provide sage-grouse with forage plants on breeding and summer habitats. Wild horses are affecting sage-grouse habitat through heavy utilization of upland grasses and meadows used by sage-grouse for nesting and summer brood rearing. Increased herbaceous cover on spring meadows would improve summer brooding habitats by increasing the availability of high quality herbaceous vegetation and increasing the availability of insects associated with riparian meadows.

Springsnails – Springsnails may benefit from the proposed action as removing wild horses would remove a potential source of disturbance (trampling) for these species.

#### Alternative 2. No Action

No direct impacts to special status wildlife are expected under this alternative. Maintaining the existing excess wild horse numbers within the Humboldt HA, which would continue to increase as a result of population growth, would result in continued indirect impacts to sensitive wildlife populations and habitats. Wild horse populations would increase approximately 15% each year that the gather is postponed. Upland habitats would continue to see an increase in utilization levels associated with wild horse use which would expand as wild horse populations continue to grow.

Special status plants may be directly impacted by wild horses under the No Action Alternative. As wild horse populations increase the likelihood of these plants being grazed by wild horses also increases.

If excess wild horses are not removed, continued wild horse grazing would occur on spring meadow systems that serve important habitat functions for sensitive species. Sage-grouse brooding habitats would continue to be impacted by wild horses. Insect production, important for bats and sage-grouse, would continue to be substantially less than potential.

#### **4.1.14. Vegetation**

##### Proposed Action

Direct impacts associated with the action alternatives would consist of disturbance to vegetation immediately in and around the temporary bait/water trap site(s) and holding facilities. Impacts would be created by vehicle traffic and hoof action as a result of concentrating horses at the gather site, and could be locally high in the immediate vicinity of the temporary bait/water trap site(s) 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. These impacts would include trampling of vegetation.

In addition, most temporary bait/water trap 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 long-term effects of these impacts.

Implementation of the action alternative would remove the current wild horse population resulting in decreased harvest of vegetation and prevent over-grazing. Competition for forage among wild horses, wildlife, and livestock would be reduced as utilization levels decrease and rangeland health improves; thereby promoting healthier habitat. Allotment specific utilization objectives would not be exceeded. Removal of wild horses could contribute to the recovery of the vegetative resource. Physical damage to shrubs and herbaceous vegetation associated with the physical passage of horses would decrease.

##### Alternative 2. No Action

There would be no direct impacts expected under this alternative.

Indirect impacts include increased competition for forage among multiple-users of the range as wild horse populations continue to increase. As a result of the increasing wild horse populations, wild horses would trail farther out from limited waters to foraging areas, subsequently broadening the areas receiving grazing or trailing use. The Humboldt HA is not managed for wild horses; therefore, no forage has been allocated for their use. Forage utilization by wild horses could exceed the capacity of the range, resulting in a loss of desired forage species from plant

communities as plant health and watershed conditions deteriorate. Abundance and long-term production potential of desired plant communities may be compromised and native vegetative loss could become irreversible in some areas, potentially precluding the return of these vegetation communities to their full potential as identified in ecological site descriptions published by the Natural Resource Conservation Service.

### 4.1.15. Wild Horses

#### Proposed Action

Impacts to wild horses under the Proposed Action would be both direct and indirect, occurring on both individual animals and the population as a whole.

#### **Capturing Wild Horses**

The BLM has been gathering excess wild horses from public lands since 1975 and has been using helicopters for such gathers since the late 1970s. Refer to [Appendix A, Standard Operating Procedures \(Gather Operation\)](#) for information about methods that are utilized to reduce injury or stress to wild horses during gathers. Since 2004, BLM Nevada has gathered over 40,000 excess animals. Of these, gather related mortality has averaged 0.5%, which is very low when handling wild animals. Another 0.6% of the animals captured were humanely euthanized due to pre-existing conditions and in accordance with BLM policy. This data affirms that the use of helicopters and motorized vehicles are a safe, humane, effective and practical means for gathering and removing excess wild horses from the range.

Injuries sustained by wild horses during gathers include nicks and scrapes to legs, face, or body from brush or tree limbs while being herded to the trap corrals by the helicopter. Rarely, wild horses may encounter barbed wire fences and receive wire cuts. These injuries are generally not fatal and are treated with medical spray at the holding corrals until a veterinarian can examine the animal. During the actual herding of wild horses with a helicopter, injuries are rare, and consist of scrapes and scratches from brush, or occasionally broken legs from wild horses stepping into a rodent hole. Serious injuries requiring euthanasia could be anticipated to occur in 1-2 wild horses per every 1,000 captured based on prior gather statistics. If a gather were to be implemented additional care and monitoring would be planned to ensure pregnant mares and foals were appropriately cared for.

Though some members of the public have expressed the view that helicopter gathers are not humane, most injuries occur once the wild horses are captured, and similar injuries would also be sustained if wild horses were captured through a more passive gather method such as bait/water trapping, as the animals would still need to be sorted, aged, transported and otherwise handled.

#### Environmental Stressors

Gathering wild horses during the winter months can minimize the risk of heat stress, although heat stress can occur at any time of year during any gather, especially in older or weaker animals. Although there may be more potential for heat stress during a gather conducted in the summer months, adherence to the SOPs and techniques used by the gather contractor help minimize the risks of heat stress. Heat stress does not occur often, but if it does, death can result. Most temperature related issues during a gather (including heat stress) can be mitigated or minimized by adjusting daily gather times to avoid the extreme hot or cold periods of the day. The BLM and the contractor would be pro-active in controlling dust in and around the holding facility and the

gather corrals to limit the wild horses' exposure. Electrolytes can be administered to the drinking water during gathers that involve animals in weakened conditions or during summer gathers. Additionally, BLM staff maintains supplies of electrolyte paste if needed to directly administer to an affected animal. The Humboldt HA gather operations SOPs are designed to minimize stress of wild horses associated with distance and speed of travel.

### Sorting and Transporting Wild Horses

Most injuries are sustained once the wild horse has been captured and is either within the trap corrals or holding corrals, or during transport between the facilities and during sorting. These injuries result from kicks and bites, and from animals making contact with corral panels or gates. Transport and sorting is completed as quickly and safely as possible to reduce the occurrence of fighting and to move the wild horses into the large holding pens where they can settle in with hay and water. Injuries that may be experienced by wild horses during transport and sorting consist of superficial wounds of the rump, face, or legs. Despite precautions, occasionally a wild horse may rear up or make contact with panels hard enough to sustain a fatal neck break, though such incidents are rare. There is no way to reasonably predict any of these types of injuries. On many gathers, no wild horses are injured or die. Due to the genetic background of wild horses, some are not as calm as others and injuries may occur. Overall, however, injuries and death are not frequent and usually average less than 0.5% of the gathered population.

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

### Wild Horses Response to Handling

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

The wild horse is a very adaptable animal and assimilates into the environment with new members quite easily. Observations made following completion of gathers shows that captured wild horses acclimate quickly to the holding corral situation, becoming accustomed to water tanks and hay, as well as human presence.

Indirect individual impacts are those impacts which occur to individual wild horses after the initial stress event, and may include spontaneous abortions in mares, and increased social displacement and conflict in stallions. These impacts, like direct individual impacts, are known to occur intermittently during wild horse gather operations. An example of an indirect individual impact would be the brief skirmish which occurs among older stallions following sorting and release

into the stallion pen, which lasts less than a few minutes and ends when one stallion retreats. Traumatic injuries usually do not result from these conflicts. These injuries typically involve a bite and/or kicking with bruises which do not break the skin. Like direct individual impacts, the frequency of occurrence of these impacts among a population varies with the individual animal.

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

Foals are often gathered that were orphaned on the range (prior to the gather) because the mother rejected it or died. These foals are usually in poor, unthrifty condition. Orphans encountered during gathers are cared for promptly and rarely die or have to be euthanized

### Temporary Holding Facilities During Gathers

Wild horses that are gathered would be transported from the gather sites to a temporary holding corral within the Humboldt HA in goose-neck trailers. At the temporary holding corral wild horses would be sorted into different pens based on sex, age class and health status. The wild horses would be provided good quality hay and water. Mares and their un-weaned foals would be kept in pens together. Wild horses are initially nervous in new surroundings which results in the need to keep visitors and extra personnel at a safe distance from pens to allow the animals to settle down and to water and feed. At the temporary holding facility, a veterinarian, when present, would provide recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club foot, and other severe congenital or developmental abnormalities) would be humanely euthanized using methods acceptable to the American Veterinary Medical Association (AVMA).

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

Wild horses removed from the range would be transported to the receiving short-term holding facility in a goose-neck stock trailer or straight-deck semi-tractor trailers. Trucks and trailers used to haul the wild horses would be inspected prior to use to ensure wild horses can be safely transported. Wild horses would be segregated by age and sex when possible and loaded into separate compartments. Mares and their un-weaned foals may be shipped together. Transportation of recently captured wild horses is limited to a maximum of 12 hours. During transport, potential impacts to individual wild horses can include stress, as well as slipping, falling, kicking, biting, or being stepped on by another animal. Unless wild horses are in extremely poor condition, it is rare for an animal to die during transport.

Upon arrival, recently captured wild horses are off-loaded by compartment and placed in holding pens where they are provided good quality hay and water. Most wild horses begin to eat and drink immediately and adjust rapidly to their new situation. At the short-term holding facility, a veterinarian provides recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club foot, and other severe congenital or developmental abnormalities) would be humanely euthanized using methods acceptable to the AVMA. Wild horses in very thin condition or animals with injuries are sorted and placed in hospital pens, fed separately and/or treated for their injuries. Recently captured wild horses, generally mares, in very thin condition may have difficulty transitioning

to feed. A small percentage of animals can die during this transition; however, some of these animals are in such poor condition that it is unlikely they would have survived if left on the range.

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

At short-term corral facilities, a minimum of 700 square feet is provided per animal. Mortality at short-term holding facilities averages approximately 5% (USGAO 2008) including animals euthanized due to a pre-existing condition, animals in extremely poor condition, animals that are injured and would not recover, animals which are unable to transition to feed, and animals which die accidentally during sorting, handling, or preparation. As of February 2012, approximately 15,600 excess wild horses are being maintained within BLM's short-term holding facilities.

### Adoption

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

### Sale with Limitation

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

### Long-Term Grassland Pastures

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

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

LTPs are designed to provide excess wild horses with humane, and in some cases, life-long care in a natural setting off the public rangelands. There, wild horses are maintained in grassland pastures

large enough to allow free-roaming behavior and with the forage, water, and shelter necessary to sustain them in good condition. As of May 22, 2013, about 34,000 wild horses are in excess of the current adoption or sale demand (because of age or other factors such as economic recession) are currently located on private land pastures in Oklahoma, Kansas, Iowa, South Dakota, Nebraska, and Montana. (BLM 2013). Establishment of LTPs was subject to a separate NEPA and decision-making process. Located in mid or tall grass prairie regions of the United States, these LTPs are highly productive grasslands compared to the more arid western rangelands. These pastures comprise about 256,000 acres (an average of about 10-11 acres per animal).

Mares and sterilized stallions (geldings) are segregated into separate pastures except at one facility where geldings and mares coexist. Although the animals are placed in LTP, they remain available for adoption or sale to qualified individuals; and foals born to pregnant mares in LTP are gathered and weaned when they reach about 8-12 months of age and are also made available for adoption. The LTP contracts specify the care that wild horses must receive to ensure they remain healthy and well-cared for. Handling by humans is minimized to the extent possible although regular on-the-ground observation by the LTP contractor and periodic counts of the wild horses to ascertain their well-being and safety are conducted by BLM personnel and/or veterinarians. A small percentage of the animals may be humanely euthanized if they are in very poor condition due to age or other factors. Although wild horses residing on LTP facilities live longer, on the average, than wild horses residing on public rangelands, natural mortality of wild horses in LTP averages approximately 8% per year, but can be higher or lower depending on the average age of the wild horses pastured there (USGAO 2008).

#### Euthanasia or Sale Without Limitation

While euthanasia and sale without limitation has been limited by Congressional appropriations, it is allowed under the WFRHBA. Neither option is available for wild horses under the Department of the Interior's fiscal year 2013 budgetary appropriations. Although the appropriations restrictions could be lifted in future appropriations bills, it would be contrary to Departmental policy to euthanize or sell without limitations healthy excess wild horses.

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

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

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

When actively trapping wild horses, the trap would be manually closed by BLM or contractor staff or if designed to allow the animals to self-trap using spring gates, the trap would be checked on a daily basis. Wild horses would be either removed immediately or fed and watered for up to several days prior to transport to a holding facility. Existing roads would be used to access the trap sites.

Gathering of the excess wild horses utilizing bait/water trapping could occur at any time of the year and would extend until all of the wild horses residing within the HA boundaries are removed. Generally, bait/water trapping is most effective when a specific resource is limited, such as water during the summer months. For example, in some areas, a group of wild horses may congregate at a given watering site during the summer because there are no other water resources available nearby. Under those circumstances, water trapping could be a useful means of gathering wild horses at a given location, which can also relieve the resource pressure caused by too many wild horses. As the proposed bait and/or water trapping in this area is generally a lower stress approach to gathering of wild horses, such trapping can continue into the foaling season without harming the mares or foals. Conversely, it has been documented that at times water trapping could be stressful to wild horses due to their reluctance related to approaching new, human structures or intrusions. In these situations, wild horses may avoid watering or may travel greater distances in search of other watering sources. Water trap sites would be monitored to assure wild horse mortality does not occur.

### Alternative 2. No Action

Under the No Action alternative, excess wild horses would not be removed from areas within the HA. Wild horse populations would continue to increase at an average rate of 15% per year. Without a gather and removal now, the wild horse population in the Humboldt HA would exceed 900 wild horses in 10 years based on population annual reproduction rate estimates. These population levels would continue to exceed the carrying capacity of the range.

The increasing population of wild horses under the No Action alternative would over-extend and deplete water and forage resources. Excessive utilization, trampling, and trailing by wild horses would further degrade the vegetation, prevent improvement of range that is already in less than desirable or in degraded condition, would degrade currently healthy rangelands, and would not allow for sufficient availability of forage and water for either wild horses or other ungulates, especially during drought years or severe winter conditions.

Throughout the lands administered by the WD, few predators exist to control wild horse populations. Some mountain lion predation occurs, but does not appear to be substantial. Coyote are not prone to prey on wild horses unless wild horses are very young or extremely weak. Other predators such as wolf or bear do not exist within the WD.

Wild horses are a long-lived species with documented foal survival rates exceeding 95%. Survivability rates collected through research efforts are as follows:

Pryor Mountain Wild Horse Range, Montana: >95%; 15 years and younger, except for foals, both sexes: 93%;

Granite Range HMA, Nevada: >95%; 15 years and younger, except for male foals: 92%;

Garfield Flat HMA, Nevada: > 95%; 24 years and younger, except both foals, both sexes: 92%.

Wild horses are not a self-regulating species and would continue to reproduce until their habitat can no longer support them. Usually the habitat is severely, if not irreversibly, damaged before the wild horse population is abruptly impacted and experiences substantial death loss. Once the vegetative and water resources are at these critically low levels due to excessive utilization by an over population of wild horses, the weaker animals, generally the older animals and the

mares and foals, are the first to be impacted. It is likely that a majority of these animals would die from starvation and dehydration. The resultant population would be heavily skewed towards the stronger stallions which would lead to substantial social disruption. Fighting among the wild horse stallions would increase as they protect their position at scarce water sources and their harems, and injuries and death to all age classes of animals would be anticipated. By managing the public lands in this way, the vegetative and water resources would be impacted first and to the point that they have no potential for recovery.

Trampling and trailing damage by wild horses in/around riparian areas would also be expected to increase, resulting in larger, more extensive areas of bare ground. Continued decline of rangeland health and irreparable damage to vegetative, soil and riparian resources, would have obvious impacts to the future of the HA and all other users of the range's resources. Competition for the available water and forage between wild horses, domestic livestock, and native wildlife would increase. Continued decline of rangeland health and irreparable damage to vegetative, soil and riparian resources, would have obvious impacts to the future of the HA and all other users of the resources, which depend upon them for survival. As a result, the No Action Alternative would not ensure healthy rangelands that would allow for the management of a healthy wild horse population, and would not promote a thriving natural ecological balance.

As populations increase beyond the capacity of the habitat to sustain them, more bands of wild horses would leave the boundaries of the HA in search of forage and water. This alternative would also result in increasing numbers of wild horses in areas not designated for their use, and would not achieve the stated objectives for wild horse herd areas to "prevent the range from deterioration associated with overpopulation" (WFRHBA).

## 4.1.16. Wildlife

### Proposed Action

In addition to direct impacts previously analyzed for Migratory Bird and Special Status Species, direct impacts would consist primarily of disturbance and displacement to wildlife by the low-flying helicopter, running wild horses and construction of temporary trap/holding facilities. Typically, the natural survival instinct of wildlife to this type of disturbance is to flee from the perceived danger. 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.

Implementation of the Proposed Action would remove competition for available cover, space, forage, and water between wild horses and other wildlife. Removing the wild horse population would eliminate conflicts between wild horses and wildlife at limited water sources. Reduced harvest of vegetation would result in increased plant vigor, production, seedling establishment, and ecological health of important wildlife habitat. Resident populations of mule deer and pronghorn antelope would benefit from an increase in forage availability, vegetation density, and structure.

See [Section 4.1.3, "Migratory Birds"](#) for further effects on wildlife species that would occur with the reduction of water use as a result of removing wild horses.

### Alternative 2. No Action

No direct impacts are expected under this alternative. Maintaining the current numbers of excess wild horses on the range and augmented by yearly population growth, would result in continued impacts to wildlife populations and habitats. Wild horse populations would increase by about

15%. Upland habitats would continue to see locally heavy levels of utilization associated with wild horse use which would expand as wild horse populations continue to grow. The associated decrease in herbaceous vegetation would reduce wildlife forage availability and quality, decrease nesting and thermal cover, and potential decreasing population levels. Wildlife habitat would also continue to be impacted by the physical action of wild horse movement.

If excess wild horses are not removed, continued wild horse grazing would occur on spring meadow systems that serve important habitat functions for wildlife species. The result would be to decrease water availability, leading to increased competition for this critical resource. Increasing wild horse populations would continue to concentrate and trample riparian areas, thereby degrading riparian habitats and the important functions these sites represent for many wildlife species.

## 4.2. Cumulative Effects

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

The Cumulative Assessment Area (CAA) for the purpose of this analysis is the Humboldt HA (refer to [Map 1](#)). The length of time considered for the cumulative impact analysis is based on the potential impacts to the resource from the proposed action of the proposed gather in July of 2013 and any potential follow-up bait trapping activities that may occur within ten years of the initial gather.

### 4.2.1. Past and Present Actions

On the basis of aerial photographic data, BLM Legacy Rehost 2000 database (which records lands and mineral actions) report ran on February 4, 2013, current agency GIS records and analysis, the following past and present actions, which have impacted the assessment area to varying degrees, have been identified: agricultural development, livestock grazing, residential development, transportation and access, right-of-ways and mineral resources.

Agricultural Development – The cultivation of crops, such as alfalfa, wheat, barley and oats, is a prominent activity on private land within the assessment area. The analysis of aerial imagery indicates that approximately 1,800 acres or about 0.42 percent of the assessment area are currently under agricultural production. On some parcels, this level of production is supported by substantial irrigation facilities and associated utilities.

Lands and Realty - According to BLM records, LR 2000, GIS data, past and present lands actions that have impacted the cumulative assessment area to varying degrees are: transportation and access (use and maintenance of roads and trails), development of utilities (power lines, natural gas line, fiber optic lines, communication sites), water pipelines, and easements across private lands.

Transportation and access – Interstate 80 defines the western edge of the Humboldt HA. Past and present actions within the assessment area are supported by an extensive transportation system. Most of these roads originated from mining exploration or ranching access and few are regularly maintained.

Utilities - Power lines, and other various land authorizations identified above, traverse the assessment area and have been in place for many years. Periodic maintenance to the existing facilities has resulted in some temporary vegetation removal and short term disturbance to wild horses due to human presence.

Livestock Grazing – Forage utilization during the 1900s was high when thousands of cattle, sheep, and horses grazed lands in northern Nevada. In the 1930s when overgrazing threatened to reduce Western rangelands to a dust bowl, Congress approved the TGA in 1934, which for the first time regulated grazing on public lands. The TGA required ranchers who grazed horses or livestock on public lands to have a permit and to pay a grazing fee, but by that time, thousands of wild horses roamed the Nevada desert unbranded and unclaimed.

Prior to the TGA, livestock grazing practices resulted in major impacts to soil resources and the vegetation communities they supported. As a result, historic livestock grazing activities prior to the TGA had significant impacts on the vegetation resources within the impact assessment area by eliminating or greatly reducing the primary understory plants. Cheat grass was introduced into the area in the early 1900s.

Prior to the TGA, livestock grazing practices also significantly impacted wetland and riparian zones. Wetland and riparian zones declined, riparian vegetation was insufficient to dissipate energy or to filter sediments, thereby increasing erosion and destabilizing stream banks and meadows. Destabilization of streams and meadows led to incised channels and gullies resulting in lowered water tables. In an effort to prevent adverse impacts to rangeland health and to support and better distribute livestock on the public range, a variety of range improvement projects have been implemented through the years dating back to the 1930s.

Within the Humboldt HA there are portions of seven grazing allotments: Coal Canyon, Humboldt House, Prince Royal, Rawhide, South Rochester, Rye Patch and Star Peak totaling approximately 400,000 acres or about 93% of the HA.

Mineral Resources – There has been mining activity within the cumulative impact assessment area since the 1870s. These were open pit or underground mines initiated to produce gold, silver, tungsten, mercury, antimony, gypsum, lead, clay, fluorspar, salt or iron. Some of these operations ended prior to current reclamation requirements and it is unlikely that any of these mining-related disturbances were reclaimed, although natural re-vegetation over time may have partially reclaimed some disturbances.

Currently in the Humboldt HA there are approximately six active mining and exploration operations totaling approximately 21,200 acres (Coeur Rochester, Standard, Florida Canyon, Willard, Relief Canyon and Spring Valley). Approximately sixty exploration operations have been authorized under Notices and Exploration Plans of Operations as described in the surface management regulations at 43 CFR 3809. Approximately sixteen gravel pits totaling approximately 6,400 acres are located within the Humboldt HA. Surface disturbance is required to be reclaimed as soon as practical.

There are two geothermal permits (Presco Energy and New York Canyon) within the CAA. The total disturbance of geothermal facilities within the Humboldt HA is 836 acres with Presco (Humboldt House) accounting for 81 acres and TGP (NYC) for 755 acres. These geothermal projects allow for geothermal exploration authorized activities including drilling up to fifteen 10,000-foot deep observation wells, erecting a plant, and power lines.

Wildlife Guzzlers – Wildlife guzzlers are permanent installations which capture rainwater and retain it on site in a reservoir for use by wildlife. There are fourteen wildlife guzzlers within the HA. Twelve are owned by NDOW and two are owned by Florida Canyon. Thirteen of the guzzlers are designed to be accessible only to small game (chuckar, etc.) and one is designed to allow use by big game (deer, etc.). None of the guzzlers are designed in a way which would allow use by wild horses or livestock.

Recreation - Recreation resources that exist in the area are mainly outdoor recreation, wildlife watching/photography, wild horse watching/photography, rock hounding and hunting for both large and small game. Visitor use levels range from extremely low in winter, low to moderate in the summer, and peak in the fall during hunting seasons with season opening weekends having the highest visitation of the year.

Residential Development – Residential development in the area is concentrated in the towns of Unionville and Imlay with a smaller residential area at Humboldt River Ranch Estates. Population in 2010 was 2,147 (U.S. Census Bureau 2010).

Wildland Fire - Wildfires have impacted the assessment areas in recent years resulting in large areas dominated by cheatgrass. Natural recovery of native vegetation has been slow and efforts to re-establish native vegetation have had minimal success. The BLM database currently shows there have been 47 fires since the last gather in 1993 with approximately 62,310 acres impacted within the Humboldt HA.

## **4.2.2. Reasonably Foreseeable Future Actions**

Past and present actions identified above are likely to persist through the next 10 years. In addition to these activities, the following actions are likely to occur within the 10-year time frame.

### Lands and Realty Actions

Several road and one communication site rights-of-way (ROWs) are currently pending evaluation by the BLM. It is expected Terra Gen Power will submit an application for a transmission ROW associated with proposed New York Canyon geothermal plant.

### Rangeland Management

Over the next 5-10 year period livestock grazing is expected to continue at similar stocking rates for cattle and sheep with annual fluctuations in response to drought and other climatic factors. Grazing permits associated with the grazing allotments within the Humboldt HA may be evaluated for renewal over the next ten years.

### Mineral Resources

Expansions are proposed at the Coeur Rochester and Florida Canyon mines.

### Recreation

Recreational use is expected to increase an average of 5 percent annually as a result of such factors as population growth and family oriented activities. (Winnemucca RMP AMS, 2005).

### Wildland Fire

While the occurrence of wildfire is unpredictable, it is likely based on historical patterns, that wildfire would again burn parts of the assessment area. BLM fire management policy states that wildfire would be aggressively suppressed, which makes it likely that suppression techniques such as the construction of dozer lines, the cross-country travel of engines, the implementation of retardant drops, and the establishment of base camps for fire fighters are reasonably foreseeable.

Depending on the severity of the fire, and the nature of topography and soils, it is also reasonably foreseeable that some combination of rehabilitation and stabilization treatments such as dozer line stabilization, road repair, the construction of erosion or sediment control structures, the repair of damaged range improvements and facilities, drill and/or aerial seeding, range closures, greenstripping and nonnative weed control would be implemented.

The BLM is currently reviewing a proposed land use permit for a fire suppression facility near the Rye Patch Reservoir that would be located within the boundary of the assessment area.

### **4.2.3. Cumulative Impacts**

Impacts associated with past, present, and reasonably foreseeable future actions are generally created by ground or vegetation-disturbing activities that affect natural and cultural resources in various ways. Of particular concern is the accumulation of these impacts over time. This section of the EA considers the nature of the cumulative effect and analyzes the degree to which the alternatives contribute to the collective impact.

Due to the similar cumulative impacts to Migratory Birds, Special Status Species and Wildlife, these resources are lumped into one section for analysis in this section.

#### **4.2.3.1. Cultural Resources**

##### **Impacts from Past and Present Actions**

Past actions have been known to damage or destroy cultural resources where the actions have occurred in areas of high cultural resource sensitivity. Early mining, grazing, range improvements, fire suppression activities, road construction/maintenance and accompanying gravel pits, and off-highway vehicle (OHV) use have caused these types of impacts to cultural resources. Since many Great Basin prehistoric sites are surface or near surface sites, any ground disturbing activities destroy site integrity, spatial patterning and site function. Datable organic features are either destroyed or contaminated. This kind of damage and contamination can result from concentration of grazing animals (livestock and wild horses), use and maintenance of roads and trails, development and maintenance of utilities (power lines, natural gas lines, fiber optic lines, communication sites, water pipelines), and recreational activities such as off-highway vehicle use. These types of impacts have generally been mitigated through avoidance, controlled excavation, and monitoring. Wildfire has impacted cultural resources by destroying wooden or other flammable artifacts and features, most recently at the historic town of Rochester. Spalling of rock art has also occurred due to wildfire.

Looting of cultural resources has also heavily impacted sites in the past. Artifacts have been removed and the synchronic context of some sites has been destroyed. Passage of the NHPA of 1966, the NEPA of 1969, the FLPMA of 1976 and the ARPA of 1979 and an improved level of cooperation between federal law enforcement officers, agency fire fighters, and archaeologists has led to increased protection of cultural resource and reduced impacts to these resources as a

result of the actions just described, although OHV use and looting are exacerbated by current population growth trends.

### **Impacts from Reasonably Foreseeable Future Actions**

Impacts to cultural resources described under Impacts from Past and Present Actions would continue. Like impacts from past actions, the reasonably foreseeable future actions would be subject to mitigation or avoidance to minimize impacts. Increase in recreational use, particularly OHV traffic, is especially destructive to cultural resources through direct ground disturbance or by increasing erosion. Looting and vandalism (intentional or accidental) may also occur more often as the population grows and as access and recreational activities increase.

Implementation of laws and regulations, continuing improvement in consultation between fire officials and archaeology staff and increasing awareness of potential impacts that may result from certain wild horse management practices should minimize impacts to cultural resources from authorized activities on public lands.

### **Cumulative Impacts**

#### **Proposed Action**

Previous land management practices and other human activities as described above have contributed to the overall condition of cultural resources in the Humboldt HA. However, removing excess (all) wild horses from the Humboldt HA as outlined in the proposed action would result in reduced impacts to cultural resources due to erosion and trampling. No direct cumulative impacts are expected as a result of the proposed action. Indirectly, the removal of excess wild horses would incrementally reduce indirect impacts further than what has been, and would be, provided by mitigation, avoidance, and monitoring from past, present, and reasonably foreseeable actions.

The Proposed Action would not affect foreseeable increases in OHV use and site looting as discussed above.

#### **No Action**

This alternative, along with the past, present, and reasonable foreseeable future actions, could incrementally increase damage to cultural resources. Substantial increases in wild horse numbers could exacerbate natural erosional processes, which, in turn, could impact cultural sites. Increases in trampling damage would also be anticipated. Increases in impacts would be anticipated particularly in riparian zones. This alternative would not affect foreseeable increases in OHV use and site looting of cultural resources.

## **4.2.3.2. Invasive-Nonnative Species**

### **Impacts from Past and Present Actions**

Past disturbances from agricultural development, establishment of roads and right-of-way, minerals exploration, grazing disturbances, wildfire impacts, and recreational use have resulted in the introduction and subsequent naturalization of disturbance and drought-adapted invasive annual plants such as cheatgrass and tumble-mustard to the Great Basin at large. These species have, in combination with increased frequency and duration of drought events, resulted in increased frequency and intensity of wildfire which creates further disturbance which is exploited by the same invasive annuals. Past ESR planting and seeding projects have helped mitigate the

effects of infestation by invasive annuals and noxious weeds. Noxious weeds control projects have removed priority weeds from the planning area during both past and present management actions, which has reduced opportunities for further spread of these species, and probably has resulted in a reduced presence of noxious weeds within the Humboldt HA than would have occurred if no noxious weeds management had occurred at all.

### **Impacts from Reasonably Foreseeable Future Actions**

Right-of-way and road construction is expected to occur in the future within the Humboldt HA, albeit on a much smaller scale than has occurred in the past. Disturbances from expansion of existing mining operations are expected to occur, however these disturbances will be managed for noxious weeds as part of the approved plan(s) of operations for those projects. Continued livestock grazing will continue to generate soil disturbance and provide a vector of spread for noxious weeds. Recreational activities, particularly OHV recreation is expected to increase within the Humboldt HA and will also potentially generate soil disturbance, and will also provide a vector for seed transport. Wildfire impacts are expected to continue to occur within the Humboldt HA, although the effects of those impacts will be variable due to uncertain size of fires and locations in which they occur. Control of Nevada State-listed noxious weeds is expected to continue in the future, with continued emphasis on “early detection, rapid response” projects which intend to locate and control noxious weed populations in their infancy. Both inventory and control projects are funding limited, which results in prioritization for treatment based upon noxious weed species or circumstances of infestation. Assuming that current prioritization criteria and funding scenarios are still valid in the future, it is expected that watersheds which are currently free or minimally impacted by noxious weeds will remain so, areas which are marginally infested would be managed for eradication of noxious weeds, and areas which are heavily infested or otherwise logistically problematic would be managed to reduce or eliminate risk of further infestations.

### **Cumulative Impacts**

#### **Proposed Action**

Cumulatively, when considered with all other past, present, and reasonably foreseeable events and actions, the removal of wild horses from the Humboldt HA would have no impact to existing noxious weed populations and existing areas of disturbance.

#### **No Action**

Due to the cumulative impacts from all other past, present, and reasonably foreseeable events and actions, noxious weeds will continue to persist and will still have some potential for continued spread and establishment within the Humboldt HA. The No Action alternative will allow for continued wild horse population growth, and will result in increased disturbance and increased opportunity for seed transport above and beyond the same disturbance and seed transport opportunity created by all other impacts combined. Because wild horse disturbance and traffic would occur in areas outside of those created by other cumulative disturbances, noxious weed spread and establishment in the future would be greater than if the proposed action is implemented.

## **4.2.3.3. Migratory Birds, Special Status Species and Wildlife**

### **Impacts from Past and Present Actions**

Wildlife and their habitats have been impacted through wildfire and various multiple uses such as livestock grazing, lands and realty, mining, recreation, wild horses, and associated roads and trails. Human activities have also increased the introduction and spread of weeds.

Livestock and wild horses continue to utilize vegetation and impact riparian vegetation, soils and water quality. These impacts can be especially pronounced during times of below average precipitation. Forage and water availability can become limited, and negatively affect wildlife health and fitness. The impacts to the important riparian and stream habitats from these past and present actions, in general, include: loss of streamside vegetation, increased sedimentation, increased stream channel width, and loss of undercut stream bank habitat.

Rangeland management projects, such as fences and water developments have been installed over the last several decades and continue to be used and maintained for the purpose of livestock grazing management. The use of fencing can help reduce adverse impacts to habitat from livestock, wild horse and human use. They can also allow implementation of livestock grazing systems which have a beneficial impact to wildlife habitat by providing periodic rest from grazing. Negative impacts can result from injuries or death to wildlife from entanglement or from alteration of natural movement. Fences may also provide unnatural, advantageous perch sites for avian predators.

Additional water sources can increase populations by providing water where it would not naturally occur. This may be beneficial to some species and detrimental to others. For instance, insect numbers may increase and provide a greater abundance of food for birds and bats but may also increase the incidence of disease (e.g. West Nile virus) transmission to some species of wildlife.

Realty and mining actions have added to impacts to wildlife through authorization of access and permitting of structures and activities in the assessment area. Such actions result in more human activity, noise, and disturbance to wildlife habitat. Development within the assessment area has resulted in habitat fragmentation since some species are reluctant to go near or cross roads or trails.

Recreation activities affect wildlife in similar ways as realty actions. Cross country OHV use in addition to use of existing trails, can injure wildlife, disrupt their activities, disturb soil and vegetation, and spread weeds.

### **Impacts from Reasonably Foreseeable Future Actions**

Impacts from livestock grazing and range improvement projects are expected to remain at the current level.

The future realty and mining actions within the CAA would result in additional noise, fragmentation and disturbance to wildlife and habitat. Recreational activities are expected to increase in the future, resulting in a proportionate increase of impacts as described under Impacts from Past and Present Actions.

Impacts to sage grouse from future actions are expected to be similar to but less than described in under Impacts from Past and Present Actions. Due to evolving BLM sage-grouse habitat management guidance, impacts to sage-grouse from multiple uses would be lessened in an effort to prevent their listing under the Endangered Species Act.

### **Cumulative Impacts**

#### Proposed Action

The Proposed Action would add slightly to impacts discussed in the Reasonably Foreseeable Future Actions section above from wild horse gather activities. Disturbance to migratory birds and other wildlife from the helicopter and wild horses could occur but would be short-term and minimal. Damage to vegetation at trap sites would be on a small scale and would not have a measurable impact. Human presence at trap sites would disrupt wildlife activities. Beneficial short and long-term impacts would result from removing excess wild horses from the Humboldt HA. An immediate benefit to wildlife would be less competition for forage and water which would allow gradual improvement of upland and riparian health.

#### No Action

Negative direct impacts such as disturbance and possible injury to birds, special status species and wildlife would not occur under this alternative, therefore resulting in less cumulative negative impacts than the proposed action. However, beneficial impacts to bird special status species and wildlife habitats would not be realized and wild horse numbers in excess of AML would result in continuing decline of habitat condition and viability of bird, special status species and wildlife populations. This would incrementally increase impacts associated with past, present and Reasonably Foreseeable Future Actions as the wild horse population increases.

### **4.2.3.4. Native American Religious Concerns**

#### **Impacts from Past and Present Actions**

From contacts with settlers, disease and alcohol have decimated Northern Paiute and Shoshone population groups. Further, past historical actions ranging from mining and gravel extraction, grazing, home building, and road construction, have served to drive the Northern Paiutes off the land, confine them to reservations, and further destroy their culture. Only in the past 50 years has an attempt been made by the federal and state governments to undo some of these actions.

#### **Impacts from Reasonably Foreseeable Future Actions**

Impacts to Native American Religious Concerns described under Impacts from Past and Present Actions will continue. The foreseeable lands and realty action of the access road right-of-way could directly or indirectly impact Native American spiritual sites if present through ground disturbing activities. Like impacts from past actions, the reasonably foreseeable future actions would be subject to mitigation or avoidance to minimize impacts. Increase in recreational use, particularly OHV traffic, is especially destructive to cultural resources through direct ground disturbance or by increasing erosion. Looting and vandalism of archaeological sites, which are considered to be sacred by many tribes, (intentional or accidental) may also occur more often as the population grows and as access and recreational activities increase.

#### **Cumulative Impacts**

##### Proposed Action

Cumulatively, the removal of excess wild horses would have little impact to Native American concerns when compared to past, present, and Reasonably Foreseeable Future Actions.

##### No Action

Cumulative impacts under the No Action would be the same as those described under the Cumulative Impacts of the Proposed Action.

### 4.2.3.5. Water Quality (surface and ground)

#### Impacts from Past and Present Actions

Agricultural development has led to the use of groundwater for irrigation. Because this water, in general, doesn't leave the irrigated lands, there is no impact on the general water quality of surface or groundwater in the assessment area. Groundwater use for irrigation leads to a large use of water compared to domestic and stockwater uses, however water use is permitted by the Nevada State Engineer. The State Engineer is tasked with ensuring that water use does not exceed the perennial yield in any given basin. With that, the BLM is not aware of any long term impacts to water quantity from water use permitted for irrigation purposes.

Wildlife guzzlers are not expected to have any impact on water quality. The guzzlers would have a negligible impact on water quantity. By catching rain water, the guzzler allows water to remain at the site for use by wildlife. As such, the same volume of water is removed from the watershed and doesn't contribute to groundwater or surface water flows. The small size of the guzzler relative to the watershed makes this impact negligible. By design, this water is not intended to be available for wild horse or livestock utilization.

ROW authorizations have not had any measureable impact on water quality or quantity. The construction of I-80 has led to alteration of some natural flow channels. These channels, however, are ephemeral and only receive surface flows on rare occasions. Because of this, the impact to surface water quality due to sediment load alteration or introduction of road surface pollutants is negligible.

Mining activities within the HA are crossed by approximately 40 mapped stream segments (18 by Florida Canyon, 5 by Standard, 10 by Rochester, 7 by Relief Canyon). These segments along with the downstream reach into which they flow represent 160 miles of mapped perennial, intermittent, and ephemeral streams. Due to mitigations and projects design, impacts to water quality from these activities are not expected to be present. Physical hydrology (water flow characteristics) may be impacted where mine pits or piles have been created. In some cases, particularly Coeur Rochester and Florida Canyon Mines, where presence of surface water was reduced due to mining activities, guzzlers were installed to ensure the availability of water for wildlife.

Due to the position in the landscape, generally dry fan features, none of the permitted gravel pits in the assessment area have had an impact on surface water quality or quantity.

A processing plant related to Colado Mine falls within the HA boundary. This structure and its activities are not expected to have an impact on water quality or quantity within the HA.

Geothermal power generation activity is not expected to have an impact on water quality or quantity in a way that would be cumulative to impacts from the proposed action or any alternatives.

Historically, cattle grazing occurred over the entire HA. Measureable impacts to water quality are variable in time (both seasonally and over the long term) and space. Impacts include increases of bacteria to water sources, increased sediment loading where riparian vegetation has been over utilized, and potential increases in surface water temperatures where riparian vegetation has been over utilized or where ground and surface water interactions have been disrupted due to erosion. Currently, grazing occurs across the entire HA. Some of this grazing is permitted by the BLM; however, some occurs on privately owned and managed lands. As stated in Affected Environment for Wetland and Riparian Zones, 70% of these areas are functioning properly or making progress

toward that status. This would indicate that at least 70% of the surface water within the HA are not experiencing degradation of quality from cattle or any other factor. Livestock grazing within the HA has always relied on surface and ground water sources to provide drinking water for cattle. Prior to Nevada water law (circa 1905), use of water for all purposes was unmanaged. With the passing of Nevada water law, users of the water were required to submit claims of vested interest in water previously used or apply for permits to use water for new purposes. In general, total permitted water use in an area does not decrease because most interested parties ensure that water rights are not forfeited. Permitted water use has generally increased over time. As stated in the Affected Environment, there are currently 48 stock water rights within the HA with a total water use of approximately 5,300 acre feet per year.

Impacts to water quality from recreation activities have primarily resulted from use of OHVs through wetlands and across streams. Both of these impacts lead to increases of sediment to streams which are generally short lived and do not result in long term measurable impacts to water quality. Currently there are approximately 1,000 mapped stream segments that are crossed by at least one mapped road in the HA. Recreation may lead to occasional use of water within the HA, however impacts from this use are negligible would not be considered to have had any impact on water quantity.

Due to the position on the landscape, residential development is not expected to have an impact on water quality or quantity in a way that would be cumulative to impacts from the proposed action or any alternatives.

Impacts to water quality from wild horses would have been identical in type and distribution as those described for cattle grazing. Magnitude, overall, would have been lower due to the original removal of wild horses and continued low numbers of wild horses relative to cattle. Duration of impacts from wild horses, where they are present, occur year round.

Between the years 1993 and 2012, 43 fires were recorded and mapped in the planning area. These fires impacted 62,130 acres (14%) of the HA and had the potential to impact approximately 350 miles of mapped streams. These impacts can include extreme increases in surface water temperature while the fire is burning, increases in nutrient loading from runoff of ash and soot, and increases in sediment loading to streams until riparian and upland vegetation becomes reestablished. Because of the variability of these impacts over time and space, the overall impacts cannot be quantified. Wildfire suppression activities may have occasionally resulted in use of water from streams within the HA, however most water would likely have come from sources outside of the HA. These uses would have been of short duration and rare in occurrence. Because of this, wildfire and wildfire suppressions activities are not considered to have had any impact on water quantity.

If successful, the BLM - Cottonwood ESR Plan would have an impact on up to 16 miles of perennial, intermittent, or ephemeral streams for approximately two years after implementation. Expedited reestablishment of vegetation would reduce sediment and nutrient (carbon from soot and ash) inputs to surface waters. After two years, natural processes would likely have already led to decreases in sediment and nutrient loading. The project was completed in 2011. The BLM - Cottonwood ESR Plan is not expected to have any impact on water quantity.

### **Impacts from Reasonably Foreseeable Future Actions**

Reasonably foreseeable future actions under lands and realty would not be expected to have any measureable impact on water quality or quantity.

There is no reasonably foreseeable change in impacts from cattle grazing based on current grazing management. Impacts to water quality would continue to be identical to those described under past and present grazing. Any changes would likely result in a reduction in the magnitude of impacts as the BLM continues to manage livestock grazing to meet standards and guidelines for rangeland health. Though there is no proposed change to grazing management within the HA, it is assumed that number of water developments for cattle and their associated water rights will continue to increase over time. Because water use is intended to be permitted only for the amount that can actually be put to beneficial use, the total volume of water used for cattle should not change without a change in permitted grazing numbers.

Recreation is expected to increase, however it is difficult to assess the impacts to water quality from this increase. Because of the existing access routes in the planning area, it is not likely that the number of stream crossings would increase. An increase of use at each crossing would increase the number of times sediment is disturbed and transported, but it is unlikely that this would cause a measureable increase in erosion or deposition relative to the currently existing environment. Because recreation is expected to increase, the associated occasional use of water by recreationists would be expected to increase proportionately. The volume of use, however, would still be considered to be negligible.

If wildfire frequency increases, as expected, impacts to water quality would increase proportionately. Types of impacts would remain the same as those that have occurred in the past. However, with increased emphasis being placed on protection and restoration of sage grouse habitat, ES&R activities in the planning area will likely decrease sediment loading impacts to water quality through expedited vegetation reestablishment. There is potential for these impacts to occur throughout the entire planning area. If wildfire frequency increases, as expected, impacts to water quantity would increase proportionately. The infrequent and short duration of use for wildfire suppression activities would still cause the volume of use to be considered negligible. The proposed fire station within the assessment area is not expected to have any impacts on water quality or quantity in a way that would be cumulative with the proposed action or any alternatives. Short term impact to water quality during construction would occur, however BMPs and SOPS would likely be utilized to reduce, mitigate, or eliminate these impacts. Otherwise the impacts would be identical in type to those described for existing residential development.

## **Cumulative Impacts**

### **Proposed Action**

Water quality and quantity are not expected to be impacted by cumulative effects of the proposed action and agricultural development, lands and realty actions, wildlife guzzlers, geothermal activity, or residential activities.

Because the removal of utilization by wild horses on riparian habitat within the HA would increase the hydrologic and riparian function of streams in the HA, the Proposed Action would have a countervailing cumulative effect to the alteration made to the physical hydrology and water quality of streams within the HA by mining activities cattle grazing, recreation, and fire activities. Removal of utilization of riparian habitats by wild horses in the HA would have a compounding effect to the restoration efforts of the Cottonwood ES&R activities.

### **No Action**

Water quality and quantity are not expected to be impacted by cumulative effects of the No Action Alternative and agricultural development, lands and realty actions, wildlife guzzlers, geothermal activity, or residential activities.

Because the number of wild horses and their utilization of riparian habitat within the HA would be expected to increase, the No Action Alternative would have an additive effect to the impacts on water quality and quantity from mining, cattle grazing, and recreational activities. Because the number of wild horses and their utilization of riparian habitat within the HA would be expected to increase, the No Action Alternative would have a compounding effect on the impacts to water quality from wild fires. Because the number of wild horses and their utilization of riparian habitat within the HA would be expected to increase, the No Action Alternative would have a countervailing effect on the impacts to water quality from ES&R activities.

#### **4.2.3.6. Wetlands and Riparian Zones**

##### **Impacts from Past and Present Actions**

Due to its position on the landscape, lower elevations with less likelihood of riparian habitat, agricultural development is not expected to have had any impacts on wetlands or riparian zones.

Wildlife guzzlers are not expected to have had any impact on wetlands or riparian zones.

ROW authorizations are not expected to have had any impacts on wetlands or riparian zones.

No mining activities have occurred on wetlands or riparian habitats as identified by the SynthMap vegetation mapping data.

No gravel pits have been developed on wetlands or riparian habitats as identified by the SynthMap vegetation mapping data. Geothermal activities have not occurred on wetlands or riparian habitats as identified by the SynthMap vegetation mapping data.

Measurable impacts to wetland and riparian zones from livestock grazing are variable in time (both seasonally and over the long term) and space. Impacts include over-utilization of riparian vegetation and alteration of stream bank and meadow soils, both of which can lead to increased erosion, loss of wetland and riparian soils, increased rates of groundwater loss from meadows, and alteration of natural surface flow patterns. Historic erosion and incision has not been quantified or had exact causal factors determined within the planning area, however qualitative assessments confirm that cattle (both historic and currently active) have not had major impacts on long term functionality on the majority of wetland and riparian areas. As stated in *Affected Environment for Wetland and Riparian Zones*, 70% of these areas are functioning properly or making progress toward that status.

Impacts to wetland and riparian zones from recreation have resulted from camping in meadows and use of OHVs through meadows and across streams. Both of these impacts lead to loss or damage of riparian vegetation, compaction of riparian and wetland soils, and alteration of stream banks. All of these impacts, generally, can cause loss of wetland or riparian zone habitat through erosion. These effects are highly localized and occur over relatively short time frames; however repeated use of wetland and riparian zones can lead to persistent degradation of wetland and riparian zones. Because of the dispersed nature of this use in time and space, it is difficult to quantify the impacts. Degradation of riparian functionality due to recreation would be reflected

qualitatively in PFC assessments (see [Section 3.1.2.7, “Wetlands and Riparian Zones”](#)); however, PFC ratings do not highlight the causes of disturbance.

Between the years 1993 and 2012, 43 fires were recorded and mapped in the planning area totaling 62,130 acres (14%) of the HA. A total of 163 acres of SynthMap identified wetland and riparian zones within the HA have been impacted by these fires. These impacts can include temporary loss of riparian vegetation and temporary increases in erosion and deposition. Because of the variability of these impacts over time and space, the overall impacts cannot be quantified.

The BLM - Cottonwood ESR Plan is not expected to have any impact on wetlands or riparian zones.

### **Impacts from Reasonably Foreseeable Future Actions**

Reasonably foreseeable future actions under lands and realty would not be expected to have any measureable impact on wetlands and riparian zones.

There is no reasonably foreseeable change in impacts from cattle grazing based on current grazing management. Impacts to wetlands and riparian zones would continue to be identical to those described under past and present grazing. Any change would likely be a reduction in the magnitude of impacts as the BLM continues to manage livestock grazing to meet standards and guidelines for health rangelands.

Recreation is expected to increase, however it is difficult to assess the impacts to wetlands and riparian zones from this increase. Because of the existing access routes in the planning area, it is not likely that the number of stream crossings would increase. An increase of use at each crossing would increase the degree of stream bank alteration. This may lead to impassibility of some crossings which would encourage use of new crossings. Where this occurred, increases in degradation of wetland and riparian zones would also occur. The uncertain nature of recreational use makes the likelihood that this would occur and the degree to which this would occur impossible to quantify what these impacts may be.

If wildfire frequency increases, as expected, impacts to wetland and riparian zones would increase proportionately. Types of impacts would remain the same as those that have occurred in the past. However, with increased emphasis being placed on protection and restoration of sage grouse habitat, ES&R activities in the planning area will likely decrease post-fire erosion of wetland and riparian zones through expedited vegetation reestablishment and soil stabilizing measures. There is potential for these impacts to occur throughout the entire HA.

### **Cumulative Impacts**

#### **Proposed Action**

Wetlands and riparian zones are not expected to be impacted by cumulative effects of the proposed action and agricultural development, lands and realty actions, mineral resource, wildlife guzzlers, residential, or ES&R activities.

Because the removal of utilization by wild horses on riparian habitat within the HA would increase the functionality of these habitats in the HA, the Proposed Action would have countervailing cumulative effect to the alteration made to the functionality of wetlands and riparian zones within the HA by cattle grazing, recreation, and fire activities.

### No Action

Wetlands and riparian zones are not expected to be impacted by cumulative effects of the No Action Alternative and agricultural development, lands and realty actions, mineral resource, wildlife guzzlers, residential development, or ES&R activities.

Because the number of wild horses and their utilization of riparian habitat within the HA would be expected to increase, the No Action Alternative would have an additive effect to the impacts on wetland and riparian zone functionality from cattle grazing and recreational activities. Because the number of wild horses and their utilization of riparian habitat within the HA would be expected to increase, the No Action Alternative would have a compounding effect on the impacts to wetland and riparian zone functionality from wild fires.

### **4.2.3.7. Fire Resources — Fuels and Emergency Stabilization and Rehabilitation**

#### **Impacts from Past and Present Actions**

Disturbances from past and present actions, particularly those sourced to livestock grazing and wildfire occurrence have resulted in the introduction of competitive annual invasive plants, which have dramatically altered the composition of vegetations communities within the Humboldt HA. The introduction of invasive annual plant species, particularly cheatgrass, has resulted in increased frequency, and size of wildfire events and reduced success revegetating burned areas as part of the ESR program.

#### **Impacts from Reasonably Foreseeable Future Actions**

It is probable that wildfire impacts will occur again within the Humboldt HA. Precisely when and where those impacts will occur is impossible to accurately predict, however wildfire impacts increase opportunity for habitat conversion to invasive annual “monoculture” regardless of location. Other Reasonably Foreseeable Future Actions such as livestock grazing, right-of-way creation and expansion, expansion of existing mining operations, and increased recreation use would continue to provide opportunity for further spread of noxious weeds which could potentially reduce future ESR project success. No Reasonably Foreseeable Future Actions would be expected to impact future fire suppression efforts.

#### **Cumulative Impacts**

##### Proposed Action

Cumulatively, with all other impacts from past, present, and reasonably foreseeable future actions considered, the implementation of the proposed action would be expected to increase the success of ESR projects due to the removal of a significant, unmanaged grazing impact to potential revegetation projects. There would be no impact to future fire suppression efforts or to the amount and abundance of hazardous fuels.

##### No Action

With all other impacts from past, present, and reasonably foreseeable future actions considered, the No Action alternative would result in decreased success of ESR revegetation projects due to the increased potential for competition from noxious weeds, and a greater, unmanaged grazing

pressure following wildfire which would not occur as part of any other impacts which were considered as part of the cumulative analysis.

#### **4.2.3.8. Fisheries**

##### **Impacts from Past and Present Actions**

Past and present actions have caused impacts to fishery habitats from wild horse and livestock grazing, recreation, wildfire, and road construction/maintenance. The impacts to the fishery habitats from these past and present actions, in general, include: loss of streamside vegetation, increased sedimentation, increased stream channel width, and loss of undercut stream bank habitat. These impacts to fisheries have been reduced through implementation of mitigation measures. Recreation use has removed streamside vegetation and increased stream sedimentation due to OHV use in and around streams. Past actions from road construction and transportation have caused impacts to fishery habitats with increased sedimentation and loss of streamside vegetation at the road/stream crossings.

##### **Impacts from Reasonably Foreseeable Future Actions**

Reasonably foreseeable future actions for livestock grazing, road maintenance, wildfire, and recreation use would impact fisheries. The expected impacts to the fishery habitat would be similar to the past and present actions to include: loss of streamside vegetation, increased sedimentation, increased stream channel width, and loss of undercut stream bank habitat. Implementation of mitigation measures would reduce these impacts.

##### **Cumulative Impacts**

###### **Proposed Action**

There should be an incremental improvement in the riparian and aquatic habitat conditions over an extended period of time.

###### **No Action**

If the no action is chosen, impacts to fisheries described in the past, present, and reasonably foreseeable future sections could increase from habitat lost due to the increase in size of the wild horse population in this HA.

#### **4.2.3.9. Public Health and Safety**

As defined by 40 CFR 1508.7, the cumulative impact is the impact which results from the incremental impact of the action, decision, or project when added to the other past, present, and reasonably foreseeable future actions. No impacts to public health and safety have been identified from past, present, or reasonably foreseeable future actions; therefore, cumulative impacts to public health and safety are not expected.

#### **4.2.3.10. Rangeland Management**

##### **Impacts from Past and Present Actions**

Past and present activities have affected livestock grazing through the removal of forage within disturbed areas related to realty, mining and transportation activities. Transportation, mining and access improvements have also provided livestock operators better access to portions of their allotments to better check and care for the livestock on the allotments. Recreational activities have caused impacts due to damage or vandalism of range improvements and difficulties in managing livestock from fences being cut/broken or gates being left open. Past wildfire events have removed large areas of forage and restricted access to forage. Fire rehabilitation projects have re-established vegetation in some areas and mitigated some of the effects associated with wildfire events. In the past livestock operators have removed cattle from the rangeland earlier or have run fewer numbers than they are allowed due to the presence of excess wild horses in the Humboldt HA.

### **Impacts from Reasonably Foreseeable Future Actions**

Impacts to livestock grazing from reasonably foreseeable future actions would remain similar to those analyzed under the past and present actions.

### **Cumulative Impacts**

#### **Proposed Action**

Cumulative impacts from activities proposed under the Proposed Action would be potential trampling of forage by both humans and animals from activities in and around trap sites that would incrementally add to the amount of forage that has already been disturbed and is expected to be disturbed. In addition to any disturbance to livestock from past, present, or reasonably foreseeable future actions listed above, livestock in areas outside of the critical area of concern may be frightened and leave the area due to helicopter, traffic, and human interactions.

#### **No Action**

This alternative, along with the past, present, and reasonably foreseeable future actions, would incrementally increase damage to rangeland ecosystems. With unchecked population growth and no planned wild horse gathers, rangeland resources would become degraded at an accelerated rate. Livestock numbers could be continually reduced to accommodate the increasing wild horse numbers.

## **4.2.3.11. Soils**

### **Impacts from Past and Present Actions**

Prior to the Taylor Grazing Act (TGA) of 1934, livestock grazing practices resulted in significant major impacts to soil resources. The soil tolerance was exceeded and the soil medium for plant growth was not maintained. As a result, historic livestock grazing activities prior to the TGA had significant impacts on soil resources within the impact assessment area. A series of livestock grazing decisions since the TGA have resulted in reductions in livestock numbers and changes in seasons of use and in grazing management practices to promote rangeland health within grazing allotments. While the present livestock grazing system has helped reduce past historic soil impacts and has improved current soil resource conditions, the current overpopulation of excess wild horses is resulting in areas of heavy vegetative utilization, trailing and trampling damage, and prevents BLM from managing public lands within the Humboldt HA for rangeland health and for a thriving natural ecological balance.

Other past and present activities have affected soil resources through the removal of vegetation and soil surface within disturbed areas related to recreation, realty, mining and transportation activities.

### **Impacts from Reasonably Foreseeable Future Actions**

Multiple-use activities would continue to be similar to present impacts on soils within the HA, with increases expected from reality actions, mining and recreational activities. Disturbances to soil resources from grazing would be expected to remain the same.

### **Cumulative Impacts**

#### **Proposed Action**

Cumulative impacts from activities under the Proposed Action would be potential compaction of soils by both humans and animals from activities in and around trap sites. In addition to any disturbance to soil resources from past, present, or reasonably foreseeable future actions listed above, condition of soil resources is likely to incrementally improve.

#### **No Action**

Continuing growth in the numbers of excess wild horses will increase competition between horses and cattle and wildlife for limited forage and water. This would expose more soil surfaces to trampling and erosion adjacent to these resources, further degrading soil resources as wild excess horse numbers increase unabated.

## **4.2.3.12. Vegetation**

### **Impacts from Past and Present Actions**

Prior to the TGA, livestock grazing practices resulted in significant major impacts to the rangeland vegetation. As a result, historic livestock grazing activities prior to the TGA had significant impacts on the vegetation resources within the impact assessment area by eliminating or greatly reducing the primary understory plants. Cheat grass was introduced into the area in the early 1900s. A series of livestock grazing decisions since the TGA have resulted in reductions in livestock numbers and changes in seasons of use and in grazing management practices to promote rangeland health within grazing allotments. While the present livestock grazing system has helped reduce past historic impacts to rangeland vegetation and added to improving vegetation conditions, the current overpopulation of excess wild horses is resulting in areas of heavy vegetative utilization, trailing and trampling damage, and prevents BLM from managing public lands within the Humboldt HA for rangeland health and for a thriving natural ecological balance.

Other past and present activities have affected vegetation resources through the removal of vegetation within disturbed areas related to recreation, realty, mining and transportation activities.

### **Impacts from Reasonably Foreseeable Future Actions**

Multiple-use activities would continue to be similar to present impacts on rangeland vegetation within the HA, with increases expected from reality actions, mining and recreational activities. Disturbances to vegetation from grazing would be expected to remain the same.

### **Cumulative Impacts**

### Proposed Action

Cumulative impacts from activities proposed under the Proposed Action would be potential trampling of forage by both humans and animals from activities in and around trap sites. In addition to any disturbance to vegetation from past, present, or reasonably foreseeable future actions listed above, condition of vegetation is likely to incrementally improve.

### No Action

This alternative, along with the past, present, and reasonable foreseeable future actions, would be expected to increase damage to vegetation resources.

## **4.2.3.13. Wild Horse**

### **Impacts from Past and Present Actions**

Wild horses within the Humboldt HA CAA have been impacted through various authorized uses such as livestock grazing, range improvement projects, lands and realty activities, mining, recreation, associated roads and trails and wild fires.

Since livestock utilize upland and riparian vegetation, and may impact soils and water quality there is competition between the cattle and wild horses for these resources. This competition can be especially pronounced during times of below average precipitation. Forage and water availability can become limited, and negatively affect health of the wild horses.

Rangeland management projects, such as fences and water developments have been installed over the last several decades and continue to be used and maintained for the purpose of livestock grazing management. Fences also allow implementation of livestock grazing systems which can have a beneficial impact to the rangeland by providing periodic rest from grazing. Additional water sources can increase livestock and wild horse distribution by providing water where it would not naturally occur.

Realty and mining actions have impacted wild horses through authorizations of access roads, permitting of structures and mines in the assessment area. Such actions result in less vegetation, more noise, wild horse vehicular collisions and overall general disturbance from human activity to wild horses.

Recreation activities affect wild horses in similar ways as realty actions. Cross country OHV use in addition to use of existing trails, can injure wild horses, disrupt their activities, disturb soil and vegetation, and spread weeds which may reduce the productivity of the rangelands on which the wild horses are dependent.

### **Impacts from Reasonably Foreseeable Future Actions**

There would be no impacts to wild horses from Reasonably Foreseeable Future Actions within the Humboldt HA CAA, under the proposed action as they would be removed from the HA.

Under the No Action Alternative, Reasonably Foreseeable Future Actions which would be expected to contribute to the cumulative impacts include: future wild horse gathers, continued livestock grazing on the allotments within the area, new or spreading infestations of invasive plants, and pests and their associated treatments, minerals and realty actions and recreational activities historically associated with them.

Impacts from livestock grazing and range improvement projects are expected to remain at the current level.

Future realty and mining actions within the CAA would result in increases in vehicle collisions, noise, fragmentation and disturbance to wild horses.

### **Cumulative Impacts**

#### **Proposed Action**

There would be no cumulative impacts to wild horses from the Proposed Action, the Past and Present Actions and the Reasonable Foreseeable Actions for the Humboldt HA CAA as wild horses would no longer reside within the area. A gather would ultimately benefit wild horses, and would ensure wild horses are provided adequate feed and water during temporary and short term holding when gathered, and in future months when they are adopted or moved to long term pastures. Removal of excess wild horses would ensure that individual animals do not perish due to vehicular accidents, starvation, dehydration, or other health concerns related to insufficient feed and water and extreme dust conditions. Additionally, a gather would remove excess wild horses while they remain in adequate health to transition to feed.

#### **No Action**

The No Action Alternative would incrementally increase impacts associated with past, present and Reasonably Foreseeable Future Actions as the wild horse population continues to increase. Deferral of gather activities would allow for the wild horse population to increase and impacts to wild horses associated with the other authorized uses in the Humboldt HA CAA would be amplified. One of the highest concerns is the increase in wild horse vehicular accidents as the use of the area by recreations, right of way holders and mines increase.

# **Chapter 5. Monitoring and Mitigation Measures**

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

Primary Field Office COR, Melanie Mirati

Primary State Office COR, Alan Shepherd

Primary Project Inspectors would be assigned from the WD.

## **Chapter 6. Tribes, Individuals, Organizations, or Agencies Consulted:**

Public hearings are held annually on a state-wide basis regarding the use of motorized vehicles, including helicopters and fixed-wing aircraft, in the management of wild horses. During these meetings, the public is given the opportunity to present new information and to voice any concerns regarding the use of motorized vehicles. A motorized vehicle hearing for the state will be held prior to any gather activities occurring in 2013.

The use of helicopters and motorized vehicles has proven to be safe, effective and practical means for gather and removal of excess wild horses from the range. Since July 2004, Nevada has gathered 26,000 animals with a mortality rate of 1.1 percent (of which 0.5 percent was gather related) which is very low when handling wild animals. BLM also avoids gathering wild horses prior to and during the peak foaling period and does not conduct helicopter removals of wild horses during March 1 through June 30 unless under emergency situations.

#### Native American Consultation

Consultation has occurred with the following tribes: Battle Mountain Band Tribal Council, Fallon Paiute Shoshone Tribe, Lovelock Paiutes, Pyramid Lake Paiutes, and the Winnemucca Indian Colony. For more information on consultation results, please refer to [Section 3.1.2.4, “Native American Religious Concerns”](#).

#### Agencies Consulted

A list of federally listed, proposed or candidate species was requested from the U.S. Fish and Wildlife Service (USFWS) for the proposed project area on November 26, 2012. A response from USFWS was received on December 10, 2012.

# **Chapter 7. List of Preparers**

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

**Table 7.1. List of Preparers**

<b>Name</b>	<b>Title</b>	<b>Responsible for the Following Section(s) of this Document</b>
Samantha Gooch	Wild Horse and Burro Specialist	Project Lead/Wild Horses, Public Health and Safety
Peggy McGuckian	Archaeologist	Cultural Resources, Paleontology
Eric Baxter	Natural Resource Specialist	Invasive, Non-native species, Fire Rehab
Mandy DeForest	Assistant Field Manager Natural Resource Specialist	Editing/Review Wildlife, Migratory Birds, and Special Status Species
Greg Lynch	Fisheries Biologist	Fisheries
Dr. Mark Hall	Archaeologist	Native American Religious Concerns
John McCann	Hydrologist	Water Resources/Wetlands and Riparian Zones
Garrett Noles	Rangeland Management Specialist	Rangeland Management
Robert Burton	Natural Resource Specialist	Soils, Vegetation
Zwaantje Rorex	Planning and Environmental Coordinator	National Environmental Policy Act Compliance
Janet Hook	Geologist	Minerals
Mark Williams	Fire Ecologist	Fire and Fuels

# **Chapter 8. List of References**

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# Chapter 9. Maps

**Map 1. [Humboldt HA and Cumulative Assessment Area](#)**

**Map 2. [Grazing Allotments within the Humboldt Herd Area](#)**

**Map 3. [Humboldt Herd Area Ecological Site Descriptions](#)**

# Appendix A. Standard Operating Procedures (Gather Operation)

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

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

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

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

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

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

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

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

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

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

2. The rate of movement and distance the animals travel shall not exceed limitations set by the COR who will consider terrain, physical barriers, access limitations, weather, extreme temperature ( high and low), condition of the animals, urgency of the operation (animals facing drought, starvation, fire rehabilitation, etc.) and other factors. In consultation with the contractor the distance the animals travel will account for the different factors listed above and concerns within the HA.
3. All gather sites, wings, and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:
  - a. Gather sites and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All gather sites and holding facilities shall be oval or round in design.
  - b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered, plywood, metal without holes larger than 2"x4".
  - c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for burros, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet above ground level for burros and 1 foot to 6 feet for horses. The location of the government furnished portable fly chute to restrain, age, or provide additional care for the animals shall be placed in the runway in a manner as instructed by or in concurrence with the COR/PI.
  - d. All crowding pens including the gates leading to the runways shall be covered with a material which prevents the animals from seeing out (plywood, burlap, plastic snow fence, etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses
  - e. All pens and runways used for the movement and handling of animals shall be connected with hinged self-locking or sliding gates.
4. No modification of existing fences will be made without authorization from the COR/PI. The Contractor shall be responsible for restoration of any fence modification which he has made.
5. When dust conditions occur within or adjacent to the gather site or holding facility, the Contractor shall be required to wet down the ground with water.
6. Alternate pens, within the holding facility shall be furnished by the Contractor to separate mares or jennies with small foals, sick and injured animals, estrays or other animals the COR determines need to be housed in a separate pen from the other animals. Animals shall be sorted as to age, number, size, temperament, sex, and condition when in the holding facility so as to minimize, to the extent possible, injury due to fighting and trampling. Under normal conditions, the government will require that animals be restrained for the purpose of determining an animal's age, sex, or other necessary procedures. In these instances, a portable restraining chute may be necessary and will be provided by the government. Alternate pens shall be furnished by the Contractor to hold animals if the specific gathering requires that animals be released back into the gather area(s). In areas requiring one or more satellite gather site, and where a centralized holding facility is utilized, the contractor may be required to provide additional holding pens to segregate animals transported from remote

locations so they may be returned to their traditional ranges. Either segregation or temporary marking and later segregation will be at the discretion of the COR.

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

An animal that is held at a temporary holding facility through the night is defined as a horse/burro feed day. An animal that is held for only a portion of a day and is shipped or released does not constitute a feed day.

8. It is the responsibility of the Contractor to provide security to prevent loss, injury or death of gathered animals until delivery to final destination.
9. The Contractor shall restrain sick or injured animals if treatment is necessary. The COR/PI will determine if animals must be euthanized and provide for the destruction of such animals. The Contractor may be required to humanely euthanize animals in the field and to dispose of the carcasses as directed by the COR/PI.
10. Animals shall be transported to their final destination from temporary holding facilities as quickly as possible after gather unless prior approval is granted by the COR for unusual circumstances. Animals to be released back into the HMA following gather operations may be held up to 21 days or as directed by the COR. Animals shall not be held in gather sites and/or temporary holding facilities on days when there is no work being conducted except as specified by the COR. The Contractor shall schedule shipments of animals to arrive at final destination between 7:00 a.m. and 4:00 p.m. No shipments shall be scheduled to arrive at final destination on Sunday and Federal holidays, unless prior approval has been obtained by the COR. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours in any 24 hour period. .

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

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

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

### **C. Use of Motorized Equipment**

1. All motorized equipment employed in the transportation of gathered animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The Contractor shall provide the COR/PI, if requested, with a current safety inspection (less than one year old) for all motorized equipment and tractor-trailers used to transport animals to final destination.
2. All motorized equipment, tractor-trailers, and stock trailers shall be in good repair, of adequate rated capacity, and operated so as to ensure that gathered 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 gather site(s) to temporary holding facilities, and from temporary holding facilities to final destination(s). Sides or stock racks of all trailers used for transporting animals shall be a minimum height of 6 feet 6 inches from the floor. Single deck tractor-trailers 40 feet or longer shall have at least two (2) partition gates providing at least three (3) compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing at least two (2) compartments within the trailer to separate the animals. Compartments in all tractor-trailers shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have a minimum 5 foot wide swinging gate. The use of double deck tractor-trailers is unacceptable and shall not be allowed.
4. All tractor-trailers used to transport animals to final destination(s) shall be equipped with at least one (1) door at the rear end of the trailer which is capable of sliding either horizontally or vertically. The rear door(s) of tractor-trailers and stock trailers must be capable of opening the full width of the trailer. Panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of all trailers must be strong enough so that the animals cannot push their hooves through the side. Final approval of tractor-trailers and stock trailers used to transport animals shall be held by the COR/PI.
5. Floors of tractor-trailers, stock trailers and loading chutes shall be covered and maintained with wood shavings to prevent the animals from slipping as much as possible during transport.

6. Animals to be loaded and transported in any trailer shall be as directed by the COR/PI and may include limitations on numbers according to age, size, sex, temperament and animal condition. The following minimum square feet per animal shall be allowed in all trailers:
  - 11 square feet per adult horse (1.4 linear foot in an 8 foot wide trailer);
  - 8 square feet per adult burro (1.0 linear foot in an 8 foot wide trailer);
  - 6 square feet per horse foal (.75 linear foot in an 8 foot wide trailer);
  - 4 square feet per burro foal (.50 linear feet in an 8 foot wide trailer).
7. The COR/PI shall consider the condition and size of the animals, weather conditions, distance to be transported, or other factors when planning for the movement of gathered animals. The COR/PI shall provide for any brand and/or inspection services required for the gathered animals.
8. If the COR/PI determines that dust conditions are such that the animals could be endangered during transportation, the Contractor will be instructed to adjust speed.

#### D. Safety and Communications

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

#### G. Site Inventories

##### Cultural

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

Prior to setting up a gather site or temporary holding facility, BLM will conduct all necessary inventories. All proposed site(s) must be inspected by a government archaeologist. Once an archaeological inventory has been completed, the gather site or temporary holding facility may be set up if no sites are identified. Said inventories shall be arranged for by the COR, PI, or other BLM employees.

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

Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the immediate vicinity of the discovery and protect it from your activities for 30 days or until notified to proceed by the authorized officer.

When previously undiscovered antiquities or other objects of historic or scientific interest including but not limited to historic or prehistoric ruins, vertebrate fossils or artifacts are discovered in the performance of this permit, the item(s) or conditions(s) will be left intact and immediately brought to the attention of the authorized officer of the BLM.

#### National Historic Trails

Locate wild horse and burro gather sites outside of National Trail Management Corridors.

#### Wildlife, Special Status Species

##### Migratory birds

In order to avoid potential impacts to breeding migratory birds from gather sites, a nest survey should be conducted by BLM personnel within potential breeding habitat prior to any surface disturbance proposed during the avian breeding season (March 1st through August 31st). Surveys must be conducted no more than 10 days and no less than 3 days prior to initiation of disturbance.

##### Special Status Plants

Prior to setting up gather sites within potential habitat for special status plants, a plant survey should be conducted by a qualified biologist/botanist. Should a sensitive plant species occur, the habitat for the species would be mapped out and no surface disturbance would occur within that area.

## **I. Public Participation**

Opportunities for public viewing (i.e. media, interested public) of gather operations will be made available to the extent possible; however, the primary considerations will be to protect the health, safety and welfare of the animals being gathered and the personnel involved. The public must adhere to guidance from the on-site BLM representative. It is BLM policy that the public will not be allowed to come into direct contact with wild horses or burros being held in BLM facilities. Only authorized BLM personnel or contractors may enter the corrals or directly handle

the animals. The general public may not enter the corrals or directly handle the animals at any time or for any reason during BLM operations.

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

### **Contracting Officer's Representative/Project Inspector**

Melanie Mirati

### **Contracting Officer's Representative/Project Inspector**

Alan Shepherd

The Contracting Officer's Representatives (CORs) and the Project Inspectors (PIs) have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. The Field Manager for the Humboldt River Field Office will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, District Office, State Office, National Program Office, and BLM Holding Facility offices. All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

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

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

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

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

# Appendix B. Wild Horse Gather Public Observation Protocol

## Humboldt HA Wild Horse Gather Observation Protocol

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

- Observation days and gather operations may be suspended if bad weather conditions create unsafe flying conditions. A Wild Horse Gather Info Line will be set up for daily updates.
- Observers must provide their own 4-wheel drive high clearance vehicle, appropriate shoes, clothing, food and water.
- Observers are prohibited from riding in government and contractor vehicles and equipment.
- BLM will establish one or more observation areas, in the immediate area of the gather and holding sites, to which individuals will be directed. These areas will be placed so as to maximize the opportunity for public observation while providing for a safe and effective horse gather. The utilization of such observation areas is necessary due to the use and presence of heavy equipment and aircraft in the gather operation and the critical need to allow BLM personnel and contractors to fully focus on attending to the needs of the wild horses while maintaining a safe environment for all involved. In addition, observation areas will be sited so as to protect the wild horses from being spooked, startled or impacted in a manner that results in increased stress.
- BLM representatives will escort visitors to and from the gather and/or temporary holding facility during designated observation days.
- Visitors will be assigned to a specific BLM representative and must stay with that person at all times.
- Individuals will be directed to the designated observation area by BLM personnel and informed of behavioral rules (such as remaining quiet and still to ensure a safe and effective gather operation).
- BLM will delineate observation areas with yellow caution tape (or a similar type of tape or ribbon).
- Visitors are **NOT** permitted to walk around the gather site unaccompanied by their BLM representative.
- Observers are prohibited from climbing/trespassing onto or in the trucks, equipment or corrals, which is the private property of the contractor.

- When BLM is using a helicopter or other heavy equipment in close proximity to a designated observation area, members of the public may be asked to stay by their vehicle for some time before being directed to an observation area once the use of the helicopter or the heavy machinery is complete.
- When given the signal that the helicopter is close to the gather site bringing horses in, visitors must sit down in areas specified by BLM representatives and must not move or talk as the horses are guided into the corral.
- Visitors must direct their questions/comments to either their designated BLM representative or the BLM spokesperson on site, and not engage other BLM/contractor staff and disrupt their gather duties/responsibilities - professional and respectful behavior is expected of all.
- BLM may make the BLM/contractor staff available during down times for a Q&A session.
- Individuals attempting to move outside a designated observation area will be requested to move back to the designated area or to leave the site. Failure to do so may result in citation or arrest. It is important to stay within the designated observation area to safely observe the wild horse gather.
- Visitors who do not cooperate and follow the rules will be escorted off the gather site by BLM law enforcement personnel, and will be prohibited from participating in any subsequent observation days.
- BLM reserves the right to alter these rules based on changes in circumstances that may pose a risk to health, public safety or the safety of wild horses (such as weather, lightening, wildfire, etc.)