

U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
CHALLIS FIELD OFFICE

**ENVIRONMENTAL ASSESSMENT AND GATHER PLAN**  
**CHALLIS HERD MANAGEMENT AREA**  
**WILD HORSE GATHER AND REMOVAL**

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## **BACKGROUND INFORMATION**

With passage of the Wild Free Roaming Horse and Burro Act of 1971, Congress found that: “Wild horses are living symbols of the pioneer spirit of the West.” In addition, the Secretary was ordered to “manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands.” From the passage of the Act, through present day, the Bureau of Land Management (BLM) Challis Field Office has endeavored to meet the requirements of this portion of the Act. The procedures and policies implemented to accomplish this mandate have been constantly evolving over the years.

Throughout this period, BLM experience has grown, and the knowledge of the effects of current and past management on wild horses and burros has increased. For example, wild horses have been shown to be capable of 18 to 25% increases in numbers annually, and wild burros increasing at a slower rate, 11 to 15%. This can result in a doubling of the wild horse population about every 3 years. At the same time, nationwide awareness and attention has grown. As these factors have come together, the emphasis of the wild horse and burro program has shifted.

Program goals have expanded beyond simply establishing “thriving natural ecological balance” (setting appropriate management level (AML)) for individual herds, to include achieving and maintaining viable vigorous and stable populations.

AML for the Challis Herd Management Area (HMA) has been previously established based on monitoring data; following a thorough public review in the 1999 Challis Resource Management Plan (RMP); and a 1983 consent judgment in United States District Court. Documents containing this information are available for public review at the Challis Field Office.

The numbers, age, and sex of animals proposed for removal in the proposed alternative are derived from The Wild Horse Population Model Version 1.35 WinEquus developed by Dr. Steve Jenkins, Associate Professor, University of Nevada Reno. Appendix 5 establishes the parameters used for this HMA’s modeling runs.

The Challis HMA encompasses 154,150 acres of public land in the East Fork of the Salmon River. The herd area is bordered on the north by the Salmon River, on the west by the East Fork of the Salmon River, on the south by the ridgeline between Herd Creek and Road Creek and on the East by U.S. Highway 93 and the watershed boundary between the Salmon River drainage and the Lost River drainage. It was last gathered in FY00.

The HMA is also home to a variety of threatened and endangered species, which include chinook salmon, bull trout, steelhead trout and gray wolves. Consultation on these listed species with National Marine Fisheries Service (NMFS) and the United States Fish and Wildlife Service (FWS) has resulted in livestock and wild horse use restrictions in riparian habitats throughout the herd area.

### **PURPOSE OF AND NEED FOR ACTION**

The purpose of the action is to achieve and maintain wild horse AMLs which reflect the normal thriving ecological balance, collect information on herd characteristics, determine herd health, maintain sustainable rangelands, protect/enhance endangered species habitat, protect highly erodible soils in the Malm Gulch and Sand Hollow areas, remove and impound unauthorized horses, and maintain a healthy and viable wild horse population.

Objectives common to all alternatives:

1. Re-establish or maintain herd characteristics that were typical of the Challis Herd Management Area at the time of the passage of the Act.
2. Maintain the genetic diversity of the Challis Herd Management Area
3. Remove approximately 80-90 horses (remaining animals would be no less than the AML of 185) from the Challis Herd Management Area to attain a thriving ecological balance between horses, wildlife, livestock, and vegetation.

### **Location of Proposed Action**

Challis wild horse herd management area, Townships 9-13 N, Ranges 18-21 E, Boise Meridian. See map Appendix 1.

### **CONFORMANCE WITH EXISTING LAND USE PLANS**

The proposed action is in conformance with the Challis Resource Management Plan (July, 1999) under Wild Horses and Burros, Goal 1, Decision #1 (Manage the wild horse herd for an AML of 185 animals in accordance with the 1983 U.S. District Court Consent Judgment and the current activity plan for the wild horse HMA); Decision #3 (Monitor wild horse use of the Malm Gulch and Sand Hollow areas, and remove wild horses as necessary to protect fragile watersheds); and Decision #7 (Adjust wild horse management to ensure progress toward the riparian and aquatic habitat conditions described in Attachment 1).

### **Relationship to Statutes, Regulations, Policies, Plans, or Other Environmental Analyses**

This action is governed by the Wild Free Roaming Horse and Burro Act of 1971 (Public Law (PL) 92-195 as amended) and Title 43 Code of Federal Regulations (CFR) part 4700. Gathering and disposal of the wild horses would be in accordance with PL 92-195 as amended by PL 94-579 (Federal Land Policy and Management Act (FLPMA)) and PL 95-514 (Public Rangelands Improvement Act (PIRA)). Section 302(b) of FLPMA states that all public lands are to be managed so as to prevent unnecessary or undue degradation of the lands. Interim Management Policy and Guidelines for Lands Under Wilderness Review (BLM 1995) would be followed.

The following are excerpts from CFRs:

- 1) 43 CFR 4720.1 - "Upon examination of current information and a determination by the authorized officer that an excess of wild horses or burros exists, the authorized officer shall remove the excess animals immediately."
- 2) 43 CFR 4180.2(b) - "Standards and guidelines must provide for conformance with the fundamentals of 4180.1."

All trap sites will be located outside of riparian areas so impacts to historic Chinook salmon and steelhead trout habitats in Road Creek drainage will not occur. A project specific Biological Assessment has been prepared for horse gather operations and has determined that federally listed salmonids will not be affected. Horse gather operations will not prevent attainment of the Riparian Management Objectives identified in PACFISH.

### **PROPOSED ACTION AND ALTERNATIVES**

The Proposed Action and alternatives represent a range of reasonable alternatives based on the issues and goals identified through public scoping efforts.

#### **Alternative 1 (Proposed Action)**

Approximately 200 wild horses (74% of the herd) would need to be captured to accomplish the proposed action. The animals captured from the HMA would be shipped to the Challis holding/preparation facility to determine sex, age and color, acquire blood samples, assess herd health, conduct immunocontraceptive research, and sort individuals by age, sex and temperament. In all, approximately 80-90 horses between 0-5 years old would be removed from the HMA and made available to the public through the adoption program. Roughly 30 mares would be treated with a revised immunocontraceptive vaccine and returned to the HMA. Wild horses not placed in the adoption program would be returned to the HMA or placed in a sanctuary. This would ensure a vigorous and viable breeding population, reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Free Roaming Horse and Burro Act and Challis RMP. Additional objectives for this action would be to:

- 1) Reduce reproductive rates to levels that will accommodate a minimum four-year gather schedule allowing for the maintenance of AML.

- 2) Re-establish the pre-selective removal gather sex distribution toward a 60/40 male/female ratio as specified in the 1989 Update of the Challis Wild Horse Herd Area Management Plan (HMAP).

Multiple capture sites (traps) may be used to capture wild horses from the HMA (See Appendix 4 for trap location map). Whenever possible, capture sites would be located in previously disturbed areas. All capture and handling activities (including capture site selections) would be conducted in accordance with Standard Operating Procedures (SOPs) described in Attachment 1. Selection of capture techniques would be based on several factors such as herd health, season of the year and environmental considerations.

Determination of which horses would be returned to the range would be based on an analysis of existing population characteristics, which are saddle horse type conformation with some draft horse influence.

Approximately thirty mares would be treated prior to release with a revised immunocontraceptive vaccine, porcine zona pellucida (PZP), to slow reproduction in the Herd Management Area. This would be a 1-injection, 2-year vaccine with a contraception rate of approximately 82%. The inoculation of mares would consist of a liquid dose of PZP vaccine and a time released portion of the drug in the form of pellets. The approach under study incorporates the PZP into a non-toxic, biodegradable material that can be formed into small pellets. The pellets are designed to release PZP at several points in time during the first three months after injection, much the way time-release cold pills work. This formulation would be delivered as an intramuscular injection by a jabstick syringe into the mares in the working chute. Upon impact a liquid in the chamber would be propelled into the muscle along with the pellets. Such a vaccine would permit a single injection to cause one or more years of contraception at approximately 90% efficiency. Due to the timing of this gather and treatment, only one year of efficacy would be achieved

Delivery of the vaccine would be by means of a syringe with a 12 gauge needle. 0.5 cc of the PZP vaccine would be emulsified with 0.5 cc of adjuvant (a compound that stimulates antibody production) and loaded into the delivery system. The pellets would be placed in the barrel of the syringe needle that is dipped in Furazone to prevent bacterial infection at injection site. Only trained personnel would mix and/or administer the vaccine.

All treated mares would be freeze branded on the left hip or shoulder to enable the researchers to positively identify animals in the research project during the data collection phase. The effectiveness of treatments would be determined by counting foals produced in each of the next two years. This study would be under the direction of the BLM National Research Field Trials on Wild Horse Fertility Control, Summer 2002.

**Alternative 2:** Under this alternative a modified “gate cut” procedure would be used to reduce the population of horses in the HMA to the AML of 185 animals. A “gate cut” gather is one in which entire bands are gathered and removed and no more than the target number of animals is

gathered. This alternative is described as "modified" since animals that exhibited particularly desirable traits (i.e. size, confirmation, color) would be returned to the HMA. To accomplish this an estimated 100 to 110 animals would be captured at temporary trap sites during mid-August. The animals captured from the HMA would be shipped to the Challis holding/preparation facility to determine sex, age and color, acquire blood samples, assess herd health and sort individuals by age, sex and temperament. Those animals that are unadoptable due to old age would be returned to the HMA or shipped to a long term holding facility. Approximately 80-90 horses would be removed from the HMA and made available to the public through the adoption program. There would be no fertility control used under this alternative.

Multiple capture sites (traps) may be used to capture wild horses from the HMA (See Appendix 4). Whenever possible, capture sites would be located in previously disturbed areas. All capture and handling activities (including capture site selections) would be conducted in accordance with Standard Operating Procedures (SOPs) described in Attachment 1. Selection of capture techniques would be based on several factors such as herd health, season of the year and environmental considerations.

## **Procedures common to Alternatives 1 and 2**

Removal Procedures: The wild horse gather would be conducted by BLM personnel from Rock Springs, Wyoming. These personnel would begin capturing horses in mid August. Horses would be gathered from temporary trap sites. Trap sites would be located close to horse concentrations to reduce stress on the animals by moving them a minimal distance by helicopter. The traps would also be located along existing roads and trails to minimize the trampling and trailing impacts associated with holding animals in the trap and vehicle traffic. All potential trap sites would be cleared by the Field Office archaeologist and TES plant specialist prior to use.

The pilot for this horse gather would be provided through an existing contract with BLM. In accordance with BLM and Office of Aircraft Service (OAS) regulations, no BLM personnel would be allowed in the helicopter during the actual moving of horses. The decision about which bands of horses to capture would be made by Challis Field Office personnel who would fly the gather area the day of the roundup to instruct the pilot as to which bands to capture. To the extent possible entire bands would be gathered at a time.

As much as possible, existing roads and trails would be used to move horses to the trap. This would reduce the possibility of damage to soils and vegetation from trampling by horses, and would decrease the possibility of injury to horses. Other safeguards to ensure the safety of the horses and people are:

Allotment and pasture fences would be rolled back, as appropriate, from the path of horses en route to the temporary traps.

Use of the temporary traps would ensure that horses would not have to travel excessive distances. This is especially critical for foals.

The rate of movement of horses to the trap would not exceed those set by the BLM authorized officer; taking into account the distance to the trap, the prevailing weather conditions, the presence of foals, and the general condition of the horses. Generally, horses would be moved no faster than 5-6 miles per hour (trotting) to avoid stress.

The gather would take place during August or early September when foals should be sufficiently old enough to keep up with the band without trouble. Also, there should be few mares carrying foals that late in the season.

A veterinarian would be on site during the entire gather.

Any ground disturbance would be rehabilitated.

#### Preparation and Transporting Procedures

Once horses have been captured at the temporary trap site, they would be transported by truck to the BLM corrals in Challis, where they would be separated by sex, age class, and wet/dry mares. Any problem animals would be separated at this time also. Feed and water would be available if it became necessary to hold horses at the temporary trap site longer than 12 hours. Due to BLM selective removal policy (IM2002-095), several extra bands may have to be gathered. This Instruction Memorandum places removal priority on animals five years of age and younger. Animals ten years of age and older may then be removed and placed into long-term holding facilities (sanctuaries). Wild horses six to nine years old would be removed last and only if the HMA cannot achieve AML without their removal. The veterinarian would do a visual examination of each horse either at the trap site or immediately after they arrive in Challis to ensure that there are no physical or biological abnormalities or life threatening conditions present. The veterinarian would be responsible for worming, Coggins testing, inoculating, and drawing blood. Qualified BLM personnel would freeze brand and age. Horses would then be available for private adoption under the BLM adoption program.

#### Blood Draws for Genetic and Health Studies

Blood samples would be drawn from approximately 25 to 40 horses captured during the gather effort. These samples would be used to evaluate male and female contribution to the gene pool and estimate genetic effective population size for the Challis herd. These same blood samples would then be tested and banked at Colorado State University in efforts to evaluate the risks of infectious upper respiratory diseases (IRUDs), including strangles and other health issues, in the Challis herd. Hazardous material (veterinarian drugs) in use during the gather operation would be kept, used and disposed of under the supervision of the contract veterinarian. Regulated

medical waste would be placed in leak proof containers that are contained in a red plastic bag labeled medical waste. Medical waste would be handled and transported separately from other waste to an approved disposal facility.

#### Distribution Process

BLM employees and a licensed veterinarian would be on site for all capture, transportation, preparation, and handling operations. Each horse would be freeze branded with BLM numbers and tracked as an individual through the adoption and compliance with the Private Maintenance and Care Agreement (PMACA) processes. Each horse would receive a Coggins test for Equine Infectious Anemia so they can legally be taken out of state. Applicants for horses under the adoption program would be screened to determine whether they meet necessary conditions for adoption before their applications are approved. Any horses not adopted in Challis would be transported to a BLM holding facility where they would be available for future adoptions.

Branded domestic horses have been present in the Herd Management Area during previous gathers. All branded horses caught during the gather would be impounded at the Challis Field Office Corrals in Challis until the owner of the brand can provide proof of ownership of the horse. Proof of ownership would be subject to state of Idaho requirements. A trespass fee per Animal Unit Month (AUM) and a prorated cost of the removal would be charged to retrieve these animals. Unclaimed branded animals would be turned over to the Idaho brand inspector.

#### Destruction of Lamé Horses

See Attachment 1- Standard Operating Procedures for Removal and Safety 2002, item 6 for detailed procedures.

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

#### **No Action Alternative**

Under this alternative no removals of any age horses would take place from the Challis HMA. This alternative was eliminated from further consideration due to long-term impacts on the population and range, and the inability of this alternative to reduce the herd to within the acceptable range of AML. This alternative would allow natural controls to regulate the size of the herd. There would be no active management to control herd size of this population. Under this alternative, the wild horses would be allowed to regulate their numbers naturally through predation, disease, and forage, water and space availability.

Other factors also contributed to the elimination of this alternative from further analysis. Wild horses in the Challis HMA are not substantially regulated by predators. In addition, wild horses are a long-lived species with high foal survival rates. This alternative would result in a steady

increase in numbers that would exceed the carrying capacity of the range. The Wild and Free Roaming Horse and Burro Act of 1971 mandates the Bureau to “prevent the range from deterioration associated with overpopulation”, and “preserve and maintain a thriving natural ecological balance and multiple use relationships in that area”. These mandates would not be met under this alternative.

### **Fertility Control as a Complete Means of Population Control**

Under this alternative, at least 80% of all breeding-aged mares currently on the range would need to be gathered and brought into the Challis corral facility. Research studies on east-coast barrier island populations being managed by fertility control, and application of The Wild Horse Population Model Version 1.35 WinEquus developed by Dr. Steve Jenkins to the Pryor Mountain data (data on file at Challis FO), clearly indicate that during the first 3 years of management at least 80% of all breeding aged mares must receive the vaccine and subsequent boosters, for each year of expected infertility. This level of infertility is necessary to reduce population growth rates to only a stabilizing level. This action will not allow for reductions in herd size, but will, at best, maintain the population at the size it was when fertility control was first applied.

This alternative was considered but eliminated from further analysis due to the inability of this alternative to reduce the herd to AML within a timely manner. Failure to reduce the herd to within acceptable limits of AML would result in irreparable harm to the range. In addition, all breeding-aged mares would either need to be gathered and brought into Challis each March for booster shots or the vaccine would need to be remotely-delivered in the field. Gather activities in the spring might have a negative impact on mares heavy with foal. Furthermore, remote access to this number of mares in the field may be compromised by weather and snowfall conditions during this time period. Further analysis of normal behavior in Challis mares and the impacts of predation and other natural mortality are needed prior to further consideration of this alternative.

### **Affected Environment**

General Setting: The herd area is characterized by open mountainous terrain with high valleys, grading down to broad flats on the east and the Salmon River drainage to the northwest. Elevations vary from about 5000 feet adjacent to the Salmon River to 9658 feet on Lone Pine Peak in the northern end of the herd area. The steep, mountainous terrain effectively limits motorized travel to a few well-traveled roads through the area, and restricts winter movement of wild horses to open, windswept ridges or valley bottoms.

Consultation under the National Historic Preservation Act of 1966 (as amended) has been conducted in accordance with the BLM’s National Programmatic Agreement and the implementing protocol agreement between Idaho BLM and the Idaho State Preservation Office. This project would have no effect on cultural resources. If at any time during project implementation cultural resources are located, all work in the area would cease until a qualified archaeologist could visit the site and determine the significance of the resource. Sensitive plant

inventories have been conducted on all proposed temporary trap sites and no impacts are expected. See map Appendix 4.

**Critical Elements of the Human Environment**

Some of the following elements of the human environment are subject to requirements specified in statute, regulation, executive order, or policy and must be considered in all environmental assessments. Others have been added to the following list because of their importance in assessing impacts. All the following elements have been analyzed. *However, elements denoted by an "X" are NOT affected by the proposed action and will receive no further consideration.*

- |  |   |
|--|---|
| <input type="checkbox"/> Air Quality   | <input type="checkbox"/> Areas of Critical Environmental Concern        |
| <input checked="" type="checkbox"/> Cultural Resources   | <input checked="" type="checkbox"/> Farm Lands (prime or unique)        |
| <input checked="" type="checkbox"/> Flood plains   | <input checked="" type="checkbox"/> Native American Religious Concerns  |
| <input checked="" type="checkbox"/> Threatened/Endangered Animals  | <input checked="" type="checkbox"/> Threatened/Endangered Plants        |
| <input type="checkbox"/> Threatened/Endangered Fish  | <input type="checkbox"/> Wastes, Hazardous or Solid                     |
| <input type="checkbox"/> Water Quality - Surface & Ground  |   |
| <input checked="" type="checkbox"/> Wild & Scenic Rivers   | <input type="checkbox"/> Wilderness                                     |
| <input checked="" type="checkbox"/> Availability of Access/<br>Need to Reserve Access  | <input type="checkbox"/> Soils  |
| <input type="checkbox"/> Wild Horse and Burro<br>Designated Herd Management Areas  | <input type="checkbox"/> Wetlands/Riparian Zones<br>(including uplands) |
| <input type="checkbox"/> Vegetation types, communities;<br>vegetative permits and sales;   | <input checked="" type="checkbox"/> Mineral Resources                   |
|  | <input checked="" type="checkbox"/> Invasive, Non-native<br>Species     |
| <input type="checkbox"/> Wildlife  | <input checked="" type="checkbox"/> Forest Resources                    |
| <input checked="" type="checkbox"/> Economic Feasibility of<br>Agricultural Entry  | <input checked="" type="checkbox"/> Paleontological Resources           |
| <input checked="" type="checkbox"/> Indian Trust Resources   | <input checked="" type="checkbox"/> Tribal Treaty Rights                |
| <input checked="" type="checkbox"/> Recreation Use,<br>Existing and Potential  | <input checked="" type="checkbox"/> Visual Resources                    |
| <input type="checkbox"/> Existing and Potential Land Uses  | <input checked="" type="checkbox"/> Economic & Social Values            |
| <input checked="" type="checkbox"/> Environmental Justice (EO 12989)<br>(minority and low-income populations)  | <input type="checkbox"/> Fisheries                                      |
| <input checked="" type="checkbox"/> No chemical or chemicals from the EPA's <u>Consolidated List of Chemicals Subject to Reporting Under Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986</u> , (10,000 pounds or more), will be used, produced, stored, transported, or disposed of in implementing the proposed action. No extremely hazardous substances, as defined in 40 CFR 355, will be used, |   |

produced, stored, transported, or disposed of in implementing the proposed action. *If this element is not checked, see EA document for further details concerning these chemicals and/or hazardous substances.*

### **Affected Resources:**

***Air Quality*** – Under the Clean Air Act (as amended, 1977) all BLM-administered lands were given a Prevention of Significant Deterioration (PSD) Class II status. In this PSD Class, moderate air quality deterioration associated with moderate, well-controlled industrial and population growth is allowed. Air quality in the Challis Field Office Area is generally considered to be excellent because of the remoteness of the Field Office's geographical location in east-central Idaho. Some air quality degradation occurs within the Challis FO Area, but it is usually seasonal and short-term.

***Areas of Critical Environmental Concern*** - There are five Areas of Critical Environmental Concern (ACEC) within the HMA. They are: Malm Gulch/Germer Basin, Lone Bird, Antelope Flat, East Fork Salmon River Bench and Sand Hollow. These ACECs contain a variety of unique features including pristine vegetation, rare plants, unusual plant assemblages, fragile soils and cultural resource significance.

***Threatened/Endangered Fish*** - The HMA is located within three watersheds; the Salmon River to the north, the East Fork Salmon River to the south, and Warm Springs to the east. Of these systems, only the Salmon River is currently occupied by federally listed Snake River spring/summer chinook salmon, Snake River sockeye salmon, Snake River steelhead trout, and bull trout. Horse gather operations will not be located in areas that drain into the Salmon River.

Road Creek is a tributary to the East Fork of the Salmon River and is the primary fish bearing system that drains the HMA. The Road Creek drainage includes numerous tributary streams such as Mosquito Creek, Bear Creek, Horse Basin Creek, Corral Basin Creek, and intermittent stream drainages such as Poison Creek and Boulevard Springs. Snake River spring/summer chinook salmon do not currently occupy historic spawning and rearing habitats in Road Creek due to stream diversions in the lower part of the drainage. Snake River sockeye salmon are not native to the East Fork Salmon River Watershed.

With the large historic populations of steelhead trout in the East Fork Salmon River mainstem, it is likely that steelhead also used Road Creek for either spawning or rearing. Snake River steelhead trout were Federally listed as a Threatened species in September, 1997. Discussions with local residents indicate that Road Creek was occupied by anadromous steelhead trout (*Oncorhynchus mykiss*) within the past 40 years. Prior to the construction of stream diversions in lower Road Creek, it is thought that the stream carried sufficient water to be used extensively by steelhead trout.

In June 1997, the bull trout (*Salvelinus confluentus*) was listed as a Threatened species. Bull trout are known to be present in the mainstem of the East Fork and several of its tributaries. Fisheries surveys by BLM employees have not identified bull trout in the Road Creek drainage. It is not known if bull trout were historically present in Road Creek or any of its tributaries.

There are no federally listed salmonids present in the Warm Springs watershed due to naturally elevated water temperatures from geothermal hot springs throughout the drainage.

**Hazardous Material** - Hazardous material (veterinarian drugs) in use during the gather operation would be kept, used and disposed of under the supervision of the contract veterinarian.

**Water Quality** - Six primary perennial and intermittent streams flow within the herd management area. Cold water biota is the critical beneficial use for Broken Wagon Creek. Cold water biota and salmonid spawning are the critical beneficial uses for Road Creek, Horse Basin Creek, Corral Basin Creek, Mosquito Creek and Bear Creek. In addition, secondary contact recreation and agricultural water supplies (livestock water) are also beneficial uses for all perennial streams in the herd area.

All of Road Creek, from its headwaters to its confluence with the East Fork of the Salmon River, has been identified as a Water Quality Limited Segment (WQLS) by the Environmental Protection Agency. A water-quality monitoring program is being implemented to provide current and ongoing data trends, status of beneficial uses, and BMP (Best Management Practices) effectiveness in meeting water quality standards and protecting existing beneficial uses.

Road Creek is approximately 15.3 miles long. Of this length, the last 2.7 miles of the creek is in private ownership, 1.7 miles is administered by the state, and the remainder is administered by BLM.

Existing beneficial uses on Road Creek include salmonid spawning (resident fish), cold water biota, secondary recreation and agricultural livestock water. As a tributary and sediment source to the East Fork of the Salmon River, Road Creek can affect water quality and anadromous and resident fisheries in the East Fork of the Salmon River.

**Wetlands/Riparian Zones** - There are three primary perennial creeks within the HMA (Corral Basin, Horse Basin, and Road Creeks). Road Creek has two major tributaries (Mosquito and Bear Creeks) that enter from the south. Broken Wagon Creek is perennial for just over 2 miles and also lies within the HMA flowing east into Antelope Flat. All these creeks are spring fed with headwaters within the HMA, and actively flow throughout the year. These creeks make up a total of 37.8 miles. Riparian condition was evaluated from 1994 through 1999 through a contracted riparian inventory. Condition

ratings are as follows: 31% of the stream length was in Proper Functioning Condition, 54% was Functioning at Risk with an upward trend, 10% Functioning at Risk with trend not apparent, and 5% of the stream length was Non-Functional. This condition rating focused on evaluating stream function criteria and existing vegetation habitats. Characteristics of a properly functioning riparian area include: banks stabilized by riparian vegetation, accessible floodplains, water storage in the banks due to high organic content, high water tables, the ability to dissipate energy and to trap sediment. Other secondary perennial creeks and numerous intermittent and ephemeral drainages lie within the HMA providing water, shade and forage to the resident horses.

Riparian areas and meadows associated with springs and seeps are generally in fair to poor condition due to altered hydrologic processes and community types and compacted soils throughout the HMA.

**Wilderness** - The Jerry Peak and Corral-Horse Basin Wilderness Study Areas (WSA) fall within the Wild Horse Management area. Management of the WSAs is prescribed in the Interim Management Policy and Guidelines for Lands Under Wilderness Review (BLM 1995). This document describes the policies under which BLM would manage lands under wilderness review until Congress either designates these lands as wilderness or releases them for other purposes.

Approximately forty-seven percent of the HMA is Wilderness Study Area. All 48,500 acres of the Corral-Horse Basin WSA fall within the HMA. The Jerry Peak WSA makes up 46,150 acres; 23,269 acres of which are in the HMA.

**Soils** - The soils within the HMA are shallow to very deep, gravelly to stony loams to clay loams derived from extrusive igneous rocks. Some are influenced by calcium (containing calcic horizons) from limestone deposits. Soils occurring at the higher elevations have a thick surface horizon (mollic), however, most are dry for at least half the growing season (aridic). The erosion hazard is slight to moderate. An exception to this is the “badlands” associated with Malm Gulch and Sand Hollow, which have severe erosion hazards and are described only at the suborder level as mixed Orthids. All the soil types within the HMA have rapid infiltration rates although some may have a clay or calcic horizon within 20 inches of the surface that may perch surface water.

**Wild Horse & Burro** - The proposed gather and removal would occur in the Challis Herd Management Area. Current census data (7/25/02) indicates there are 43 bands containing 251 horses in the HMA. Of these 34 were foals, indicating a 16% population increase.

Dominant colors for the present day horses are gray, black, and bay. Other colors observed are palomino, sorrel, roan and paint. The average weight of a mature adult is estimated to be around 900 pounds. This HMA has been gathered seven times since 1983. Each gather has been a “gate cut” operation whereby the removal of animals

stopped when the target number was reached. One thousand four hundred eighty three horses have been removed since 1979.

Forage is allocated for 185 horses in the HMA or 2220 Animal Unit Months (AUMs). Monitoring data indicate that when the total horse population begins to reach the upper limit of 253 animals, resource conditions begin to decline, especially in riparian areas. Stubble height standards have been set for the perennial streams in the HMA at 4 inches at the end of the grazing season. This goal has been met by the livestock use, but use of the riparian areas by horses, before and after livestock use, has prevented the stubble height standard from being achieved (Mountain Springs- 2001 End of year Report; and Warm Springs monitoring file). The Corral Basin, Horse Basin and Little Anderson Ranch areas are three areas that have had the most documented horse use. Utilization levels and stubble height standards have not been met the last two years due primarily to use by wild horses.

***Vegetation Types*** - Forty-three upland vegetation communities (including one generic mixed conifer type) have been identified within the Challis Field Office Area. All but four of these are found within the HMA. The most dominate of these are sagebrush communities with varying understories of fescue, wheatgrass or bluegrass species. Also common are shadscale and chicken sage communities with ricegrass, squirreltail, and bluegrass understories on drier (<9 inch precipitation zones) and mixed conifer and mountain mahogany communities on the higher elevation, wetter sites (>16" precipitation).

The upland communities are generally in a healthy state with adequate vegetative cover, good plant spacing, and relatively little invasion of noxious or undesirable plants. Existing species composition (based on weight) places most of the sites in late seral stage. It is estimated that less than 30% of the HMA is at mid to early seral stage.

***Existing and Potential Land Uses*** - There are six cow/calf grazing allotments within the herd management area (HMA) currently under deferred or rest rotation grazing systems with use periods of spring, summer and fall. Two additional areas (Malm Gulch and Sand Hollow) are closed to livestock grazing (Challis RMP, 1999) due to fragile soil conditions. Warm Springs, Mountain Springs, Road Creek, Split Hoof, Bradbury Flat and Bradshaw Basin allotments are within the gather area. Other primary resources associated with the rangeland environment include recreation activities, watershed protection and wildlife habitat.

***Wildlife*** - Primary wildlife species present in the herd area include elk, mule deer, antelope, sage grouse, and blue grouse. Riparian habitats found along the creeks and around the springs and seeps in the area provide important habitats for riparian dependent wildlife species.

***Fisheries*** - Road Creek also contains broadly distributed populations of westslope cutthroat trout (*Oncorhynchus clarki lewisi*), which are considered a state-sensitive species. These fish are found in most of Road Creek, Mosquito Creek, Bear Creek and Horse Basin Creek, and likely occur in the lower reaches of Corral Basin Creek.

Electrofishing surveys conducted by BLM personnel in 1994 identified westslope cutthroat/rainbow trout hybrids in Road Creek and Mosquito Creek. Bear Creek and Horse Basin Creek both contain fish that appeared to be pure strains of westslope cutthroat trout. No fish were observed in lower Corral Basin Creek although instream habitats appear to be suitable to support fish during high water years.

## **Environmental Consequences**

### **Impacts of the Proposed Action:**

***Air Quality*** - Since the horse gather is going to occur in August, and conditions will probably be dry it is very likely that dust would be a short term and localized air quality problem (especially at the trap site). The dust should not persist after the trap site has been abandoned and the associated vehicle traffic is gone. The estimated time a trap would be in use is two to three days.

***ACECs*** - Impacts to the ACECs may occur in the form of vegetation disturbance and soil dislocation from herding. These impacts would be short-lived and overall insignificant.

***Threatened/Endangered Fish*** - Chinook salmon, steelhead trout and bull trout are not currently present in any of the drainages where horse gathering would occur. Therefore, no direct or indirect effects to these Federally listed species are expected. Horse trap sites would be located outside of riparian areas so effects to federally listed species and their habitats can be avoided. Horse gather activities are expected to result in minimal soil disturbance. Any soil disturbed as a result of horse gather activities is not expected to reach downstream habitats used by federally listed salmonids.

***Wastes, Hazardous Materials*** - The amount of regulated medical waste that would be generated by this project would be minimal and not result in any threat to the environment. Therefore, no impacts are expected.

***Water Quality*** - Any impact on riparian and aquatic habitats would be reflected in water quality. Any action that lessened riparian impacts would reduce impacts on water quality and tend to increase water quality, although impacts that affect stream channel morphology or riparian vegetation would take years to exert measurable effects. As a result, quantification of effects would be difficult. All wild horse gather activities would be located in areas which would not contribute sediment into Road Creek.

**Wetlands/Riparian Zones** - The gather activities would have no long-term effects on the wetland or riparian resources since these areas would be avoided. Some insignificant impacts, such as localized bank alteration, may be experienced should horses inadvertently run through seep areas or across stream channels.

All large ungulates, both native (elk, deer) and introduced (wild horses, livestock) utilize wetlands and riparian areas for shade, water and forage. Native ungulates are relatively few, tend to not concentrate in large numbers and are allowed to range over large areas. Wild horses do impact live creeks and springs, by trampling in search of water and forage, but do not tend to concentrate or lounge for long periods of time. Maintaining a defined herd size assists in the long term management and general improvement objectives identified for perennial creeks and springs. By maintaining the wild horse herd at the AML of 185, the improvements currently being obtained in the wetland and riparian habitats through improved livestock management would continue.

**Wilderness** - Wild Horses were identified during the Corral/Horse Basin and Jerry Peak WSA inventory process as a wilderness value within the WSAs. It is likely that, during the gather there would be some surface disturbance due to the concentration of horses and humans within a temporary trap area. However by maintaining the wild horse herd at the level specified in the Resource Management Plan, degradation caused by overgrazing would be reduced, thus improving the overall health and appearance of the WSAs.

Wilderness values such as outstanding opportunities for primitive recreation, solitude and naturalness would be temporarily impacted by the presence of human activity including helicopters, trucks, riders and temporary corral structures during the gather, however this is expected to last about one week and occurs during late summer, a low use time. No vehicle use would occur off of existing roads and ways. The supplemental values noted in the original inventories include excellent wild horse viewing in Corral-Horse Basin WSA and the geological value of the Herd Lake landslide in Jerry Peak WSA. Neither of these values would be impaired through the implementation of this proposal.

This project would be substantially unnoticeable once the temporary gather facilities are removed. The addition of this proposal would not produce a cumulative effect upon the area's wilderness characteristics or values that would constrain Congress's ability to determine suitability for preservation as wilderness. The proposed action is consistent with the Interim Management Policy for Land Under Wilderness Review.

**Soils** - The gather of horses would occur primarily along existing horse trails or designated roads. During the gather some additional disturbance to soils and vegetation adjacent to the trails would occur. Aggregate structure can be destroyed, deep hoof prints could modify and influence surface drainage, additional compaction of the soil and trampling of vegetation can result. The degree of these impacts would be dependent on soil moisture conditions, the concentration of horses, and the overall amount of time horses are present.

The most severe impacts to the soil resource would be expected near and in temporary traps and holding corrals. Dry soil conditions at the time of the gather would decrease the potential for compaction and deep hoof prints, but soil particles would be more susceptible to wind erosion due to reduced aggregate stability. These impacts to the soil resource would be localized and generally short-term, unless severe adverse climatic conditions followed shortly after the gather. The latter would further displace or remove soil materials by wind or water erosion. Historically, trampling disturbance has revegetated without reseeding.

***Wild Horse & Burro*** - Impacts to wild horses take the form of direct and indirect impacts and may occur on either the individual or the population as a whole. Direct individual impacts are those that occur to individual horses and are immediately associated with implementation of the Proposed Action. These impacts include: handling stress associated with the gather, capture, sorting, animal handling, and transportation of the animals. The intensity of these impacts vary by individual and are indicated by behaviors ranging from nervous agitation to physical distress. Mortality of individuals from this impact is infrequent, but does occur in .5 to 1 percent of horses gathered in a given roundup.

There are no indications that these direct impacts persist beyond a short time following the stress event. They would be expected to completely dissipate following release or adoption. Stress levels and the potential for injury are, however, expected to be highest immediately following capture, and when animals are moved through the chutes in preparation for adoption. Well-constructed corrals at the corral facility, well maintained equipment, and additional pens for animals determined best kept separate from other animals, would be provided in an effort to decrease stress and the potential for injury and illness. The holding facility would be watered regularly to keep the dust down. Experienced BLM personnel would be on-site during all phases of the operation. A contract veterinarian or APHIS veterinarian technician would either be on-site or on-call at all times during the gather and preparation. Observers would be asked to remain some distance from the animals during all phases of the gather and preparation of the animals in order to decrease additional stress due to surrounding levels of commotion and activity.

Indirect individual impacts are those impacts that occur to individual horses after the initial stress event. Indirect individual impacts may include spontaneous abortions in mares, and increased social displacement and conflict in studs. These impacts, like direct individual impacts, are known to occur intermittently during wild horse gather operations. An example of an indirect individual impact would be the brief skirmish which occurs with most older studs following sorting and release into the stud pen which lasts less than two minutes and ends when one stud retreats. Traumatic injuries do not occur in most cases, however, they do occur. These injuries typically involve a bite and/or kicking with bruises that don't break the skin. Like direct individual impacts, the frequency of

occurrence of these impacts among a population varies with the individual. Spontaneous abortion events are very rare among mares following captures.

Population wide direct impacts are immediate effects that would occur during or immediately following implementation of the Proposed Action. They include the displacement of bands during capture and the associated re-dispersal which occurs following release, the modification of herd demographics (age and sex ratios), the temporary separation of members of individual bands of horses, the reestablishment of bands following releases, and the removal of animals from the population. With exception of changes to herd demographics, direct population wide impacts have proven, over the last 20 years, to be temporary in nature with most if not all impacts disappearing within hours to several days of release. No observable effects associated with these impacts would be expected within one month of release except a heightened awareness of human presence.

The effect of band displacement on a population as a result of gather operations has been observed in several HMAs following releases. Observations have been made of individual and population wide horse response following releases from both the trap site where particular animals were captured and from the central holding facility where all captured animals were held. Most horses relocated themselves from the release site back to their home ranges within 12 to 24 hours and at times much faster. This redistribution occurred following a brief “reorientation swing” involving horses ranging out from the release site in a curving arc until their bearings were apparently restored. Following this initial random travel, most horses lined out and headed off in a particular direction often without deviating from that line until they disappeared into the mountain or over the horizon. Assertions that horses are simply taking the most direct route away from humans are not accurate, as instances where horses reverse their original direction crossing back in front of the release trailer or holding area are fairly common following the re-orientation swing.

Specialists have also observed horse behavior, following releases, as it relates to bands that are separated at capture. While the affinity of individual animals to their band would be expected to vary, it was a very common observation that mares or studs broke from the group they were released with (unexpected behavior for a social animal exercising the flight response) and headed toward a particular animal or group of animals. Following this activity, the pair or trio of horses continue the re-orientation swing and then lined out together in a common direction. In some cases, individual groups were observed later together in a new area presumed to be the site of their original home range. Some specialists have noted individual mares reassociated with specific studs or mare groups following capture.

The effect of removal of horses from the Challis herd would not be expected to have an impact on herd dynamics or population variables, as long as the selection criteria for the removal ensured a “typical” population structure was maintained. Obvious potential

impacts on horse herds and populations, from exercising poor selection criteria not based on herd dynamics, includes modification of age or sex ratios to favor a particular class of animal. Expected results of establishing a 60/40 male/female ratio would be: decreased band size, competition for mares would be expected to increase, recruitment age for reproduction among mares would be expected to decline, and size and number of bachelor bands would be expected to increase.

The Proposed Action would mitigate potential adverse impacts on wild horse populations by establishing a procedure for determining what selective removal criteria is warranted for the herd. This more flexible procedure of removing horses under 6 years and over 10 years old, would allow for the correction of any existing discrepancies in herd dynamics which could predispose a population to increased chances for catastrophic impacts. The Proposed Action would establish a standard for selection which would minimize the possibility for developing negative age or sex based selection effects in the population in the future.

Considerable progress has been made in wild horse contraception since 1992. A field-deliverable, 1-injection vaccine which contains polymer pellets that release PZP and adjuvant boosters at prescribed times has been developed. Contraception rates in mares are from 82% (2 years) to 94% (1 year). Results of fertility control research conducted to date indicate that PZP immunocontraception is highly effective, and that the reproductive success of the mares returns to normal the year following fertility control. There would be no significant increase in stress above that normally associated with the preparation and sorting of animals during a gather.

Research has shown that treating mares three consecutive years and possibly five consecutive years is completely reversible. The vaccine has been used successfully to manage the wild horse population of Assateague Island National Seashore under the sponsorship and authority of the National Park Service (NPS). The population has been treated for 12 years without health problems. Wild horses are being treated on Cape Lookout National Seashore for the NPS, on Carrot Island (Rachel Carson National Estuarine Reserve) in NC, and on many HMAs in Nevada, for the Bureau of Land Management. In addition to controlling the horse population on Assateague Island and the other locations, research has shown thus far no permanent infertility, and has shown extended lives and improved health condition of older mares by removing the stresses of pregnancy and lactation (Journal of Reproduction and Fertility 1992 Kirkpatrick, J.).

Population wide indirect impacts would not appear immediately as a tangible effect and are more difficult to quantify. The proposed action would decrease foal production for one year, but would not negatively impact the wild horse population in long-term management. Population wide indirect impacts are associated primarily with the use of fertility control drugs and involve reductions in short term fecundity of initially a large percentage of mares in a population, increasing herd health as AMLs are achieved, and potential genetic issues regarding controlling contributions of mares to the gene pool,

especially in small populations. Again, with implementation of the Proposed Action, these impacts would be mitigated by an overall lessening of the need to impose fertility control treatments on a high proportion of the mare population, and all mares would be expected to successfully recruit some percentage of their offspring into the population.

***Vegetation Types*** - Short-term disturbance would occur in the immediate vicinity of the catch pens or corrals and the loading chute. The soil would be compacted and vegetation would be trampled during panel installation by personnel and vehicles and severely trampled in the catch pen area by wild horses, domestic horses, and the wranglers. Crushing of standing vegetation would occur during gather activities from running horses. Although roads and trails would be used where possible, certain impacts would, nevertheless, occur. It is unlikely these impacts would result in significant numbers of plants affected or size of area affected. Large stature shrub communities in the wetter areas would experience minimal impacts, while the low stature shrub communities (chicken sage, fringed sage) occupying the drier, more fragile ranges may experience some mortality resulting in reduced ground cover and increased bare ground. Although these impacts may appear to be considerable on a site-specific basis, they are generally slight when viewed throughout the project area.

Many of the vegetation types occupying the Herd Management Area are dominated by bluebunch wheatgrass. This particular species is sensitive to grazing during certain times of its life cycle due to its growth form. When the growing points (apical meristems) reach grazing height (4-6 inches) the plant ceases all growth if it is grazed. This response may last several years depending upon the severity of grazing, climate year, and health of the plant affected. Nested frequency plots located throughout the HMA generally indicate a static to upward trend in plant vigor. Some locations, however, do indicate a downward trend as shown by a reduction in frequency of occurrence. It has not been conclusively determined that this downward trend is the result of uncontrolled wild horse grazing or merely natural plant dynamics (i.e. responses to drought). By controlling the wild horse numbers at a level anticipated to be in balance with ecological capabilities of the site, these bluebunch wheatgrass communities would remain healthy and vigorous.

***Existing and Potential Land Uses*** - Managing horses and livestock to obtain and maintain a thriving ecological balance would benefit all biotic and abiotic resources. Direct effects to livestock grazing may include scattering of livestock on those allotments that may still have cattle on them during the gather. Mountain Springs and Road Creek are the only allotments within the HMA that may still have cattle out during the gather, and the cattle on Mountain Springs are scheduled to move at this time. Bradshaw Basin, Split Hoof, Bradbury Flat and Warm Springs should not have cattle grazing during the gather, so this affect will be minimal.

***Wildlife*** - Wildlife populations in the areas from which horses are gathered by the helicopter would be forced to seek cover in areas adjacent to the flight path. This would not cause them to abandon their normal habitat areas as the disturbance would be of short

duration (8 to 10 days) and very localized. A reduction in wild horses from current numbers to AML would generally create more favorable conditions for wildlife. Effects would include increased amounts of herbaceous vegetative cover and less competition for food and space. Reduced wild horse numbers would also result in the improvement of riparian habitats for riparian-dependent wildlife species.

***Fisheries*** - Westslope cutthroat trout are the only salmonid within the horse gather assessment area that are not federally listed. Westslope cutthroat are present in Road Creek and several of its tributaries. Since horse herding would occur along these occupied streams, there is the potential for individual fish to be affected as horses are moved from the upper portions of the watershed down to the temporary corrals in the lower portions of the watershed. These affects could include affects to instream habitats from streambank trampling and soil disturbance, or direct affects to individual fish from trampling as the herd crosses an occupied stream. Any affects to individuals or their habitats would be localized and short term in nature and are not expected to occur at a level that would affect the long-term reproductive capability of westslope cutthroat trout in the Road Creek watershed.

## **Impacts of Alternative 2:**

***Air Quality*** - Same as Proposed Action.

***ACECs*** - Same as Proposed Action.

***Threatened/Endangered Fish*** - Same as Proposed Action.

***Wastes, Hazardous Materials*** - Same as Proposed Action.

***Water Quality***- Same as Proposed Action.

***Wetlands/Riparian Zones*** – Same as Proposed Action.

***Wilderness***- Same as Proposed Action.

***Soils***- Same as Proposed Action.

***Existing and Potential Land Uses*** – Same as Proposed Action.

***Wildlife***- Same as Proposed Action.

***Fisheries***- Same as Proposed Action.

***Wild Horses*** - This alternative would employ a modified “gate cut” gather. Using this method, approximately 100 to 110 horses would be gathered, with 80 to 90 removed. This gather is described as “modified” because animals with more desirable traits (i.e. size, conformation, color) would be returned to the range. This type of gather has been shown to leave more studs than mares in most cases. Expected results of more males than females would be: decreased band size, competition for mares would be expected to increase, recruitment age for reproduction among mares would be expected to decline, and size and number of bachelor bands would be expected to increase. Based on previous gathers, the sex ratios for the Challis herd seems to be holding at about 45 to 50 % studs.

Fewer animals would need to be gathered under this proposal resulting in less overall stress on the herd.

Under this proposal fertility control would not be used, so the population would continue to increase at 15 to 20% each year. A gather would again be necessary in a couple of years to stay within the AML.

### **Cumulative Impacts**

Cumulative impacts on the environment of both Alternative 1 and 2 would be similar. Both actions would help stabilize soils in fragile soil areas which would in turn lead to healthier plant communities and ultimately better watershed health and water quality. Good watershed health and good water quality have beneficial effects for salmonid habitat, cold water biota and recreation.

Based upon these considerations, the effects of other existing and reasonably foreseeable future activities including the Proposed Action would not significantly affect the environment.

### **Consultation and Coordination**

A public hearing was held July 9, 2002, to discuss the use of helicopters and motorized vehicles to capture wild horses. During this meeting, the public was given the opportunity to present new information and to voice any concerns regarding the use of these methods to capture wild horses.

This EA and Gather Plan have been distributed to the members of the general public, special interest groups, and intra-and interagency personnel (See Attachment 3) for review and comment.

Person/Agencies Consulted: (see attached mailing list- Attachment 3)

**List of Preparers**

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Signature (NEPA Coordinator)

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Date