Hog Creek Herd Management Area Gather EA

OR-030-03-018

July 1, 2003

Vale District Office

Gather Plan for Hog Creek

TABLE OF CONTENTS

BACKGROUND INFORMATION

With passage of the Wild 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) Vale District 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 has increased. For example, wild horses have been shown to be capable of 18 to 25% increases in numbers annually. 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 Hog Creek Herd Management Area (HMA) has been previously established at a range from 30 to 50 horses based on monitoring data and following a thorough public review. Documents containing this information are available for public review at the Vale District office.

The numbers, age, and sex of animals proposed for removal are derived from The Wild Horse Population Model Version 3.2 developed by Dr. Steve Jenkins, Associate Professor, University of Nevada Reno. Appendix B establishes the parameters used for this HMA's modeling runs.

The Hog Creek HMA was last gathered in FY97. The Hog Creek HMA lies west of Harper, Oregon (see attached map), adjacent and to the north of Highway 20. The topography of the HMA varies from flat to slightly rolling hills, and steep mountainous country. There are several high, steep ridges in the area with rims and rocky out crops. Elevation varies from approximately 3,000 to 5,600 feet. The primary vegetation found in the allotment is the big sagebrush/bluebunch wheatgrass cover type.

PURPOSE OF AND NEED FOR ACTION

The purpose of the action is to achieve and maintain wild horse AML which reflect the normal thriving ecological balance, collect information on herd characteristics, determine herd health, maintain sustainable rangelands, and maintain a healthy and viable wild horse population.

Climatic data document varying degrees of drought conditions in the area from 1985 to present. During the 2002 drought conditions, forage production was estimated to be 25 to 30% (source: note that the Sneva model has a minimum 50% production) of normal. These prolonged "below

normal" precipitation conditions have reduced forage production, stressed plants, and the vigor and health of many vegetative communities has declined. Plants are generally in a low vigor condition and yearlong wild horse grazing has stressed the community even further. Areas near water during the summer of 2003 have been stressed when livestock, wild horses and wildlife concentrated on the available water sources. Horse numbers need to be reduced in number to prevent further resource degradation in key areas of horse concentrations.

Objectives include:

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 more "normal" distribution as indicated by herd sex structure found during the first documented BLM gather in this area.

3. Re-establish pre-selective removal gather age class distribution toward a more "natural" year gather.

4. Re-establish or maintain herd characteristics which were typical of the Hog Creek HMA at the time of the passage of the Act.

5. Maintain the genetic diversity of the Hog Creek herd.

6. Capture 120 and remove approximately 90 horses from the Hog Creek herd to attain a thriving ecological balance between horses, wildlife, livestock, and vegetation.

CONFORMANCE WITH EXISTING LAND USE PLANS
The Southeastern Oregon Resource Management Plan (RMP) approved in September, 2002 has been reviewed. The Proposed Action is in conformance with RMP objectives (p. 55-57 SEORMP Record of Decision).

Relationship to Statutes, Regulations, Policies, Plans, or Other Environmental Analyses
This action is governed by the Wild 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."

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 4710.3-1 - "Herd Management Areas shall be established for maintenance of wild horse and burro herds."

Gathering excess horses conforms to the Standards and Guidelines (S & Gs; Appendix D) for Grazing Management. These S & Gs were developed with full public participation and in consultation with South Eastern Oregon's resource advisory council. They have been reviewed by the Departmental Review Team that found they comply with the requirements of the regulations.

The Proposed Action is also consistent with the 1991 Final Oregon Wilderness Environmental Impact Statement and the Endangered Species Act Section 2(c) and 7(a) 2.

The Southeastern Oregon RMP, which constitutes the land use plan for Malheur Resource Area (note above), stresses the prevention of excess utilization of vegetative resources. In addition, the gathering of excess horses is consistent with the Hog Creek Management Area Plan and the Proposed Action also conforms to the Allotment #4 Allotment Management Plan.

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

Alternative 1 (Proposed Action)
The Proposed Action is to capture approximately 85% of the total number counted, or 102 horses during the fall of 2003. Approximately 90 wild horses would be removed determining sex, age and color, acquiring blood samples to be analyzed to establish genetic baseline data (genetic diversity, historical origins of the herd, unique markers, plus norms for the herd), assessing herd health (pregnancy/parasite loading/physical condition/etc), monitoring results as appropriate, sorting individuals as to age, size, sex, temperament and/or physical condition, and returning selected animals, primarily in the 6 to 10 year age group. The rest of the horses captured would be returned to the HMA. Horses of similar characteristics are introduced to this herd periodically. This ensures a vigorous and viable breeding population. Removing excess horses would reduce stress on vegetative communities and wildlife, and be in compliance with the Wild Horse and Burro Act and land use plans.

Multiple capture sites (traps) may be used to capture wild horses from the HMA. 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 Appendix A. 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 confirmation.

Alternative 2: (Continue Existing Management)
Under this alternative wild horse management would continue under the current strategy for horse removals. All removals would be based on the Selective Removal Policy (0-5 years of age only.) Management would continue to be conducted utilizing a strategy of issue based designations of excess animals.

Alternative 3: (No Action)
Under this alternative, wild horses would not be removed from the Hog Creek during the fall of 2003. The existing population of 120 horses would continue to increase at approximately 20% per year.

Alternatives Considered But Eliminated From Further Analysis:

1. The use of an immunocontraception vaccine in conjunction with the gather was eliminated from further analysis due to the small number of horses that will be gathered and returned to the herd. It was determined that no significant benefit would result by the administration of the drug.

2. Wild horse management using fertility control measures only to regulate wild horse populations. Periodic capture operations would be required to administer the vaccine to mares, or suitable remote delivery methods would need to be developed. This alternative was eliminated from further analysis since the immunocontraceptive vaccine has not been formally approved by the Food and Drug Administration for management based applications. Even with formal approval, an effective remote delivery methodology (aerial or water based) has not been developed for current formulations. The current data suggest that repeated long-term applications of the vaccine may affect fecundity.

3. Closure of the area to livestock use, or reduction of permitted use, was eliminated from consideration since it would not meet existing law, regulation, policy, nor concur with existing land use plan decisions. The Wild and Free Roaming Horse and Burro Act does not require that these areas of public lands be managed for wild horses but states under Section 2a (Act) that even in case of ranges that are devoted principally for wild horse management, it is not necessary to devote these lands exclusively to their welfare in keeping with multiple use management concept for public lands, but rather that these determinations be made through the land use plans.

AFFECTED ENVIRONMENT

A. Wild Horses

Total area of the Hog Creek HMA is 21,814 acres. The HMA is located 8 miles west of Harper, Oregon in the Malheur Resource Area of the Vale District. The Southeastern Oregon RMP was completed in September, 2002.

The Hog Creek HMA has been periodically gathered since it was first gathered in 1977. Numbers of horses captured and removed for each successive gather are documented in the Burns District Office.

Last census in the HMA was done on June 20, 2003 when 120 horses were counted. Of these 120 horses, 25 were foals less than one year of age, which indicates a 20% population increase. However, it need be noted that the foaling season was not complete at the time the census was conducted and a number of pregnant mares were observed.

Adult horses in the HMA weigh an average of 950 to 1050 pounds and stand between 14.2 and 15.2 hands, with some stallions being slightly larger. The dominant colors are sorrel, bay, red roan, and black, with a few palominos and buckskins. Most have saddle horse type confirmation. Characteristics of the herd have remained the same since 1975. Stallions from other herds with similar characteristics have been periodically introduced into this HMA to help ensure genetic diversity.

Peak foaling period for this herd is from March through May. Peak breeding period is from April through June. Currently, the existing sex ratio in the HMA is about 50/50.

Hog and Miller Creeks are the major riparian areas in the Hog Creek HMA. Reservoirs and springs are the main late season water sources within much of the HMA. Water can be a limiting factor on certain years in the HMA.

Forage is allocated for 30 to 50 horses in the Hog Creek HMA or 600 animal unit months (AUMs). Utilization levels in identified key horse areas for the much of the HMA is within acceptable limits of 40-45%. However, the numbers of horses using the area has increased in the past several years and there is no rest provided for key cool season grasses. Utilization levels have reached the upward limits of the acceptable range.

Other issues driving the Proposed Action include continuing drought conditions in the area leading to water shortage and excessive riparian impacts around the springs. The results are degradation of water quality and habitat in the Hog Creek HMA.

B. Grazing Management

Hog Creek HMA

Forage allocation for livestock in the Hog Creek HMA is currently 5502 AUMs of active

authorization with a seven month season of use from April 1 through October 31 annually. An Allotment Management Plan was implemented in 1985. The eleven pasture allotment is in two areas of use, both of which contain portions of the HMA. Hog Creek HMA is within North Gravel, South Gravel, and East Miller Creek pastures (38 percent of the allotment). Additional small enclosures are excluded from livestock grazing and wild horse use. There have been periodic voluntary livestock grazing reductions made within Hog Creek HMA by the permittees.

As noted in the most recent allotment evaluation (1991), resource management objectives within the HMA were being met as follow:

- "The objective to improve the ecological condition of upland communities within North Gravel Pasture was not met during the past six years. Early ecological condition classification of North Gravel pasture is questionable. Much of the pasture is believed to be in mid to late ecological condition."
- "Upland vegetation objectives to improve the ecological condition within South Gravel Pasture are being met."
- "The riparian objective within East Miller Creek Pasture has not been met due to season of use and incidental livestock trespass. The Hog Creek Riparian exclosure controlled livestock and wild horse use of riparian communities beginning in 1990. This action allows for a deviation from the spring use only constraint in the land use plan since the critical riparian area is protected."

There are six permittees who graze livestock on the Allotment #4. There is an established grazing system whereby the permittees rotate cattle through. Water for livestock and wild horses is mainly available from springs and reservoirs during late winter to early summer. Throughout the summer, spring flow and reservoir storage diminish. By the late part of the grazing season some water resources become dry, thus causing some excessive use around other watering areas.

Overall rangeland trend is static throughout Allotment #4. Current utilization levels in many areas of the Allotment #4 are within the maximum utilization level of 50% on native range where objectives are to improve ecological condition and 65% on nonnative seedings where objectives are to improve or maintain conditions set forth in the SEORMP, Record of Decision.

C. Wildlife

Pronghorn antelope (Antilocapra americana), mule deer (Odocoileus hemionus), and elk (Cervus canadensis) use the HMA to varying extents. Pronghorn and mule deer are present year-long while elk generally migrate into the herd area during the winter. Chukar partridge (Alectoris chukar) are found in the area. A variety of small mammals, reptiles, neotropical migratory birds and raptors common to southeast Oregon can be found throughout the area. Forage demand identified in the SEORMP in cooperation with Oregon Department of Fish and Wildlife is 183.6 AUMs for deer, 8.6 AUMs for antelope, and 56 AUMs for elk in Allotment #4.

D. Threatened and Endangered/Special Status Species

No special status plant species have been identified in the HMA. No plant species in the area are listed as threatened or endangered under the Endangered Species Act.

Sage grouse, loggerhead shrikes, and long-nosed leopard lizards found within the Hog Creek are BLM special status species. BLM's policy is to manage so there will not be a need to list under the Endangered Species Act. Reptiles include (Gambelia wislizenii), Mojave black collared lizards (Crotaphytus bicinctores), northern sagebrush lizards (Scleoporius graciosus), and desert horned lizards (Phrynosoma platyrhinos).

E. Vegetation

Vegetation in the HMA primarily consists of Wyoming big sagebrush (*Artemisia tridentate ssp. wyomingensis*), rabbit brush (*Chrysothamnus viscidifloris*), low sagebrush (*Artemisia arbuscula*), stiff sagebrush (*Artemisia rigida*), bluebunch wheatgrass (*Pseudorogneria spictata*), Thurber's needlegrass (*Stipa thurberiana*), bottlebrush squirreltail (*Elymus elymoides*), Sandberg bluegrass (*Poa sandbergii*), and cheatgrass (*Bromus tectorum*). The present ecological condition of the vegetation is considered to be in middle to late seral condition with static trend.

F. Soils

The soils found in the Hog Creek HMA were surveyed and described in Oregon's Long Range Requirements for Water 1969, Appendix I-10, Malheur Drainage Basin. Unit 56 and 60 occur on 7 to 12 percent slopes. Units 76 and 77 occur on 12 to 60 percent slopes. Microbiotic crusts have not been inventoried, but are known to exist in the HMA.

Unit 56 soils are shallow, well drained soils with clayey subsoils and cemented pans. They occur on very extensive, gently sloping to moderately steep old fans on high terrace remnants. Native vegetation consists mostly of big sagebrush, low sagebrush, rabbitbrush, budsage, Atriplex spp., needlegrass, and squirreltail grass. This soil makes up approximately 7% of the HMA along the eastern edge.

Unit 60 soils that are moderately fine textured, well drained soils underlain by old lacustrine sediments. They occur on gently sloping to hilly uplands mainly in conjunction with Unit 56 soils. Native vegetation consists mostly of big sagebrush, rabbitbrush, bluebunch wheatgrass, and Sandberg bluegrass. This soil makes up approximately 3% of the HMA along the eastern edge.

Unit 76 soils are shallow, clayey, very stony, well drained soils over basalt, rhyolite, or welded tuff. These soils occur on gently undulating to rolling lava plateaus and some very steep faulted and dissected terrain. Native vegetation consists mostly of big sagebrush, low sagebrush, bluebunch wheatgrass, and Sandberg bluegrass. This soil makes up approximately 58% of the area on 20 – 60% slopes in the western part of the

HMA and is found in conjunction with Unit 77 on 12 – 20% slopes in the northern and eastern part of the HMA.

Unit 77 soils are very shallow, very stony, rocky, well-drained soils over basalt, rhyolite, or welded tuff. These soils occur on gently undulating to rolling lava plateaus. Native vegetation consists mostly of big sagebrush, low sagebrush, and Sandberg bluegrass.

G. Riparian Areas/Water Quality/Floodplains

Hog and Miller Creeks are the major riparian areas in the Hog Creek HMA, with portions of both creeks having perennial flow. These creeks are located in the western region of the HMA with both woody and herbaceous riparian vegetation. Assessments have not been fully completed on these creeks, but there is significant horse use in both riparian areas. The eastern region of the HMA has several reservoirs, springs, and a few seeps that are reliable late season water sources. Many of these areas have limited capacity for riparian development. The terrain is dissected and extremely steep with ridgetop elevations of over 4400 feet and water source elevations less than one mile away under 3500 feet. The steep terrain and dissected ridgetops have been observed to deter the horses from traveling long distances to water sources unless pressured.

H. Recreation

The area within the HMA receives some recreational use, mainly big game and upland game bird hunting, limited wild horse viewing, fishing in stocked reservoirs, and hiking.

I. Other

The following key elements are either not present or not affected by the proposal or alternative.

1. Wild and Scenic Rivers - Not present.

2. Visual Resources - VRM class II and IV not affected.

3. Air Quality - Not affected.

4. Cultural and Historic Resources – All known and recorded sites will be avoided. If new traps are selected they will be surveyed prior to use. No trap sites will be located in areas where there are prehistoric or historic resources present.

5. Prime or Unique Farmlands - None present.

6. American Indian Religious Concerns - None present.

7. Environmental Justice - Not affected.

8. Invasive Weeds - Not Affected.

9. Research Natural Area (RNA)/Areas of Critical Environmental Concern (ACEC) - None present.

10. Wilderness Study Areas (WSAs)
None present in the HMA and none affected adjacent to the HMA.

ENVIRONMENTAL CONSEQUENCES

Alternative 1: (Proposed Action)

A. Wild Horses

Impacts to wild horses under the Proposed Action 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 impacts which occur to individual horses and are immediately associated with implementation of the Proposed Action. These impacts include: handling stress associated with the roundup, 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.

Indirect individual impacts are those impacts which 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 which 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 which would occur during or immediately following implementation of the Proposed Action (Appendix C). 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, 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 which 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 population would not be expected to have 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.

Effects resulting from successive removals causing shifts in sex ratios away from normal ranges are fairly self evident. If the selection criterion leaves more studs than mares, band size would be expected to decrease, 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. On the other hand, a selection criterion which leaves more mares than studs would be expected to result in fewer and smaller bachelor bands, increased reproduction on a proportional basis with the herd, lengthening of the time after birth when individual mares begin actively

reproducing, and larger band sizes.

Effects resulting from successive removals causing shifts in age dynamics away from normal ranges are likewise, fairly obvious. Herd shifts favoring older age horses (over 15 years) have been observed resulting in a favoring of studs over mares in some herds. Explanations include sex-based differences in reproductive stress (relative demand for individual contributions to reproduction) and biological stress (timing the most physically demanding period of the annual cycle).

For studs, reproductive stress is based on dominance in the herd and by definition is confined to a fairly narrow period in their lifespan when they are capable of defending a mare group. For mares, recurrent reproductive stress starts as early as age 2 and continues until as late as age 15 or 16, and sometimes as late as 20. Biological stress in wild horses tends to indicate a selection against mares. Biological stress is based on the degree, duration, and timing of biologically demanding activities during the annual reproductive cycle.

For mares, the greatest biological stress is during pregnancy and lactation. In wild horse populations, this occurs in late winter or early spring when forage availability is at its lowest level, and body condition is at its poorest. For studs, biological stress is at its peak during the breeding season. This peak biological demand is in the late spring and early summer and is more suited to a rapid recovery and a lower energy deficit than for mares.

The susceptibility of the older herd to extreme climatic events would depend on the age of the dominant class in the group. Generally, survival rates of horses are very high (exceeding 98%) for mature animals and lower for very young. This survivability declines again at some older age. Similarly, reproductive success also declines at some age. The threshold age has not been established at which susceptibility to extreme events and reproductive senescence occurs. It is reasonable to conclude that the older the population, the more prone it would be to a catastrophic die-off as a result of reduced resistance to disease, lowered body condition, and/or reduced reproductive capacity.

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

The Proposed Action would mitigate the potential adverse impacts on wild horse populations by establishing a procedure for determining what selective removal criteria is warranted for the herd. This 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.

B. Grazing Management

The proposed action would allow present livestock use to continue at allocated levels with possible restrictions in livestock use due to continuing drought conditions and other unforeseen situations.

C. 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, trap sites, and other areas of human activity associated with the gather operation. 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. Competition for water and/or forage that might exist between wild horses and wildlife would be reduced.

D. Threatened and Endangered/Special Status Species

Increased herbaceous cover as well as maintained or improved vegetative conditions will benefit the special status species identified on page 10.

E. Vegetation

In the immediate vicinity of the catch pens or corrals and the loading chute, short-term disturbance would occur. 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. It is estimated and anticipated that 1 to 3 years would be required for native vegetation to become reestablished under average conditions with no reclamation. The total area of impact per trap would be approximately 2 acres, with less than ¼ acre severely disturbed. Less than one AUM of livestock forage would be temporarily lost for one grazing season at each trap site used.

There would be a positive impact to the upland and riparian vegetation by reducing the total numbers of wild horses grazing year long within the HMA. Lessened utilization would allow critical growth period rest for key cool and warm season grasses. The composition of vegetation would change to a higher percentage of desirable plants, soil cover would increase and the potential for erosion would decrease.

F. Soils

Soil loss and compaction would be expected to decrease in those areas near water sources where horses are forced to concentrate. Lower populations of horses would result in less hoof traffic, thereby decreasing negative impacts to soil micro biotic crusts.

Soil would be displaced and/or compacted on approximately two acres at each site in the construction of the trap panels, use of the access routes, and in the round-up and loading

of the wild horses. The area of severe surface disturbance is normally less than 2,000 square feet. Minimal surface wind and water erosion is expected on these areas during the vegetative rehabilitation period (approximately 1 to 3 years).

G. Riparian Areas/Water Quality/Flooplains

The proposed action would limit the intensity of use at water sources and surrounding uplands. Regulating the number of wild horses in the HMAs would reduce use near water sources and riparian areas by minimizing degradation to these resources.

The trap sites would not be located adjacent to any surface water sources or riparian areas, therefore, there would be no anticipated direct impact due to the gather.

H. Recreation

No impact is anticipated beyond the few days of activity associated with the gather.

Alternative 2: (Continue Existing Management)

A. Wild Horses

Wild horses would continue to be removed under the selective removal policy (0-5 year old age group only) and using a strategy of issue based removals. Issues include, but are not limited to, drought, riparian degradation, wildlife impacts, or wildfires. A lack of flexibility in the procedure of removing horses over the age of 6 years would continue or cause discrepancies in herd dynamics (i.e. sex ratios, age distribution) which could predispose a population to increased chances for catastrophic impacts. This means that older age groups of horses are more susceptible to die offs than the younger, more vigorous animals.

B. Grazing Management

Same as proposed action.

C. Wildlife

Same as proposed action.

D. Threatened and Endangered/Special Status Species

Same as proposed action.

E. Vegetation

Same as proposed action.

F. Soils

Same as proposed action.

G. Riparian Areas/Water Quality/Flooplains

Same as proposed action.

H. Recreation

Same as proposed action.

Alternative 3: (No Action)

A. Wild Horses

The HMAs would continue to support an existing population of 120 horses. The horses would continue to multiply and the population would increase at a rate of 20 to 25 percent per year until the habitat would no longer support the horse population and a natural die off would occur. Until this happens the horses would continue to overuse the available forage and water. The horses would begin to show signs of malnutrition, and a decrease in the population rate can be expected. In concentrated, overabundant animal populations, the individuals become much more susceptible to disease, which endangers the entire population. Domestic stock in the vicinity could also be threatened by disease.

Under this alternative, natural controls would regulate wild horse numbers through predation, disease, and forage, water and space availability. Wild horses in the Hog Creek HMA are not substantially regulated by predators. In addition, wild horses are a long-lived species with documented foal survival rates exceeding 95%. This alternative would result in a steady increase in numbers that would exceed the carrying capacity of the range. The Wild 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".

B. Grazing Management

Assuming that livestock and wildlife populations are managed to allocated levels, the carrying capacity of the HMA would be over allocated. The weight gains of the livestock would decrease as the quality and quantity of available water and forage decreases. The BLM may be forced to suspend or reduce the permitted use of livestock in the area to compensate for the excess number of horses. This in turn, would affect the financial income of these operations.

C. Wildlife

Wildlife populations in the HMAs would be forced to compete more for limited water and forage, which would most likely alter use patterns. Habitat degradation would decrease wildlife populations and wildlife use in the HMAs.

D. Threatened and Endangered/Special Status Species

Special status species would be affected by increased horse numbers through degradation of habitat conditions which could reduce productivity of these species. Riparian vegetation browsing and trampling springs, primarily due to wild horse use, would

further degrade habitat conditions for wildlife.

E. Vegetation

Areas which are presently over utilized, such as areas adjacent to water sources, would continue to be used excessively. The area of over utilization would continue to increase in both size and degree. The composition of vegetation would change to a higher percentage of undesirable plants, soil cover would be reduced, and the potential for erosion would increase.

F. Soils

Soil loss and compaction would be expected to increase in those areas near water sources where horses are forced to concentrate. Increased wild horse numbers on uplands and riparian areas would negatively impact soil surface features and would increase erosion in the HMAs.

G. Riparian Areas/Water Quality/Flooplains

Increasing numbers of wild horses in the HMAs would result in greater use and degradation of riparian areas. This would result in an unacceptable decline in water quality through increased sedimentation and water temperatures. Riparian area vegetation would be degraded as additional horse use would decrease vegetation recruitment, reproduction, and survivability. In addition, riparian vegetation community types and distribution would be changed, root density lessened, and canopy cover reduced. This would lead to reduced stream channel and spring/seep dynamics and further deterioration of these systems.

H. Recreation

Some negative impacts to hunters would occur with degraded conditions for wildlife populations. The visual resources would be negatively impacted with increased use of the water sources and vegetation. There would be increased horse numbers in the area, thus increasing the horse viewing opportunities.

I. Cultural

An increased horse population would compound the use near available water sources, and may damage or displace artifacts in the immediate vicinities.

CUMULATIVE IMPACTS

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

Alternative 1: (Proposed Action)

The potential for cumulative impact on most of the identified resources other than wild horses is minimal. There would be lessened competition for forage and limited water with fewer numbers of horses. By removing horses without the selective removal policy there would be a restoration of age structure and sex ratio within the bands to historical levels. In addition, a quality cross section of horses in all age groups can be released back into the HMA and older, less desirable or defective horses removed. The proposed action is needed to maintain a thriving, ecological balance, thereby, reducing the stress on the horses related to gather activities.

Alternative 2: (Continue Existing Management)
Continuing to remove horses under the selective removal policy would contribute to a skewed age structure and sex ratio. Overall quality of the horses would be reduced because of the necessity of turning back unadoptables in other age classes.

Alternative 3: (No Action)
The horses would continue to over populate the HMA until numbers would reduce or eliminate the herds by natural means. Range condition would deteriorate, watershed cover would be reduced, water quality would be reduced, soil erosion increased, wildlife use patterns and numbers would be altered, and domestic livestock would be eliminated.

CONSULTATION AND COORDINATION

Public hearings are held at the Burns District Office prior to gathers to inform the public on the use of helicopters and motorized vehicles to capture wild horses. During these meetings, the public is given the opportunity to present new information and to voice any concerns regarding the use of these methods to capture wild horses. For more information contact Cody Hansen at the Burns District Office at 541-573-4492.

Persons consulted and coordinated with outside of the Bureau of Land Management:
Walt Van Dyke…….Oregon Department of Fish and Wildlife
Gary Johnson…….……Livestock Permittee
Ramey Allaire……...…Livestock Permittee
Tim Smith……..……...Livestock Permittee
Frank Fisher……..……Livestock Permittee
Robert VanDerMark……..……...Livestock Permittee
Dexter Reeder……...……Livestock Permittee
Dan Joyce……Malheur County Commissioner
Wild Horse Interest Groups

List of Preparers

Jim W. Johnson	Wild Horse and Burro Specialist	Vale District Office
Bob Alward	Outdoor Recreation Planner	Vale District Office
Jean Findley	Botanist	Vale District Office
Al Bammann	Wildlife Biologist	Vale District Office

Steve Christensen	Rangeland Management Spec.	Vale District Office
Shaney Rockefeller	Soil Scientist	Vale District Office
Cynthia Tait	Fisheries Biologist	Vale District Office
Diane Pritchard	Archaeologist	Vale District Office
Tom Hilken	Area NEPA Coordinator	Vale District Office
Wayne Wetzel	District NEPA Coordinator	Vale District Office