United States Department of the Interior
BUREAU OF LAND MANAGEMENT
White River Field Office
220 East Market Street,
Meeker, Colorado 81641

In Reply Refer To:
4700

DECISION RECORD
For the
WEST DOUGLAS HERD AREA WILD HORSE GATHER
DOI-BLM-CO-110-2010-0088-EA
September 3, 2010

INTRODUCTION

The BLM has determined that all wild horses within and adjacent to the West Douglas Herd Area (WHDA) are excess animals and require immediate removal, following extensive analysis and public input. The BLM's conclusion is that a self-sustaining population of healthy wild horses cannot be maintained within the WDHA in balance with their habitat and other uses, within the bounds of where wild horses existed in 1971, and with the minimum level of management needed to achieve land use plan objectives. As a result, the purpose of the BLM's proposed action is to remove all excess wild horses from the WDHA and immediately adjacent areas in accordance with The Wild Free-Roaming Horses and Burros Act of 1971 and the relevant land use planning decisions. The need for this action is to remove excess wild horses in order to establish, preserve and maintain a thriving natural ecological balance and multiple-use relationship within the WDHA in accordance with The Wild Free-Roaming Horses and Burros Act of 1971.

AUTHORITIES

The proposed gather and removal of excess wild horses within and immediately adjacent to the WDHA is in compliance with Public Law 92-125, the Wild Free Roaming Horses and Burros Act of 1971, as amended by the Federal Land Policy and Management Act (FLPMA); and Public Law 95-514, the Public Rangelands Improvement Act of 1978 (PRIA). P.L. 92-125, as amended, which require the BLM to protect, manage and control wild horse (or burro) populations on public lands.

DECISION

Based upon the analysis in Environmental Assessment No. DOI-BLM-CO-110-2010-0088-EA, and after consideration, it is my decision to implement the removal of all the excess wild horses from within the WDHA. It is also my decision to removal all excess wild horses that have relocated outside the WDHA boundaries, as described in Alternative A (Proposed Action) of the EA. This alternative will best implement the planning decisions of the White River Record of Decision and Approved Resource Management Plan (WRRMP) dated July 1, 1997 and the West Douglas Herd Area Amendment (WDHAA) to the White River Resource Management Plan, Environmental Assessment CO-WRFO-05-083-EA dated October 10, 2007.

ALTERNATIVES CONSIDERED BUT NOT SELECTED

In addition to the selected alternative, the EA evaluated and analyzed two other alternatives:

1. Alternative B is identical to Alternative A except the BLM would extend the window for the gather and removal of excess wild horses from within and/or adjacent to the WDHA, from July 1 through February 28th.

2. Alternative C is the "No Action" alternative and wild horses would not be gathered and then removed from areas within and adjacent to the WDHA. BLM would not pursue removal of excess wild horses.

The EA also lists three additional alternatives that were identified by the BLM or by the public through scoping comments, and were considered by the BLM, but were eliminated from detailed analysis. The reasons why these alternatives were not analyzed are provided in the EA on pages 11 and 12.

RATIONALE

The finding to select Alternative A is based on the following rationale:

1. This decision is based on a Finding of No Significant Impact (FONSI) dated September 3, 2010. .

2. This decision is also in accordance with policy and 43 CFR 4700 and The Wild Free-Roaming Horses and Burros Act of 1971.

3. This decision conforms to the White River Record of Decision and Approved Resource Management Plan (WRRMP) dated July 1, 1997 and the West Douglas Herd Area Amendment (WDHAA) to the White River Resource Management Plan, Environmental Assessment CO-WRFO-05-083-EA dated October 10, 2007, which requires the removal of all wild horses from the WDHA.

4. Alternative A best meets the Purpose and Need to remove excess wild horses in order to establish, preserve and maintain a thriving natural ecological balance and multiple-use relationship within the WDHA in accordance with The Wild Free-Roaming Horses and Burros Act of 1971.

5. Vegetation: Implementation of Alternative A would result in the total removal of wild horses over time within and adjacent to the WDHA. Horse removal would decrease overall forage utilization within and adjacent to the WDHA and would be expected to prompt recovery of vegetation resources sufficient to more broadly achieve rangeland health standards. Within the 123,320-acre WDHA, BLM identifies approximately 52,486 acres (43%) as rangeland sites that contribute principally to forage production. Trend data collected in the summer of 2008 using the Daubenmire canopy coverage and frequency transect method was compared to trend data collected in 2003 that was used during the development of the 2005 WDHAA. These data indicate persistent declines in perennial herbaceous ground cover and in the composition of native grasses and forbs in rangeland communities within the WDHA. In the short term, Alternative A would be expected to halt and reverse declining trends on the estimated 3200 acres of bottomland and basin shrublands in the WDHA that presently fail to meet the land health standards, and would prevent further long-term accumulations of such lands, because of incompatible levels or duration of growing season use by wild horses. For more detailed

analysis regarding land health standards which are not being met see Finding on the Public Land Health Standard for plant and animal communities within the vegetation section page 25 the EA.

6. Special Status Plants: Removal of wild horses will decrease the impacts to Special Status Plant Species due to the reduction of tramping, trailing and foraging.

7. Wildlife, Terrestrial and Rangeland Management: Implementation of Alternative A is expected to increase forage and plant cover, resulting in upward trend in rangeland health, improved wildlife habitat and use of allocated AUMs for livestock that have been utilized by excess wild horses, to be used by permitted livestock.

8. Cultural Resources: Implementation of Alternative A results in the removal of all wild horses, impacts to cultural resources as a result of wild horse presence, concentrating, trailing and rubbing on standing architecture and rock art would be ultimately eliminated.

9. Excess Wild Horses: As defined in 16 USC § 1332(f) "excess animals" means wild free-roaming horses or burros which must be removed from an area in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area. I have carefully considered the analysis contained for each Alternative in the EA, available information on vegetation trend, herd genetics, and other resources in the WDHA; and the analysis and management decisions of the WRRMP and the WDHAA to the White River Resource Management Plan. The WDHAA found that BLM could not maintain a thriving natural ecological balance and multiple-use relationship outside of the designated Piceance/East Douglas Herd Management Area and that all the excess wild horses were to be removed from the West Douglas Herd Area. That determination was based upon the existing WRRMP land resource use planning decisions, resource use allocations and their associated impacts specific to the WDHA. Evaluation of the analyses for each Alternative in this EA, vegetation trend data collected in 2003 and 2008, data on herd genetics, and available information concerning impacts to other resources, confirms the predictions of the land use planning decisions and associated environmental analyses. Hence, after consideration of the aforementioned information, I conclude that a thriving natural ecological balance and multiple-use relationship within the confines of the land use planning decisions is not being met within the WDHA.

   Trend data collected in 2003 that was used during the development of the 2005 WDHAA showed that an estimated 3200 acres of bottomland and basin shrublands in the WDHA failed to meet the land health standards. Trend data collected in the summer of 2008 using the Daubenmire canopy coverage and frequency transect method was compared to the 2003 trend data. These data indicate persistent declines in perennial herbaceous ground cover and in the composition of native grasses and forbs in rangeland communities within the WDHA, because of incompatible levels or duration of growing season use (including use of allocated AUMs for livestock), by wild horses.

   In addition, genetic reports released in 2010 (listed in the EA, Appendix E) show that genetic variability of this herd is low and has declined since 2002. Allelic diversity, as explained in the EA, is particularly low which is indicative of variation loss based upon microsatellite data. These wild horses are representative of American riding breeds that are commonly found throughout North America. The low variation would appear to be due to small population size. This wild horse herd is isolated and the genetic data indicates that the wild horse population itself is unable to naturally sustain itself. The WDHAA determined, even with forage allocated

to wild horses, the limited summer range could only support a wild horse herd of up to 60 wild horses and that a wild horse herd of that size is not genetically viable and could not sustain itself naturally. That determination has been confirmed by the 2010 genetic reports. To be naturally self sustaining, a herd size of approximately 200 wild horses would be required, however, with the limited summer range the WDHA is unable to support a herd of that size (refer to WDHAA, CO-WRFO-05-083-EA). New information in the EA (see EA pages 35-36) confirms that there continues to be limited summer range. Therefore, I conclude that due to the low genetic variability and inability of the herd to naturally sustain itself with a minimum level of management, the herd cannot be maintained in a thriving natural ecological balance and multiple use relationship in the area.

The existing documentation and analysis set forth in the foregoing documents, coupled with the trend data collected in 2003 and the summer of 2008 shows a continuing decline in rangeland health conditions and herd genetics, makes it clear that when all land resource use decisions and their impacts are considered cumulatively, failure to remove wild horses from the WDHA will result in unacceptable resources impacts and failure to maintain a thriving natural ecological balance, multiple-use relationship and compliance with the land use planning decisions as specified by the WRRMP and reaffirmed in the WDHAA.

Consideration of the analyses for each Alternative in this EA, vegetation trend data collected in 2003 and 2008, data on herd genetics, and available information concerning impacts to other resources shows that the conditions described in earlier land use planning have not changed or would lead the BLM to change the determination that the wild horses need to be removed in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in the WDHA. Furthermore, no new significant information was brought forth during our environmental analysis, scoping, and numerous public comments received regarding the EA which contradicts our findings or warrants additional analysis of the inability to maintain a thriving natural ecological balance.

After extensive analysis and public input dating back to 1975 (see EA pages 2-4) and most recently supported and reaffirmed by this EA, a self-sustaining population of healthy wild horses cannot be maintained within the West Douglas Herd Area in balance with their habitat and other uses, within the bounds of where wild horses existed in 1971, and with the minimum level of management needed to achieve land use plan objectives. BLM has determined that the best way to manage wild horses and maintain a thriving natural ecological balance within the White River Field Office's management area is to remove all excess wild horses from the WDHA, while continuing to manage wild horses within the designated Piceance/East Douglas Herd Management Area.

Therefore, after careful consideration of all the aforementioned information and relevant factors, I have determined an overpopulation of wild horses currently exists and that action is necessary to remove all the excess wild horses from within and immediately adjacent to the WDHA, to protect land resources from the deterioration associated with overpopulation. This action is also needed to conform with the applicable land use planning decisions. I have carefully reviewed all the current available information and have determined that land use plan decisions to remove all the excess wild horses from the WDHA are needed in order to maintain a thriving natural ecological balance and multiple use relationship in the area.

CONSULTATION AND COORDINATION

Consultation with the Tribes is ongoing for this project. However, at this time none of the tribes have identified any Traditional Cultural Properties or issues of cultural concern in the gather area.

Coordination with State and Federal wildlife agencies was conducted throughout this process regarding potential threatened and endangered species and special status species. No formal consultation was required or conducted with the US Fish and Wildlife Service as the known threatened or endangered populations would not be impacted by gather operations within the WDHA.

PUBLIC INVOLVEMENT

The BLM published the preliminary environmental assessment for the West Douglas Herd Area Wild Horse Gather on June 17, 2010 by posting the document on the BLM web site at http://www.blm.gov/co/st/en/fo/wrfo/wrfo_wild_horses.html. The BLM sent letters to approximately 108 individuals and groups announcing the availability of the document. The web site and letters invited the public to submit public comments on the EA until July 19, 2010.

The BLM received approximately 3033 public comments in the form of individual letters, form letters, telephone calls, and emails from the interested public. In response to comments received the BLM made some minor changes in the final EA. For additional information refer to Appendix C and D.

The BLM will provide the public with the opportunity to observe the West Douglas HA gather operations as they occur, and to observe horses in temporary holding at the BLM wild horse facilities. A schedule will be prepared and posted at http://www.blm.gov/co/st/en/fo/wrfo.html that will outline specific viewing opportunities.

ADMINISTRATIVE PROCEDURES

This decision is subject to appeal. If you wish to appeal this decision, as provided by 43 CFR 4770.3 and 43 CFR 4.4, you must file an appeal in writing within 30 days receipt of this decision with the Field Manager, White River Field Office, 220 East Market Street, Meeker, Colorado 81641.

The appeal must state clearly and concisely why you think the decision is in error.

Should you wish to file a petition for stay, the appellant shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied.
2. The likelihood of the appellant's success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted, and
4. Whether the public interest favors granting the stay.

If you decide to submit a petition for stay of the decision, a copy of the notice of appeal and petition for stay must be served simultaneously upon the parties identified below.

Field Manager
White River Field Office
220 East Market Street
Meeker, Colorado 81641

Office of the Regional Solicitor
Rocky Mountain Region
755 Parfet Street, Suite 151
Lakewood, Colorado 80215

Office of Hearing and Appeals
Interior Board of Land Appeals
801 North Quincy Street, Suite 300
Arlington, Virginia 22203

The Office of Hearing and Appeals regulation do not provide for electronic filing of appeals; therefore, they will not be accepted.

APPROVAL

The West Douglas Herd Area Wild Horse Gather is approved for implementation beginning on/after October 4, 2010. Implementation of the gather to remove excess wild horses from within and adjacent to the WHDA on/after this date is in accordance with the authority provided in Title 43CFR 4770.3(c), which states in part: "decisions… shall be effective upon issuance or on a date established in the decision" when removal of excess animals is necessary to ensure and maintain a thriving natural ecological balance and multiple-use relationship and compliance with land use planning decisions.

for Kent E. Walter
Field Manager

Date: 9/3/10

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
White River Field Office
220 East Market Street
Meeker, Colorado 81641

In Reply Refer To:
4700

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

West Douglas Herd Area
Wild Horse Gather Plan Environmental Assessment
DOI-BLM-CO-110-2010-0088-EA

I have reviewed the Final West Douglas Herd Area Wild Horse Gather Environmental Assessment (EA), DOI-BLM-CO-110-2010-0088-EA, dated September 3, 2010. After consideration of the environmental effects as described in the EA, and incorporated herein, I have determined that the Proposed Action, Alternative A with the project specifications, including minimization or mitigation measures identified in the EA will not significantly affect the quality of the human environment and that an Environmental Impact Statement (EIS) is not required to be prepared.

This finding and conclusion is based on my consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR 1508.27), both with regard to the context and the intensity of impacts described in the EA. Therefore, the preparation of an environmental impact statement is not required for compliance with the National Environmental Policy Act of 1969.

Context: The gather area is administered by the Bureau of Land Management's White River Field Office. The directly affected region is limited to the West Douglas Herd Area (WDHA) and immediately adjacent areas. The WDHA is located in northwestern Colorado, southwest of Rangely and approximately 50 miles north of Grand Junction. The herd area encompasses 123,387 acres of federal land managed by the BLM, WRFO and 4,754 acres of private land. All of the WDHA is within Rio Blanco County, Colorado. In February 2010, the BLM completed inventory flights of the WDHA, using a direct count method and estimates a population of 86 head of wild horses within and outside the WDHA. This inventory revealed a population lower than expected based on projected growth rates from a 2005 inventory. Using the population of 86 head of wild horses and an expected foal crop of 20%, the number of wild horses at the time of the proposed gather will be approximately 103 but regardless, all wild horses are considered excess and will be removed. These wild horses are especially difficult to gather due to rugged terrain and a coniferous canopy throughout much of the area. BLM in coordination with the contractor will chose trap sites prior to each gather but locations may be changed and additional traps may be required to capture wild horses that have become wise to helicopters or relocated outside of the WDHA.

Intensity: There is no evidence that the severity of impacts is significant**:**

1. The action is expected to meet BLM's objective for wild horse management of maintaining a thriving natural ecological balance and multiple use relationship consistent with other resource needs. The EA considered both beneficial and adverse impacts of the gather and removal of excess wild horses from inside and outside of the WDHA boundaries. Alternative A would be expected to halt and reverse declining trends on the estimated 3200 acres of bottomland and basin shrublands in the WDHA that presently fail to meet the land health standards, and would prevent further long-term accumulations of such lands, because

of incompatible levels or duration of growing season use by wild horses. The BLM anticipates that the removal of wild horses over time would decrease overall utilization of the vegetative resource and expects to see an improving trend in vegetation communities moving toward meeting Public Land Health Standards and maintaining a thriving natural ecological balance and multiple-use relationship. Standard Operating Procedures would be followed to minimize stress on wild horses and burros and impacts to other resources. Wild horses removed from the project area would be transported to wild horse and burro holding facilities and prepared for adoption, sale or long-term holding pastures. Wild horses within the White River Field Office's management area can be better managed and will continue to be managed within the designated Piceance/East Douglas Herd Management Area.

2. The proposed action has no effect on public health or safety. The Standard Operating Procedures and Updated Standard Operating Procedures 2010 (Appendix A and B) would be used to conduct the gathers and they are designed to protect human health and safety, as well as the health and safety of the wild horses. The Proposed Action would have minimal affects to public health or safety.

3. The proposed action has no potential to affect unique characteristics such as historic or cultural resources. There are no wild and scenic rivers, or ecologically critical areas present in the areas. There are no park lands, prime farmlands, wetlands, wild and scenic rivers within the gather area. Archaeological site clearances would be conducted prior to the construction of temporary gather sites and holding facilities. If cultural resources are found in an area, a new location would be determined to set up temporary gather sites and holding corrals. Wild horse gather activities would not be conducted within Wilderness Study Areas.

4. The effects of the proposed action on the quality of the human environment are not considered to be highly controversial, and effects of the gather are well known and understood. No unresolved issues were raised following public notification of the proposed gather. This is demonstrated through the effects analysis in the EA. Some members of the public have the view that no wild horses should be removed from any public lands and advocate removal of livestock or letting "nature take its course". However, the effects of wild horse gathers on the quality of the human environment are well documented through the many years of management of wild horses and burros through gathers and other population controls, and are not highly controversial.

5. Possible effects on the human environment are not highly uncertain, and do not involve unique or unknown risks. The Proposed Action has no known effects on the human environment which are considered highly uncertain or involve unique or unknown risks. This is demonstrated through the effects analysis in the EA.

6. The action is compatible with future consideration of actions required to improve wild horse management in conjunction with meeting objectives for wildlife habitat within the herd management area. As a result of implementation of the Proposed Action, all wild horse will be removed from the WDHA which will allow the BLM to focus their wild horse management efforts in the designated Piceance-East Douglas Herd Management Area, where wild horses can be managed while maintaining a thriving natural ecological balance and multiple-use relationship. The WDHA will remain a herd area where BLM retains the authority to manage wild horses in the future.

7. The proposed action is not related to other actions with individually insignificant, but cumulatively significant impacts. Future projects occurring within the gather area would be evaluated through the appropriate NEPA process and analyzed under a site-specific NEPA document. The Proposed Action, Alternative A does not set a precedent for future actions. The Proposed Action is not related to other actions within the project area that would result in cumulatively significant impacts. Proper NEPA analysis would be completed for all proposed actions in the future. Cumulative impacts were analyzed in the EA.

8. The proposed action has no potential to adversely affect properties listed or eligible for listing in the National Register of Historic Places, and would not cause loss or destruction of significant scientific, cultural, or historical resources. The Proposed Action would not affect significant scientific, cultural, or historical resources. A cultural resource inventory would be completed prior to gather site and corral construction. Temporary gather sites and holding facilities would be cleared to determine the presence of sites that are unclassified, eligible, or potentially eligible for listing. Archaeological site clearances and avoidance measures would ensure that loss or destruction of significant scientific, cultural, or historical resources does not occur.

9. The proposed action would have no effect on any other threatened or endangered species or habitat determined to be critical under the Endangered Species Act. No animals listed, proposed, or candidate under the Endangered Species Act are known to make appreciable use of the WDHA. There are no known Threatened, Endangered or Candidate plant species known to exist in the WDHA.

10. The Proposed Action would not violate or threaten to violate any Federal, State, or local law or requirement imposed for the protection of the environment. The Proposed Action is in conformance with all applicable regulations in Title 43 of the Code of Federal Regulations. The Proposed Action would not violate the Migratory Bird Treaty Act or Endangered Species Act.

for Kent E. Walter
Field Manager

Date: 9/3/10

U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E. Market St
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-110-2010-0088-EA

CASEFILE/PROJECT NUMBER: N/A

PROJECT NAME: West Douglas Herd Area Wild Horse Gather

LEGAL DESCRIPTION: 6th Principal Meridian, Rio Blanco County, Colorado

T 1 N, R 101 W,
Section 31
T 1 N, R 102 W,
Sections 34 - 36
T 1 S, R 101 W,
Sections 6, 7, 18 - 20, 28, 29, 33
T 1 S, R 102 W,
Sections 1 - 4, 8 – 36
T 1 S, R 103 W,
Sections 9 – 36
T 2 S, R 101 W,
Sections 4 – 9, 16 – 21, 28 – 33
T 2 S, R 102 W,
Sections: All
T 2 S, R 103 W,
Sections 1 – 18, 21 – 27, 33 – 36
T 3 S, R 101 W,
Sections 5 – 7, 18, 19
T 3 S, R 102 W,
Sections: All
T 3 S, R 103 W,
Sections 1 – 5, 9 – 15, 24, 25, 35, 36
T 4 S, R 102 W,
Sections 2 – 10, 16, 17
T 4 S, R 103 W,
Sections 1, 2, 11 - 13

APPLICANT: Bureau of Land Management, White River Field Office

INTRODUCTION

The Bureau of Land Management (BLM) has determined that all the wild horses located within the West Douglas Herd Area (WDHA) and adjacent lands are excess animals that require removal in order to comply with existing Land Use Planning decisions set forth in the White River Resource

Management Plan (Record of Decision, July 1997) and reaffirmed in the West Douglas Herd Area Amendment to the White River Resource Management Plan (Record of Decision October 10, 2007).

The BLM is preparing this Environmental Assessment (EA) to disclose and analyze the environmental consequences of gathering excess wild horses in the WDHA in compliance with the National Environmental Policy Act (NEPA). The EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the Proposed Action. The EA assists the BLM, White River Field Office (WRFO) in project planning and ensuring compliance with NEPA, and in making a determination as to whether any "significant" impacts could result from the implementation of these actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence necessary to determine whether a significant impact exists. If BLM determines that the proposal would result in a "significant" impact in the EA, then BLM would prepare an EIS for the project. If the decision maker determines that this project does not have "significant" impacts following the analysis, then BLM will prepare a "Finding of No Significant Impact" and Decision Record would be signed for the EA approving the agencies selected alternative.

The West Douglas herd area is located in northwestern Colorado, southwest of Rangely and approximately 50 miles north of Grand Junction. The herd area encompasses 123,387 acres of federal land managed by the BLM, WRFO and 4,754 acres of private land. All of the herd area is within Rio Blanco County, Colorado.

BACKGROUND

In 1975, BLM drafted a White River Resource Area (WRRA), Management Framework Plan (MFP) based on the information developed in the 1975 Unit Resource Analysis (URA). The 1975 URA identified two wild horse herd units, the Douglas Creek Herd Unit and the Piceance Basin Herd Unit. The 1975 Unit Resource Analysis further identified wild horse utilization/distribution problems resulting from human development and human population increases projected for the future. Based on this analysis the decision of the 1975 Land Use Plan was to: 1) Remove wild horses west of Douglas Creek, 2) Retain Wild Horses East of Douglas Creek, 3) Construct a fence along the Douglas Creek road (State Highway 139) from Rangely up East Douglas Creek."

From 1978 through 1980, another planning effort was undertaken to update the 1975 MFP. This update was driven by court ordered environmental impact statements requiring area specific analysis of the livestock grazing program. A 1980 URA again identified two wild horse herd units, the Douglas Creek Herd Unit and the Piceance Basin Herd Unit. Based on the 1980 URA the Piceance/East Douglas Area (including that portion of the Douglas Creek Herd Unit east of Douglas Creek) was selected for management of wild horses because of a "lower density of both developed and undeveloped energy resources than any other area within the two wild horse herd units" and, "[t]he topography of the proposed area is highly suited to the needs of wild horses... offers both summer and winter ranges and provides all other elements necessary for the survival of wild horses."

The BLM's 1980 *White River Resource Area, Management Framework Plan* called for the complete removal of wild horses from the herd area as BLM, through information gained in land use planning completed pursuant to section 202 of the Federal Land Policy and Management Act of 1976, determined there to be an overpopulation on the public lands and therefore excess. As

defined in 16 USC § 1332(f) "excess animals" means wild free-roaming horses or burros (2) which must be removed from an area in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area. Through the MFP process, BLM determined that it could not maintain a thriving natural ecological balance and multiple-use relationship outside of the designated Piceance/East Douglas Herd Management Area.[1]

The 1981, White River Resource Area, Herd Management Area Plan reiterated the 1980 Management Framework Plan and 1981 Grazing Environmental Impact Statement decisions to remove all horses west of Douglas Creek and in allotments outside the Herd Management Area. The conditions that existed had not changed, and there was no new and significant information presented that would lead the BLM to change the determination that the horses needed to be removed in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area.

In 1983, State Highway 139 was fenced separating the East Douglas Portion of the Herd Management Area from the WDHA.

In 1985, the WRRA Piceance Basin Resource Management Plan (RMP) was developed for the Piceance Basin to analyze expected impacts resulting from oil shale development. Wild horse management would continue according to decisions approved in the 1981, Piceance-East Douglas Herd Management Area Plan.

The 1997 WRRA, Resource Area Management Plan, approved by the State Director, July 1, 1997, is the current land use plan decision process for the WRRA and the Record of Decision (ROD) for the WRRA. The decision for horse management was to "[m]anage for a wild horse herd of 95-140 wild horses on 190,130 acres within the Piceance-East Douglas Herd Management Area (HMA) so that a thriving ecological balance is maintained for plant and animal species on that range." "The boundary of the Piceance-East Douglas HMA will be expanded to include the Greasewood allotment (presently a part of the North Piceance Herd Area). "Management also concluded "[t]he North Piceance and West Douglas Herd Areas [would] be managed in the short-term (0-10) years) to provide forage for a herd of 0 to 50 horses in each herd area. The long term objective (+10 years) will be to remove all wild horses from these areas." As in the 1981, White River Resource Area, Herd Management Area Plan reiterated that the 1980 Management Framework Plan and 1981 Grazing Environmental Impact conditions that existed had not changed, and there was no new and significant information presented that would lead the BLM to change the determination that the horses needed to be removed in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area.

The BLM's 1997 *White River Record of Decision and Approved Resource Management Plan* reaffirmed the 1980 decision to remove wild horses from the herd area but allowed for an interim population of 0 to 50 animals for a period of ten years while implementing the removal decision.

In 2001, the Colorado State BLM Office directed the WRFO to review the decision in the 1997 White River RMP/ROD regarding management of wild horses in West Douglas Herd Area. In response, this RMP amendment planning process was specific to the issues of the West Douglas

[1] 16 U.S.C. §1333(a). The BLM designated the Piceance/East Douglas Herd Management Area as a herd management area because at the time of the first wild horse census, wild horses were concentrated in the area, the area is wild horse preferred habitat, the area has reliable sources of water during late summer, and the area has a balance of summer and winter range, *White River Resource Area, Management Framework Plan*, 1980, *Wild Horse Management Summary*.

Herd Area and allowed for an in-depth analysis of alternatives focused just on this area and was open to public participation.

In 2005, the BLM revisited its planning decisions to remove all wild horses in the herd area. The State Director found that BLM could not maintain a thriving natural ecological balance and multiple-use relationship outside of the designated Piceance/East Douglas Herd Management Area. That portion of the State Director's decision reads as follows:

> After extensive analysis and public input, the BLM concluded that a self-sustaining population of healthy wild horses could not be maintained within the West Douglas Herd Area in balance with their habitat and other uses, within the bounds of where wild horses existed in 1971, and with the minimum level of management needed to achieve land use plan objectives.

The State Director then found that wild horses within the White River Field Office's management area could be better managed within the designated Piceance/East Douglas Herd Management Area:

> Intensive management would be required to maintain genetic viability of the herd, provide adequate horse habitat and suitable conditions for other competing uses, keep the horses within the boundaries of the management area, and to carry-out horse gathers in the localized rough terrain. *For these reasons, BLM concluded that wild horses could be better managed within the adjacent Piceance/East Douglas Herd Management Area.*

Through all of the analysis completed by the BLM on the West Douglas Herd Area, the BLM has consistently determined that the wild horses are excess animals that need to be removed in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area. This determination is based upon the existing WRRMP land resource use planning decisions, resource use allocations and their associated impacts specific to the WDHA and a wild horse herd cannot be managed in the WDHA within the confines of the land use planning decisions. The BLM has reviewed the determinations made in the previous Plan Amendments and associated NEPA analyses, as well as all information currently available, and concludes that an overpopulation of wild horses currently exists on the public lands within the West Douglas Herd Area and that action is necessary to remove excess animals. The BLM concludes that wild horses within the West Douglas Herd Area meet the statutory definition of excess animals, and therefore, consistent with the authority provided in 16 USC § 1333 (b) (2), the BLM shall immediately remove excess animals from the range so as to achieve appropriate management levels. Such action shall be taken until all excess animals have been removed so as to restore a thriving natural ecological balance to the range, and protect the range from the deterioration associated with wild horse overpopulation:

RELATIONSHIP TO STATUTES, REGULATIONS, POLICIES, PLANS OR OTHER ENVIRONMENTAL ANALYSES

Statutes:

The Wild Free-Roaming Horses and Burros Act of 1971, 16 U.S.C. 1333(a) provides:

> The Secretary shall 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.

The Wild Free-Roaming Horses and Burros Act of 1971, 16 U.S.C. 1333(b)(2) provides:

> Where the Secretary determines on the basis of . . . information contained in any land use planning completed pursuant to section 202 of the Federal Land Policy and Management Act of 1976 . . . that an overpopulation exists on a given area of the public lands and that action is necessary to remove excess animals, he shall immediately remove excess animals from the range so as to achieve appropriate management levels.

The Federal Land Policy and Management Act of 1976, 43 U.S.C. 1732(b), provides:

> In managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.

Regulations:

Title 43 of the Code of Federal Regulations (CFR) provides:

> Section 4710.1: Management activities affecting wild horses and burros, including the establishment of herd management areas, shall be in accordance with approved land use plans prepared pursuant to part 1600 of this title.
>
> Section 4710.4: Management of wild horses and burros shall be undertaken with the objective of limiting the animals' distribution to herd areas. Management shall be at the minimum level necessary to attain the objectives identified in approved land use plans and herd management area plans.
>
> Section 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….
>
> Section 4740.2(b): Before using helicopters or motor vehicles in the management of wild horses or burros, the authorized officer shall conduct a public hearing in the area where such use is to be made.
>
> Section 4770.3(c): …the authorized officer may provide that decisions to remove wild horses or burros from public or private lands in situations where removal is required by applicable law or is necessary to preserve or maintain a thriving ecological balance and multiple use relationship shall be effective upon issuance or on a date established in the decision.

Plans:

The Proposed Action is subject to and in conformance with the following plan (43 CFR 1610.5-3(a), BLM 1617.3):

> Name of Plan: White River Record of Decision and Approved Resource Management Plan (WRRMP).

Date Approved: July 1, 1997

Decision Number/Page: Page 2-26, *Wild Horse Management*, "The North Piceance and West Douglas Herd Areas will be managed in the short-term (0-10 years) to provide forage for a herd of 0 – 50 wild horses in each herd area. The long term objective will be to remove all wild horses from these areas ... The wild horse herd population will be managed to improve range condition.

Name of Plan: West Douglas Herd Area Amendment (WDHAA) to the White River Resource Management Plan, Environmental Assessment CO-WRFO-05-083-EA

Date Approved: October 10, 2007

In 2005, the BLM revisited its planning decisions to remove all wild horses in the herd area. The State Director found that BLM could not maintain a thriving natural ecological balance and multiple-use relationship outside of the designated Piceance/East Douglas Herd Management Area. That portion of the State Director's decision reads as follows:

> After extensive analysis and public input, the BLM concluded that a self-sustaining population of healthy wild horses could not be maintained within the West Douglas Herd Area in balance with their habitat and other uses, within the bounds of where wild horses existed in 1971, and with the minimum level of management needed to achieve land use plan objectives.

The State Director then found that wild horses within the White River Field Office's management area could be better managed within the designated Piceance/East Douglas Herd Management Area:

> Intensive management would be required to maintain genetic viability of the herd, provide adequate horse habitat and suitable conditions for other competing uses, keep the horses within the boundaries of the management area, and to carry-out horse gathers in the localized rough terrain. *For these reasons, BLM concluded that wild horses could be better managed within the adjacent Piceance/East Douglas Herd Management Area.*

Incorporation by Reference:

This document is being tiered to foregoing planning documents and associated NEPA analyzes and are incorporated by reference.

PURPOSE AND NEED

The purpose for this action is to remove all excess wild horses from the WDHA and immediately adjacent areas in accordance with The Wild Free-Roaming Horses and Burros Act of 1971 and land use planning decisions.[2] In accordance with 16 USC § 1332 (f) "excess animals" means wild free-roaming horses or burros which must be removed from an area in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area. The BLM has

[2] 16 U.S.C. §1333(b)(2)

reviewed its current inventories, the WRRMP and all applicable Resource Management Plan amendments, any existing court ordered EIS's, and other information in accordance with The Wild Free-Roaming Horses and Burros Act of 1971, as amended, and determined that an overpopulation exists on the public lands within the WDHA.

The need for this action is to remove excess wild horses in order to establish, preserve and maintain a thriving natural ecological balance and multiple-use relationship within the WDHA in accordance with The Wild Free-Roaming Horses and Burros Act of 1971.[3]

SCOPING AND PUBLIC INVOLVEMENT

BLM initiated public involvement on the WDHA in 1974 when BLM conducted a census of the wild horses existing in the White River Field Office's boundaries by the herd units as required by the 1971 Act and later identified in the WRRMP of 1997. Public involvement has continued through the planning efforts described in the background section above.

Scoping is an important part of the NEPA process and determines the scope of key issues related to a Proposed Action. Scoping can involve federal, state, and local government agencies, tribal governments, resource specialists, industry representatives, local interests groups, and other members of the public. Previous public scoping efforts identified nearly 30 issues during the development of 2005 West Douglas Herd Area Amendment to the White River Resource Management Plan and the 2008 West Douglas Herd Area Gather Plan (08-166). Notice of this action, DOIBLMCO11020100088, was posted to the NEPA log on the WRFO BLM website on February 23, 2010. In addition, BLM published the NEPA log in the Rio Blanco Herald Times on March 25 and April 1, 2010 to notify the interested public of the BLM's intent to develop the EA. Of the nearly 30 issues identified during previous scoping periods, the following are relevant to this document and are included as follows:

- **Range of Wild Horse Management Options and Statutory Requirements.** Have all reasonable management options been considered and analyzed? Do management alternatives meet statutory requirements? The BLM previously addressed alternative management options through the analyses of the 1997 WRRMP and 2005 WDHAA to the WRRMP. Therefore, this issue is outside the scope of this environmental analysis.
- **The Bureau's authority to zero out a herd area.** The BLM previously addressed this issue through the analyses and decisions addressed within the of 1997 WRRMP and the 2005 WDHAA to the WRRMP and on the basis of all information currently available determined that an overpopulation exists on the WDHAA on the public lands and that it is necessary to remove excess animals. The issue of zeroing out the herd has been determined in previous NEPA and is therefore outside the scope of this analysis.
- **Winter Gathers.** Health and Safety of wild horses, late gestation of mares, low temperatures, and extreme conditions. Within the scope of this environmental analysis, the Bureau will address this issue will be through mitigation identified in this document.
- **Use of Helicopters During Gather Operations In WSAs.** This issue is addressed through mitigation within this document.
- **Helicopter use for gather operations during hunting seasons could scare game away.** This issue is through mitigation within this document.

[3] 16 U.S.C. §1333(b)(2)

- **Placement of trap sites, Landing Zones, and other gather operations may impact cultural resource sites and artifacts.** This issue is addressed through mitigation within this document.
- **Continued overpopulation of horses will result in decreased rangeland health.** This issue is addressed within this document.
- **Gather operations may have adverse impacts on various wildlife and plant species.** These issues are addressed within this document.
- **The use of other gather techniques other than helicopters to gather excess wild horses.** The BLM considered but dismissed an alternative to address this issue from detailed analysis. See EA, page 12, for additional information.

The BLM released a preliminary EA to the public on June 19, 2010 and provided for a 30 day review and comment period in accordance with BLM Washington Office Instruction Memorandum 2010-130. BLM received 3034 comments which were grouped by topic, addressed Appendix D. The BLM has added additional discussion of herd genetics (Page 16) as well as additional information regarding land health standards for vegetation (Pages 23, 24) within the final EA.

Pursuant to 43 CFR §4740.2(b), the BLM has scheduled a public hearing to address the use of helicopters or other motorized vehicles in gathering excess animals. The hearing will be Wednesday, September 15, 2010 from 6:00p.m.-7:00p.m. in the Community Room at Mountain Valley Bank, 400 Main Street, Meeker, CO. Notice of this hearing will also be posted in the local newspaper, and on the BLM WRFO http://www.blm.gov/co/st/en/fo/wrfo.html.

The BLM will provide the public with the opportunity to observe the WDHA gather operations as they occur, and to observe horses in temporary holding at the BLM wild horse facilities. A schedule will be prepared and posted at (http://www.blm.gov/co/st/en/fo/wrfo.html.) that will outline specific viewing opportunities and other relevant information.

Any subsequent gather operations will be published in the local newspapers as well as on the WRFO's website as above.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Alternative A: Proposed Action. The Proposed Action is to remove all the excess wild horses from within the WDHA as well as those excess wild horses that have relocated outside the WDHA boundaries. The BLM would conduct gathers to remove all the excess wild horses between July 1 through November 30.

It may be necessary to conduct annual gathers for multiple years until all of the excess wild horses are gathered and removed. The initial gather is tentatively scheduled to begin in October 4, 2010 and is subject to change within the months of July through November as discussed above. The BLM estimates that subsequent gathering operations will depend on the success of the initial gather and any subsequent gathers, but expectations would be to decrease the number of trap locations, number of wild horses to be gathered, etc. as the wild horses are gathered and removed. The BLM would conduct follow up gathers on an annual basis between the dates of July 1 and November 30 until all of the excess wild horses have been gathered and removed from within the WDHA as well as those excess wild horses that have relocated outside the WDHA boundary.

The BLM will use only the standard gather methods of helicopter drive trapping, helicopter assisted roping, water trapping, and bait trapping. The primary method for the first gather and subsequent gathers will be helicopter drive trapping.

No gathers would take place between December 1st and June 30th except in emergencies, or when wild horses are negatively influencing private property as authorized by Title 43 CFR Subpart 4720.2-1. All excess wild horses captured from within the WDHA or from the adjacent public or private lands will be removed, and either transported to the BLM Cañon City Wild Horse Facility or offered for adoption locally.

The most recent inventory, a direct count aerial inventory using a fixed wing aircraft, was conducted in February 2010, estimates that 86 excess wild horses are within or adjacent to the WDHA (Map 1). With an estimated foal crop of 20%, the population will reach 103 animals by the time the initial gather commences. This estimated number and any additional wild horses above the estimated 103 head of wild horses are considered excess and will be gathered and removed.

The project will be completed by a BLM Wild Horse and Burro (WH&B) National Program Contractor and/or BLM personnel. The four gather methods of trapping include:

- Helicopter drive-trapping, which is the primary method used to capture wild horses. Helicopter drive-trapping involves using a helicopter to spot and then herd wild horses towards a pre-constructed trap.

- Helicopter assisted roping includes herding by helicopter towards ropers who rope the wild horse(s). Once roped, another rider rides alongside the roped wild horse and roper, helping to haze, or herd, the roped wild horse either towards the trap or towards a stock trailer. Once at the trap the rope is flipped away from the roped wild horse's neck and it joins the rest of the trapped wild horses.

- Water trapping utilizes a trap constructed of portable, round-pipe steel panels. Funnel-shaped traps are built allowing wild horses to get deep into the trap so that the gate release mechanism has time to close. Water traps are located at a specific water source.

- Bait trapping utilizes a trap constructed of portable, round-pipe steel panels. Funnel-shaped traps are built which allow wild horses to get deep into the trap so that the gate release mechanism has time to close. Bait traps would be located in areas frequented by wild horses so that the horses make use of the provided forage.

For a detailed description of the gather methods incorporated into this proposed action refer to *Appendix A - Standard Operating Procedures*, which is attached and was augmented by Appendix B – WO IM 2010-135 – Standard Operating Procedures.

The following design features and mitigation measures have been incorporated into the Proposed Action and will be adhered to by Wild Horse and Burro (WH&B) National Program Contractor and/or BLM personnel.

1. Liquid nitrogen will be kept in an approved container and in the care of the BLM personnel.

2. All refueling would occur on existing roads, or an approved staging area. Use of absorbent pads while refueling will limit the potential of fuel spills. In the event of a spill of lubricants,

hydraulic fluid, or any other hydrocarbon during activities, the Contractor would immediately contain and clean up the affected area immediately. Any contaminated vegetation and soil would be removed and disposed of in an approved waste disposal facility. The Contractor would have absorbents onsite for spill containment. After cleanup is complete, the spilt substance(s) and materials used for cleanup would be removed from the project area and disposed of at an approved disposal facility. All spills would be immediately reported to the appropriate surface management agency.

3. Helicopter fuel storage and fueling stations shall be sited a minimum of 200 feet from riparian vegetation or drainages that have potential to directly contribute contaminants to systems that support riparian resources. Refer to the mitigation listed in the Wastes, Hazardous or Solid section regarding spills.

4. Any discovery of hazardous or potentially hazardous materials will be reported to BLM hazardous materials coordinator and Law Enforcement for investigation.

5. Any hay fed at trap sites or holding facilities, on BLM, will be certified as weed free. Any noxious weeds that establish as a result of the proposed action will be controlled by the BLM. All of the trap locations will be monitored for up to three years for weed species infestation. If discovered, BLM will treat these locations based on either the weed species that may be discovered, i.e. pesticide treatment, at any of the trap locations. It is estimated that less than 10 acres total will be affected. Generally, the impacts are concentrated at the trap location and this concentration varies depending on the number of wild horses that are gathered at each trap location.

6. WRFO staff will complete surveys of suitable raptor nesting habitat on trap sites proposed for use or development prior to August 15. In the event an active raptor nest is found in the vicinity of trapping operations, these nest sites will be afforded a buffer in accordance with the WRRMP (2-30) and any subsequent documents, to effectively isolate nesting activity from disruptions generated from wild horse trapping operations.

7. Trap locations and holding areas will be sited to avoid archaeological and cultural resources. In areas with acceptable levels of inventory no additional field work should be necessary except to ensure that sites in the near vicinity can be adequately avoided by drive lines, wing fences and traps. In areas where inadequate inventory data exists an inventory will be conducted to ensure that any resources present are avoided.

8. Known and reported fossil localities will be avoided when locating trap sites and associated wing fences and holding facilities. Sites without adequate inventory data will need to be examined for the presence of fossils during trap site selection activities. Trap facilities will be modified to avoid impacting identified fossil resources.

9. Public notice will be given through various media outlets starting in July. The main access roads leading into gather areas will be signed informing the public of potential gather operations. Areas being utilized for the gather including helicopter ground operations, gather sites and temporary holding facilities could be restricted and/or closed for administrative use only for the safety of the public, the gather personnel and the wild horses (See Map 2). Sites should be set up for media, 1st Amendment, and the general public wishing to view the gather operations. Rules would need to be established and posted for site visitation. Increased law enforcement personnel would be necessary to meet the increased patrol needs.

10. Avoid, if at all possible, helicopter gather operations from late-August through November for high public use during big game hunting seasons.

11. In the event helicopter activity cannot be avoided during annual dates that correspond with CDOW's trophy deer seasons (approximately mid-October through mid-November), CDOW staff will be contacted to coordinate gather in an effort to develop mutually compatible strategies that may reduce the intensity and localize the expanse of helicopter-related disturbances. BLM would attempt to provide CDOW gather details that involve potential disruption of trophy deer hunting seasons early enough for this information to be published in the current year hunting regulation brochure.

12. All of the trap locations will be monitored for up to three years for vegetation recovery. If problems with vegetation establishment are discovered, BLM will treat these locations based on the aid in vegetation recovery that may be necessary, i.e. broadcast seeding, at the trap locations. It is estimated that less than 10 acres total will be affected. Generally, the impacts are concentrated at the trap location and this concentration varies depending on the number of wild horses that are gathered at each trap location.

13. If a gather site is selected in the unfenced private land portion of Section 14, Township 2 South, Range 103 West, and the site is located on a previously undisturbed area where Soil Mapping Unit 64 has been mapped, a pre-mobilization rare plant survey will be conducted by a BLM plant specialist. If BLM Sensitive plant species or federally listed plant species are located, another site will be selected at a distance greater than 328 feet (100 meters) from the edge of the population or occurrence and pre-surveyed similarly, as necessary. Avoidance of shale barren areas for gathering sites will be considered. Trap sites within areas of identified federally listed plant species habitats will be avoided until, additional NEPA and USFWS consultation for any ground disturbing activities would be conducted.

14. If capture sites are anticipated for areas within the ACEC that have not been previously disturbed, pre-survey for special status plant species will be conducted prior to mobilization of vehicles and equipment by a BLM plant specialist. If BLM Sensitive plant species or federally listed plant species are located, another site will be selected at a distance greater than 328 feet (100 meters) from the edge of the population or occurrence and pre-surveyed similarly, as necessary. Avoidance of shale barren areas for gathering sites should be considered. Trap sites within areas of identified federally listed plant species habitats will be avoided until, additional NEPA and USFWS consultation for any ground disturbing activities would be conducted.

Alternative B: Annual Gathers from July through February: Alternative B is identical to Alternative A except BLM would extend the window, for the gather of excess wild horses from within and/or adjacent to the WDHA, from July 1 through February 28th.

Gather methods and design features would remain the same in this alternative and BLM would conduct gathers on an annual basis until all excess wild horses have been gathered.

This alternative incorporates the design features and mitigation measures identified within the Proposed Action. In addition, the following design features and mitigation measures are added to Alternative B, and will be adhered to by Wild Horse and Burro (WH&B) National Program Contractor and/or BLM personnel.

1. For winter gathers, December through February, distances to trap sites will be reduced to maximum of five miles when snow depth is greater than one foot deep. Wild horses will be moved slower when snow depth hinder their natural movement.

2. Wild horses will be monitored by the contracting officer representative (COR) or other authorized BLM personnel and a veterinarian from the Animal & Plant Health Inspection Service (APHIS) after the first couple of runs to ensure that they are not sweating excessively. A veterinarian will be on site or on call during any winter gathers. If wild horses are sweating excessively, the speed and/or distance to the trap will be reduced further. When temperatures are less than ten degrees below zero, wild horses will not be gathered by helicopter.

Alternative C: No Action Alternative. Under Alternative C, wild horses would not be gathered and then removed from areas within and adjacent to the WDHA. The BLM would not pursue removal of excess wild horses at this time.

ALTERNATIVES CONSIDERED BUT DISMISSED FROM DETAILED ANALYSIS: The BLM considered numerous alternatives in the development of this document. These alternatives were considered, but were not carried forward for detailed analysis due to issues raised by the public during scoping, wild horse welfare concerns, did not meet the purpose and need, and/or as identified below:

- **Annual gathers between the dates of March through June:** This alternative was not carried forward since the time period corresponds with peak foaling periods, resulting in the increased separation of foals from their mare during herding operations, increased stress on mares resulting in increased abortion rates, mares abandoning foals and increased orphan foals.

- **Use of Bait and/or Water Trapping:** An alternative considered but not carried forward for detailed analysis was the use of bait and/or water trapping (without the use of helicopter) as the exclusive gather method. This alternative was dismissed from detailed study for the following reasons: (1) the size of the area is too large to the use this method; (2) the presence of water sources on both private and public lands inside and outside the WDHA boundary would make it difficult to restrict wild horse access to selected water trap sites, and would extend the time required to remove excess wild horses; and (3) the aforementioned logistic difficulties and increased cost of this alternative would make it ineffective in meeting the purpose and need. The large geographic area involved and the extended time necessary for this alternative would result in a significant increase in gather cost and would make it difficult to limit the gather to the preferred time frame. Given the impracticalities of implementation, this alternative was eliminated from detailed analysis.

- **Other alternative capture techniques instead of helicopter assisted techniques:** This alternative would be used as capture methods other than helicopters to gather excess wild horses, which were suggested through previous public reviews. As no specific alternative methods were suggested, the BLM identified chemical immobilization, net gunning, and wrangler/horseback drive trapping as potential methods for gathering wild horses. Net gunning techniques normally used to capture big game also rely on helicopters. Chemical immobilization is a very specialized technique and strictly regulated. Currently, the BLM does not have sufficient expertise to implement this method and it would be impractical to use given the size of the WDHA, access limitations and the approachability of the wild

horses. Use of wrangler on horseback drive-trapping to remove excess wild horses can be fairly effective on a small scale but due to number of excess wild horses to be removed, the large geographic size of the WDHA and approachability of the wild horses this technique would be ineffective and impractical to meet the purpose and need. Horseback drive-trapping is also very labor intensive and can be very harmful to the domestic horses and wranglers during the gather operations. For these reasons, this alternative was eliminated from further consideration.

If any of the above identified alternatives are considered in future gather operations separate analysis will be done at that time.

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below.

NATURAL, BIOLOGICAL, AND CULTURAL RESOURCES

WILD HORSES

*Affected Environment***:** In February 2010, the BLM completed inventory flights of the WDHA, and is using a direct count of those animals, which indicates an estimated population of 86 head of wild horses within and outside the WDHA. See Map 1 for the locations of wild horses observed during the inventory flights. This inventory revealed a population lower than expected based on projected growth rates from the 2005 inventory.

The 2010 inventory flights were exhaustive, done by direct count, and in accordance with the best management practices identified in BLM Instruction Memorandum (IM) #2010-057. This IM encourages use of alternative inventory techniques but steps have not yet been taken to fully implement the IM. The IM further states that direct counts can undercount the actual number of wild horses by as much as 60%. Despite following best management practices, it is likely that a substantial number of wild horses were not counted during the 2010 inventory.

Most BLM offices currently base their wild horse and burro population estimates on direct counts from either a helicopter or a fixed-wing airplane. However, research reviewed by the National Research Council (1982) indicated that this practice can undercount the actual number of wild horses by 7 - 60% depending on topography, vegetation, observer experience, weather, type of aircraft, etc. More recently, Lubow and Ransom (2009) found an undercount bias as large as 32% before making any statistical corrections. Further, they found substantial residual unmodeled heterogeneity that contributed to underestimation of the "true population" by as much as 22.7% when they used models that did not fully account for unmeasured sources.

The following delineates the range between the direct count, the "true population" undercount, and the maximum 60% undercount of wild horses within the WDHA:

Direct Count/20% Foal Crop/AUMs	Direct Count with 22.7% Undercount/20% Foal Crop/AUMs	Direct County with 60% Undercount/20% Foal Crop/AUMs
86 / 103 / 1,545	106 / 127 / 1,905	138 / 166 / 2,490

Using the population of 86 head of wild horses and an expected foal crop of 20%, the number of wild horses at the time of the proposed gather will be approximately 103 but regardless, all wild horses are considered excess and will be removed.

These wild horses are especially difficult to gather due to rugged terrain and a coniferous canopy throughout much of the area. BLM in coordination with the contractor will chose trap sites prior to each gather but locations may be changed and additional traps may be required to capture wild horses that have become wise to helicopters or relocated outside of the WDHA.

Genetic Diversity and Viability

Blood samples were collected from the wild horses removed From the WDHA during the 2001 and 2006 gathers for genetic baseline data (e.g. genetic diversity, historical origins of the herd, unique markers) with written reports received in 2002 and 2010. The samples were analyzed by Dr. E. Gus Cothran, previously with Department of Veterinary Science, University of Kentucky, Lexington, KY however now with Equine Genetics Laboratory, Texas A&M University. Refer to Appendix E for Dr. Cothrans full report.

Smaller herds (<200 horses in size) which experience some degree of isolation tend to lose genetic information through genetic drift. The loss of genetic material has a negative impact on the genetic composition of a herd. According to the Cothran's data, at this time, there is evidence to indicate that the WDHA suffers from low genetic fitness. The pattern of variation suggest low effective population size and some inbreeding. Since the herd is unable to mix with other herd areas or herd management areas there is no exchange of genetic materials.

Genetic similarity values and the RML cluster analysis indicate that this herd is primarily derived from North American riding horse breeds. Monitoring of the genetic diversity of the West Douglas wild horses that were gathered from the West Douglas Herd Area in 2001 and 2006 indicates that the WHDA are primarily derived from North American riding horse breeds. These breeds are abundant throughout North America and the alleles are well represented in these breeds.

*Environmental Consequence of Alternative A, Proposed Action***:** All wild horses will experience varying levels of stress during herding, gather, handling and holding when gathered. Wild horses herded using helicopter drive trapping and helicopter assisted roping are herded cross country. Those wild horses gathered during water and bait trapping are not herded cross country. Stress levels, and the potential for injury, will be highest immediately following gather when wild horses are moved through the chutes during sorting and when they are being loaded into trailers. Confinement of wild horses at the temporary holding facility may increase the likelihood of injury, and stress/confinement related illness.

Well-constructed traps, safety-conscious corral construction at the holding facility, well-maintained equipment, and additional pens for wild horses kept separate from other wild horses will decrease stress, and the potential for injury and illness. The Standard Operating Procedures (Appendix A) and additional management requirements listed in the EA (page 9) would be implemented and would also reduce the potential for stress, injury or illness. Experienced BLM personnel will be on-site during all phases of the operation. The BLM plans to have an APHIS veterinarian on-site throughout the gather. To minimize the level of activity, address health and safety of observers, and reduce stress to wild horses, BLM will ask observers remain some distance from the wild horses during all phases of the gather, holding and preparation.

If BLM is successful in implementing the Proposed Action all wild horses associated with the WDHA would be gathered and removed, would not occupy private lands, would not relocate outside the WDHA, and would not be available for viewing by the public in the WDHA.

During gather operations wild horses may become separated from other members of their bands, and some may ultimately escape being gathered, requiring subsequent gather efforts. If subsequent annual gathers, between the dates of July 1st and November 30th, are needed wild horses potentially become more and more difficult to gather as the herd and the band sizes decrease and habituate to helicopter gather methods. It is expected that after the initial gather in 2010, if wild horses remain, they will form smaller bands and in some cases become solitary wild horses. Wild horses that evade being gathered, during the initial gather, would experience herding stress as described above each time they are herded until they are gathered.

For those excess wild horses that make use of private lands west of Highway 139 the BLM would expect requests from the private land owners to gather and remove those wild horses from their private lands. Based on past and current inventories of wild horses it is apparent that year long occupation and use by wild horses has extended beyond the WDHA boundary and some cases into other private lands. BLM has documented dates and numbers of wild horses that trespass onto private lands. When this occurs it makes it difficult for land owners to manage their domestic horses, because when wild horse gain access to private lands they may injure and/or breed with the domestic horses, attempt to incorporate the domestics into a herd and make use of the forage and water resources.

Direct and Indirect Gather Impacts

Over the past 35 years, various impacts to wild horses as a result of gather activities have been observed. Under the action alternatives, impacts to wild horses would be both direct and indirect, occurring to both individual horses and the population as a whole. The BLM has been conducting wild horse gathers since the mid-1970s. During this time, methods and procedures have been identified and refined to minimize stress and impacts to wild horses during gather implementation. The SOPs in Appendixes A and B would be implemented to ensure a safe and humane gather occurs and would minimize potential stress and injury to wild horses.

In any given gather, gather-related mortality averages only about one half of one percent (0.5%), which is very low when handling wild animals. Approximately, another six-tenths of one percent (0.6%) of the captured animals could be humanely euthanized due to pre-existing conditions and in accordance with BLM policy (GAO-09-77). These data affirm that the use of helicopters and motorized vehicles has proven to be a safe, humane, effective, and practical means for the gather and removal of excess wild horses from the public lands. The BLM also avoids gathering wild horses by helicopter during the 6 weeks prior to and following the peak foaling season. The peak of foaling occurs between mid-April to mid-May. Therefore,

the BLM prohibits the use helicopters to assist in the removal of wild horses from March 1 through June 30 unless an emergency situation exists.

Individual, direct impacts to wild horses include the handling stress associated with the roundup, capture, sorting, handling, and transportation of the animals. The intensity of these impacts varies by individual, and is indicated by behaviors ranging from nervous agitation to physical distress. When being herded to trap site corrals by the helicopter, injuries sustained by wild horses may include bruises, scrapes, or cuts to feet, legs, face, or body from rocks, brush or tree limbs. Rarely, wild horses will encounter barbed wire fences and will receive wire cuts. These injuries are very rarely fatal and are treated on-site until a veterinarian can examine the animal and determine if additional treatment is indicated.

Other injuries may occur after a wild horse has been captured and is either within the trap site corral, the temporary holding corral, during transport between facilities, or during sorting and handling. Occasionally, wild horses may sustain a spinal injury or a fractured limb but based on prior gather statistics, serious injuries requiring humane euthanasia occur in less than1 horse per every 100 captured. Similar injuries could be sustained if wild horses were captured through bait and/or water trapping, as the animals still need to be sorted, aged, transported, and otherwise handled following their capture. These injuries result from kicks and bites, or from collisions with corral panels or gates.

To minimize the potential for injuries from fighting, the animals are transported from the trap site to the temporary (or short-term) holding facility where they are sorted as quickly and safely as possible, then moved into large holding pens where they are provided with hay and water. On many gathers, no wild horses are injured or die. On some gathers, due to the temperament of the horses, they are not as calm and injures are more frequent. Overall, direct gather-related mortality averages less than 1%.

Indirect individual impacts are those which occur to individual wild horses after the initial event. These may include miscarriages in mares, 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 1-2 minute skirmish between older studs which ends when one stud retreats. Injuries typically involve a bite or kick with bruises which do not break the skin. Like direct individual impacts, the frequency of these impacts varies with the population and the individual. Observations following capture indicate the rate of miscarriage varies, but can occur in about 1 to 5% of the captured mares, particularly if the mares are in very thin body condition or in poor health.

A few foals may be orphaned during a gather. This can occur if the mare rejects the foal, the foal becomes separated from its mother and cannot be matched up following sorting, the mare dies or must be humanely euthanized during the gather, the foal is ill or weak and needs immediate care that requires removal from the mother, or the mother does not produce enough milk to support the foal. On occasion, foals are gathered that were previously orphaned on the range (prior to the gather) because the mother rejected it or died. These foals are usually in poor, unthrifty condition. Every effort is made to provide appropriate care to orphan foals. Veterinarians may administer electrolyte solutions or orphan foals may be fed milk replacer as needed to support their nutritional needs. Orphan foals may be placed in a foster home in order to receive additional care. Despite these efforts, some orphan foals may die or be humanely euthanized as an act of mercy if the prognosis for survival is very poor.

In some areas, gathering wild horses during the winter may avoid the stress that could be associated with a summer gather. By fall and winter, foals are of good body size and sufficient age to be easily weaned. Winter gathers are often preferred when terrain and higher elevations make it difficult to gather wild horses during the summer months. Under winter conditions, wild horses are often located in lower elevations due to snow cover at higher elevations. This typically makes the wild horses closer to the potential trap sites and reduces the potential for fatigue and stress. While deep snow can tire wild horses as they are moved to the trap, the helicopter pilots allow the wild horses to travel slowly at their own pace. Trails in the snow are often followed to make it easier for wild horses to travel to the trap site. On occasion, trails can be plowed in the snow to facilitate the safe and humane movement of horses to a trap.

In some areas, a winter gather may result in less stress as the cold and snow does not affect wild horses to the degree that heat and dust might during a summer gather. Wild horses may be able to travel farther and over terrain that is more difficult during the winter, even if snow does not cover the ground. Water requirements are lower during the winter months, making distress from heat exhaustion extremely rare. By comparison, during summer gathers, wild horses may travel long distances between water and forage and become more easily dehydrated.

Through the capture and sorting process, wild horses are examined for health, injury and other defects. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy. BLM Euthanasia Policy Washington Office Instruction Memorandum-2009-041 is used as a guide to determine if animals meet the criteria and should be euthanized (refer to SOPs, Appendixes A and B). Animals that are euthanized for non-gather related reasons include those with old injuries (broken or deformed limbs) that cause lameness or prevent the animal from being able to maintain an acceptable body condition (greater than or equal to BCS 3); old animals that have serious dental abnormalities or severely worn teeth and are not expected to maintain an acceptable body condition, and wild horses that have serious physical defects such as club feet, severe limb deformities, or sway back.

As the wild horses are removed they would be placed with adopters locally or transported to the Canon City holding facility.

Transport, Short Term Holding, Long-term Pastures, and Adoption (or Sale) Preparation - All excess wild horses would be removed and transported from the capture/temporary holding corrals to the designated BLM short-term holding corral facility(s). From there, they are made available for adoption or sale to qualified individuals or to long-term pastures (LTPs).

Wild horses selected for removal from the range are transported to the receiving short-term holding facility in a straight deck semi-trailers or goose-neck stock trailers. Vehicles are inspected by the BLM COR or PI prior to use to ensure wild horses can be safely transported and that the interior of the vehicle is in a sanitary condition. Wild horses are segregated by age and sex and loaded into separate compartments. A small number of mares may be shipped with foals. Transportation of recently captured wild horses is limited to a maximum of 8 hours. During transport, potential impacts to individual wild horses can include stress, as well as slipping, falling, kicking, biting, or being stepped on by another animal. Unless wild horses are in extremely poor condition, it is rare for an animal to be seriously injured or die during transport.

Upon arrival at the short term holding facility, recently captured wild horses are off-loaded by compartment and placed in holding pens where they are fed good quality hay and water. Most wild horses begin to eat and drink immediately and adjust rapidly to their new situation. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club feet, and other severe congenital abnormalities) would be humanely euthanized using methods acceptable to the American Veterinary Medical Association (AVMA). Wild horses in very thin condition or animals with injuries are sorted and placed in hospital pens, fed separately and/or treated for their injuries as indicated. Recently captured wild horses, generally mares, in very thin condition may have difficulty transitioning to hay. Some of these animals are in such poor condition that it is unlikely they would have survived if left on the range. Similarly, some mares may abort. Every effort is taken to help the mare make a quiet, low stress transition to captivity and domestic feed to minimize the risk of miscarriage or death.

After recently captured wild horses have transitioned to their new environment, they are prepared for adoption or sale. Preparation involves freeze-marking the animals with a unique identification

number, drawing a blood sample to test for equine infections anemia, vaccination against common diseases, castration, and de-worming. During the preparation process, potential impacts to wild horses are similar to those that can occur during handling and transportation. Serious injuries and deaths from injuries during the preparation process are rare, but can occur.

At short-term corral facilities, a minimum of 400 square feet is provided per animal. Mortality at short-term holding facilities averages approximately 5% per year (GAO 2008), and includes animals euthanized due to a pre-existing condition; animals in extremely poor condition; animals that are injured and would not recover; animals which are unable to transition to feed; and animals which are seriously injured or accidentally die during sorting, handling, or preparation.

Adoption or Sale with Limitations, and Long Term Pastures - Adoption applicants are required to have at least a 400 square foot corral with panels that are at least six feet tall for wild horses over 18 months of age. Applicants are required to provide adequate shelter, feed, and water. The BLM retains title to the wild horse for one year and most of the wild horses and the facilities are inspected to assure the adopter is complying with the BLM's requirements. After one year, the adopter may apply for title to the wild horse after an inspection from a humane official, veterinarian, or other individual approved by the authorized officer, at which point the wild horse becomes the property of the adopter. Adoptions are conducted in accordance with 43 CFR 5750.

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

Between 2007 and 2009, nearly 62% of the excess wild horses or burros removed were adopted and about 8% were sold with limitation (to good homes) to qualified individuals. Most wild horses 5 years of age and older are transported to LTPs. Each LTP is subject to a separate environmental analysis and decision making process. Animals in LTPs remain available for adoption or sale to individuals interested in acquiring a larger number of animals and can provide the animals with a good home. The BLM has maintained LTPs in the Midwest for over 20 years.

Potential impacts to wild horses from transport to adoption, sale and/or LTP are similar to those previously described. One difference is that when shipping wild horses for adoption, sale or LTP, animals may be transported for a maximum of 24 hours. Immediately prior to transportation, and after every 18-24 hours of transportation, animals are offloaded and provided a minimum of 8 hours on-the-ground rest. During the rest period, each animal is provided access to unlimited amounts of clean water and good quality hay with adequate space to allow all animals to eat at one time. Most animals are not shipped more than 18 hours before they are rested.

LTPs are designed to provide excess wild horses with humane, life-long care in a natural setting off the public rangelands. There wild horses are maintained in grassland pastures large enough to allow free-roaming behavior and with the forage, water, and shelter necessary to sustain them in good condition. About 22,700 wild horses, that are in excess of the existing adoption or sale demand (because of age or other factors), are currently located on private land pastures in Iowa, Kansas, Oklahoma, and South Dakota. Located in mid or tall grass prairie regions of the United States, these LTP are highly productive grasslands as compared to more arid western rangelands. These pastures comprise about 256,000 acres (an average of about 8-10 acres per animal).

Mares and castrated stallions (geldings) are segregated into separate pastures except one facility where geldings and mares coexist. No reproduction occurs in the long-term grassland pastures, but foals born to mares that are pregnant when they were removed from the range are gathered and weaned when they reach about 8-10 months of age and are then shipped to short-term facilities where they are made available for adoption. Handling by humans is minimized to the extent possible although regular on-the-ground observation and weekly counts of the wild horses to ascertain their numbers, well-being, and safety are conducted. A very small percentage of the animals may be humanely euthanized if they are in very thin condition and are not expected to improve to a Body Condition Score (BCS) of 3 or greater (base on the Henneke Scoring System) due to age or other factors, see IM 2009-041. Natural mortality of wild horses in LTP averages approximately 8% per year, but can be higher or lower depending on the average age of the wild horses pastured there (GAO-09-77, Page 52). The savings to the American taxpayer which results from contracting for LTP averages about $4.45 per wild horse per day as compared with maintaining the animals in short-term holding facilities.

Euthanasia and Sale without Limitation - While humane euthanasia and sale without limitation of healthy wild horses for which there is no adoption demand is authorized under the WFRHBA, Congress prohibited the use of appropriated funds between 1987 and 2004 and again in 2010 for this purpose. It is unknown if a similar limitation will be placed on the use of FY2011 appropriated funds.

Environmental Consequence of Alternative B, Annual Gathers July through February: Impacts resulting from this alternative are similar to those of the Proposed Action, except that gather operations may occur during winter months. Due to the presence of mountainous terrain, vegetative cover and the potential for winter storm conditions, gather efficiency may be less than optimal.

Winter gathers can also be more stressful to wild horses due to snow depth and cold temperatures. If the helicopter moves wild horses too far or too quickly there is a possibility of increased upper respiratory problems.

Environmental Consequence of Alternative C, No-Action: Under this alternative, wild horses would not experience the stress associated with gathering, removal or adoption. The current population of wild horses would continue to increase at a rate of 20% annually, and exceed the carrying capacity of the range. Table 1 provides the projected population increase over the next 5 years based upon the 2010 inventory and 20% growth rates. The BLM currently estimates that every four years the wild horse population would double. Though it may require many years for the population to reach catastrophic levels, this alternative poses the greatest risk to the health and viability of the wild horse population, wildlife populations, water resources, and the vegetative resources.

Table 1 – Current and Projected Estimated Populations Thru 2014

Year	Estimated Population	20% Recruitment Rate	New Population Estimate	Forage Utilization by AUMs
2010	86[1]	17	103	1,545
2011	103	21	124	1,860
2012	124	25	149	2,235
2013	149	30	179	2,685
2014	179	36	215	3,225

[1] Population estimate by aerial inventory done in 2010.

The population of wild horses would continue to compete for the available water and forage resources. The locations closest to water would experience severe utilization and degradation of the rangeland resources. Over the course of time, the wild horse's condition would deteriorate as a result of declining forage availability and the increasing distance traveled between forage and water sources. The mares and foals would be affected severely under such conditions. The continued increase in population would eventually lead to a catastrophic loss to the herd, which would be a function of the loss of available forage and water and the degradation of the habitat. When the herd exceeds the ecological carrying capacity, both the habitat and the wild horse population would be critically unhealthy.

Ecological carrying capacity of a population is a scientific term, which refers to the level at which density-dependant population regulatory mechanisms would take effect with the herd. At this level, the herd would show obvious signs of ill fitness, including poor individual animal condition, low birth rates, and high mortality rates in all age classes due to disease and/or increased vulnerability to predation (Coates-Markle, 2000). In addition, irreparable damage would occur to the habitat through overgrazing, which is not only dependent upon by wild horses but by wildlife, and permitted livestock. Also all multiple uses of the area would be impacted. Significant losses of wild horses due to starvation and disease would have obvious consequences to the herd within the WDHA. Irreparable damage to the resources, which would include primarily vegetative, soil and watershed resources, would have obvious impacts to all other uses of the resources, which depend upon them for survival.

Within the WDHA, wild horses cannot be maintained within the parameters of a thriving, natural ecological balance as required by law, and the consequent degradation of range sites from the no action alternative would be irreversible and irretrievable. Not conducting a gather would result in an exponential growth in the number of excess wild horses as identified in Table 1 above.

Cumulative Analysis Area and Impacts: The cumulative analysis area (CAA) for wild horses includes the WDHA and areas immediately surrounding the areas including the Bookcliffs and Piceance-East Douglas Herd Management Areas and the North Piceance Herd Area. The most important past, present and reasonably foreseeable future actions that affect the wild horse herd and health include drought, competition with wildlife and livestock for forage and water, oil and gas exploration and development, and wildfire.

Numerous gathers have been completed in the past and future gathers may be scheduled. Over time, as the excess wild horse population is removed a thriving natural ecological balance would be achieved and maintained. Effects that may result would include continued improvement of the range condition and riparian-wetland condition. The opportunity for beneficial effects would be realized under Alternatives A and B. In general, adverse cumulative impacts for the no action alternative would include continued over utilization of vegetative resources.

For Alternatives A and B, there are no cumulative impacts of concern. The WDHA is isolated from the other herds identified above. These other areas are managed for separate objectives and their Management Levels would not be affected by these alternatives.

Under Alternative C, in the event of prolonged periods of drought, the competition among wild horses for limited water and forage, particularly if exacerbated by wildfire, could create conditions if the no action was selected that could lead to high levels of mortality or morbidity caused by

adverse conditions resulting from excess wild horse numbers on the range, which would then require emergency actions to alleviate wild horse suffering and/or mortality.

Mitigation Measures: Mitigation measures have been incorporated into both Alternatives A and B.

VEGETATION (includes a finding on Standard 3)

Affected Environment: The native plant communities can be described by major plant associations that are characterized by one or two dominant plant species or an association of several dominant plant species. Distribution of these associations is influenced primarily by precipitation and elevation and, to a lesser extent, by aspect and soil type. Table 2 below shows the vegetation communities by ecological sites and acres associated with each site.

Table 2 - Vegetation Communities by Ecological Site and Acreage

ECOLOGICAL SITE// WOODLAND TYPE	PLANT COMMUNITY APPEARANCE	PREDOMINANT PLANT SPECIES IN PLANT COMMUNITY	ACRES WITHIN WDHA
Pinyon/Juniper	P/J Woodland	Pinyon, Juniper	43932 (35.6%)
Clayey Slopes	Hillside Bunchgrass/Salt Desert Shrub	Salina wildrye, Indian ricegrass, Sandberg bluegrass shadscale, sagebrush	40371 (32.7%)
Rock Outcrop	Barren	Very Scattered shrubs and grasses	16247 (13%)
Stony Foothills	Pinyon/Juniper	Pinyon, juniper, Indian ricegrass, beardless wheatgrass, prairie junegrass, low rabbitbrush	7822 (6%)
Rolling Loam	Sagebrush/grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, horsebrush, bitterbrush, western wheat grass, Indian rice grass, squirreltail, June grass, Nevada and Sandberg bluegrass	4604 (3.7%)
Foothills Swale	Grass Shrubland	Basin wildrye, western wheatgrass, Indian ricegrass, big sagebrush, rubber rabbitbrush	3117 (2.5%)
Alkaline Slopes	Sagebrush/grass	Greasewood, Big Sagebrush, western wheatgrass, sand dropseed	2221 (1.8%)
Mountain Loam/D-fir	Douglas-Fir Forest Stands	North and West facing steep slopes of predominately Douglas-Fir	1196 (.9%)
Torrifluvents	Nearly Barren	Sparse Desert Shrubs and annual grasses	1164 (.9%)
Brushy Loam	Mountain Shrub type	Utah serviceberry, snowberry, mountain brome, elk sedge	742 (.6%)
Deep Loam	Low Shrubs and Grass	Beardless wheatgrass, muttongrass, snowberry and sagebrush	756 (.6%)
Badlands	Barren	Low Desert Shrubs and grasses	506 (.4%)
Loamy Slopes	Sagebrush/grass Shrubland	Wyoming big sagebrush, Beardless wheatgrass, western wheatgrass and serviceberry	352 (.3%)
Dry Exposure	Grass Shrubland	Bluebunch wheatgrass, bottlebrush squirreltail, Colorado buckwheat, winterfat, Douglas rabbitbrush	149 (.1%)
Clay Salt Desert	Salt Desert Shrub	Douglas rabbitbrush, Indian ricegrass, Sandberg bluegrass shadscale, sagebrush	68 (.05%)
Salt Desert Breaks	Salt Desert Shrub	Indian ricegrass, galleta, needle and thread grass, thickspike wheatgrass, Douglas rabbitbrush, shadscale	53 (.04%)
Clayey Foothills	Grass Shrubland	Western wheatgrass, green needlegrass, big sagebrush, dwarf rabbitbrush	20 (.02%)
		Total	123,320

Within the WDHA plant communities are classified by "range sites" or "non-range sites". A range site is a distinctive kind of rangeland that differs from other kinds of rangeland in its ability to produce a characteristic natural plant community. A range site is the product of all the environmental factors responsible for its development. It is capable of supporting a native plant community typified by an association of species that differs from that of other range sites in the kind or proportion of species or in total production (National Range Handbook 1976). Non-range sites are composed of forests, woodlands and non-grazeable sites including badlands and rock outcrops. Non-range sites are generally not considered as range forage producing sites.

Range sites were classified by the present communities' similarities to the climax communities. The following Table 3 shows this classification:

Table 3 – Percent of present communities' similarities to the climax communities

RANGE CONDITION CLASS	PERCENTAGE OF PRESENT PLANT COMMUNITY THAT IS CLIMAX FOR THE RANGE SITE. (BASED ON WEIGHT)
Potential Natural Community (PNC)	76-100
Late Seral	51-75
Mid Seral	26-50
Early Seral	0-25

Listed below are the Ecological sites within the WDHA and Range Condition classification Tables 3a-3d:

Table 3a - Potential Natural Community Condition Class:

ECOLOGICAL SITE	ACRES
Alkaline Slopes	97
Dry Exposure	149
Total	246

Table 3b - Late Seral Condition Class:

ECOLOGICAL SITE	ACRES
Alkaline Slopes	87
Brushy Loam	440
Clayey Foothills	20
Clayey Slopes	38,050
Deep Loam	729
Loamy Slopes	246
Rolling Loam	173
Total	39,745

Table 3c - Mid-Seral Condition Class:

ECOLOGICAL SITE	ACRES
Alkaline Slopes	250
Brushy Loam	302
Clayey Salt Desert	68
Clayey Slopes	2,354
Deep Loam	27
Foothills Swale	972
Loamy Slopes	106
Rolling Loam	3,367

ECOLOGICAL SITE	ACRES
Salt Desert Breaks	53
Total	7,499

Table 3d - Early Seral:

ECOLOGICAL SITE	ACRES
Alkaline Slopes	1,787
Foothills Swale	2,145
Rolling Loam	1,064
Total	4,996

Listed in Table 4 below are the non-range sites for the WDHA. Non-range sites are composed of forests, woodlands and non-grazeable sites including badlands and rock outcrops. BLM does not consider non-range sites as range forage producing sites due to these characteristics.

Table 4 - Non-Range Sites:

NON-RANGE SITES	SUCCESSIONAL STAGE	ACRES
Torrifluvents	Not Classified	1,164
Pinyon/Juniper Woodlands	Late Seral	40,716
Douglas-fir-Spruce/Fir Forests	PNC	1,196
Pinyon/Juniper Chainings & Fires	Early	3,250
Badlands	Not Classified	506
Rock Outcrop	Not Classified	16,180
Stony Foothills (Pinyon/Juniper)	Late Seral	7,822
	Total	**70,834**

Tables 3a-4 were created using data gathered for the development of the 2005 WDHAA. Trend data collected in the summer of 2008 using the Daubenmire canopy coverage and frequency transect method was compared to trend data collected in 2003 which was used during the development of the 2005 WDHAA as shown in tables 5 and 6 below. Daubenmire transect data was collected at permanent transect locations which were Trend Data collected in the summer of 2008 using the Daubenmire canopy coverage and frequency transect method established in the mid 1970s.

Table 5: Comparison of 2003 and 2008 % Canopy Cover Data

% Canopy Cover			
Species	Rolling Loam	Clayey Slopes PJ Woodlands/Clayey Slopes	Combined Ecological Sites
Shrubs			
2003	37.85%	14.95%	26.40%
2008	20.25%	15.15%	17.70%
Change	17.6% Decrease	0.20% Increase	8.70% Decrease
Forbs			
2003	0.75%	4.90%	2.83%
2008	9.20%	11.45%	10.33%
Change	8.45% Increase	6.55% Increase	7.50% Increase
Grasses			
2003	28.85%	24.20%	26.53%
2008	16.15%	21.75%	18.95%
Change	12.70% Decrease	2.45% Decrease	7.58% Decrease
Total Vegetation			
2003	67.40%	44.00%	55.70%
2008	45.60%	48.30%	46.95%
Change	21.80% Decrease	4.30% Increase	8.75% Decrease

Table 6: Comparison of 2003 and 2008 Species Composition Data

Species composition %									
	Shrubs			Forbs			Grasses		
Ecological Site	2003	2008	Change	2003	2008	Change	2003	2008	Change
Rolling Loam	57.50%	46.20%	11.30% Decrease	1.10%	19.70%	18.60% Increase	41.35%	34.05%	7.30% Decrease
Clayey Slopes PJ Woodlands/Clayey Slopes	29.15%	32.35%	3.20% Increase	9.65%	23.55%	13.90% Increase	61.20%	44.10%	17.1% Decrease
Combined Ecological Sites	43.33%	39.28%	4.05% Decrease	5.38%	21.63%	16.25% Increase	51.28%	39.08%	12.20% Decrease

As shown in table 5 data from 2008 for shrub, forb and grass species within both the Rolling Loam and Clayey Slopes ecological sites shows there has been an 8.75% decrease in percent canopy cover. Table 6 above shows the percent of each vegetation type contributing to the total vegetation composition of a site (100%). As shown in table 6 when data for both ecological sites are compared, the composition of shrub species has decreased 4.05%, forb species has increased 16.25%, and grass species has decreased 12.20%. The decrease in canopy coverage, and decrease in species composition of grasses as well as an increase of forb species is likely a result of several factors including. Drought conditions have existed over the past 5 years, as shown in tables 12 and 13 in the Range Management section, livestock use since 2005 has consistently been below what is authorized. The reduced use of livestock has allowed for the availability of forage for use by wild horses. If livestock were to have used the total amount which is allocated for livestock that use couple with drought conditions, and the removal of forage by excess wild horses, the decrease of overall canopy coverage, and decrease in composition of grass species is expected to have been larger.

Data was not collected from every permanent transect and photo point within the WDHA, the information that was collected in 2008 represents 43% of the ecological sites within the WDHA in which a permanent transect has been established. Since conditions between 2003 and 2008 had not changed significantly, data collected in 2003 remains valid as it accurately represents the affected environment for vegetation.

Summary: Within the WDHA BLM identifies approximately 52,486 acres (43%) as rangeland sites and 70,834 acres (57%) as non-rangeland sites. Of the rangeland sites 246 acres (0.5%) are considered Potential Natural Community; 39,745 acres (76%) are considered late-seral; 7,499 acres (14%) are considered as mid-seral; and 4,996 acres (9.5%) are considered early-seral.

Environmental Consequence of Alternative A, the Proposed Action: During gather operations, vegetation would be disturbed at the location of trap sites and holding facilities due to congregation and trampling by wild horses. The amount of vegetation that would be disturbed or destroyed is dependent on the number of wild horses that are gathered at a specific site and the duration those wild horses remain at the trap site/holding facility. The BLM doesn't anticipate the direct impacts from trap sites/holding facilities to exceed 10 acres. Vegetation disturbance will be short term, and it is expected that plant communities will recover from disturbance within three years.

The BLM anticipates that the removal of wild horses over time would decrease overall utilization of the vegetative resource and expects to see an improving trend in vegetation communities moving toward meeting Public Land Health Standards.

*Environmental Consequence of Alternative B, Annual Gathers July through February***:** During fall gather operations impacts from gather operations associated with this alternative would be the same as described above for the proposed action alternative.

During winter gather operations disturbance of vegetation would result from plant roots being physically removed from the soil. Because vegetation would be in a dormant growth stage during a gather occurring in February it is expected that there would be minimal disturbance to the cover and ecological function of vegetation species; during this dormant stage above ground plant parts are brittle, and no longer functional lowering the likelihood of plants being pulled from the soil. This disturbance would again be localized to the location of trap sites and holding facilities. Disturbance resulting from a winter gather would be short term, and vegetation would be expected to recover within two growing seasons.

Environmental Consequence of Alternative C, No-Action: Under Alternative C wild horses would not be gathered and removed from the WDHA. There would be no impacts associated with gather operations. Utilization of vegetation would increase as the wild horse population increases, this increase combined with wildlife and livestock use will rapidly exceed the amount of available forage resulting in continual overuse. The constant overuse of rangeland vegetation will decrease the ability of plants to complete their growth cycle, recover from grazing while decreasing regeneration. As a result, desirable native plants will eventually be replaced by less desirable, often non-native plants, most commonly the invasive annual cheatgrass. Once the desired native rangeland vegetation community has been lost it generally cannot recover without human intervention, which is often time consuming, and expensive. The loss of valuable rangeland forage will force wild horses to expand their range to areas outside of the WDHA.

Cumulative Analysis Area and Impacts: The CAA for vegetation is the WDHA, and adjacent lands within the Douglas Creek and Evacuation Creek watersheds. Reasonably foreseeable activities impacting vegetation include oil and gas exploration, livestock grazing, and recreation. It is not expected that there will be a large increase of oil and gas activity within this area however; there is abundant existing infrastructure associated with oil and gas exploration including well pads, pipelines, roads, and compressor stations. As these disturbed lands are reclaimed, it is expected to improve the health of vegetation communities. Livestock grazing results in removal of forage, however the number of animals, season of use, duration, and species of grazing animal can be controlled to avoid long term degradation of vegetation. In the event of drought or wildfire livestock can be removed from the range to prevent damage. Impacts from alternatives A and B are considered short term, vegetation would be able to recover quickly. Impacts from alternative C will increase exponentially as wild horses are left on the range, desirable vegetation will be lost, allowing non desirable species to colonize, at which point human intervention will be necessary to reclaim areas to a natural productive state.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Standard 3 for Public Land Health in Colorado is: Healthy, productive plant and animal communities of native and other desirable species are maintained at viable population levels commensurate with the species and habitat's potential. Plants and animals at both the community and population level are productive, resilient, diverse, vigorous, and able to reproduce and sustain natural fluctuations, and ecological processes. Vegetation associations in early-seral condition or declining trend were determined to not be meeting the vegetation health standard based on the indicators of Standard 3 for rangeland health listed below.

Indicator: Noxious weeds and undesirable species are minimal in the overall plant community.

Condition: Within some WDHA plant community's cheatgrass dominates.

Indicator: Native plant and animal communities are spatially distributed across the landscape with a density, composition, and frequency of species suitable to ensure reproductive capability and sustainability.

Condition: Key species are a minor component in these communities and do not ensure reproductive capability and sustainability.

Trend: Key species are in decline and do not ensure reproductive capability and sustainability.

Indicator: Plants and animals are present in mixed age classes sufficient to sustain recruitment and mortality fluctuations.

Condition: These communities do not present a mixed age class and do not sustain recruitment and mortality fluctuations of key species.

Trend: These communities are not sustaining recruitment and mortality fluctuations of key species.

Indicator: Photosynthetic activity is evident throughout the growing season.

Condition: The dominance of cheatgrass removes soil moisture abbreviating desired plant species growth during the growing season.

Trend: Increasing cheatgrass and decreasing litter volumes are decreasing available soil moisture abbreviating desired plant species growth during the growing season.

Indicator: Appropriate plant litter accumulates and is evenly distributed across the landscape.

Condition: Adequate litter is lacking.

Trend: Cover of litter is declining.

Within the project area 90% (47,490 acres) of the range sites represent plant communities within acceptable thresholds for healthy communities and within acceptable levels of desired plant communities (Mid to PNC) as defined in the WRRMP. Vegetation production and species composition on these sites provide adequate cover for soil protection and forage production to meet foraging demands. The remaining range sites 10% (4,996 acres) early seral are generally not meeting standards due to the presence and proliferation of cheatgrass mono-cultures. Vegetation disturbed by the proposed action would not be meeting public land health standards however, this disturbance is localized and will be short term, vegetation would be expected to recover and again be meeting standards within three years. Under alternative B, short term impacts to vegetation related to gather operations would be identical to the proposed action. An increase in overutilization of vegetation will result in more acres not meeting land health standards. With the no action alternative, overutilization of vegetation will increase exponentially as the population of wild horses increases, resulting in increased acres of degraded rangelands where vegetation communities would not meet land health standards.

Mitigation: Mitigation has been incorporated into the Proposed Action. No additional mitigation identified.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: Noxious weeds and their continued encroachment on BLM lands represent a serious threat to the continued productivity, diversified use and aesthetic value of WRFO lands. BLM currently has an active noxious weed management program which emphasizes cooperation with Rio Blanco County, private landowners and BLM permitted land users. The WRFO weed management program is based in part on the 1990 White River Resource Area

Noxious Weed Management Plan, the priorities established by the *Record of Decision, Vegetation Treatment on BLM Lands, 13 Western States* (BLM 1991), the *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement. (*BLM, 2007a), and the White River Field Office Integrated Weed Management Plan, DOI-BLM-CO-110-2010-0005-EA.

The current program uses an integrated management approach using: (1) chemical control using BLM approved chemicals, (2) biological control insect releases focused on leafy spurge, musk and Canada thistles, (3) mechanical control primarily digging of initial infestations of biennial noxious weed species, and (4) management to maintain competitive vegetation to prevent noxious weed invasion and spread. All aspects of this program have been effective where they have been applied.

Within the WDHA there have been a number of outbreaks of noxious weeds. Noxious weeds of concern include cheatgrass, halogeton, thistles (bull, musk and Canada), knapweeds (spotted, diffuse and Russian), burdock, hoary cress, mullein, black henbane and houndstongue. Cheatgrass and halogeton are found throughout the WDHA, with the primary control method being management to maintain competitive desirable species. On those noxious weed species which are controlled by direct control methods, there has been good success at containing the initial outbreaks.

Environmental Consequence of Alternative A, Proposed Action: Wild horse gather activities would disturb soils in localized areas, primarily associated with traps and holding pens. Follow-up inspections by BLM of these sites and treatment of any noxious weeds would prevent noxious weeds from invading and dominating adjacent native plant communities. Hay utilized at trap sites or holding facilities could be a source of noxious weeds.

BLM anticipates that the removal of wild horses over time would decrease overall impacts of wild horse use and proliferation of invasive, non-native species.

Environmental Consequence of Alternative B, Annual Gathers July through February: Impacts from soil disturbance associated with gather activities under this alternative would be similar to those impacts identified under Alternative A. Soil disturbance would be less during winter gathers while the ground is frozen thereby reducing the potential spread of invasive species.

Environmental Consequence of Alternative C, No-Action: Under Alternative C wild horses would not be gathered and removed from the WDHA. There would be no impacts associated with gather operations. Failure to reduce wild horses in these areas would continue to degrade plant communities as the wild horse population increases. Readily available native rangeland forage will continue to decrease as the wild horses are expected to expand their range in search of forage. Degraded plant communities would be expected to increase, these weakened plant communities would be susceptible to weed invasion.

Cumulative Analysis Area and Impacts: The CAA for Invasive, Non-Native species is the WDHA, and adjacent lands in the Douglas Creek and Evacuation Creek watersheds. Past, present, and reasonable foreseeable activities which also impact the proliferation of invasive, and non-native species include: wild horse, livestock and wildlife grazing use, recreation, and oil and gas activity.

Over utilization by grazing animals can degrade native vegetation communities which can become susceptible to invasion by invasive species, these animals can act as vectors to spread invasive species by transporting seeds.

Recreation activities which disturb soils, such as unauthorized off-road travel can create disturbed areas which non native species readily invade. Vehicles used by recreationists can also transport and introduce weed seed into areas that are previously free on invasive non native species.

Activities associated with oil and gas exploration and development may provide a vector for spread of invasive species.

Foreseeable impacts from alternative A are short term, since BLM will be monitoring and treating disturbed areas for invasive species, when these populations are discovered and treated in the early stages of establishment, they can generally be eradicated with much success. Gather activities associated with alternative B would also be short term. Potential impacts from alternative C would be considered long term, as the population of wild horses increases, native vegetation will be substantially over utilized resulting in large areas susceptible to invasion by non native species.

Mitigation: Mitigation has been incorporated into the Proposed Action. No additional mitigation identified.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: Wildlife that inhabit the project area, and upon which management emphasis is placed, include big game (mule deer and elk), dusky grouse, and special status nongame species (e.g. raptors).

Big game: The project area encompasses the seasonal ranges of both mule deer and elk. The Colorado Division of Wildlife (CDOW) recently revised its big game range categorization for Game Management Unit (GMU) 21. The project area encompasses about 30% of all winter ranges and 6% of the summer range (critical habitat) available to deer in GMU 21. These winter ranges are further delineated into winter concentration areas, severe winter range, and critical winter range (coincident severe winter range and winter concentration area). The project area encompasses about 25% of the critical winter range, 21% of the severe winter range, and 38% of the winter concentration areas described for deer in GMU 21. The project area also includes about 8% of the summer range (critical habitat), 12% of the winter concentration area, and about 30% of the remaining winter range extent available to elk in GMU 21. Critical habitat is a designation conveyed to seasonal habitats that, within a given big game herd area (Data Analysis Unit - DAU), are most limited in supply or are of inordinate value; the loss or deterioration of which would adversely affect long term population objectives established by the CDOW.

Game Management Unit 21 (within which the project area lies) is managed by Colorado Division of Wildlife (CDOW) as a trophy unit for mule deer. Approximately 60% of the DAU's deer population winters at lower elevations in the Douglas, Missouri, and Evacuation Creek drainages in mature pinyon and juniper woodlands interspersed with sagebrush and/or deciduous browse shrublands. Suitable summer habitat in the project area is confined to higher elevation Douglas-fir and mixed shrub associations on Oil Spring, Texas, and Rabbit Mountains.

Deer population objectives remain consistent with those authorized in the RMP in 1997 for the Douglas planning unit (i.e., about 9,385 on BLM surface). Relative to recently adjusted long term population objectives, CDOW considers wintering deer populations presently at objective levels in

GMU 21. Currently, it is estimated that about 100 deer summer in the Oil Spring/Texas Mountain area and an average 1600 deer winter on ranges within the project area.

Elk populations in GMU 21 are also within the desired range of the CDOW's long-term population objective for elk. CDOW intends on continuing to manage for stable numbers of elk at newly established population levels.

Population density varies by season with fewer elk occupying the project area during the core winter months (about 100 from late November through February) and larger numbers supported spring and fall (about 160-200 animals). Critical summer range habitat for elk is similar in distribution to that of mule deer. Oil Spring and Texas Mountains provide suitable summer habitat for elk, but relatively few animals (about 50) summer in the project area.

Dusky (blue) grouse: The project area encompasses a peninsula of higher elevation habitats extending north from the Douglas-Baxter Pass divide that support year-long dusky grouse occupation (i.e., West Creek pasture and higher elevations of the East and West Texas Creek pastures). The WDHA encompasses about 14% of the potential dusky grouse habitat available in Game Management Unit (GMU) 21. Grouse winter habitat and year-round distribution centers on the 1200 acres of mixed spruce and fir forest on Texas and Oil Spring Mountains. Habitats that support nesting, brood-rearing, and general summer and fall distribution are confined to about 2380 acres of surrounding mixed shrub and higher elevation (above 7200') sagebrush habitats (about 7% of those available in GMU 21). After the first snows (~by mid-October), dusky grouse distribution is strongly associated with mature arboreal cover in spruce, fir, and pine, and diets consist primarily of conifer needles.

Raptors and non-game wildlife: Raptor nesting activities are dispersed throughout the project area. Nesting records are heavily skewed toward the more conspicuous cliff-nesting species. Golden eagles and red-tailed hawks nest predominantly on cliff faces found throughout this region. Systematic or extensive inventory for the less obvious, but probably more common woodland nesting species, including Cooper's and sharp-shinned hawks, northern pygmy, saw-whet, and long-eared owls, is lacking and few nests have been recorded relative to the extent of available habitat. Nesting records for potentially affected hawks, eagles, and owls indicate that nest attempts (initiated as early as March) are largely (85%) complete and young fledged by mid-August.

The non-game bird community throughout the project area's uplands is considered representative and complete with no obvious deficiencies in composition. Over 200 species of nongame birds have been recorded in those habitats widely represented within the project area (e.g., pinyon-juniper, mountain shrub, sagebrush). Species associated with riparian/wetland and spruce/fir forest communities are confined to limited acreage in mainstem and West Douglas Creek (forming the eastern boundary of the project area) and the tops of Texas and Oil Spring Mountains, respectively.

Small mammal populations are poorly documented; however, the 20 or so species that are likely to occur in this area are widely distributed throughout the Great Basin or Rocky Mountain regions. Even though several species have relatively specialized habitat affiliation (i.e., shrubland with well developed understories), all species display broad ecological tolerance. No narrowly distributed or highly specialized species or subspecific populations are known to occur in the project area.

Environmental Consequence of Alternative A, Proposed Action: Big game: Extensive and potentially disruptive helicopter operations would be conducted in the late summer through late fall months. Helicopter herding represents a high-intensity, but transient source of disturbance that

would become increasingly concentrated and more frequent near the trap-site. It is doubtful that dispersed helicopter herding and the initially intense, but relatively predictable gathering/holding activities would contribute significantly to deterioration in animal fitness at the population level, but big game would tend to avoid or be displaced from areas within 0.5 to 1 mile of this activity (500-2000 acres). It is anticipated that displaced animals would return, more or less, to predisturbance distribution soon after gather operations at an individual site were complete.

The limited number of deer and elk summering in the Texas/Oil Spring Mountain complex would be subjected to varying levels of localized disturbance for short (e.g., 4-7 days) periods of time. Based roughly on the distribution of wild horses in 2010, gather operations in July and August would not be expected to involve more than about 10% of the big game summer ranges available in the WDHA (less than 1% of summer range available in GMU 21). Similarly, helicopter activity September through November may occur across 15-20% of the winter ranges encompassed by the WDHA, though, at any given time less than 2% would ever be subject to active helicopter herding operations. More disruptive involvement would represent less than 1% of the winter range extent available in GMU 21.

Although substantive disruption of big game distribution would remain localized at any given time, CDOW relies on annual big game harvest for annual funding and to maintain herds at desired population levels and it is important to minimize, where practicable, inadvertent disruption of sport hunting for big game in GMU 21. Helicopter activity has the potential to disrupt trophy deer hunting opportunities during the 2010 (and subsequent years) seasons of 23-31 October and 6-14 November for persons that have accumulated preference points for 10-14 years. BLM would attempt to accommodate this concern by providing early notification to the CDOW of gather operations that may occur during the hunting seasons (for publication in license application brochures) and by attempting to avoid helicopter gather activity during the deer hunting seasons. This notification would provide prospective hunters the opportunity to decide whether to apply for a license for the following fall/winter hunting seasons.

Water or bait trapping operations involves the ground-based capture of individual animals. Although these capture techniques may be used during big game occupation, these operations represent very localized and short-term points of potential disturbance that would have no substantive adverse influence on animal distribution or energetics.

Dusky (blue) grouse: Gather activities would be temporally or spatially asynchronous with and would have no effective influence on the reproductive or wintering functions of dusky grouse.

Raptors and non-game wildlife: Helicopter-based gather activities may coincide with the later reproductive activities of non-game wildlife from early July through mid-August. In the case of passerine birds and small mammals, this intense, but localized activity would be expected to disrupt reproductive activity and suppress recruitment at levels discountable at the local population level (see Migratory Bird section). The relatively infrequent circumstance where active cliff or woodland raptor nests would be subjected to brief and close approach by helicopter activity late in the nesting sequence would not be expected to prompt prolonged nest absences or have any substantive influence on chick survival. Preparation and gathering work in July and August may infrequently involve late nesting attempts of raptors, including golden eagle and BLM-sensitive accipitrine hawks. Surveys of suitable raptor nesting habitat will be conducted by WRFO staff on those trap sites proposed for use or development prior to August 13. In the event an active raptor nest is found in the vicinity of trapping operations, these sites will be afforded a buffer adequate to effectively isolate nesting activity from disruptions generated by wild horse trapping operations.

*Environmental Consequence of Alternative B, Annual Gathers July through February***:** Big game: Gather related effects on wildlife would be identical in nature to those discussed in Alternative A, except those operations may extend into the winter and late winter months of December through February when adverse weather and forage conditions exert their greatest influence on big game condition (i.e., on severe winter ranges) and when animals are most concentrated (i.e., winter concentration areas).

Again, based roughly on the distribution of wild horses in 2010, gather operations in December through February may occur annually across 5-10% of the big game critical winter ranges and winter concentration areas encompassed by the WDHA. At any given time it is estimated that these operations could influence up to 3 and 6% of those big game critical winter range and winter concentration areas, respectively (or about 1% of each range in GMU 21). Although disturbances would be short term, energy expended by animals repeatedly avoiding gather activity or fleeing close helicopter approach, particularly in more open sagebrush terrain and under snowpack conditions, would likely have strong and lasting consequences on the subsequent condition (e.g., winter fitness, gestation) of those animals affected.

An extended gather strategy, depending on the duration and frequency of operations on these ranges, would probably have strong adverse consequences on a relatively small portion of the GMU 21 big game population for up to 5 years, but would provide a measure of flexibility in scheduling gathers to avoid important big game hunting seasons and, if deemed necessary, would remain effective in remedying the long-term habitat effects of season-long grazing exerted by wild horses in GMU 21 (for discussion see Alternative C).

Environmental Consequence of Alternative C, No-Action: Under Alternative C wild horses would not be gathered and removed from the WDHA. There would be no impacts associated with gather operations. Nearly 11,000 acres of big game summer range (about 10% of that available within GMU 21) and at least 16,000 acres of surrounding big game winter range that is occupied by wild horses through the summer would continue to be subjected to exaggerated growing season use by increasing numbers of wild horses. Because current levels of growing season use on Texas Mountain are inconsistent with the maintenance of well developed herbaceous understories, it is inevitable that the utility of big game summer ranges in the Texas Mountain area under this alternative would continue to diminish, both in terms of big game acquiring sufficient nutrition and heightened levels of antagonistic displacement from high wild horse densities.

Approximately 12% of cumulative livestock and wild horse grazing use within the WDHA, concentrated initially around Texas Mountain, is attributable to season long grazing by wild horses. This contribution would increase an average 3-4% annually such that wild horses would assume 26% of the total livestock and wild horse grazing load by 2014. Diminished forage availability in the Texas Mountain area would continue to require that cattle make longer duration use of lower elevation winter pastures. Cattle now remain on these ranges until mid-June - a date that precludes sufficient growing season rest for sustained plant vigor and forage productivity. The development of reliable waters to accommodate this use would be exploited by dispersing bands of wild horses, thereby compounding inappropriate seasonal grazing use and further expanding sedentary season-long use of these arid ranges by wild horses.

Though wild horse-related influences would be most evident in the Texas/Oil Spring Mountain area, further direct and indirect influences would be widely felt on about 30% of the big game winter ranges available in GMU 21, particularly in bottomland and basin situations. Current

livestock and wild horse grazing use levels within the WDHA exceed that considered necessary to reverse declining trends on 3200 acres of land that failed to meet the land health standard in 2003. Much of this acreage is represented by deer severe winter range (20% of those available in GMU 21) and winter concentration areas (65% of those available in GMU 21) at lower elevations in the northern half of the WDHA. Because degraded lands in concentration and preferred use areas can generally produce one-quarter to one-half the herbaceous forage as lands in mid to late seral states, wild horses and cattle are compelled to seek new forage/water sources or forage increasingly further from water. To compensate for declining forage production in degraded sites, grazing use demands attributable to current wild horse numbers in the near term would require 400-600 additional acres of shrubland communities to assume heavy levels of season-long use. To meet the annual increase in wild horse numbers and forage demand, surrounding range subject to increased season-long grazing use by wild horses would need to expand at an average annual rate of about 20-25% (~1000-1200 additional acres by 2014). It is likely that in the short term this acreage, too, would fail to meet the land health standard. Areas that fail to meet the standards hold little value in supporting spring and fall big game forage use except during the brief emergence of invasive annual weeds in early spring.

Furthermore, the herbaceous ground cover on these big sagebrush ranges, once entrenched with cheatgrass or other annual grasses are severely competitive with desirable perennial grasses and forbs and become highly susceptible to wildfire. Cheatgrass dominance after fire events becomes self-perpetuating, with recurrent fire occurring at frequencies that eliminate opportunities for redevelopment of sagebrush as the major winter forage source for deer. Similarly, the year-round removal of herbaceous growth or residual as a cover and forage source for small mammals likely relegates these communities to a few of the most generalized and disturbance-adapted species. Over time and in the long term, those species requiring well developed or more diverse understory vegetation would, barring extraordinary intervention be extirpated.

Progressive and accelerating declines in rangeland conditions beyond 2014 would necessarily prompt remedial action (e.g., reduction in livestock use). Efforts at reducing total grazing load through livestock would not resolve declining rangeland conditions attributable to sustained season-long grazing regimens in areas inhabited by wild horses. Even with livestock removal, progressive grazing-related effects at levels exceeding 300 wild horses in the WDHA (i.e., by 2016) are projected to expand acreage failing to meet Public Land Health Standards to 24,000 acres, or nearly 20% of the WDHA. It is likely that by 2015 widespread deterioration of ground cover conditions would be evident across a minimum 18% of shrublands in GMU 21 that comprise the forage base for 20% of the severe winter ranges and 65% of the winter concentration areas available in GMU 21. It is inevitable that these effects would severely compromise, if not preempt, BLM's ability to accommodate the Colorado Division of Wildlife's long term big game population objectives.

Dusky (blue) grouse: Failing to implement gather operations at elevated and continually increasing wild horse populations would persist in degrading 2,400 acres of open mountain shrub and sagebrush communities used by dusky grouse as late summer, nesting and brood-rearing habitat in the Oil Spring/Texas Mountain area.

Cumulative ungulate grazing use May through September reduces herbaceous cover density and height in these shrubland types sufficient to preclude their utility as effective grouse cover (about 7% of available habitat in GMU 21). Once cattle are removed from these areas by early to mid June, 70% of the remaining ungulate use through the remainder of the grouse nest and brood-rearing period, mid June through August, is attributable to wild horses. Alterations in the composition of herbaceous communities also involve increased expression of annual (cheatgrass,

mustards), introduced (Kentucky bluegrass), or grazing tolerant (grama) species which fail to offer comparable persistence, structure, or production as substrate for invertebrate prey and/or supplemental cover for reproductive functions. Since at least 1994, herbaceous community conditions on these grouse ranges have been static or declining, implying that collective ungulate use remains more intensive or more persistent than thresholds that would allow for recovery and/or improvement of understory conditions. As these ranges continue to be subjected to grazing use that is excessively intense and prolonged, increasing dominance by introduced grazing tolerant grasses and invasive annual weeds would both expand in areal extent and become increasingly resistant to reestablishment of native forms of perennial bunchgrasses and native forbs. It is unknown whether intraspecific competition at these population levels has stabilized the number of wild horses these preferred ranges can support. Presently there are few indications that wild horses would expand their influence to additional dusky grouse range to the south, but the likelihood of dispersal would increase as wild horse densities on preferred ranges elevate.

Regardless of options available for livestock management, vegetation and water management aligned with increasing emphasis on the support of an increasingly large and expansive wild horse population would lead to progressive long-term deterioration of sagebrush and shrubland steppe communities and, in exponential increments, lead to landscape level failures in achieving the Public Land Health Standard. This grazing regimen would, within a decade, probably eliminate nesting and brood-rearing functions associated with the Texas/Oil Spring Mountain dusky grouse population.

Raptors and non-game wildlife: Raptor nest habitat would not be directly affected by declining range conditions attributable to unregulated wild horse populations, however, these species would remain vulnerable to the indirect effects of declining range health, namely reduced abundance and diversity of avian and mammalian prey stemming from degraded herbaceous ground cover.

Because small mammals rely on woody shrubs and herbaceous ground cover as a source of forage (herbage and seed production) and year-round cover, their response to direct and indirect grazing effects would closely parallel those described in the Migratory Bird section. In the near term, failure to gather wild horses would add progressively to acreage in declining trend and those failing to meet the standard at a minimum estimated average annual rate of 20-25% (e.g., an additional 1000-1200 cumulative acres by 2014). In the longer term, it is projected that growing season-long grazing regimens attributable to wild horses would ultimately add another 21,000 acres to the 3200 acres that failed to meet the Public Land Health Standard in 2003. This acreage represents about 18% of the shrubland types available in GMU 21. Progressive declines in the condition of native shrubland communities would prompt shifts in these small mammal communities to more generalized and disturbance-adapted species. In the long term, those species requiring well developed or more diverse understory vegetation would, barring extraordinary intervention, become increasingly rare in abundance and be relegated to increasingly small and isolated patches of suitable habitat.

Cumulative Analysis Area and Impacts: The CAA for Wildlife, Terrestrial, is the WDHA, GMU 21, and adjacent lands in the Douglas Creek and Evacuation Creek watersheds. Progressive deterioration of native ground cover communities, particularly in sage-steppe habitats, would contribute to the cumulative range-wide deterioration and modification/loss of sagebrush habitats from oil and gas developments and the proliferation of invasive annual grasses. See also Finding on Standard 3 under the plant and animal communities below.

Mitigation: Mitigation has been incorporated into the Proposed Action and Alternative B.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): On a landscape scale, the project area and its encompassing watersheds generally meet the land health standard in providing for viable native animal communities commensurate with habitat potential. As conditioned, behavioral disruption of wildlife generated by proposed helicopter herding, gather/holding operations, or water/bait trapping would remain localized and transient and, although risking strong temporary effects on big game populations in Alternative B, would have no effective influence on continued long-term meeting of the land health standard.

Alternatives A and B would be expected to halt and reverse declining trends on the estimated 3200 acres of bottomland and basin shrubland sites that presently fail to meet the land health standard because of incompatible levels or duration of growing season use.

In the longer term under Alternative C, it is projected that growing season-long grazing regimens attributable to wild horses would ultimately add another 21,000 acres to the 3200 acres that failed to meet the Public Land Health Standard in 2003. This acreage represents 20% of the WDHA and about 18% of the shrubland types available in GMU 21. Considering the progressive loss of forage productivity and proliferation of invasives and noxious weeds on degraded rangelands, it is likely that lands within the WDHA that meet Public Land Health Standard 3 or any of its indicators would be relegated to small, disjunct parcels making up a lesser fraction of its land base.

RANGELAND MANAGEMENT

Affected Environment: BLM organizes the descriptions for grazing management into two allotments within this analysis area: Twin Buttes and Bull Draw. Twin Buttes allotment contains a total of 158,520 acres of which 113,790 acres are within the WDHA. Bull Draw allotment contains 9,530 acres and is entirely within the WDHA.

Bull Draw Allotment: The Bull Draw allotment is used in conjunction with the East Douglas Creek Allotment. This allotment contains 9,530 acres of public land and 38 acres of private land that are not controlled by the permittee. The permitted use for the Bull Draw allotment is 268 AUMs. The grazing schedule for the Bull Draw allotment is 60 cattle during the period November 16, to March 31. This allotment is not broken into separate pastures.

Twin Buttes Allotment: The Twin Buttes Allotment contains 158,520 acres of public land and 17,540 acres of private land. Two grazing permittees operate in-common on this allotment: James Steele and the Twin Buttes Ranch Company. James Steele runs 59 cattle during the period of November 1 to May 30. The Twin Buttes Ranch Co. runs 1157 cattle and is reliant on the public lands throughout the year. The Twin Buttes Ranch Co. manages livestock under an Allotment Management Plan completed in 1984, with a major revision completed in 1999 (BLM 1999). Twin Buttes Ranch Co. is a cow/calf operation that also maintains a registered Hereford herd. Table 5 provides a breakdown of the AUMs by pasture within this allotment.

The northern part of the allotment is within the WDHA, this area is lower in elevation with a milder climate and precipitation averaging about 10-12 inches/year and used during the winter and spring. The middle elevations, centered around Texas Mountain, have a wide variance in elevation and vegetation associations and used during the fall, winter, and spring. The southern part of the

allotment has the highest elevations (8000 feet) with precipitation ranging from 15-20 inches/year and used during the summer and fall (Table 8).

Table 7: Twin Buttes Allotment Permitted Use by Pasture (Both Operators)

PASTURE	ACTIVE AUMS	SUSPENDED AUMS	TOTAL AUMS
Cottonwood	1,340	1,130	2,470
Lower Horse Draw	680	0	680
Water Canyon	3360	0	3,360
Park Canyon	96	0	96
Subtotal	5,476	1,130	6,606
Texas Creek*	3,550	57	3,607
West Creek*	1,289	0	1,289
Red Rock**	140	0	140
West Douglas**	1095	0	1,095
Total	**11,550**	**1,187**	**12,737**

* Part of pasture not within WDHA
** Pasture not within WDHA.

The grazing program for the Twin Buttes allotment is described in the Allotment Management Plan (AMP) completed in 1999 (BLM 1999). This AMP was developed through a collaborative Section 8, of the Public Range Improvement Act of 1978[4], process based on the 1997 WRRMP which calls for the removal of wild horses by 2007.

The following description is directly from the Twin Buttes AMP:

> Four units within the grazing management area have been identified within the lower winter and spring ranges. These units are Lower Cottonwood, Lower Big Horse, Lower Douglas Creek and Lower Texas Creek. Livestock would be spread across the whole of the winter range from approximately November 1 to March 31. This will allow for livestock to use the rims and south slopes through the winter periods. On the Cottonwood Grazing Management (Unit #1), over a four year period, livestock would be cleared out by April 1, May 1, May 7, and May 31. On the remaining area of Cottonwood pasture, livestock would be progressively moved off the pasture ending May 31. On the Lower Horse Draw Grazing Management (Unit #2), over a four year period livestock would be cleared out by May 31, April 1, May 1, and May 15 (bottom areas cleared by May 7). On the Lower Douglas Grazing Management (Unit #3), over a four year period livestock would be cleared by May 15, May 31, April 1, and May 1. On the remaining Water Canyon pasture livestock would be progressively moved off the pasture ending May 31. On the W1/2 Texas Creek Grazing Management (Unit #4), over a four year period livestock would be cleared by May 1, May 15, May 31 and April 1. On the remaining area of W1/2 Texas Creek pasture livestock would be progressively moved off the pasture ending May 31.

[4] Section 8 of the Public Rangelands Improvement Act of 1978 (P.L. 95-514; Stat. 1803) "provide for, among other things, careful and considered consultation, cooperation, and coordination between the Forest Service, Bureau of Land Management, federal grazing permittees and lessees, and any state having lands within areas to be included in allotment management plans;…"

The summer use period is June 5 to November 1 using the Red Rock, West Douglas and West Cr. Pastures (outside this planning area). Livestock are split, with half of the herd using the Red Rock and West Douglas pastures, and the remainder using the West Creek pasture. Cattle are rotated around each grazing area for two years and then the rotation would be reversed.

Shown in Table 6 below is the grazing schedule for this grazing program.

Table 8: Twin Buttes Grazing Schedules

PASTURE	GRAZING USE PERIOD	
Cottonwood	March 1 to April 1 March 1 to May 1 March 1 to May 20 March 1 to May 20	November 1 to February 28
Lower Horse Draw	March 1 to May 20 March 1 to April 1 March 1 to May 1 March 1 to May 20	November 1 to February 28
Water Canyon	March 1 to May 20 March 1 to May 20 March 1 to April 1 March 1 to May 1	November 1 to February 28,
W1/2 Texas Creek	March 1 to May 1 March 1 to May 20 March 1 to May 20 March 1 to April 1	November 1 to February 28
E1/2 Texas Creek	March 1 to June 12	November 1 to February 28
West Creek	June 5 to November 1	
West Douglas Creek & Red Rock	June 5 to November 1	
Park Canyon Pasture (1)	March 1 to May 20	November 1 to February 28

The following table shows estimated carrying capacity (Animal Unit Months, AUMs) on federal lands for pastures within the WDHA. An AUM is the amount of forage necessary for the sustenance of 1 cow or 1 cow with calf under 6 months old for a period of 1 month. Table 9 is broken down by acres within each pasture and Acres per AUM, which determines the estimated AUMs available for those acres.

Table 9: Federal Lands Carrying Capacity for Pastures within WDHA

Allot #	Pasture	BLM Acres	Good Acres / AUM	Fair Acres / AUM	Poor Acres / AUM	Good Total AUMs	Fair Total AUMs	Poor Total AUMs
E Douglas Cr	Bull Draw	9529.95	10.68	15.37	22.32	892	620	427
Twin Buttes	Winter/Spring[1]	105700.00	9.20	13.36	21.20	11484	7910	4985
Twin Buttes	Park Canyon	899.29	9.77	14.27	21.93	92	63	41
Twin Buttes	West Creek	7190.98	7.06	10.39	17.08	1018	692	421
		123320.22	9.14	13.28	20.99	13486	9285	5874

*Good, Fair, and Poor refer to the condition of the rangeland
[1]Winter/Spring ranges include Cottonwood, Lower Horse Draw, Water Canyon, and both Texas Creek Pastures

As shown in the vegetation section above, there are 70,834 acres (57% of WDHA) which are considered non-range sites, and are not available for grazing.

Table 10 below, is a breakdown by pasture of authorized livestock AUMs within the WDHA.

Table 10: Authorized Livestock AUMs within the WDHA

ALLOTMENT	PASTURE	BLM ACRES WITHIN HA	Ac/AUM	AUMs
Twin Buttes	Winter/Spring[1]	105700	13.14	8044
Twin Buttes	Park	899.3	9.21	98
Twin Buttes	West Creek	7191.0	14.61	492
E Douglas Cr	Bull Draw	9529.9	40.61	235
	Total	123320	13.91	8869

[1]Winter/Spring ranges include Cottonwood, Lower Horse Draw, Water Canyon, and both Texas Creek Pastures

Studies and Evaluation: Permittees maintain actual use records throughout the course of each grazing season. These records are submitted to BLM and provide the basis for actual use billings at the end of each grazing/billing period. Table 11 identifies ongoing allotment studies, which includes elements necessary to make an evaluation of the effectiveness of the AMP.

Table 11: Allotment Studies

RANGE STUDY	COMPLETION DATE	FREQUENCY	METHOD	RESPONSIBILITY
Actual Use	End of each grazing period	With each pasture change	Actual Use Record	Permittee
Utilization Mapping	3 Periods-winter spring, summer/fall	Every year	Key Forage plant	BLM
Condition and Trend	August/September	5 years	ESI, Photo Plots Daubenmire	BLM

Refer to vegetation section for data regarding to condition and trend

Table 12 below is a breakdown in AUMs by pasture and year of actual use livestock use and permitted livestock for the 2005 through 2009 grazing years, a grazing year is March 31 to February 28 of the following year. This Table shows livestock use throughout the Twin Buttes allotment and Bull Draw pasture, it is not specific to use within the WDHA. Actual use data within the Bull Draw pasture for the 2005 and 2006 grazing years is not available. Graphs 1a and 1b below represent a comparison of authorized livestock AUMs to actual use by livestock for the 2005 through 2009 grazing year. These graphs clearly show that livestock use over the past 5 years has been below what is authorized, this is due to drought conditions, economic factors, and the need to provide forage for wild horses in the short term and avoid unnecessary rangeland degradation as a result of overutilization by grazing animals.

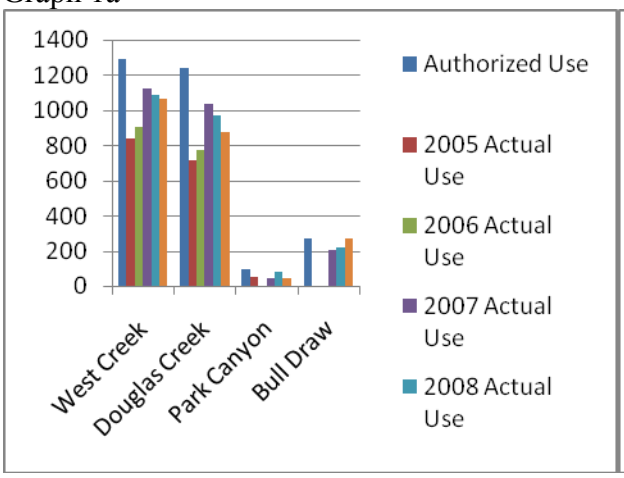
Table 12: Livestock Actual Use

Pasture	Authorized Use	Actual Use by Year (AUMs)				
		2005	2006	2007	2008	2009

	(AUMs)					
Winter/Spring*	8525	2549	1958	1574	3999	6092
West Creek*	1289	838	907	1121	1083	1068
Douglas Creek**	1236	715	773	1039	970	873
Park Canyon	98	53	0	45	82	42
Bull Draw	268			205	221	272

* Part of Pasture not within the Herd Area
** All of Pasture not within the Herd Area

Graph 1a



Graph 1b

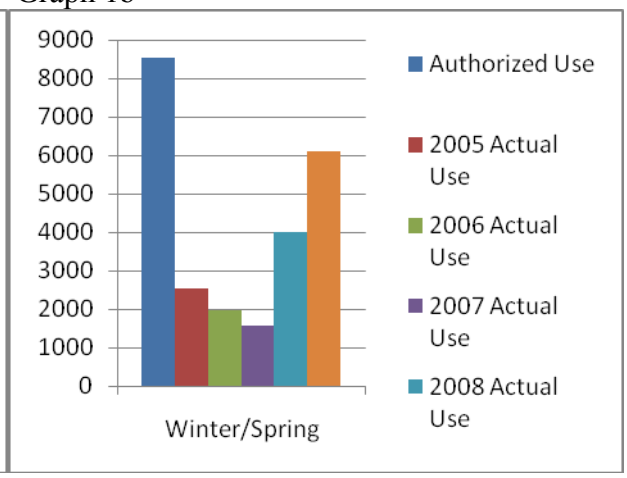


Table 13 below is the difference of authorized livestock AUMs and the amount of AUMs that were actually used for the 2005 through 2009 grazing years. These AUMs were available for use by wild horses and wildlife. As shown in this table there has been an average of 5992 AUMs that were unused by livestock. Reduced livestock use within and outside of the WDHA over the past 5 years has allowed for the availability of forage for use by excess wild horses. The availability of this forage for excess wild horses has made it possible to avoid rangeland degradation within and outside of the WDHA.

Table 13: Total Unused AUMs 2005-2009

Difference of Authorized AUMs and Actual Use						
Pasture	2005	2006	2007	2008	2009	Average
Winter Spring	5976	6567	6951	4526	2433	5291
West Creek	451	382	168	206	221	286
Douglas Creek	521	463	197	266	363	362
Park Canyon	45	98	53	16	56	54
Total	6993	7510	7369	5014	3073	5992

Land health assessments conducted in July of 2008 by an interdisciplinary team from WRFO show that rangelands within the WDHA are generally meeting standards for rangeland health on a landscape scale. The maintenance of acceptable rangeland conditions is likely due to the reduced level of use by livestock, forage utilized by excess wild horses within and outside of the WDHA has been offset by reduced utilization of forage by livestock.

Existing Water Developments: Within the WDHA there are 69 stock ponds, 3 wells and 4 developed springs. The stock ponds range in age and usability and the majority are functional. None of the wells are functional.

Environmental Consequence of Alternative A, Proposed Action: BLM expects that during wild horse gathering operations, forage loss due to vegetation disturbance will occur. This disturbance will be confined mostly to trap sites, and holding facilities, and is dependent on the number of wild horses that are gathered at each site, as well as the duration which the wild horses are held at each facility. The vegetation loss would be short term and expected to recover within three years. With the gather and removal of wild horses from the WDHA, there would no longer be an overlap in dietary use between wild horses, livestock, and wildlife. Over time, improvement in the health of rangelands potentially could allow for full implementation of the Twin Buttes AMP.

Displacement of livestock and irregular grazing use patterns due to helicopter operations while gathering wild horses is not expected.

Environmental Consequence of Alternative B, Annual Gathers July through February: Impacts would be similar to those associated with alternative A. Forage loss resulting from winter gather activities would be minimal due to the soil conditions and vegetation dormancy during winter months.

Environmental Consequence of Alternative C, No-Action: Under Alternative C wild horses would not be gathered and removed from the lands within and adjacent to the WDHA. There would be no short term impacts to rangeland resources associated with gather operations.

Table 14 below shows the estimated wild horse herd population, over the next 5 years absent gathers, assuming a 20% annual recruitment rate, the amount of AUMs used by wild horses, and the total AUMs of livestock and wild horses (assuming the livestock owners graze at full preference, 8869 AUMs). The estimated carrying capacity is based on the rangelands being in Fair condition from Table 7 above.

Table 14: Wild Horse and Livestock AUMs Compared to Estimated Carrying Capacity

Year	Number Recruited	Total Number of Wild Horses	Wild Horse Animal Unit Months(AUMs)	Total AUMs Livestock and Wild horses	Estimated Carrying Capacity	AUMs Exceeding Estimated Carrying Capacity
2009		86	1290	10159	9285	874
2010	17	103	1545	10414	9285	1129
2011	21	124	1860	10729	9285	1444
2012	25	149	2235	11104	9285	1819
2013	30	179	2685	11554	9285	2269
2014	36	215	3225	12094	9285	2809

As shown in Table 14 above, if no wild horses are gathered and removed the amount of AUMs exceeding the estimated carrying capacity would increase exponentially each year as the wild horse population increases. Due to the increased competition for forage by livestock, wild horses, and wildlife it is expected that long term negative impacts to rangeland resources would occur. Due to wild horse grazing behavior, such as tendencies to stay within preferred ranges for extended periods of time, rangeland vegetation will not have adequate deferment periods to complete physiological processes necessary to recover and persist after grazing. Areas which receive continuous heavy use by wild horses would eventually be invaded by the invasive annual cheatgrass (Bromus tectorum). Because cheatgrass has little forage value for grazing animals, it is expected wild horses would

expand their range to areas outside of the WDHA. Under this alternative BLM would be in non-compliance with the Twin Buttes AMP and additional analysis to reflect the exponential growth and forage use by the wild horses would need to be completed.

Cumulative Analysis Area and Impacts: The CAA for rangeland management includes the Twin Buttes Grazing Allotment and the Bull Draw Pasture of the East Douglas Creek Allotment. Reasonably foreseeable activities in this area include livestock grazing, oil and gas development, wildlife and recreation.

Continued livestock grazing within these grazing allotments removes vegetation associated with AUMs which are allocated for livestock consumption.

BLM currently does not anticipate an increase in oil and gas activity within this area, however, existing infrastructure associated with this activities (i.e.well pads, pipelines and compressor stations) has resulted in long term removal of vegetation. Current reclamation associated with this activity has provided positive benefits to Rangeland Management, as these wells begin to lose production value and are successfully reclaimed, increasing the amount of valuable forage.

Wildlife grazing within these grazing allotments removes vegetation associated with AUMs, which are allocated for wildlife consumption.

Recreation activities (i.e. hunting, hiking, OHV use) may result in removal and impact to vegetation associated with AUMs, which are allocated to livestock and wildlife for consumption. In addition, activities may displace livestock and redistribute animals within the allotment resulting in unanticipated distribution.

Generally impacts associated with the proposed action are considered short term, and will not have long term effects to Rangeland Management.

Alternatives A and B result in the removal of wild horses from both grazing allotments. This would therefore allow for the full implementation of the 1997 WRRMP and The Twin Buttes AMP (AMP), EA CO-017-99-93-EA, signed May 18, 1999 (BLM 1999), if rangeland conditions allow. Livestock distribution would improve allowing for lower utilization and deferment improving vegetation communities.

Impacts associated with Alternative C include irreversible loss of native perennial vegetation resulting in a conversion to unhealthy, low producing rangelands unable to support livestock, wildlife, or wild horse grazing. Once rangelands have crossed this threshold, they are then no longer comprised of healthy perennial vegetation communities capable of supporting the current AMP. This would require revision to the current AMP, or implementation of human manipulations to restore degraded rangelands which are often time consuming and expensive to complete.

In the event of drought, fire, or other natural phenomenon would drastically reduce the amount of forage available under all of the alternatives. BLM would not be able to remove wild horses to prevent irreversible degradation to rangeland, as well as prevent wild horse starvation on the range.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: No animals listed, proposed, or candidate under the Endangered Species Act are known to make appreciable use of the project area.

Colorado pike-minnow (federally endangered): The endangered pike-minnow occupies the lower White River below Taylor Draw dam. The White River and its 100-year floodplain below Rio Blanco Lake have been designated as critical habitat for the fish. The project area is located in the Douglas, Cottonwood, and Evacuation Creek watersheds, all of which drain to the White River below Taylor Draw dam. The river is separated varying distances from affected portions of these watershed by ephemeral or intermittent drainage systems, as follows:

- Douglas Creek watershed (65% of project area): 6 miles
- Cottonwood Creek watershed (15% of project area): 7 miles
- Evacuation Creek watershed (20% of project area): 22 miles

Mexican spotted owl (federally threatened): BLM is aware of only 2 records of Mexican spotted owl in the vicinity of this field office resource area: one unpaired male in Dinosaur National Monument, CO in the summer of 1996 and 1997, and a single bird in northeast Utah (upper Book Cliffs; fall 1958). Suitable habitats consist of arid canyon lands or mature to old-growth mixed conifer stands, particularly in proximity to deep rocky canyons. In the course of preparing state-wide Biological Assessments for BLM's land use plans, contractors are presently evaluating the suitability of Mexican spotted owl habitat within this Resource Area. Initial indications are that potential suitable habitat is narrowly confined to steep, north-facing canyons supporting mixed conifer forests along the White-Colorado River divide. About a dozen conifer stands high in the headwaters of East Douglas Creek appear to satisfy accepted parameters of suitable habitat. These habitat parcels are located a minimum of two miles south of the project area boundary.

Greater Sage-grouse (federal candidate, BLM sensitive): On 5 March 2010, the USFWS concluded that the greater sage-grouse warranted listing as an endangered species under the Endangered Species Act, but that listing was precluded by the need to complete listing actions of higher priority. Range-wide, this species is considered a candidate for listing--a designation that affords management attention equivalent to that of species considered "sensitive" by the BLM. Small numbers of sage grouse have been sporadically encountered by local CDOW staff in larger Wyoming big sagebrush parks on the north and northwest portions of the project area, but there appears to be no consistent use or occupation of these habitats. These areas are not associated with any known strutting grounds and the habitat offers few attributes that would be expected to serve summer/nesting functions.

BLM Sensitive Species and other special status animals: A number of animals that may inhabit the project area are classified as sensitive by the BLM. These species are thought to be especially susceptible to population-level influences. It is the policy of BLM to identify these species on a state-by-state basis and ensure that BLM actions do not contribute to their becoming candidate for listing under the Endangered Species Act. Sensitive species that have a reasonable probability of occupying the project area include: northern goshawk, Brewer's sparrow, Townsend's big-eared bat, big free-tailed bat, fringed myotis, white-tailed prairie dog, northern leopard frog, and Great Basin spadefoot. The bald eagle was recently delisted, but similar levels of protection are afforded this species through the Eagle Protection Act. The Colorado Natural Heritage Program has identified a number of nongame species that, by merit of population vulnerability, may warrant special management attention or concern. Those that inhabit the project area include the gray vireo and sagebrush vole (probable).

Bald eagle: The White River corridor is the hub for seasonal bald eagle use of the lower White River Valley. Particularly during the late fall and winter months, up to several dozen bald eagles make regular foraging use of open upland communities south of the river, but these forays in search of, primarily, big game and livestock carrion and small game (e.g., rabbit and hare) are dispersed and opportunistic. Concentrated diurnal use and nocturnal roosting functions during the winter, and summer use attributable to a nest site near the Utah border are associated with the river corridor's cottonwood stands, a minimum of five miles north of the project area boundary.

Northern goshawk: The BLM has no record of goshawk nesting in the project area, but birds have been seen here during the breeding season (e.g., Texas Mountain). Based on BLM's experience in the adjacent Piceance Basin, goshawks likely nest sparingly (e.g., 6 pair) in mature pinyon-juniper woodlands (above 6500') and Douglas-fir stands in the southern half of the project area. Goshawks establish breeding territories as early as March and begin nesting by the end of April. Nestlings are fledged and independent of the nest stand by mid-August. Although never common, an influx of migrant goshawk appears to elevate densities in this Resource Area during the winter months.

Townsend's big-eared bat, big free-tailed bat, and fringed myotis: Although the distribution of these bats is poorly understood, recent acoustical surveys in the nearby Piceance Basin and along the lower White River have documented the localized presence of Townsend's big-eared and big free-tailed bat along larger perennial waterways. These bats typically use caves, mines, bridges, and unoccupied buildings for night, nursery, and hibernation roosts, but in western Colorado, single or small groups of bats use rock crevices and tree cavities. Although rock outcrops and mature conifers suitable as temporary daytime roosts for small numbers of bats are widely available in the project area, and relatively extensive riparian communities are available in West Douglas and mainstem Douglas Creeks, there are no underground mines or known caves, and unoccupied buildings are extremely limited in or within several miles of the project area.

White-tailed prairie dog: White-tailed prairie dogs are sparingly distributed in small, isolated groups south of the White River. Lands showing evidence of past prairie dog occupation are confined to the project area's extreme northern margin in the Cottonwood Creek valley (92 acres in 4 towns) and the headwaters of Big Horse Draw (123 acres in 5 towns). Most recent surveys (2007-2008) indicate that current distribution is limited to 1.5 acres in Cottonwood and 25 acres in Big Horse Draw, immediately north of the project area boundary. These small, severely insular prairie dog towns offer no effective habitat base for associated species, such as black-footed ferret or burrowing owl. Prairie dogs begin dormancy in the late summer to early fall months and emerge from hibernation in March.

*Northern leopard frog and Great Basin spadefoot***:** Leopard frogs are uncommon and sporadically distributed along Douglas and West Douglas Creek, and there is a relatively low probability that portions of these creeks encompassed by the project area support these amphibians. Spadefoot toads are known from western Rio Blanco County and neighboring Uintah County, Utah and appear to be associated with ephemeral stock ponds in valley and basin terrain. BLM has recently (2009) documented larval spadefoots at a stockpond in the lower Cottonwood Creek valley, about 4 miles north of the project area boundary. Although all ponds in this valley were surveyed (several in the project area), no additional evidence of toads were found. It remains possible that toads occupy shrublands and woodlands in close association with stockponds distributed throughout the project area.

Brewer's sparrow: Brewer's sparrows are common and widely distributed in virtually all big sagebrush and mixed brush communities throughout the planning area. These birds are typically

one of the most common members of these avian communities and breeding densities probably range between 10-40 pairs per 100 acres. Typical of most migratory passerines in this area, nesting activities normally take place between mid-May and mid-July.

Gray vireo: The gray vireo is associated with this field office resource area's Utah juniper-black sagebrush ranges principally below 6000' in elevation. In higher elevation woodlands with more extensive canopies, and with the appearance of pinyon pine and the plumbeous vireo, gray vireo distribution appears to abruptly cease. Point-count surveys conducted by BLM from 1996-2009 in the core of occupied habitat indicate average breeding populations of about 16 pairs per section. The northern boundary of the project area lies on the southern periphery of occupied gray vireo habitat such that the project area encompasses less than 10% of potential habitat within the Resource Area. Although there is a history of wild horses occupying these lower elevation ranges, there has been no substantive use of these gray vireo habitats by wild horses since a BLM gather 20-25 years ago. There appears to be no tendency for wild horses to use these ranges at sustained WDHA populations under 150 wild horses.

Sagebrush vole: The sagebrush vole occurs locally in sagebrush regions of the Great Basin and northern Great Plains. In Rio Blanco County, the sagebrush vole is associated with sagebrush and mixed shrub – perennial bunchgrass habitats from 6000-9000', which involves some 385,000 acres of BLM surface in the WRFO. Oil shale baseline inventories in the mid-70s suggest that the vole is a widely distributed, but relatively uncommon component (1-2%) of this Resource Area's upland shrub small mammal community, occupying these habitats at minimum densities of about 1 per hectare. It is presumed that sagebrush voles are distributed throughout the project area's 10,000 acres of upland sagebrush and mountain shrub communities and perhaps at lower densities in its 43,000 acres of saltbush and greasewood types.
Voles are active throughout the winter months beneath the snowpack; sagebrush leaves and cambium being the primary constituents of their winter diet. The voles reproduce during the spring and early summer months; their diverse summer diet consisting of flowers and leaves of virtually all green plants including grasses, forbs, and shrubs.

Environmental Consequence of Alternative A, Proposed Action: As conditioned, the proposed action would have little, if any, discernible influence on special status species.

Habitats occupied by Colorado pike-minnow and (potentially) by Mexican spotted owl are geographically separated from the project area. Because there is no reasonable likelihood that project-related influences would extend beyond the project area, this gather operation would have no reasonable chance of affecting these listed species.

Greater sage-grouse and bald eagle are sparingly distributed at low density and no important use functions are attributable to the project area. Impacts could include the temporary displacement of birds during gather operations. Any exposure of these species to project-related disturbances would be brief and infrequent.

Although no northern goshawk nest sites have been identified in the project area, it is likely that several nests occur. Based on preferred nest site placement (interior of heavy canopied stands) and nest density, there would be a very low probability of helicopter encounters, much less prolonged or frequent disturbances that would jeopardize nest success late in the nesting season (July-August). Requirements to survey areas potentially influenced by trapping and holding activities will reduce the risk of nest involvement in these instances to negligible levels.

White-tailed prairie dogs are confined to less than 30 acres at two widely separated sites and, outside the reproductive period (March), are not believed to be particularly sensitive to short term disturbance. In the unlikely event that a trap site required placement within occupied habitat when animals were active (i.e., adults and independent young in late summer), there would be no physical alteration of habitat besides a brief period of vegetation trampling.

Brewer's sparrow, gray vireo and sagebrush vole are species that are believed to be widely distributed in suitable habitat across the project area. Reproduction in each of these species would normally be complete by early to mid July. Brief and infrequent helicopter flyovers would not be expected to fail nest attempts late in the nesting sequence. The proportion of habitat and number of animals influenced by those facets of the gather that involve longer duration impacts (e.g., helicopter staging, holding and trap sites) would be discountable at the landscape and population levels (see for example, Migratory Bird section).

It is unlikely that the project area offers habitat suitable for hibernation or rearing of young for the 3 species of bat (big free-tailed bat not known to reproduce in Colorado). Perhaps widely distributed singly or in small groups during the summer months, roosting bats may be subject to short-term gather-related activity at discrete trapping and holding sites, and briefly and infrequently during dispersed helicopter flyovers during July and August. Besides the potential for displacement of individuals from temporary diurnal roosts near holding/trapping sites and helicopter staging areas (about 40 acres maximum), gather operations would have no potential to interfere with any important roost functions (e.g., hibernacula, nurseries)

Northern leopard frog and Great Basin spadefoot are confined to areas that are unlikely to be selected as trap or holding sites (e.g., avoidance of large perennial streams and ephemeral ponds) where concentrated activity would occur, and would remain unaffected by helicopter flyovers.

Environmental Consequence of Alternative B, Annual Gathers July through February: Gather related effects on wildlife would be identical to those discussed in Alternative A.

Environmental Consequence of Alternative C, No-Action: Under Alternative C wild horses would not be gathered and removed from the WDHA. There would be no impacts associated with gather operations. Failure to gather wild horses would prolong and exacerbate detrimental wild horse-related effects on wildlife resources. With no effective means of biological control, wild horse populations and the influences they exert on wildlife habitats would continue to expand and intensify each year in geometrically increasing increments. Assuming no interim management response, forage use (AUMs) attributable to livestock and wild horses within the WDHA presently increases at an annual rate of about 3%, which would increase to 5% within 5 years (i.e., total use 19% greater than current). Wild horse contributions to the overall livestock and wild horse grazing load in the WDHA would increase from about 12% presently to about 26% by 2014.

Grazing use attributable to unregulated numbers of wild horses tends to be growing season-long and concentrated, a grazing regimen that, in combination with livestock and big game use, results in declining vigor and density of desirable perennial ground cover and increasing frequency of invasive annuals and grazing-tolerant forms of herbaceous cover inferior as a source of cover and forage for native bird, mammal, amphibian, and invertebrate prey communities.

Current livestock and wild horse grazing use levels within the WDHA exceed that considered necessary to reverse declining trends on 3200 acres that failed to meet the land health standard in 2003 and these effects are likely increasing at a rate commensurate with the wild horse population.

Because degraded lands in concentration and preferred use areas can generally produce one-quarter to one-half the herbaceous forage as lands in mid to late seral states, wild horses and cattle are compelled to seek new forage/water sources or forage increasingly further from water. To compensate for declining forage production in degraded sites, it is estimated that grazing use demands attributable to current wild horse numbers in the near term would require 400-600 additional acres of shrubland communities to assume heavy levels of season-long use. To meet the annual increase in wild horse numbers and forage demand, surrounding range subject to increased season-long grazing use by wild horses would need to expand at an average annual rate of 20-25% (1000-1200 cumulative acres by 2014). It is likely that in the short term this acreage, too, would fail to meet the land health standard.

BLM-sensitive species or Birds of Conservation Concern (BCC) associated with forest or woodland types would not be directly affected by declining range conditions attributable to unregulated wild horse populations (e.g., northern goshawk, bats, gray vireo). However, these species would remain vulnerable to the indirect effects of declining range health, namely reduced abundance and diversity of invertebrate prey (or prey with invertebrate diets) stemming from degraded herbaceous ground cover.

Remaining groups of special status species are discussed separately below:

Colorado pike-minnow and other special status fish of the lower White River: As herbaceous ground cover and composition deteriorates, overland erosion rates would increase, particularly from that acreage failing to meet the land health standards. As wild horse gathers are consecutively postponed, these lands would contribute increasingly to sediments delivered to tributaries of the lower White River and its Colorado pike-minnow critical habitat, both in rate of delivery and areal extent. Excessive sediment loads in these systems would contribute to lateral channel instability and bank erosion, which aggravates downstream sediment delivery. Heavy sedimentation in fisheries habitats inundates gravel substrates as sources of aquatic invertebrate production (as prey), increases water temperature with declining water depth, and reduces the utility or availability of important channel structure such as bank undercuts, backwaters and overflow channels. This alternative, due to its indeterminate duration, would have the potential to adversely influence Colorado pike-minnow critical habitat, and depending on circumstances, may prompt further BLM planning. Sediment-related impacts to the lower White River would also involve a number of BLM-sensitive fish that inhabit the lower White River, including roundtail chub, flannelmouth sucker, and bluehead sucker.

Mexican spotted owl and bald eagle: These species are unlikely to be affected by this alternative in the short term. Habitat ostensibly suited for these owls is well separated from wild horse-related influences at the moment, however, as wild horse populations increase with postponed gathers, further dispersal of wild horses to higher elevations to the south may occur.

Similarly, wild horse distribution does not currently involve the White River floodplain or riverine habitats important for bald eagle nest, roost, and perch use. Although current wild horse use is considered detrimental to big game habitat quality in the Douglas watershed, it is unlikely that population level effects in the short term would be sufficient to measurably reduce carrion available for bald eagle use along the White River.

Northern leopard frog: Wild horses are currently confined to accessing about 2 miles (or about 20%) of West Douglas Creek and those aquatic habitats that have potential to support leopard frogs. This distribution is not expected to change over time, although with gather delays, the

intensity of wild horse use or wild horse-induced livestock use is expected to further reduce the utility of this 2-mile reach as aquatic habitat available for these frogs.

Greater sage-grouse and other sagebrush associates: Although there is little present use of the Douglas Creek watershed by greater sage-grouse, any current or future nesting or brood-rearing utility derived from sagebrush communities that are subjected to excessive grazing use as the direct or indirect result of wild horses would be foregone. Collective ungulate use at current levels (and above) would be expected to stall opportunities to establish improving trends (i.e., well developed native bunchgrass communities) on the 3200 acres of land not meeting the land health standard in 2003 and increase lands in failing status by an estimated average annual rate of 20-25% in the near term (minimum 4200 total acres by 2014). These effects would likely extend to sagebrush associates that depend on well-developed native forms of herbaceous ground cover as sources of forage and cover, such as sagebrush voles and ground or near-ground nesting birds such as sage-grouse. Migratory birds, most notably the Brewer's sparrow, continue to nest in sagebrush stands with degraded understories, but at densities and with nest success much reduced from potential.

Great Basin spadefoot: These toads are closely associated with water sources that retain free water for sufficient periods of time (at least 5 weeks) to allow successful development of toad larvae into immature terrestrial forms. Dispersal from these waters occurs, but it is likely that the toads remain closely associated with these sites throughout their life. Concentrated summer-long wild horse use around upland waters used by these toads for reproduction likely detracts substantially from recruitment rates by adding to trampling mortality and providing no recovery period for the redevelopment of ground cover effective in concealing young toads from other forms of predation. This effect is probably localized at the present time, but as wild horse populations increase, wild horse dispersal and each newly established band would increase the number and proportion of available sites subject to impact.

Progressive and accelerating declines in rangeland conditions beyond 2014 may prompt remedial action (e.g., reduction in livestock use). Efforts at reducing total grazing load through livestock would not resolve declining rangeland conditions attributable to sustained season-long grazing regimens in areas inhabited by wild horses. Even with livestock removal, progressive grazing-related effects at levels exceeding 300 wild horses in the WDHA (i.e., by 2016) are projected to increase acreage failing to meet Public Land Health Standards to 24,000 acres, or nearly 20% of the WDHA. It is likely that by 2015 widespread deterioration of ground cover conditions would be evident across a minimum 18% of shrublands available in GMU 21.

Regardless of options available for livestock management, vegetation and water management aligned with increasing emphasis on the support of an increasingly large and expansive wild horse population would lead to progressive long-term deterioration of sagebrush and shrubland steppe communities and, in exponential increments, reduce the number of acres or miles of stream that meet Public Land Health Standards for special status species. This alternative and its ramifications on designated critical habitat for Colorado pike-minnow may require further analysis through the BLM planning system and Endangered Species Act consultation with the U.S. Fish and Wildlife Service.

Cumulative Analysis Area and Impacts:: Alternatives A and B would result in sediments originating from those areas subjected to incompatible wild horse and wild horse-induced livestock grazing regimens would contribute cumulatively to those sediments being produced and transported through the White River system from the development of oil and gas resources in the Piceance, Douglas, and Coal Oil basins and from other public lands administered by the Field Office that fail

to meet Public Land Health Standards 1, 2, and 3. Progressive deterioration of native ground cover communities, particularly in sage-steppe habitats, would contribute to the cumulative range-wide deterioration and modification/loss of sagebrush habitats and animals obligate to the type (e.g., Brewer's sparrow, greater sage-grouse) from oil and gas developments and the proliferation of invasive annual grasses.

Under Alternative C, wild horses would not be gathered and removed from the WDHA. There would be no cumulative impacts associated with gather operations.

Mitigation: Mitigation has been incorporated into the Proposed Action and Alternative B.

Finding on the Public Land Health Standard for Threatened & Endangered species: The project area broadly meets the public land health standard for listed and candidate species, as well as for those animals that are regarded with higher conservation interest by BLM, the State, and other entities. As conditioned, the proposed action and Alternative B would have no effective influence on these special status species or their habitat and would not detract from continued meeting of the standard. However, it is estimated that at least 3200 acres of bottomland and basin shrubland sites presently fail to meet the land health standard, primarily due to incompatible levels or duration of growing season use as manifested by the inappropriate composition of herbaceous ground cover (i.e., invasive annuals and grazing-tolerant grasses). In the near term, Alternative C would progressively add to acreage in declining trend and those failing to meet the standard at a minimum estimated average annual rate of 20-25% (e.g., an additional 1000-1200 cumulative acres by 2014). In the longer term, it is projected that growing season-long grazing regimens attributable to wild horses would ultimately add another 21,000 acres to the 3200 acres that failed to meet the Public Land Health Standard in 2003. This acreage represents about 18% of the shrubland types available in GMU 21. See further discussion for Alternative C's Public Land Health Standard finding in the Aquatic Wildlife section.

MIGRATORY BIRDS

Affected Environment: A large array of migratory birds fulfills nesting functions throughout the project area's woodland and shrubland habitats during the months of May, June, and July, with peak nesting activity from late May through mid-July). Species associated with these shrubland and woodland communities are typical and widely represented in the Resource Area and region. Those bird populations associated with this Resource Area's shrublands and pinyon-juniper identified as having higher conservation interest (e.g., Rocky Mountain Bird Observatory, Partners in Flight program) are listed in Table 15 below. These birds are typically well distributed in extensive suitable habitats. Species classified with the forest types (aspen/fir) are best associated with mesic aspen stands in this Resource Area—a habitat type that does not occur within the project area. There is no reasonable expectation for these birds to be well represented in the project area's small and disjunct fir stands.

Table 15 - Birds of Higher Conservation Interest by Habitat Association in Project Area

	Habitat Association			
	Sagebrush	**Pinyon-juniper**	**Mountain shrub**	**Aspen/fir**
Birds	Brewer's sparrow*[1], green-tailed towhee	gray flycatcher, gray vireo*, pinyon jay*, juniper titmouse*, black-throated gray warbler, violet-green swallow, northern	blue grouse, common poorwill, Virginia's warbler	broad-tailed hummingbird, red-naped sapsucker, purple martin, Cordilleran flycatcher, MacGillivray's warbler

		goshawk[1]		

*Birds of Conservation Concern (USFWS 2008)
[1]Colorado BLM sensitive species

Those portions of Douglas and West Douglas Creeks within the project area boundary also support a strong contingent of riparian-affiliated (willow and tamarisk) neo-tropical migratory birds, including: yellow warbler, yellow-breasted chat, blue grosbeak, and lazuli bunting. Although uncommon and sporadic breeding species at this time, willow flycatcher and common yellowthroat are expected to increase in abundance and distribution as these channels continue to develop more stable and extensive willow and sedge dominated components.

Environmental Consequence of Alternative A, Proposed Action: Primary gather and trapping operations involve the use of aircraft and considerable ground activity, but these activities would either be widely dispersed and short duration (i.e., helicopter surveillance and herding) or concentrated, but localized (e.g., helicopter staging, trap sites and holding facilities). Because birds display increasing fidelity to nest sites and nestlings as the nesting season progresses (i.e., less susceptible to abandonment or long absences), infrequent, transient disturbances associated with helicopter flyover beginning in July would have no effective influence on migratory birds reproductive functions. Although late nest attempts in close proximity (e.g., within 300 feet) to concentrated activity would be subjected to high levels of disturbance, these circumstances would be confined to four or fewer sites affecting no more than 10 acres each. Assuming most nesting activity would have been completed by early July, and that half the nesting attempts in these situations would fail, no more than a half-dozen total attempts would be disrupted and less than half of those would be associated with species having higher conservation status (e.g., Brewer's sparrow). This level of impact would have no discernible influence on population-level abundance or reproductive performance, even at the smallest landscape level. Similarly, water and bait trapping strategies that occur in July or August would be extremely localized (maximum trap size of about 0.1 acre) and would involve only brief, low intensity activity. It would be inconceivable that these activities would involve more than several nesting birds.

Environmental Consequence of Alternative B, Annual Gathers July Through February: Gather related effects on wildlife would be similar to those discussed in Alternative A when those species are present. There are no identified impacts resulting from this alternative during winter months when migratory birds are not present within the analysis area.

Environmental Consequence of Alternative C, No-Action: Under Alternative C wild horses would not be gathered and removed from the WDHA. There would be no impacts associated with gather operations. Failure to gather wild horses would prolong and exacerbate detrimental wild horse-related effects on wildlife resources. With no effective means of biological control, wild horse populations and the influences they exert on wildlife habitats would continue to expand and intensify each year in geometrically increasing increments. Assuming no interim management response, forage use (AUMs) attributable to livestock and wild horses within the WDHA presently increases at an annual rate of about 3%, which would increase to 5% within 5 years (i.e., total use 19% greater than current). Similarly, wild horse contributions to the overall livestock and wild horse grazing load in the WDHA would increase from about 12% presently to about 26% by 2014.

Shrubland communities within 2 miles of water in the Texas Mountain area (6000 acres or about 13% of like types in WDHA) would continue to be subjected to heavy collective grazing use during the migratory bird nesting season (May through August). Wild horses in the Texas and Oil Spring Mountain complex account for at least 70% of the ungulate grazing load that persists through the migratory bird nest and brood-rearing seasons once cattle are removed (June, July, August). Because degraded lands in livestock and wild horse concentration and preferred use areas can generally produce one-quarter to one-half the herbaceous forage as lands in mid to late seral states, wild horses and cattle are compelled to seek new forage/water sources or forage increasingly further from water. To compensate for declining forage production in degraded sites in the near term, grazing use demands attributable to current wild horse numbers would require 400-600 additional acres of shrubland communities to assume heavy levels of use during the growing season. To meet the annual increase in wild horse numbers and direct forage demand, surrounding range subject to increased season-long grazing use by wild horses would need to expand in the near term at an average annual rate of about 20-25% (~1000-1200 cumulative acres by 2014).

Strong reductions in the density and height of herbaceous ground cover from collective ungulate grazing would be sufficient to substantially (50% or more) depress nest success and/or breeding densities of, particularly, ground-nesting and near-ground nesting birds such as dusky grouse, Virginia's warbler, gray-headed junco, and spotted towhee (Walsberg 2005, Krueper et.al. 2003) and would likely extend more indirectly to most shrubland birds that are insectivorous by nature (dusky flycatcher) or rely heavily on insect prey to feed nestlings during brood-rearing functions (Brewer's sparrow). Shifts in ground cover composition that attend inappropriate levels of growing season use by livestock and wild horses would reduce the suitability and utility of affected shrub-steppe habitat in the longer term and may be irreversible barring extraordinary management intervention.

Because current livestock and wild horse grazing use levels within the WDHA exceed those considered necessary to reverse declining trends on 3200 acres of land that failed to meet the land health standard in 2003, breeding populations of migratory birds associated with the WDHA's lower elevation shrublands would generally remain static in the short term, with populations adjusting to the progressive accumulation of bottomland and associated upland habitats in declining condition. Cattle would continue to be forced to make longer duration use of lower elevation winter pastures. Cattle use is expected to persist through mid-June and would be coincident with most of the migratory bird reproductive season. Any efforts to develop additional waters to accommodate wild horse and livestock use at lower elevations during the drier months would compound inappropriate seasonal grazing use and further expand sedentary season-long use of these arid ranges by wild horses and livestock. Persistent growing season use on these sagebrush-dominated ranges would continue to alter the composition of herbaceous communities, with increasing expression of annual (cheatgrass, mustards), introduced (Kentucky bluegrass), or grazing tolerant (grama) species which fail to offer comparable persistence, structure, or production as substrate for invertebrate prey and/or supplemental cover for reproductive functions. Reductions in the availability of intervening herbaceous cover, as forage and cover during nesting and the rearing of young, would be most evident on about 6800 total acres of bottomland and basin areas in the north half of the WDHA and 6000 acres in the Texas/Oil Spring Mountain complex that would be subject to heavy seasonal or season-long use by cattle and wild horses, respectively. It is believed that current breeding bird populations would persist at densities well below potential (e.g., 50% or less) across 10% of shrubland types available in Game Management Unit 21 (the Douglas and Evacuation watersheds in Colorado).

Progressive and accelerating declines in rangeland health beyond 2014 may prompt remedial action (e.g., reduction in livestock use). Efforts at reducing total grazing load through livestock would not resolve declining rangeland conditions attributable to sustained season-long grazing regimens in areas inhabited by wild horses. Even with livestock removal, progressive grazing-related effects at levels exceeding 300 wild horses in the WDHA are projected to increase acreage failing to meet Public Land Health Standards to 24,000 acres, or nearly 20% of the WDHA.

Regardless of options available for domestic livestock management, vegetation and water management aligned with increasing emphasis on the support of an increasingly large and expansive wild horse population would lead to progressive, exponential deterioration of sagebrush and shrubland steppe communities as nesting and brood-rearing habitat for migratory birds. It is likely that by 2015 widespread deterioration of ground cover conditions, sufficient to prompt substantial reductions in breeding bird nest density or success, would be evident across a minimum 18% of shrublands available in GMU 21.

Cumulative Analysis Area and Impacts: The CAA for this analysis is the same as that identified for the Wildlife – Terrestrial section. Progressive deterioration of native ground cover communities, particularly in sage-steppe habitats, would contribute to the cumulative range-wide deterioration and modification/loss of sagebrush habitats and animals obligate to the type (e.g., Brewer's sparrow, greater sage-grouse) from oil and gas developments and the proliferation of invasive annual grasses.

Mitigation: Mitigation has been incorporated into the Proposed Action and Alternative B.

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: Although an important Colorado River cutthroat trout fishery exists in the adjacent East Douglas watershed, there are no perennial systems capable of sustaining a cutthroat fishery in the project area. Perennial reaches of the West Douglas and mainstem Douglas channels are known only to support small numbers of speckled dace, an abundant and widely distributed nongame species. Beaver have intermittently colonized Douglas Creek, as well as a small portion of West Douglas Creek near Sand Draw. These beaver ponds and their lengthy backwaters support small, but well distributed breeding populations of mallard, green-winged teal, and spotted sandpiper.

Environmental Consequence of Alternative A, the Proposed Action: Because the proposed gather or helicopter fueling operations would be conditioned to avoid risking direct or indirect involvement of perennial channel systems, there would be no reasonable chance of influencing integral aquatic wildlife communities.

Environmental Consequence of Alternative B: Gather related effects on wildlife would be identical to those discussed in Alternative A.

Environmental Consequence of Alternative C, No-Action: Under Alternative C wild horses would not be gathered and removed from the WDHA. There would be no impacts associated with gather operations. Wild horses have not had substantive direct influence on channel or riparian vegetation associated with the major drainage systems that support aquatic communities in the project area, including the mainstem and West Douglas Creeks. However, indirect impacts have been implicated as WDHA wild horse populations exceed approximately 60, when early depletion of upland forage

by wild horses in the Texas Mountain area tends to aggravate cattle loitering on the West Douglas Creek valley. As wild horse populations approach and exceed 100 head, forage competition among and between wild horses and cattle would be expected to intensity and result in increased direct and indirect impacts on riparian and channel conditions along the 2 miles of West Douglas that are accessible to these animals. See discussion for *northern leopard frog* and *Colorado pike-minnow and other special status fish of the lower White River* in the Threatened, Endangered, and Sensitive Animals section.

Progressive and accelerating declines in rangeland conditions beyond 2014 may prompt remedial action (e.g., reduction in livestock use). Efforts at reducing total grazing load through livestock would not resolve declining rangeland conditions attributable to sustained season-long grazing regimens in areas inhabited by wild horses. Even with livestock removal, progressive grazing-related effects at levels exceeding 300 wild horses in the WDHA are projected to increase acreage failing to meet Public Land Health Standards to 24,000 acres, or nearly 20% of the WDHA.

As wild horse populations expand exponentially beyond 2014, the lands within and surrounding the WDHA would contribute increasingly to sediments delivered to aquatic habitat associated with West and mainstem Douglas Creek, West Creek, and the lower White River, both in rate of delivery and areal extent. Excessive sediment loads and attendant channel adjustment in these systems, particularly those that support beaver and their dam structures, would increase the proportion of channel subject to lateral instability and bank erosion, which would be expected to aggravate downstream sediment delivery to the White River. Heavy sediment deposition in these tributary channel systems would strongly degrade the suitability of aquatic habitat available for fish, amphibians, beaver, waterfowl, and aquatic invertebrates.

Cumulative Analysis Area and Impacts: The CAA for this analysis is the same as that identified for the Wildlife – Terrestrial section. Sediments originating from those areas subjected to season-long wild horse grazing regimens would contribute cumulatively to those sediments being produced and transported through the White River system from the development of oil and gas resources in the Piceance, Douglas, and Coal Oil basins and from other public lands administered by the Field Office that fail to meet Public Land Health Standards 1, 2, and 3.

Mitigation: Mitigation has been incorporated into the Proposed Action.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): The project area broadly meets the public land health standard for aquatic communities. As conditioned, Alternatives A and B are not expected to have any appreciable influence on aquatic habitat condition or trends and would not detract from continued meeting of the standard. However, it is estimated that at least 3200 acres of bottomland and basin shrubland sites presently fail to meet the land health standard, primarily due to incompatible levels or duration of growing season use as manifested by the inappropriate composition of herbaceous ground cover (i.e., invasive annuals and grazing-tolerant grasses). In the near term, failure to gather wild horses (Alternative C) would progressively increase acreage in declining trend and those failing to meet the standard at an estimated average annual rate of 20-25% (an additional 1000-1200 cumulative acres by 2014). In the short term, declining trends in aquatic habitat conditions would likely be confined to about 2 miles of West Douglas Creek that receive dual livestock and wild horse use, with little downstream manifestation.

In the longer term under Alternative C, it is projected that growing season-long grazing regimens attributable to wild horses would ultimately add another 21,000 acres to the 3200 acres that failed to

meet the Public Land Health Standard in 2003. This acreage represents about 18% of the shrubland types available in GMU 21. Under these circumstances, substantial increases in upland sediments transported through the Douglas Creek system would be expected to prompt widespread bank and bar instability in the Douglas Creek mainstem and elevate sediments delivered directly into the lower White River. Aquatic habitat present in the mainstem would be subject to frequent perturbation and flux and it is anticipated that it's utility for aquatic wildlife would be impaired such that the Public Land Health Standard would not be widely met. Sediments entering the White River directly from Douglas Creek, Cottonwood Creek, and Evacuation Creek may have more subtle influence on riverine and riparian habitats in both Colorado and Utah, but the effects would remain similar in character and be capable of compromising continued meeting of Standards 2, 3, and 4.

SOILS (includes a finding on Standard 1)

Affected Environment: Soils in the WDHA are sedimentary and include sandstone outcrops, Mancos shale outcrops, rocky hillslopes with thin soils and very diverse soil types. Gather activities would likely occur in drainage bottoms due to the flatter terrain and the ability to build traps around water sources and topographic features.

At least 50,000 acres within the WDHA are considered to be fragile either as soils derived from Mancos shale or on slopes exceeding 35 percent. In addition, a substantial acreage of soils are consider to be slightly to strongly saline at the surface or in the near surface subhorizon. These soils generally support a sparse vegetation cover of salt tolerant desert shrubs, grasses, and cryptogamic lichens. These soils formed in alluvium, colluvium, residuum, and reworked eolian deposits derived dominantly from shale and sandstone. Because they lack continual moisture, these soils are dry, causing salts to precipitate at the surface as soil moisture evaporates. Runoff from these areas transports salt in solution and sediment generally contain undissolved salts that go rapidly into solution when they reach a major waterway

In addition, within the planning area, approximately 108,767 acres or 85% of the total acres consist of soils less than 20 inches deep. The majority of these soil surfaces generally have a high portion of fine materials with little organic matter. Characteristic of these soils is slow permeability, low available water capacity, steep slopes, and shallow depth to rock; making runoff rapid. Soils susceptible to wind erosion cover approximately 10,300 acres. These soils have very fine sands and sandy loam and lack clay and organic matter. Permeability is usually rapid, available water capacity is moderate. Gathering activities in these areas are most likely to include herding with helicopters toward gather sites.

Some of the soil types in the wild horse WDHA that may not be meeting land health standards are listed in Table 16 below with corresponding acreage of each soil type. These soils are primarily located in drainage bottoms where the wild horses tend to congregate and therefore it is likely most of the gathering sites would occur in these soils types.

Table 16 - Soils that May Not be Meeting Land Health Standards

SOIL NUMBER	SOIL NAME	RANGE SITE	SLOPE	ACRES IN HA
3	Absher loam	Alkaline Slopes	0-3%	118
6	Barcus channery loamy sand	Foothills Swale	2-8%	40
36	Glendive fine sandy loam	Foothills Swale	2-4%	990

SOIL NUMBER	SOIL NAME	RANGE SITE	SLOPE	ACRES IN HA
37	Glenton sandy loam	Alkaline Slopes	1-6%	116
41	Havre loam	Foothill Swale	0-4%	2,307
61	Patent loam	Rolling Loam	3-8%	1,839
89	Tisworth fine sandy loam	Alkaline Slopes	0-5%	1,212
90	Torrifluvents gullied	Alkaline Slopes	0-5%	1,210
93	Turley fine sandy loam	Alkaline Slopes	0-3%	463
94	Turley fine sandy loam	Alkaline Slopes	3-8%	483
Total Acres				8,778

Environmental Consequence of Alternative A, the Proposed Action: Herding activities to move wild horses to the gather sites are likely to occur on steep rocky slopes, fragile soils and soils susceptible to wind erosion and gather sites are likely to be located in soils that may not be meeting land health standards due to saline soils.

The four gather methods to be used as described in the Standard Operating Procedures specify that gathering would be conducted when soils are dry and conditions are optimal for safety and protection of the wild horses and wranglers.

Direct and indirect impacts from gather activities would include but are not limited to, disturbance of vegetation and soil compaction at the trap sites. There are approximately 1,785 acres of saline soils (>16mmhos conductivity) and the alkaline slopes described in the effected environment. These soils would generally be less stable and recover more slowly than other soils. Soils in gather areas will likely become compacted due to wild horses and vehicles use for the gather. Some wind-born soil loss is expected due to the operation of the helicopter at low elevations. Since most gather sites for methods 2-4 will only be used once, impacts are expected to be minor in these areas. All impacts from wild horse gathering activities are expected to be short-term (less than 2 years) and to fully recover to pre-wild horse gather conditions within three years.

Impacts from wild horse grazing would reduce in proportion to the success of the gathers; these impacts include hoof action along well used trails and near water sources or other areas that are preferentially used by wild horses and direct impacts to vegetation. Vegetation is disturbed and eaten during grazing activities and may be less successful in stabilizing soils in some areas. As grazing is reduced impacts to vegetation and indirect impacts to soils will also reduce.

Environmental Consequence of Alternative B, Annual Gathers July through February: Impacts under this alternative would be similar to those described in Alternative A. Gathers would be allowed in the winter which if soil moisture conditions are high may lead to more impacts. However, if soils are frozen impacts could be less than non-winter gathers. Direct impacts to soils through hoof action and trailing will continue in proportion to wild horse numbers. Direct impacts to vegetation from grazing will also increase and would therefore likely result in more areas were this is a factor in indirectly destabilizing soils. These indirect impacts are more likely in saline and fragile soils due to poor vegetation success and the susceptibility to erosion.

Environmental Consequence of Alternative C, No-Action: Under the no action alternative, direct disturbance to soil as a result of the gathers in the Proposed Action and Alternative B would not occur. Greater grazing pressure will result in continued and increasing impacts as described in Alternative A and B in proportion to wild horse population increases. Vegetation cover would be

removed at a higher rate as the wild horse population increases. This higher rate of removal of vegetative cover would have negative impacts to soil quality by reducing overall protection from rainfall impact and decrease soil stability. Higher wild horse numbers would inhibit recovery of soils and could accelerate soil degradation and/or reduce chances of soils improving.

Cumulative Analysis Area and Impacts: The CAA for soils is the WDHA and the Douglas and Evacuation Creek watersheds. Implementation of the proposed action along with all existing land uses in the project area would not likely lead to any soil condition which would lead to further degradation or which would not improve naturally. Cumulative impacts would occur to soils where there are multiple land uses affecting the same location as proposed gather sites. While there are some negative impacts associated with gather sites, they would not likely lead to further soil degradation especially when compared to current departure from natural conditions.

Under Alternative C there would be no cumulative impacts to this resource.

Mitigation: Included in the proposed action.

Finding on the Public Land Health Standard for Upland Soils: In the WDHAA approximately 8,778 acres of alkaline and foothills swale soils were not meeting land health standards. BLM anticipates with increased wild horses additional soils within the WDHA are currently not meeting standards and identifies these would be located mostly along drainage bottoms. Areas not meeting land health standards are characterized by gullying and high rates of erosion. Some of the gather sites will likely be located in these areas wild horses tend to be found in these areas. Soils not meeting standards are a result of soil chemistry and will not be adversely impacted by gathering activities enough to impact long-term (more than 3 years) soil productivity. Therefore, it is unlikely that the proposed action will lead to new areas not meeting standards for public land health based on soils.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: The affected environment includes four watersheds; Douglas Creek, Evacuation Creek, Hells Hole, and Cottonwood Creek. Cottonwood Creek, Evacuation Creek and Douglas Creek watersheds were identified in the WRRMP as being fragile watersheds because the soils present in these watersheds have fragile soils (i.e. very high erosion potential, high salt content, slopes greater than 35%, and lack of vegetation cover that protects the watershed from overland flows). The WDHA is situated entirely within the White River Drainage Basin. The following table (Table 17) shows the affected water quality stream segments, area impacted (in acres), as well as any special designations for each of the affected stream segments.

Table 17:Water Quality Classifications and Water Quality Standards

Stream Segment	River Basin	Acres Affected	Designated Beneficial Uses	Use Protected (Y/N)	303(d) listed?	M&E listed?	Impairment	Priority
22	White	40,328	Aquatic Life Warm 2, Recreation Potential Primary Contact, Agriculture	Y	West Evacuation Wash, Douglas Creek	Soldier Creek	Sediment	Low
23	White	21,888	Aquatic Life Cold 1, Recreation Existing Primary Contact Use, Water Supply, Agriculture	N	N/A	N/A	N/A	N/A

Stream segment 22 is defined as all tributaries to the White River, including all wetlands, lakes and reservoirs, from a point immediately above the confluence with Douglas Creek to the Colorado/Utah border, except for specific listings in segment 23. Stream segment 22 is use protected due the ephemeral to intermittent nature of most of this segment. These streams don't generally support fish and aquatic habitat. The quality of use protected waters may be altered by permitted discharges or other activities, so long as applicable use-based water quality classifications and standards are met. Soldier creek is listed for measurement and evaluation for sediment and West Evacuation Wash is listed on the 303(d) list for sediment. Both of these stream segments are outside of the WDHA and will not be impacted by gathering activities.

Stream segment 23 is defined as the mainstem of East and West Douglas Creek, including all tributaries, from their sources to their confluence. Stream segment 23 has not been classified as use protected. For these waters, no degradation is allowed unless deemed appropriate following an antidegradation review.

The hydrologic setting of the Douglas Creek watershed ranges from relatively low lying, semi-arid lands yielding relatively little flow to steep, moderately high mountains that contribute major flows to Douglas Creek. There is very little flow or water quality data available for the tributaries to Douglas Creek. A USGS streamflow station at the mouth of Douglas Creek collected instantaneous flows and periodic water quality data for the water years, 1977, 1978 and 1995. For the period of record, data indicates, this drainage to be an ephemeral stream, flowing in direct response to snow melt or rain. Spring runoff from the semi-arid lands, generally occurs from March through early May and, from the higher terrain, into early June. Documented instantaneous peak flows from summer storms included 3,250 cfs on July 24, 1977, and 541 cfs on July 14, 1995. The major pollutants that the Douglas Creek watershed contributes to the White River are high sediment and salt. USGS measured a late summer rainstorm on October 6, 1994. The instantaneous sediment load at the discharge of 6.3 cfs was 15,800 mg/L or 270 tons per day with a specific conductance of 4,750 µmhos. Douglas Creek is listed in the White River ROD/RMP as a fragile watershed because it has soils that are both highly erosive and moderately saline.

Within the WDHA the tributaries to Evacuation Creek are Texas and Missouri Creeks, and Park Canyon. The hydrologic setting of the area ranges from relatively flat dissected basins to steep, barren side slopes in the upper reaches. Texas Creek is an ephemeral channel and is listed in the White River ROD/RMP as a fragile watershed. This listing is due to the highly erosive soils within the watershed and the fact that it contains soils that are moderately saline. Runoff from these semi-arid areas is generally from snowmelt; March through May and high intensity summer and late fall rainstorms.

Cottonwood Creek is an ephemeral drainage that is tributary to the White River downstream from Rangely, Colorado. It is typical of a semi-arid setting, in that runoff comes during spring snowmelt and intense summer or late fall rainstorms and carries with it elevated sediment loads. A localized intense storm has the ability to erode upstream sediments deposited over a five to ten year period in just one event. Cottonwood Creek watershed is listed in the White River ROD/RMP as a fragile watershed because it is a low precipitation area with flashy intense runoff and soils that are highly erosive. The hydrologic setting of Hells Hole is similar to Cottonwood Creek.

Environmental Consequence of Alternative A, the Proposed Action: Herding activities to move wild horses to the gather sites are likely to occur on steep rocky slopes, fragile soils and soils

susceptible to wind erosion and gather sites are likely to be located in soils that may not be meeting land health standards due to saline soils.

Springs may be used as potential gathering sites which may result in direct impacts to springs due to hoof action from the wild horses and installation of the portable panels. As described in the soils and water quality sections impacts are not expected to persist for more than three years and it is likely direct impacts to vegetation would not be identifiable if soil moisture conditions are favorable.

Conducting gather operations during periods of saturated and muddy soil condition would likely result in increased impacts to soils from vehicle traffic and hoof action.

Direct and indirect impacts from gather activities would include but are not limited to, disturbance of vegetation and soil compaction at the trap sites. There are approximately 1,785 acres of saline soils (>16mmhos conductivity) and the alkaline slopes described in the effected environment. These soils would generally be less stable and recover more slowly than other soils to gather activities. Sediment from these areas that is entrained in surface runoff waters may contain readily mobilized salts if it is deposited in intermittent systems like Douglas Creek. These eroded soils can therefore be a source of salinity in segments 22 and 23. Soils in gather areas will likely become compacted due to wild horses and vehicles use for the gather and some wind-born soil loss is expected due to the operation of the helicopter at low elevations. Since most gather sites for methods 2-4 will only be used only once, impacts are expected to be minor in these areas. All impacts from wild horse gathering activities are expected to be short-term (less than 2 years) and to fully recover to pre-wild horse gather conditions within three years.

*Environmental Consequence of Alternative B, Annual Gathers July through February***:** Impacts under this alternative are the similar to those in Alternative A except when soils and surface water is frozen. When temperatures result in frozen soils and surface waters the impacts resulting would be less than those identified under Alternative A.

Environmental Consequence of Alternative C, No-Action: No impacts due to gathering activities would occur under this alternative. Impacts from grazing would be similar to those described in Alternative B, but would continue to increase as populations increase (Table 1 Current and Projected Estimated Populations). Leaving excess wild horses in and adjacent to the WDHA would increase degradation to water quality as wild horse population increases. Water quality would remain in a degraded state on heavily grazed spring sources and as a result of the continued removal of standing vegetation, compaction, and deposition of animal wastes from wild horses. The increasing population of wild horses would exacerbate use on existing limited waters and compound impacts described here.

Cumulative Analysis Area and Impacts: The CAA for water quality is the WDHA and immediately adjacent areas affected by wild horses. Oil and gas development activities, livestock grazing and recreation are the reasonably foreseeable activities that would contribute to impacts to water resources in this area. Oil and gas development within this area is anticipated to be minimal. Therefore, BLM estimates that there is little foreseeable new oil and gas development in the area but there are producing fields and existing pipeline infrastructure that will need to be serviced and maintained. Vehicle trips along dirt roads to access these sites are the primary cause of continued disturbance from oil and gas activities. Recreation impacts are most likely from vehicle travel on existing roads and trails. Alternatives A and B involve removal of excess wild horses which lead to

improved water quality within the CAA. Under Alternative C grazing impacts from wild horses, livestock and wildlife would continue.

Mitigation: Incorporated into the proposed action

Finding on the Public Land Health Standard for water quality: It is unlikely that wild horse gathering activities would have an effect that exceeds water quality standards due to the short-term (less than three years) and localized impacts of the wild horse gathering activities. Increased wild horse population numbers in Alternative B and C could lead to degradation of water quality in some areas due to increased erosion and surface runoff. As shown in the water quality and quantity data for Douglas Creek most changes to water quality are due to flood events associated with particular rain storms and spring runoff.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: The west one-half of the Oil Spring Mountain Area of Critical Environmental Concern and Wilderness Study Area (ACEC/WSA), which is not within the WDHA boundary, contains Green River geological formations that provide habitats for several BLM Sensitive Plant Species (see Map 1). However, the eastern portion of the ACEC/WSA is several miles east of the nearest known BLM Sensitive Plant Species occurrences. The project is anticipated to use existing roads and previously disturbed sites where truck and trailer access is possible. Current foraging by wild horses in the ACEC/WSA, on shale barren habitats where most of the BLM Sensitive Plant Species occur, is low because these areas contain low quantities of plant species, such as bunchgrasses, typically foraged by wild horses.

Environmental Consequences of the Proposed Action, Alternative A: No effects to BLM Sensitive Plant Species occurring several miles west of the proposed action are expected. Use of BLM roads or previously disturbed areas is unlikely within the ACEC/WSA however, herding and minimal use of roads and previous disturbances could result in minimal impacts to soil and vegetation. Although the current foraging of ACEC/WSA shale barren plant habitats by wild horses is low, continued increase of wild horse numbers could produce trampling or foraging of Special Status Plant Species and unique vegetation sites, especially during drought when overall forage is limited. BLM anticipates that in the long term impacts would lessen the probability of these effects on Special Status Plant Species habitats or unique vegetation areas in the ACEC/WSA.

Environmental Consequences of Alternative B, Annual Gathers July Through February: Impacts under this alternative would be the same as those of the addressed under Alternative A.

Environmental Consequences of Alternative C, No Action: Under Alternative C, the current foraging of the ACEC/WSA shale barren plant habitats by wild horses is low, continued increase of wild horse numbers could result in increased trampling and/or foraging of special status plant species and unique vegetation sites, especially during drought when overall forage is limited. Under this alternative, impacts to Special Status Plant Species, unique and remnant vegetation would be expected to increase as the grazing pressure for available forage increases in the ACEC/WSA, especially under drought conditions.

Cumulative Analysis Area and Impacts*:* The ACEC/WSA could be negatively affected via over-use of rangeland resources by all ungulates, both wild and domestic, via trampling, trailing,

and herbivory. Increased competition for rangeland resources by all large herbivores directly increases the likelihood of damage to these resources at various thresholds.

Under Alternatives A and B the removal of wild horses decrease impacts to Special Status Plant Species due to reduction of tramping, trailing, and foraging. There are no cumulative impacts that result from gathering on these species.

Alternative C wild horse populations would exponentially increase use of areas of rangeland resources adjacent to the ACEC/WSA. Increased wild horse populations would result in expanded ranges which could lead to cumulative effects on Special Status Plant Species on other areas of the WRFO or eventually on habitats within the Vernal and Grand Junction Field Office boundaries.

Mitigation: Mitigation has been incorporated into the Proposed Action. No additional mitigation identified.

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: There are no known Threatened, Endangered or Candidate plant species known to exist in the WDHA. Limited inventories have been conducted for these and other special status plant species within the WDHA. Several suspected BLM sensitive plant species endemic to the Green River geologic formations would be anticipated to occur on shale barren habitats in the area. One BLM Sensitive plant species, the Duchesne milkvetch (*Astragalus duchesnensis*) is known from a historic State of Colorado field record in Section 14, Township 2 South, Range 103 West. This parcel is privately owned, but the portion of the parcel containing the milkvetch is unfenced from surrounding BLM parcels in the WDHA. The plant was found on Rio Blanco County Soil Series #64 and is found approximately ½ mile southeast of the Big Park Road (Rio Blanco County Road #23).

Environmental Consequence of Alternative A, the Proposed Action: Expected ground disturbance from gathering sites will generally occur on roads or previously disturbed areas which are truck and trailer accessible. In addition, Soil Series #64 does not extend onto the existing roadways within one mile of the Duchesne milkvetch occurrence. Therefore, there is no ground disturbance anticipated for the project that would be closer than ½ mile to the Duchesne milkvetch habitat, as it is currently known and mapped. If a previously undisturbed shale barren site in the WDHA or an undisturbed site in Soil Series #64, site trap site or temporary holding facility, as a gather site in Section 14, Township 2 South, Range 103 West, a survey of the location for threatened, endangered, and sensitive plants would be conducted. If plants are found they would be avoided. Avoiding those areas would reduce the chance for negative effects to special status plant species.

Environmental Consequences of Alternative B, Annual Gathers July Through February: Impacts under this alternative would be the same as those of the addressed under Alternative A.

Environmental Consequence of Alternative C, No-Action: Under Alternative C, wild horses would not be gathered and removed from the WDHA. There would be no impacts associated with gather operations. Although the current foraging of shale barren plant habitats by wild horses is generally low throughout the WDHA, continued increase of wild horse numbers could produce trampling or foraging of special status plant species and unique vegetation sites, especially during

drought when overall forage is limited. Under this alternative, impacts to special status plant species, unique and remnant vegetation would be expected to increase as the grazing pressure for available forage increases especially under drought conditions.

Cumulative Analysis Area and Impacts: The CAA for threatened, endangered and Special Status Plant Species includes Soil Series #64, Section 14, Township 2 South, Range 103 West. These areas could be negatively affected via over-use of rangeland resources by all ungulates, both wild and domestic, via trampling, trailing, and herbivory. Increased competition for rangeland resources by all large herbivores directly increases the likelihood of damage to these resources at various thresholds.

Under Alternatives A and B the removal of wild horses decrease impacts to Special Status Plant Species due to reduction of tramping, trailing, and foraging.

Under Alternative C wild horse populations would exponentially increase use of areas of rangeland resources in and adjacent to the Special Status Plant populations. Increased wild horse populations would result in expanded ranges which could lead to cumulative effects on Special Status Plant Species on other areas of the WRFO or eventually on habitats within the Vernal and Grand Junction Field Office boundaries.

Mitigation: Mitigation measures have been incorporated into both Alternative A and B.

Finding on the Public Land Health Standard for Threatened & Endangered species: Alternatives A and B are not expected to influence populations or habitats of plants associated with the Endangered Species Act or BLM sensitive species and, as such, the project should have no influence on the status of applicable Land Health Standards.

Under Alternative C, negative influence on populations or habitats of plants associated with the Endangered Species Act or BLM sensitive species are not occurring on a wide-scale basis at this time, however, the potential for cumulative impacts could be a direct result of increased rangeland forage competition. Therefore, in the short-term Alternative C should have no influence on the status of applicable Land Health Standards, however, in the long term, cumulatively negative effects should be anticipated to special status plant species habitats.

AIR QUALITY

Affected Environment: The entire WRFO has been classified as either attainment or unclassified for all pollutants, and most of the area has been designated for the prevention of significant deterioration (PSD) class II. This proposed action is located in rural northwest Colorado in the White River Basin. Industrial facilities in White River Basin include coal mines, soda ash mines, natural gas processing plants and power plants. Due to these industrial uses, increased population and oil and gas development in this region, emissions of air pollutants in the White River Basin due to exhaust emissions and dust (particulate matter) occur and are likely to increase into the future. Despite increases in emissions, overall air quality conditions in the White River Basin are generally good due to effective atmospheric dispersion conditions and limited transport of air pollutants from outside the area. Regional air quality parameters including dust are being measured at monitoring sites located at Meeker, Rangely and Ripple Creek Pass and near the Flat Tops Wilderness Area.

Environmental Consequence of Alternative A, Proposed Action: The air quality criteria pollutant likely to be most affected by the proposed actions is the level of inhalable particulate matter, specifically particles ten microns or less in diameter (PM_{10}) associated with fugitive dust. The Colorado Air Pollution Control Division (APCD) estimates the maximum PM_{10} levels (24-hour average) in rural portions of western Colorado to be near 50 micrograms per cubic meter ($\mu g/m^3$). This estimate is well below the National Ambient Air Quality Standard (NAAQS) for PM_{10} (24-hour average) of 150 $\mu g/m^3$. Gathering activities will produce temporary increases in dust from wild horse trailing, staging areas, vehicles used for the gather and helicopter use. Dust production from these activities will be localized and short-term and if these activities occur with adequate soil moisture would not be noticeable or measurable. The standard operating procedures specify that wild horse gathers would not occur during dry conditions that might produce too much dust for safe operation. Even gathers that occur during dry conditions are not expected to exceed the rural standard for western Colorado of 50 $\mu g/m^3$. Gathering activities will produce temporary increases in dust from wild horse trailing, staging areas, vehicles used for the gather and helicopter use. These impacts would be temporary and localized, would vary based on the soil moisture and wind conditions. Soils within the gather area generally have poor cohesion and a higher potential for aerosolization and dust production (see the soils section for a discussion of saline soils).

Environmental Consequence of Alternative B, Annual Gathers July through February: Impacts would be similar to those described in Alternative A except that dust impacts are less likely during winter gathers.

Environmental Consequence of Alternative C, No-Action: Under Alternative C, wild horses would not be gathered and removed from the WDHA. There would be no impacts associated with gather operations. Impacts would be the same for the first few years as described in Alternative B and would continue to increase with wild horse numbers as shown in Table 1. No dust production during gathering activities would occur, since gathers would not occur under this alternative.

Cumulative Analysis Area and Impacts: The CAA for air quality is the WDHA and the Douglas Creek and Evacuation Creek watersheds. Oil and gas development activities, livestock grazing and recreation are the reasonably foreseeable activities that would contribute to dust production in this area. There is little foreseeable new oil and gas development in the area (estimated as less than 5 % of future development in the WRFO), but there are many producing fields and existing pipeline infrastructure that will need to be serviced. Vehicle trips along dirt roads to access these sites are the primary cause of dust production from oil and gas activities. Livestock grazing results in similar impacts as those described for wild horses with dust production due to hoof action and greater during times of the day when cattle or sheep are moving from water, food and shelter sources. Recreation impacts are most likely from vehicle travel on existing roads and trails. During exceptionally dry times the cumulative impacts from these activities would result in visible dust and reduce visibility and may contribute to regional air quality events mostly due to fugitive dust. These impacts are expected to be temporary and would not likely exceed the National Ambient Air Quality Standard (NAAQS) for PM_{10} (24-hour average) of 150 $\mu g/m^3$.

Mitigation: Incorporated into the proposed action.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: Douglas Creek Watershed: Within the project area, riparian systems occur principally on Main Douglas, West Douglas, and West Creeks. These riparian systems are located within relatively wide valley bottoms (200-600 yards). The upper terraces of these valleys are composed of sagebrush, greasewood, western wheatgrass and annual grasses and forbs. The

riparian habitat is located within incised channels of these valley bottoms. Plant composition within the riparian zone is coyote willow, tamarisk, cattails, carex and juncus. The stream channels are confined by incised channel banks, have low stream gradients, meandering channel and have channel materials composed of silt clay bed materials. These streams are in proper functioning condition with an upward trend.

Distributed infrequently throughout the project area, several larger, more persistent springs receive concentrated use by all large grazing animals on a seasonal or year-round basis. Heavy and persistent use has suppressed riparian development on some sites, degrading the downstream potential for riparian expression and suppressing vegetation-derived stability to the spring site and downstream channels and banks.

Environmental Consequence of Alternative A, Proposed Action: Actual gather operations (helicopter drive trapping, helicopter assisted roping, and bait trapping) would have no impact on riparian or wetland sites as no trap or holding facilities would be placed in or adjacent to riparian areas. If gathering using water trapping occurred at any of the persistent spring sites there would be a short term localized increase in impacts at these sites. The impacts would be increased trampling of the site. After removal of the water trap(s) it is expected that these sites would stabilize and return to their previous state within three years. Over time it is expected that suppressed riparian, and degraded stream potential would experience rapid restoration to proper functioning condition.

*Environmental Consequence of Alternative B, Annual Gathers July through February***:** Impacts under this alternative would be the same as those addressed in Alternative A.

Environmental Consequence of Alternative C, No-Action: Under Alternative C, wild horses would not be gathered and removed from the WDHA. There would be no impacts associated with gather operations. Heavy and persistent use would continue, resulting in further suppressed wetland and riparian development, further degradation to downstream potential for riparian expression to the point where valuable wetlands and riparian zones are irreversibly lost.

Cumulative Analysis Area and Impacts: The CAA for wetland and riparian zones are in the Douglas and Evacuation Creek watersheds. For all of the alternatives, oil and gas development activities, livestock and wildlife grazing and recreation are the reasonably foreseeable activities that would contribute to impacts to wetland and riparian resources in this area. BLM anticipates oil and gas development within this area to be minimal, since it is relatively developed for recovery of the resources. Therefore, BLM estimates that there is little foreseeable new oil and gas development in the area but there are producing fields and existing pipeline infrastructure that will need to be serviced and maintained. Vehicle trips along dirt roads to access these sites are the primary cause of continued disturbance from oil and gas activities. Unmanaged livestock grazing would result in similar impacts as those described for wild horses. Recreation impacts are most likely from vehicle travel on existing roads and trails.

Alternatives A and B, primarily involve removal of excess wild horses, which would lead to improved wetlands and riparian zones within the CAA. Gather operations may result in increased levels of vehicular traffic. Due to limited water resources within the area competition for water will continue. With fewer animals utilizing these water sources it is expected that over time wetlands and riparian zones would experience improvement.

Under Alternative C, wild horses would not be gathered and removed from the WDHA. There would be no cumulative impacts associated with gather operations.

Mitigation: Mitigation has been incorporated into the Proposed Action. No additional mitigation identified.

Finding on the Public Land Health Standard for riparian systems: At the functional landscape scale, riparian resources meet the land health standard across the project area. Alternatives A and B would have no reasonable probability of interfering with continued meeting of this land health standard, since wild horse gather facilities (e.g., holding and trap sites) and helicopter fueling operations would not be sited in a manner that risks direct or indirect involvement of riparian vegetation or the channel systems that support these communities.

WASTES, HAZARDOUS OR SOLID

Affected Environment: BLM reviewed various hazardous materials release databases, and other records and determined that there are no known areas waste, hazardous or solid are located in association with existing energy development within the WDHA. Oil and gas development routinely uses, stores, disposes and transports hazardous materials therefore, BLM anticipates that any hazardous materials located in the area would be related to energy exploration and development. In addition, solid waste could result from illegal dumping on public lands. BLM currently does not know of any illegal solid waste dumps within the analysis area.

Environmental Consequence of Alternative A, the Proposed Action: Helicopter refueling will be necessary during the gather operations. Helicopter refueling usually takes place on roads or staging areas so that a fuel vehicle is able to reach the helicopter to refuel. Refueling operations could present a hazard if a spill occurs.

Needles may be used for treatment of wild horses during wild horse gathers by the contract veterinarian and/or by qualified BLM personnel. Needles could present a hazard to public safety if not disposed of properly. However, contract veterinarian and/or BLM personnel will dispose of all needles in a proper disposal facility.

*Environmental Consequence of Alternative B, Annual Gathers July through February**:*** Impacts would be the same as those described in Alternative A.

Environmental Consequence of Alternative C, No-Action: Gathering activities would not occur and therefore there would not be the generation of hazardous waste or the potential impact of spills during gathers.

Cumulative Analysis Area and Impacts: The CAA for hazardous waste is the WDHA and immediately adjacent areas affected by gathering activities. Oil and gas development activities, livestock grazing and recreation are the reasonably foreseeable activities that would contribute to impacts to water resources in this area Oil and gas development within this area is anticipated to be minimal. Since it is relatively developed for recovery of the resources. Therefore, BLM estimates that there is little foreseeable new oil and gas development in the area but there are producing fields and existing pipeline infrastructure that will need to be serviced and maintained. Continued use by energy exploration and development will continue to be a potential source of hazardous materials and spills. Wild horses are not likely to change this impact but in some cases could be impacted themselves by these activities due to potential water contamination from spills.

Mitigation: Mitigation has been incorporated into the Proposed Action.

CULTURAL RESOURCES

Affected Environment: The Douglas Creek area, in general, and the core WDHA specifically, are known to contain a wide variety of prehistoric and historic resources. Sites include but are not necessarily limited to open lithic scatters, open campsites, wickiup villages, Rock Art sites and wild horse trap sites. Such sites seem to be particularly concentrated on the ridges overlooking the various tributaries to Douglas Creek, particularly where the piñon-juniper and sagebrush vegetation communities come together. Recent inventory data suggests that site densities tend to be very high throughout the area. Wild horse traps, both prehistoric and historic seem to be concentrated on ridges in the piñon-juniper vegetation communities where the traps can be camouflaged. Historic resources are primarily related to early ranching and livestock grazing efforts and are concentrated along the moister drainage bottoms. Sites include, but are not limited to, old homesteads, line shacks, corrals, pasture fences, occasional irrigation ditches and hay meadows.

Environmental Consequence of Alternative A, Proposed Action: It may not be possible to herd wild horses to avoid sites when gathering by helicopter or horseback. Therefore as wild horses are rounded up and driven to traps there is a potential for trampling of sites as wild horses are guided towards trap sites. Impacts from trampling could be severe as wild horses tend to be more concentrated while being herded to the traps. As the wild horses may be trotting or cantering while being herded toward the traps as opposed to just walking there may be a higher g force from hoof impacts that could result in deeper soil disturbance on sites than might otherwise occur.

Water or bait trapping could result in impacts to cultural sites if the traps are located within less than about 500 meters of the trap site. This occurs as wild horses become habituated to the trap locations and begin to concentrate in the area more.

Standing architecture features would still be vulnerable if wild horses traverse those sites while being herded to the trap locations.

A reduction of wild horse numbers will result in reduced impacts to cultural resources over the long term until the herd is fully removed. When the herd is finally removed it is anticipated wild horse related impacts to cultural resources will cease.

Environmental Consequence of Alternative B, Annual Gathers July through February: Impacts from Alternative B are identical to impacts from Alternative A except the window of time for gathering has been extended into February.

This alternative incorporates all the same design features and mitigation measures as alternative A when gathers take place.

Environmental Consequence of Alternative C, No-Action: Under Alternative C wild horses would not be gathered and wild horse numbers would continue to increase. Increased wild horse numbers would result in increased impacts to cultural resources as wild horses shade up in tree stands where wickiup villages may occur. This would result in increased trampling of the ground surface disturbing features and displacing or breaking of artifacts. Rubbing and scratching on standing wickiup features could result in the knocking down of the wickiup poles, collapsing the wickiup structure.

As wild horse numbers increase there is the potential for increased concentration along trails and near water sources would result in increased trampling of sites in the area destroying surface features. Artifacts would continue to be broken and displaced as the soil is churned up, especially when the soil is moist and softer than when it is dry. Short term open camp sites would be especially susceptible to damage due to the shallowness of the deposits. Surface disturbance could potentially destroy the site and its contextual values completely. Tool stone quarry sites would be affected as trampling causes additional breakage of stone making interpretation of the extent of tool preparation prior to leaving the quarry area more difficult.

In areas where rock art sites are located increasing wild horse numbers could result in accelerated loss of rock art elements, particularly pictographs, where wild horses concentrate in the rock overhang areas. Increased concentration in the rock overhang and cliff face areas could result in increased rubbing and scratching on the rock face which rubs the pictograph pigments off the rock surface.

If vegetation cover is reduced due to increased grazing pressure from wild horses, livestock and wildlife there is a potential for increased sheet erosion of soil which would cause loss of surface archaeological features such as hearths as well as loss of smaller, lighter artifacts

Cumulative Analysis Area and Impacts: The CAA for this resource would include the WDHA as well as the Douglas Creek and Evacuation Creek watersheds. Alternatives A and B results in the removal of all wild horses from the WDHA, impacts to cultural resources as a result of wild horse presence, concentrating, trailing and rubbing on standing architecture and rock art would be ultimately eliminated. As these impacts are eliminated the loss of scientific, archaeological and historical data lost from wild horse related impacts also would be eliminated preserving the data.

Under Alternative C, failure to gather wild horses from the WDHA will result in the continued and accelerated, irreversible and irretrievable loss of archaeological and historical data concerning human use and occupation of the area from the earliest known human use of the area. This would be a serious long term permanent loss of scientific data.

Mitigation: Mitigation has been incorporated into the Proposed Action. No additional mitigation identified.

PALEONTOLOGY

Affected Environment: The proposed wild horse gather area is located in an area that is primarily mapped as the Mesa Verde Group which the BLM has classified as a Condition I or a potential fossil yield classification (PFYC) 5 (BLM 2007b) area, meaning it is known to produce scientifically important fossil resources. Other formations in the area are the Wasatch, a Condition I, PFYC 5 formation and the Douglas Creek member of the Green River which is classified by the BLM as a Condition II, PFYC 4 formation.

Environmental Consequence of Alternative A, Proposed Action: Fossils could be impacted by gather operations if wild horses trail across exposed rock outcrops while being driven to trap sites. Strap sites and associated wing fences or holding facilities will be located to avoid all known and reported fossil localities traps and holding areas will not impact fossil resources. Removal of all wild horses from the WDHA would ultimately eliminate all impacts to fossil resources that can

be cause by wild horses rubbing on exposed outcrops or trailing and concentrating on exposed fossil bearing rock surfaces.

Environmental Consequence of Alternative B, Annual Gathers July through February: Impacts under this alternative would be the same as those identified under Alternative A.

Environmental Consequence of Alternative C, No-Action: Under Alternative C wild horses would not be gathered and wild horse numbers in WDHA would continue to increase. As wild horse, numbers increase the impacts that occur as wild horses trail would also increase. Further, an increase in wild horse numbers would mean that areas where wild horses concentrate would increase in size and/or see an increase in the number of animals in the concentration area. Where increased rubbing on vertical surfaces or trampling of horizontal surfaces causes the displacement or crushing of fossils the loss of scientific data is irreversible and irretrievable. The increase in rate of loss compared to the current condition would be more severe that the loss under the current conditions or the proposed action.

Cumulative Analysis Area and Impacts: There were no cumulative impacts identified for this resource from any of the alternatives.

Mitigation: Mitigation has been incorporated into the Proposed Action. No additional mitigation identified.

RECREATION

Affected Environment: The proposed action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use.

The WDHA is located within Colorado Division of Wildlife (CDOW) Game Management Unit (GMU) 21. GMU 21 is a draw unit for trophy deer hunting and hunters wait several years to be able to hunt in this unit. Hunters come from all over the United States to hunt during the fall mule deer and elk big game hunting season from August through November. Additionally, the CDOW issues mountain lion hunting permits from November through mid-March.

BLM issues Special Recreation Permits for big game and mountain lion outfitters within the WDHA: Rimrock Outfitters, Peters Hunting Service, Bookcliff Outfitters, and Twin Buttes Outfitting.

Environmental Consequences of Alternative A, Proposed Action: If helicopter wild horse gather operations coincide with big game hunting seasons, it is likely that conflict between public land hunters and the gather operations will develop. The first gather may have an impact on the hunting due to the size of the herd. As gathers take place over the next several years and the herd reduces in size we should see less of an impact on hunting. Given the time in which this gather is proposed, this is the preseason scouting for the early big game hunting seasons and conflicts are anticipated to be minimal and few in number.

Helicopter activity has the potential to disrupt trophy deer hunting opportunities during the 2010 (and subsequent years) seasons of 23-31 October and 6-14 November for persons that have

accumulated preference points for 10-14 years. BLM would attempt to accommodate this concern by providing early notification to the CDOW of gather operations that may occur during the hunting seasons (for publication in license application brochures) and by attempting to avoid helicopter gather activity during the deer hunting seasons. This notification would provide prospective hunters the opportunity to decide whether to apply for a license for the following fall/winter hunting seasons.

If BLM is successful in implementing the Proposed Action all wild horses associated with the WDHA would be gathered and removed would not be available for viewing by the public in the WDHA.

*Environmental Consequence of Alternative B, Annual Gathers July through February***:** The impacts of Alternative B are similar to those of the proposed action with the exception that gather operations from November through February would also impact mountain lion hunting. However, the impact to mountain lion hunting would be of short duration, limited number of permits and hunters, and lion permits are not limited to a specific game unit allowing for guides to utilize other GMUs during the gather operations.

Environmental Consequence of Alternative C, No-Action: There would be no gathering operations that would impact hunting or hunting related activities in the area will continue at its current level of participation.

Cumulative Analysis Area and Impacts: The recreational opportunities in the area will continue to intermingle with other public land activities. Gathering under Alternatives A and B may reduce areas of recreational opportunities but the time and impact will be temporary and minor.

Under Alternative C wild horses would not be gathered and removed from the WDHA. The public will have an increased interaction with the wild horses at an increasing rate during recreational activities. There would be no cumulative impacts associated with gather operations.

Mitigation: Mitigation has been incorporated into the Proposed Action. No additional mitigation identified.

WILDERNESS

Affected Environment: Oil Spring Mountain Wilderness Study Area (WSA), which straddles the southern boundary of the WDHA, is an undeveloped island surrounded by scattered oil and gas wells, roads and well pads. The WSA provides outstanding opportunities for visitors to experience solitude and unconfined recreation. The WSA provides great opportunity for hunting and hiking. The public majority of use in the WSA is during hunting season, which starts late August and ends in late December. During the rest of the year the WSA has low public use, which consists of camping and hiking.

Environmental Consequence of Alternative A, Proposed Action: Wild horse gather operations may disrupt the solitude and unconfined recreation experience for a short period of time due to visual impacts that may result. If helicopter wild horse gather operations happen in the WSA and coincide with big game hunting seasons, there is likely that conflict between public land hunters and the gather operations will develop. The first gather may have a greater impact on recreating opportunities in the area due to the initial larger herd size, but as gathers continue the impacts will

decrease as the size of the bands decrease. No motorized use would be allowed within the WSA however, helicopter use (flying over the WSA/ACEC) would occur to move wild horses to trap locations outside of the WSA boundaries.

Environmental Consequence of Alternative B, Annual Gathers July through February: Impacts under this alternative are essentially the same with the exception of the extended period of potential gather operations might occur.

Environmental Consequence of Alternative C, No-Action: Under this alternative there would continue to be opportunities for the public to experience an area of solitude and unconfined recreation.

Cumulative Analysis Area and Impacts: The CAA for Wilderness would be limited to the area within and directly adjacent to the WSA boundary where the wilderness character may be affected. The Oil Springs Mountain WSA experiences oil and gas activity, grazing, non-motorized recreational activities and motorized recreational activities all of which have the ability to have the same effect on the recreational activities in the WSA. Gathering in the area under Alternatives A and B will increase noise and human activity within the WSA and the surrounding area but will be short in duration and will not be significant enough to deter from the public's experience. Under Alternative C, the WSA will have no increase or decrease in solitude.

Mitigation: Mitigation has been incorporated into the Proposed Action. No additional mitigation identified.

HYDROLOGY AND WATER RIGHTS

Affected Environment: Spring inventories were completed in 1985, 1986 and 1987 for the WRFO to identify springs that could have water rights filed on them. Table 18 below shows the findings of this inventory. Identified are sixteen springs that are located within the WDHA. The State of Colorado water courts do not except water filings on seasonal water sources so they do not have water rights filed on them. Twelve of the sixteen springs are in the Evacuation Creek watershed, while the other four are in the Douglas Creek watershed. There are no springs on record in the upper tributaries of Cottonwood Creek or Hells Hole. In addition, the specific conductance (SC) of twelve of these sources have values greater than 5,000 micromhos indicating high levels of salinity. Levels this high make them less desirable as water sources.

Table 18 – Water Rights with locations

SPRING NAME	QR	SEC#	LOCATION	WATER RIGHT	SC	PH	Q IN GPM	COMMENTS	WATERSHED
155-01	NWSW	10	T1S R102W	85CW439	9790	8	0.79	Perennial	West Douglas
176-03	SENE	20	T3S 102W	--	6321	7.6	0.2	Seasonal	Evacuation Ck
Wild Rose	NWSE	20	T3S 102W	W1547	8280	7.9	2	Perennial	Evacuation Ck
Big Cedar	SENE	29	T3S R102W	W1546	10315	7.7	30	Perennial	Evacuation Ck
176-06	NESE	29	T3S R102W	85CW391	12574	8	7.5	Perennial	Evacuation Ck
176-20	NWSE	29	T3S R102W	85CW391	2838	8.6	6.7	Perennial	Evacuation Ck
Wild Horse	NWSE	11	T3S R103W	W0467	1317	8.2	0.8	Seasonal	Evacuation Ck
Shale	SWNW	12	T4S R103W	W0467	4629	6.5	0.3	Seasonal	Evacuation Ck
180-03	SWNE	16	T4S R102W	--	12602	8	0.5	Seasonal	Evacuation Ck
180-20	NESE	18	T4S R102W	--	8172	8.1	1.6	Seasonal	Evacuation Ck
180-24	SENW	18	T4S R102W	--	1414	10.9	1.1	Seasonal	Evacuation Ck
181-01	SWNE	32	T3S R102W	--	13930	8.2	0.1	Seasonal	Evacuation Ck

Table 18 – Water Rights with locations

SPRING NAME	QR	SEC#	LOCATION	WATER RIGHT	SC	PH	Q IN GPM	COMMENTS	WATERSHED
181-21	NENE	8	T4S R102W	--	8588	8.2	0.5	Seasonal	West Douglas
181-31	NWNE	17	T4S R102W	85CW355	5278	8.3	0.1	Perennial	West Douglas
Oak Spg No 1	NWSE	17	T4S R102W	W1553	5170	8.8	2.9	Seasonal	West Douglas
181-34	SWNW	32	T3S R102W	--	13298	7.5	0.4	Seasonal	Evacuation Ck

Environmental Consequence of Alternative A, Proposed Action: Springs may be used as potential gathering sites as described in Appendix A. Short-term use of these areas to set up a trap and gather wild horses may result in direct impacts to springs due to hoof action from the wild horses and installation of the portable panels. As described in the soils and water quality sections impacts are not expected to persist for more than 3 years and it is likely direct impacts to vegetation would not be identifiable if soil moisture conditions are favorable.

Environmental Consequence of Alternative B, Annual Gathers July through February: Impacts would be similar for the gathering activities described in Alternative A.

Environmental Consequence of Alternative C, No-Action: There would be no impacts from gathering activities, but grazing impact would increase in proportion to increase in wild horse numbers.

Cumulative Analysis Area and Impacts: The CAA for hydrology and water rights is the area within the WDHA and immediately adjacent areas affected by wild horses. Implementation of the proposed action along with all existing land uses in the project area would not likely lead to changes in the use of springs with water rights. In some cases, the development of water sources for livestock may benefit wild horses and may result in impacts from wild horses around these water sources.
Under Alternative C, wild horses would not be gathered and removed from the WDHA. There would be no cumulative impacts associated with gather operations.

Mitigation: None identified.

NOISE

Affected Environment: The initial gather is expected to take as long as four (4) days to complete. During this time the gather helicopter will be operating daily in specific locations within the areas identified for wild horse capture. The helicopter will not remain in any given location for long durations of time; rather the noise associated with helicopter use will be intense, isolated and short-lived between one gather location and another. Vehicular traffic in the form of motor vehicles and equipment pulled by these motor vehicles will occur in locations within the gather area. Again, this activity will focus in locations where wild horses are being captured and will shift from location to location on an almost daily basis.

Environmental Consequence of Alternative A, Proposed Action: All of the areas identified for gather will be temporarily affected by noise associated with helicopters and increased vehicular traffic.

Environmental Consequence of Alternative B, Annual Gathers July through February: Impacts under alternative B are the same as those analyzed under Alternative A.

Environmental Consequence of Alternative C, No-Action: No areas will be affected by noise either by helicopter or vehicle traffic due to no gather operation taking place.

Cumulative Analysis Area and Impacts: The CAA for noise would be the WDHA and the Douglas and Evacuation Creek watershed. The cumulative effects would be that during daylight hours there would be flights in the area of the WDHA gather operation and immediately adjacent areas while the helicopter is in the air herding wild horses or performing reconnaissance flights. The increased vehicle traffic noise would be short term and generally only on roads that would be specific to the gather operation or holding facility.

Mitigation: None

LAW ENFORCEMENT

Affected Environment: This area is managed by the Colorado Division of Wildlife (CDOW) as a trophy hunting area for mule deer and has numerous licensed guide and outfitters for upland big game hunting. Upland big game hunting is a popular recreation activity in NW Colorado with public guided and non-guided hunters. Because of the added public presence during the hunting seasons, law enforcement patrol activities increase along with public contacts and enforcement/compliance of federal and state laws. This area has multiple uses for the general public including wood cutting, camping and wildlife viewing. Wild horse gathers/removals from this area have generated numerous responses with a wide range of emotions from local public and the public abroad.

Environmental Consequences of Alternative A, Proposed Action: Due to the timing of any proposed gather that would take place during big game hunting seasons, the gather activity could potentially cause conflicts with hunters wanting to camp in specific locations or having concerns of aircraft disturbing the wildlife and their natural movements. Also of concern is the potential for protesting or interference from individuals or groups that do not want the wild horses to be removed. In the past there has been great interest in wild horse gatherings within the WRFO, as well as Nationally, that have escalated to a point in one particular instance were an individual or individuals attempted to release captured wild horses from the WRFO temporary holding facility at Yellow Creek. Unintentional interference from the public wishing to utilize public lands or observe the proposed action may occur. Increased public contact will increase the probability of conflict that may require law enforcement action. This increase in public contacts will require an increase in patrol activities within this area which will result in decreased patrol activities or the ability to respond to other incidents throughout the rest of the WRFO area.

Environmental Consequence of Alternative B, Annual Gathers August through February: Impacts would be the same as those described in Alternative A.

Environmental Consequence of Alternative C, No-Action: There would be no impacts associated with this alternative since there would be no gather conducted.

Cumulative Analysis Area and Impacts: Under Alternatives A and B the cumulative effects would be that law enforcement presence may be necessary on a 24 hour schedule at the trap locations and holding facility during the entire gather operation. This adds an additional group of

BLM administrative employees to the total operation which in turn may cause additional stress to those wild horses that are gathered.

Under Alternative C no gather operations would be conducted and would not result in any associated cumulative impacts.

Mitigation: Mitigation has been incorporated into the Proposed Action. No additional mitigation identified.

ELEMENTS NOT PRESENT OR NOT AFFECTED:

Table 19: Provides those Critical Elements Not Present or were Determined not Applicable to this Proposed Action.

Other Element	NA or Not Present	Applicable or Present, Not Brought Forward for Analysis
Prime and Unique Farmlands	X	
Native American Religious Concerns	X	
Environmental Justice Concerns	X	
Visual Resources		X
Fire Management		X
Forest Management		X
Realty Authorizations		X
Access and Transportation		X
Geology and Minerals	X	
Wild and Scenic Rivers	X	
Cadastral	X	
Socio-Economics		X

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PERSONS / AGENCIES CONSULTED: Native American tribes were notified of the proposed action and no replies were received. In addition, an updated list of current NEPA actions including the WDHA Gather was posted March 25, 2010 in the field office Public Area, on the White River Field Office NEPA Register and published in the local newspaper (Rio Blanco Herald Times) for two consecutive weeks. Appendix C – Interested Parties will be contacted when the document becomes available publicly and uploaded to the White River Field Office NEPA Register website.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility	Date Signed
Bob Lange	Hydrologist	Air Quality, Wastes (Hazardous or Solids), Water Quality (Surface and Ground), Hydrology and Water Rights, and Soils	5/14/2010
Maggie Marston	Botanist	Areas of Critical Environmental Concern, Threatened and Endangered Special Status Plant Species	3/24/2010
Michael Selle	Archaeologist	Cultural Resources, Paleontological Resources	3/10/2010

Name	Title	Area of Responsibility	Date Signed
Tyrell Turner	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation , Rangeland Management	3/24/2010
Ed Hollowed	Wildlife Biologist	Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Terrestrial and Aquatic Wildlife	5/20/2010
Andrew Burrows Jim Michels	Outdoor Recreation Planner Forester /Fire / Fuels Technician	Wilderness, Access and Transportation, Recreation, Visual Resources	3/25/2010/ 4/16/2010
Jim Michels	Forester /Fire / Fuels Technician	Fire Management, Forest Management	3/18/2010
Paul Daggett	Mining Engineer	Geology and Minerals	3/16/2010
Linda Jones	Realty Specialist	Realty Authorizations	3/24/2010
Melissa J. Kindall	Range Technician	Wild Horse Management	3/26/2010

COMPLIANCE/MONITORING: As per the Proposed Action.

NAME OF PREPARER: Melissa Kindall

NAME OF ENVIRONMENTAL COORDINATOR: Lisa Belmonte

DATE:

ATTACHMENTS: Map 1 – West Douglas Herd Area 2010 Inventory
Map 2 – West Douglas Herd Area Proposed Closure Locations
Appendix A – Standard Operating Procedures
Appendix B – Updated Standard Operating Procedures 2010
Appendix C – Interested Parties
Appendix D – Comment Responses
Appendix E – Genetic Reports

Appendix A -

Standard Operating Procedures

The following considerations and guidelines are considered the technical portion of the West Douglas Wild Horse Gather Plan. This appendix outlines the safety considerations involved with the technical aspects of capturing wild horses, transporting the wild horses to temporary holding facilities, handling the captured animals and shipping the wild horses to the BLM Canon City, Colorado holding facility. This appendix defines the roles and responsibilities of individuals directly involved with the planned gather project.

Most of the gathers will be completed through a nationally awarded gather contract. Agency personnel will be directly involved in the completion of the project. The same procedures for capture and handling of wild horses apply to contractors, to agency personnel, and to volunteers. As the population decreases, a BLM gather crew may be utilized to gather small numbers of wild horses.

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

A. Capture Method Descriptions

1. Helicopter drive trapping

The helicopter drive-trapping method of capture will be the primary method used to capture wild horses. The following stipulations and procedures will be followed during the contract period to ensure the welfare, safety, and humane treatment of the wild horses in accordance with the provisions of 43 CFR 4700 and with the national gather contractor. The captures will be conducted by BLM personnel and the contractor; both of whom are experienced in the humane capture and handling of wild horses. The same rules apply to both the contractor and to BLM personnel.

Helicopter drive-trapping involves using a helicopter to spot and then herd wild horses towards a pre-constructed trap. The trap is constructed of portable, round-pipe steel panels. Funnel-shaped trap wings are built out from the corners of the trap to funnel wild horses into the trap. Trap wings are built with jute or snow fence, which is draped over and tied around trees or steel posts. The wings form a visual barrier to the wild horses and they usually enter the trap without being aware they are being trapped.

The helicopter pilot completes a recon prior to trapping to see where the bands are located. Once the trap and wings are ready for use, the pilot starts moving one or more bands of wild horses toward the trap and into the wings. The number of wild horses/number of bands moved towards a trap at one time depends on a variety of facets including proximity of bands to the trap; the number of wild horses in each band; the distance bands travel to the trap; topography, weather conditions, temperature, time of year, animal condition, and trap dimensions.

The pilot herds the wild horses into the wings of the trap and then hovers while a ground crew on foot and/or horseback comes in behind the wild horses, hazes them into the trap corral and closes a gate behind the trapped wild horses. The helicopter remains in the trap wings close enough to keep the wild horses from running back out of the trap and far enough away to assure safety of the

ground crew and the wild horses. Once the gate is closed, or when the pilot sees it is best for him to leave the area, the helicopter leaves the trap site.

A pair of Parada or Judas horses; are often supplied by the contractor to encourage bands of wild horses to run smoothly into the trap corrals. The Judas horses are stable mates and do not like being separated from one another. One Judas horse is lightly tied in the trap corral. The second Judas horse is led into the mid-section of the trap wing and held along the edge of one side of the trap wing. As wild horses are moved by helicopter into the trap the Judas horse being held in the trap wing is released. The Judas horse runs towards the trap corral to be with his stable mate. The wild horses see a horse running free ahead of them. Their instinct tells them this horse is running to freedom; they follow the Judas horse into the trap corral. The Judas horses are familiar with being in close proximity to freshly-captured wild horses. Once trapped in the corral, the Judas horses hold their own but are not overly aggressive with the wild horses.

2. Helicopter Assisted Roping

Helicopter assisted roping is used when mares and foals become separated, when every wild horse must be captured from an area, and when specific animals are targeted for capture. Helicopter roping will only be used when determined by the COR or PI as the most efficient manner to capture specific wild horses and when the roping can be done in a safe and humane manner.

In helicopter assisted rope capture individual wild horses are herded by helicopter towards ropers who rope the wild horse(s). Once roped, another rider rides alongside the roped wild horse and roper, helping to haze, or herd, the roped wild horse either towards the trap or towards a stock trailer. Once at the trap the rope is flipped away from the roped wild horse's neck and it joins the rest of the trapped wild horses. When hazed to a stock trailer the wild horse is hobbled, laid on its side and then either pulled or slid into the trailer. If the wild horse is slid into the trailer a fabric or wood surface is placed under the wild horse to protect the wild horses' hide as it is pulled into the trailer. Once in the trailer the wild horse is freed of ropes and allowed to quiet down before being transported to the trap site.

3. Water Trapping

Water trapping will be used when wild horses are not able to be helicopter drive trapped or roped, when every wild horse must be captured from an area, and when specific wild horses are targeted for capture. In the upcoming gather water trapping may be used for both wild horses within the HA and to capture wild horses that have relocated outside HA boundaries. Water trapping will be used when determined by the COR or PI as the most efficient manner to capture specific wild horses and when the helicopter drive trapping and assisted helicopter roping proves to be inadequate means of gathering or cannot be done in a safe and humane manner.

In water trapping individual wild horses are allowed to use water sources before, during and after trap construction. The trap is constructed of portable, round-pipe steel panels. Funnel-shaped traps are built which allows wild horses to get deep into the trap so that when the gate release mechanism is activated time is allowed for the gate to close which traps the wild horses inside. Once trapped the captured wild horses will be loaded into an appropriate stock trailer and delivered to the holding facility. The wild horses are not herded towards the water they simply make use of the water that they frequent naturally or human enhanced water sources.

4. Bait Trapping

Bait trapping will be used when wild horses are not able to be helicopter drive trapped or roped, when every wild horse must be captured from an area, and when specific wild horses are targeted for capture. In the upcoming gather bait trapping may be used for both wild horses within the HA and to capture wild horses that have relocated outside HA boundaries. Bait trapping will only be used when determined by the COR or PI as the most efficient manner to capture specific wild horses and when the helicopter drive trapping, assisted helicopter roping, and water trapping prove to be inadequate means of gathering or cannot be done in a safe and humane manner.

In bait trapping, individual wild horses are provided with bait during and after trap construction. The trap is constructed of portable, round-pipe steel panels. Funnel-shaped traps are built which allows wild horses to get deep into the trap so that the gate release mechanism allows time for the gate to close. Once trapped the captured wild horses will be loaded into an appropriate stock trailer and delivered to the holding facility. The wild horses are not herded towards the bait but simply make use of the bait as a necessary supplemental feed source. All hay used as bait will be certified weed free hay.

B. Trap Site Selection

The Authorized Officer will make a careful determination of a boundary line to serve as an outer limit where the wild horses will be herded to each trap. The Authorized Officer will insure that the pilot is fully aware of all natural and manmade barriers that might restrict free movement of wild horses. Topography, distance, and current condition of the wild horses are factors that will be considered to set limits to minimize stress on wild horses.

For winter gathers, distance to trap sites will be reduced to a maximum of five (5) miles when snow depth is greater than one (1) foot. Animals will be moved slower when snow depth hinders their natural movement. Wild horses will be monitored by the contracting officer representative (COR) after the first few runs to ensure that they are not sweating excessively. If wild horses are sweating excessively, the speed and/or distance to the trap will be reduced. Wild horses will not be gathered by helicopter when temperatures are less than ten (10) degrees below zero and will not be pushed across icy terrain where sharp turns could cause injuries.

Gather operations will be monitored to assure the body condition of the wild horses is compatible with the distances and the terrain over which they must travel. Pregnant mares, mares with small colts, and other wild horses will be allowed to drop out of bands that are being gathered if required to protect the safety and health of the animals.

All trap and holding facility locations will be approved by the Authorized Officer prior to construction. The situation may require moving of the trap. All traps and holding facilities not located on public land must have prior written approval of the landowner.

Trap sites will be located to cause as little injury and stress to the animals, and as little damage to the natural resources of the area, as possible. Sites will mostly be located on or near existing roads. However, additional trap sites may be required, as determined by the Authorized Officer, to relieve stress to the animals caused by specific conditions at the time of the gather (i.e. dust, rocky terrain, temperatures, etc.) or to access wild horses in remote areas.

C. Stipulations for Portable Corral Traps/Exclosures

1. Capture traps will be constructed in a fashion to minimize the potential for injury to wild horses and BLM personnel. Trapped wild horses held in traps longer than 10 hours will be fed and watered.

2. The Colorado Division of Wildlife will be notified as soon as possible if any wildlife are injured during capture operations. Wildlife caught inside traps will be released immediately.

3. All traps, wings, and holding facilities shall be constructed, maintained, and operated to handle the animals in a safe and humane manner and in accordance with the following:

a. Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high for wild horses, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and temporary holding facilities shall be without corners; oval or round in design.

b. All loading chute sides shall be fully covered with plywood (without holes) or like material. The loading chute shall also be a minimum of 6 feet high.

c. All runways shall be of sufficient length and height to ensure animal and wrangler safety and may be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 6 feet for wild horses.

d. If a government furnished portable chute is used to restrain, age, or to provide additional care for animals, it shall be placed in the runway in a manner as instructed by or in concurrence with the Authorized Officer.

e. All crowding pens including the gates leading to the runways will, if necessary to prevent injuries from escape attempts, be covered with a material which prevents the animals from seeing out (plywood, burlap, snow fence etc.) and should be covered a minimum of 2 feet to 6 feet for wild horses.

f. Alternate pens will be constructed at the temporary holding facility to separate mares with newborn foals, sick or injured animals, and domestic strays. Wild horses may also be separated according to age, number, size, temperament, and sex. The pens will be constructed to minimize injury resulting from fighting and trampling.

4. If animals are held in the traps and/or holding facilities, a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day will be supplied. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day.

5. Water troughs shall be provided at each pen where animals are being held. Water troughs shall be constructed of such material (e.g. rubber, rubber over metal) so as to avoid injury to animals.

6. When dust conditions occur within or adjacent to the trap or holding facility, the contractor/BLM shall be required to wet down the ground with water.

D. Capture Stipulations

1. The contractor/BLM shall attempt to keep bands intact except where animal or human health and safety become considerations that prevent such procedures

2. At least one saddle-horse will be immediately available at the trap site to perform roping if necessary. Roping shall be done as determined by the Contracting Officer's Representative or Project Inspector. Roping will be performed in such a manner that bands will remain together. Under no circumstances shall animals be tied down for more than one hour.

3. Domestic saddle horses may be used to assist the helicopter pilot on the ground during the gather operation, by having the domestic horse act as a pilot (or "Judas") horse leading the wild horses into the trap site. Individual ground hazer(s) and individuals on horseback will be used to assist in the gather.

4. Foals will not be left behind. If a situation arises where a foal becomes separated from its mare ropers with the help of the pilot will make every attempt to capture either the mare, or the foal and reunite the mare/foal pair keeping the safety of all the horses and gather crew in mind.

E. Contract Helicopter, Pilot and Communications

1. The contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the contractor shall comply with the Contractor's Federal Aviation Certificates, and applicable regulations of the State in which the gather is located.

2. When refueling, the helicopter shall remain a distance of at least 1,000 feet or more from animals, vehicles (other than fuel truck), and personnel not involved in refueling.

3. The COR/PI shall have the means to communicate with the contractor's pilot at all times. If communications cannot be established, the Government will take steps as necessary to protect the welfare of the animals. The frequency (ies) used for this contract will be assigned by the COR/PI when the radio is used. The contractor shall obtain the necessary FCC licenses for the radio system.

4. The COR or PI will notify dispatch each morning prior to the helicopter leaving the ground to capture wild horses; and at the end of each day's project. Dispatch will be kept informed of the trap locations and location inside the HA where the pilot is herding/capturing wild horses. The gather pilot and COR will maintain open communications with dispatch to assure both parties are aware of aircraft other than the gather contractor who may be in the capture vicinity, or who request permission to travel through, or work in the capture vicinity.

5. The proper operation, service, and maintenance of all contractor furnished helicopters is the responsibility of the contractor. The BLM reserves the right to remove from service pilots and helicopters which, in the opinion of the Contracting Officer or COR/PI, violate contract and FAA rules, are unsafe or otherwise unsatisfactory. In this event, the contractor will be notified in writing to furnish replacement pilots or helicopters within 48 hours of notification. All such replacements must be approved in advance of operation by the Contracting Officer or his/her representative.

6. All incidents/accidents occurring during the performance of any delivery order shall be immediately reported to the COR.

F. Animal Handling and Care

1. Prior to capturing wild horses, the COR/PI will conduct a pre-capture evaluation of existing conditions in the gather areas. The evaluation will determine whether the proposed activities will require the presence of a veterinarian during the project or if the veterinarian can remain on-call during the gather operation. Animal health, temperature extremes; topography, distance to the traps, and other factors will be considered when deciding between an on-call vet contract and an on-site contract.

2. The contractor will be apprised of all the conditions and will be given instructions regarding the capture and handling of animals to ensure their health and welfare is protected.

3. The Authorized Officer and pilot will identify and discuss natural hazards and man-made hazards on the ground by looking at a topographic map so the helicopter flight crew, ground personnel, and wild horse safety will be maximized. Aerial hazards will be recorded on the project map.

4. No fence modifications will be made without authorization from the Authorized Officer. The contractor/BLM shall be responsible for restoration of any fence modification.

5. If the route the contractor/BLM proposes to herd animals passes through a fence, the opening shall be large enough to allow free and safe passage. Fence material shall be rolled up and fence posts will be removed or sufficiently marked to ensure safety of the animals. The standing fence on each side of the gap will be well flagged and covered with jute or like material.

6. Wings shall not be constructed from materials injurious to animals and must be approved by the Authorized Officer.

7. It is the responsibility of the contractor/BLM to provide security to prevent loss, injury, or death of captured animals until delivery to final destination.

8. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours.

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

10. Capture methods will be identified prior to issuance of delivery orders. Regardless of which methods are selected, all capture activities shall incorporate the following:

G. Treatment of Injured or Sick; Disposition of Terminal Animals

1. The contractor/BLM shall restrain sick or injured animals if treatment is necessary. A veterinarian may be called to make a diagnosis and final determination. If necessary, destruction shall be done by the most humane method available. Authority for humane destruction of wild horses (or burros) is provided by the Wild Free-Roaming Horse and Burro Act of 1971, Section 3(b)(2)(A), 43 CFR 4730.1, BLM Manual 4730 - Destruction of Wild Horses and Burros and Disposal of Remains, and is in accordance with BLM policy.

2. Any captured wild horses that are found to have the following conditions may be humanely destroyed:

a. The animal shows a hopeless prognosis for life.
b. Suffers from a chronic disease.
c. Requires continuous care for acute pain and suffering.

3. The Authorized Officer will determine if injured animals must be destroyed and provide for destruction of such animals. The contractor/BLM may be required to dispose of the carcasses as directed by the Authorized Officer.

4. The carcasses of the animals that die or must be destroyed as a result of any infectious, contagious, or parasitic disease will be disposed of by burial to a depth of at least 3 feet.

5. The carcasses of animals that must be destroyed as a result of age, injury, lameness, or non-contagious disease or illness will be disposed of by removing them from the capture site or holding corral and placing them in an inconspicuous location to minimize visual impacts. Carcasses will not be placed in drainages regardless of drainage size or downstream destination.

H. Motorized Equipment

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The contractor shall provide the Authorized Officer with a current safety inspection (less than one year old) of all tractor/stock trailers used to transport animals to final destination.

2. Vehicles shall be in good repair, of adequate rated capacity, and operated so as to ensure that captured animals are transported without undue risk or injury.

3. Only stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities. Only stock trailers or single deck trucks shall be used to haul animals from temporary holding facilities to final destination(s). Sides or stock racks of transporting vehicles shall be a minimum height of 6 feet 6 inches from the vehicle floor. Single deck trucks with trailers 40 feet or longer shall have a minimum of two (2) partition gates providing a minimum three (3) compartments within the trailer to separate animals. The compartments shall be of equal size plus or minus 10 percent. Trailers less than 40 feet shall have at least one partition gate providing two (2) compartments within the trailer to separate animals. The compartments shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have at the minimum a 5 foot wide swinging gate. The use of double deck trailers is unacceptable and will not be allowed.

4. All vehicles used to transport animals to the final destination(s) shall be equipped with at least one (1) door at the rear end of the vehicle, which is capable of sliding either horizontally or vertically. The rear door must be capable of opening the full width of the trailer. All panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of the trailer must be strong enough, so that the animals cannot push their hooves through the sides. Final approval of vehicles to transport animals shall be held by the Authorized Officer.

5. Floors of vehicles, trailers, and the loading chute shall be covered and maintained with materials sufficient to prevent the animals from slipping.

6. Animals to be loaded and transported in any vehicle or trailer shall be as directed by the Authorized Officer and may include limitations on numbers according to age, size, sex, temperament, and animal condition. The minimum square footage per animal is as follows:

- 11 square feet/adult horse (1.4 linear feet in an 8 foot wide trailer)
- 8 square feet/adult burro (1.0 linear foot in an 8 foot wide trailer)
- 6 square feet/horse foal (0.75 linear feet in an 8 foot trailer)
- 4 square feet/burro foal (0.50 linear feet in a 8 foot wide trailer)

7. The Authorized Officer shall consider the condition of the animals, weather conditions, type of vehicles, distance to be transported, or other factors when planning for the movement of captured animals. The Authorized Officer shall provide for any brand and/or inspection services required for the captured animals.

8. Communication lines will be established with personnel involved in off-loading the animals to receive feedback on how the animals arrive (condition/injury etc.). Should problems arise, gathering methods, shipping methods and/or separation of the animals will be changed in an attempt to alleviate the problems.

9. If the Authorized Officer determines that dust conditions are such that animals could be endangered during transportation, the contractor/BLM will be instructed to adjust speed and/or use alternate routes.

10. Periodic checks by the Authorized Officer may be made as animals are transported along dirt roads. If speed restrictions are in effect the Authorized Officer will at times follow and/or time trips to ensure compliance.

I. **Special Stipulations**.

1. Private landowners or the proper administering agency(s) would be contacted and authorization obtained prior to setting up traps on any lands that are not administered by BLM. Wherever possible, traps would be constructed in such a manner as to not block vehicular access on existing roads.

2. Gathering would be conducted when soils are dry or frozen and conditions are optimal for safety and protection of the wild horses and wranglers. Whenever possible, gathering activities will be scheduled to minimize impacts with big game hunting seasons.

3. Gathers would not be conducted between March 1 and June 30 to reduce the risk of injury or stress to pregnant mares and mares with young foals, except in case of an emergency necessitated by wildlife, drought, etc.

4. The helicopter would avoid eagles and other raptors, and would not be intentionally flown over any identified active raptor nests. Unnecessary flying would not occur over big game on their winter ranges or active fawning/calving grounds during the period of use.

J. Safety

Safety of BLM employees, contractors, members of the public, and the wild horses will receive primary consideration. The following safety measures will be used by the Authorized Officer and all others involved in the operation as the basis for evaluating safety performance and for safety discussions during the daily briefings:

1. A briefing between all parties involved in the gather will be conducted each morning.

2. All BLM personnel, contractors, and volunteers will wear protective clothing suitable for work of this nature. BLM will alert observers of the requirement to dress properly. BLM will assure that members of the public are in safe observation areas.

3. Emergency road closures may be planned and implemented to control public access once trap locations are determined.

4. BLM Law Enforcement Officer presence may be required to ensure the safety of the public, BLM personnel, contractors, volunteers, and animals.

K. Responsibility and Lines of Communication

1. The Contracting Officer's Representative and Project Inspectors have the direct responsibility to ensure the contractor's compliance with the contract stipulations.

2. The Associate Field Manager and the Field Manager will take an active role to ensure the appropriate lines of communication are established between the Field Office, State Office, and Royal Gorge Field Office.

3. All employees involved in the gathering operations will keep the best interests of the animals and their own safety at the forefront at all times.

4. The COR will maintain open communications with dispatch to assure both parties are aware of project status; capture locations; and daily aviation activity.

Appendix B – Updated Standard Operating Procedures 2010

Standard Operating Procedures for Wild Horse Gathers

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

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

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

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

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

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

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

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

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

2. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who will consider terrain, physical barriers, weather, condition of the animals

and other factors. Under normal circumstances this travel should not exceed 10 miles and may be much less dependent on existing conditions (i.e. ground conditions, animal health, extreme temperature (high and low)).

3. All traps, wings, and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:

a. Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and holding facilities shall be oval or round in design.

b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered, plywood, metal without holes larger than 2"x4".

c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for burros, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet above ground level for burros and 1 foot to 6 feet for horses. The location of the government furnished portable fly chute to restrain, age, or provide additional care for the animals shall be placed in the runway in a manner as instructed by or in concurrence with the COR/PI.

d. All crowding pens including the gates leading to the runways shall be covered with a material which prevents the animals from seeing out (plywood, burlap, plastic snow fence, etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses

e. All pens and runways used for the movement and handling of animals shall be connected with hinged self-locking or sliding gates.

4. No modification of existing fences will be made without authorization from the COR/PI. The Contractor shall be responsible for restoration of any fence modification which he has made.

5. When dust conditions occur within or adjacent to the trap or holding facility, the Contractor shall be required to wet down the ground with water.

6. Alternate pens, within the holding facility shall be furnished by the Contractor to separate mares or jennies with small foals, sick and injured animals, estrays or other animals the COR determines need to be housed in a separate pen from the other animals. Animals shall be sorted as to age, number, size, temperament, sex, and condition when in the holding facility so as to minimize, to the extent possible, injury due to fighting and trampling. Under normal conditions, the government will require that animals be restrained for the purpose of determining an animal's age, sex, or other necessary procedures. In these instances, a portable restraining chute may be necessary and will be provided by the government. Alternate pens shall be furnished by the Contractor to hold animals if the specific gathering requires that animals be released back into the capture area(s). In areas requiring one or more satellite traps, and where a centralized holding facility is utilized, the contractor may be required to provide additional holding pens to segregate animals transported from remote

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

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

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

8. It is the responsibility of the Contractor to provide security to prevent loss, injury or death of captured animals until delivery to final destination.

9. The Contractor shall restrain sick or injured animals if treatment is necessary. The COR/PI will determine if animals must be euthanized and provide for the destruction of such animals. The Contractor may be required to humanely euthanize animals in the field and to dispose of the carcasses as directed by the COR/PI.

10. Animals shall be transported to their final destination from temporary holding facilities as quickly as possible after capture unless prior approval is granted by the COR for unusual circumstances. Animals to be released back into the HMA following gather operations may be held up to 21 days or as directed by the COR. Animals shall not be held in traps and/or temporary holding facilities on days when there is no work being conducted except as specified by the COR. The Contractor shall schedule shipments of animals to arrive at final destination between 7:00 a.m. and 4:00 p.m. No shipments shall be scheduled to arrive at final destination on Sunday and Federal holidays, unless prior approval has been obtained by the COR. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours in any 24 hour period. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the COR/PI or Field Office horse specialist.

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

1. Capture attempts may be accomplished by utilizing bait (feed, water, mineral licks) to lure animals into a temporary trap. If this capture method is selected, the following applies:

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

b. All trigger and/or trip gate devices must be approved by the COR/PI prior to capture of animals.

c. Traps shall be checked a minimum of once every 10 hours.

2. Capture attempts may be accomplished by utilizing a helicopter to drive animals into a temporary trap. If the contractor selects this method the following applies:

a. A minimum of two saddle-horses shall be immediately available at the trap site to accomplish roping if necessary. Roping shall be done as determined by the COR/PI. Under no circumstances shall animals be tied down for more than one half hour.

b. The contractor shall assure that foals shall not be left behind, and orphaned.

3. Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. If the contractor, with the approval of the COR/PI, selects this method the following applies:

a. Under no circumstances shall animals be tied down for more than one hour.

b. The contractor shall assure that foals shall not be left behind, or orphaned.

c. The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who will consider terrain, physical barriers, weather, condition of the animals and other factors.

C. Use of Motorized Equipment

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The Contractor shall provide the COR/PI, if requested, with a current safety inspection (less than one year old) for all motorized equipment and tractor-trailers used to transport animals to final destination.

2. All motorized equipment, tractor-trailers, and stock trailers shall be in good repair, of adequate rated capacity, and operated so as to ensure that captured animals are transported without undue risk or injury.

3. Only tractor-trailers or stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities, and from temporary holding facilities to final destination(s). Sides or stock racks of all trailers used for transporting animals shall be a minimum height of 6 feet 6 inches from the floor. Single deck tractor-trailers 40 feet or longer shall have at least two (2) partition gates providing at least three (3) compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing at least two (2) compartments within the trailer to separate the animals. Compartments in all tractor-trailers shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have a minimum 5 foot wide swinging gate. The use of double deck tractor-trailers is unacceptable and shall not be allowed.

4. All tractor-trailers used to transport animals to final destination(s) shall be equipped with at least one (1) door at the rear end of the trailer which is capable of sliding either horizontally or vertically. The rear door(s) of tractor-trailers and stock trailers must be capable of opening the full width of the trailer. Panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of all trailers must be strong enough so that the animals cannot push their hooves through the side. Final approval of tractor-trailers and stock trailers used to transport animals shall be held by the COR/PI.

5. Floors of tractor-trailers, stock trailers and loading chutes shall be covered and maintained with wood shavings to prevent the animals from slipping as much as possible during transport.

6. Animals to be loaded and transported in any trailer shall be as directed by the COR/PI and may include limitations on numbers according to age, size, sex, temperament and animal condition. The following minimum square feet per animal shall be allowed in all trailers:

11 square feet per adult horse (1.4 linear foot in an 8 foot wide trailer);
8 square feet per adult burro (1.0 linear foot in an 8 foot wide trailer);
6 square feet per horse foal (.75 linear foot in an 8 foot wide trailer);
4 square feet per burro foal (.50 linear feet in an 8 foot wide trailer).

7. The COR/PI shall consider the condition and size of the animals, weather conditions, distance to be transported, or other factors when planning for the movement of captured animals. The COR/PI shall provide for any brand and/or inspection services required for the captured animals.

8. If the COR/PI determines that dust conditions are such that the animals could be endangered during transportation, the Contractor will be instructed to adjust speed.

D. Safety and Communications

1. The Contractor shall have the means to communicate with the COR/PI and all contractor personnel engaged in the capture of wild horses utilizing a VHF/FM Transceiver or VHF/FM portable Two-Way radio. If communications are ineffective the government will take steps necessary to protect the welfare of the animals.

a. The proper operation, service and maintenance of all contractor furnished property is the responsibility of the Contractor. The BLM reserves the right to remove from service any contractor personnel or contractor furnished equipment which, in the opinion of the contracting officer or COR/PI violate contract rules, are unsafe or otherwise unsatisfactory. In this event, the Contractor will be notified in writing to furnish replacement personnel or equipment within 48 hours of notification. All such replacements must be approved in advance of operation by the Contracting Officer or his/her representative.

b. The Contractor shall obtain the necessary FCC licenses for the radio system

c. All accidents occurring during the performance of any task order shall be immediately reported to the COR/PI.

2. Should the contractor choose to utilize a helicopter the following will apply:

a. The Contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the Contractor shall comply with the Contractor's Federal

Aviation Certificates, applicable regulations of the State in which the gather is located.

b. Fueling operations shall not take place within 1,000 feet of animals.

G. Site Clearances

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

Prior to setting up a trap or temporary holding facility, BLM will conduct all necessary clearances (archaeological, T&E, etc). All proposed site(s) must be inspected by a government archaeologist. Once archaeological clearance has been obtained, the trap or temporary holding facility may be set up. Said clearance shall be arranged for by the COR, PI, or other BLM employees.

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

H. Animal Characteristics and Behavior

Releases of wild horses would be near available water. If the area is new to them, a short-term adjustment period may be required while the wild horses become familiar with the new area.

I. Public Participation

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

J. Responsibility and Lines of Communication

Contracting Officer's Representative/Project Inspector
Melissa Kindall

Contracting Officer's Representative/Project Inspector
Tyrell Turner

The Contracting Officer’s Representatives (CORs) and the project inspectors (PIs) have the direct responsibility to ensure the Contractor’s compliance with the contract stipulations. The Assistant Field Manager, James Roberts, for Renewable Resources and Field Manager, Kent Walter, will take an active role to ensure the appropriate lines of communication are established between the field, White River Field Office, Northwest Colorado District Office, Colorado State Office, National

Program Office, and BLM Holding Facility offices at Canon City. All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

All publicity, formal public contact and inquiries will be handled through the Assistant Field Manager for Renewable Resources and Northwest Colorado District Office Public Affairs. These individuals will be the primary contact and will coordinate with the COR/PI on any inquiries.

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

The contract specifications require humane treatment and care of the animals during removal operations. These specifications are designed to minimize the risk of injury and death during and after capture of the animals. The specifications will be vigorously enforced.
Should the Contractor show negligence and/or not perform according to contract stipulations, he will be issued written instructions, stop work orders, or defaulted.

Appendix C – Interested Parties

Senator Al White
Bill Barnard
Jack Barnett, CRBSCF
Patti Barney
Thomas Berry
Mark Bishop, Sombrero Ranches Inc
Geoff Blakeslee, Carpenter Ranch
County Commissioners, Rio Blanco County
Deniz Bolbol, Wild Horse Defenders
Sharen Branch
Gary Brannon
Buckles Ranch
Dale and Dean Burke
Judy Cady, Friends of the Mustangs
Donna Caplan
Colorado Cattlemen's Assoc
Colorado Division of Wildlife, Bill DeVergie
Colorado Division of Wildlife, Terry Wygant
Jeff Comstock, Moffat County Dept Resources
Ed Coryell, Brand Inspector
Wade Cox, Cox Bros Land and Livestock
Kirk Cunningham, Consv Chair Rocky Mountain
Jimmie and Joy Dearman
T. Wright Dickinson, NW Resource Adv Council
Matt Dillon, Pryor Mtn Wild Mustang Center
Betsy Director, Uintah/Ouray Agency
Craig Downer
Barb Evens, Friends of the Mustang
Patricia A. Fennell
Barb Flores, American Mustang & Burro Assoc
Gail Fox
Friends of the Mustangs
Nancy A. Lindley-Gauthier, The Prancing Pony
Rodeo and Marilyn Harbottle
Jon Hill, Cripple Cowboy Cow Outfit
Dave Hillberry
Marji Herrmann, El Paso Oil and Gas
Humane Society of America, Wildlife Habitat Protection
Darynne Anna Jessler
Allison Jones, Wild Utah Project
Clayton Karran
Ginger Kathrens, The Cloud Foundation
Frank and Ginger Kime, Kime Ranch
Jauson King
Audrey Kipp
Bonnie Kline, CO Wool Grower's Assoc
Tamara Lackey, Political Voice for Animals
Patricia Lane, HSUS
Dawn Lappin, WHOA
Andrea Lococo
Longhopes Donkey Shelter
Mike Lopez
Cindy MacDonald
Tim Mantle
Mike Marinovich, CE Brooks & Associates, PC
John Marvel, Western Watersheds Project
Tina Mavor, Mile High Mustang Club
Ed McLain, Encana Oil and Gas (USA) Inc
Cindy Meyer
Mile Hi Mustangs
Jim Miller, Dept of Agriculture
Toni Moore
Reed Morris, CO Environmental Coalition
Maxine Natchees, Tribal Council
Roby Nichols, Debeque Wild Horse Council
Don O'Banion, Friends of the Mustangs
Michael H. Palmer
Christopher M. Papouchis, API
Wayne Pennell
Leah and Robert Plant
Lisa Pollard and Gabrielle Elliott
Rangely Town Government
Dan Rathburn
Timothy Reynolds, Tim & Randy Ecology Co
Dave Robertson, Twin Buttes Ranch
Erin Robertson, Center for Native Ecosystems
Own Robertson
Scott Robertson
Samantha Rolando, American Humane Assoc
Randy Russell, Garfield County Planning Office
Bob Schmidt
Jerry Schmutzler
Mary Schoknecht
Richard Sewing, National Mustang Assoc
Monty Sheridan
Roger Smith
Steve Smith, Western CO Congress
Vera Smith, Public Lands Policy
Valerie Stanley, Animal Legal Defense Fund
Stirrup Cup Farm, LLC
Matt Sura
Karen Sussman, ISPMB
Patti Temple
Nick Theos Family Ltd
LR Pat Thompson, Thompson Ranch
Karen Thymes, Political Voice for Animals
Barbara Warner
George Wenschhof
Celia E. Wetherill
Wild Horse Observers Assoc
The Wilderness Society, Regional Director
Lonnie Williamson, Wildlife Management Institute
Larry and Jane Yazzie
Ted Zukoski, Attorney, Earth Justice

Appendix D

Public Comments on West Douglas Herd Area Gather and BLM's Responses to the Comments

Introduction

The public comment period for this Environmental Assessment was from June 17 to July 19, 2010. During the comment period the BLM received approximately 3033 public comments in the form of individual letters, form letters, telephone calls, and emails from the interested public. Of the comments received, 2,792 comments were received during the comment period, an additional 241 were received after the end of the comment period. In response to comments received the BLM made some minor changes in the final EA.

The BLM considered every comment received, and then categorized the comments by issue. Below is a summary of the comments received, followed by the BLM's response. None of the comments received were substantive, i.e., no substantial changes were made to the environmental assessment as a result of the comments received. However, minor changes were made to clarify the intent of the Proposed Action alternative.

Most of the comments received addressed two issues: (1) the effect of the United States District Court's August 5, 2009, decision in Colorado Wild Horse and Burro Coalition, Inc., et al. v Salazar, 639 F. Supp. 2d 87 (D.D.C. 2009) (Civil Action No. 06-1609 (RMC)), and (2) the BLM's "Adaptive Management" policy including designating an area to be managed principally for wild horse herds under 43 CFR 4710.3-2. The responses to these comments as well as comments received regarding issues that were outside the scope of this EA or did not provide factual data are addressed below.

Comment 1: Considering the ruling by the Federal District Court in 2009, we are perplexed by your most recent attempt to "zero out" the small, historic herd of wild horses residing in the West Douglas Herd Area. Judge Collyer found that the BLM exceeded its authority to remove all wild horses from the West Douglas Herd Area in Colorado and set aside the plan and stopped the BLM from implementing it. Because the BLM relies on the 1997 White River Resource Management Plan and the 2005 Amendment to that Plan as the basis for removing all of the horses, rather than any determination that the horses are "excess," Judge Collyer's opinion would control this EA and require that it, too, be set aside.

Response 1: The Court's 2009 decision determined that the BLM's 2008 Gather Plan was "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right." However, the Court expresses no opinion on the lawfulness of any other BLM action challenged by the Plaintiffs. The Court stated that BLM failed to make a determination of excess with respect to wild horses in the West Douglas Herd Area and set aside the 2008 Gather Plan.

The BLM has determined that all of the horses within the West Douglas Herd Area are excess animals and require immediate removal in accordance with Section 1333 (b)(2) of The Wild Free Roaming Horses and Burros Act of 1971. Refer to EA, page 4 and the 2010 Decision Record for a detailed summary of the BLM's rationale.

If you would like to review that environmental assessment, please go to http://www.blm.gov/style/medialib/blm/co/information/nepa/white_river_field/FY_2005.Par.27083.File.dat/co11005083ea.pdfhttp://www.blm.gov/co/st/en/fo/wrfo.html

Comment 2: The Court concluded that a "*decision to remove an entire herd of concededly non-excess wild free-roaming horses and burros is ... impermissible*". With that finding, Judge Rosemary Collyer put an end to the BLM's overreaching claim that it can round up the entire West Douglas Herd whether or not they are deemed "*excess*". The judge put it bluntly, "*Congress did not intend for BLM's management authority to be so broad.*"

Response 2: In accordance with the Wild Free-Roaming Horses and Burros Act of 1971, the BLM has determined that all of the wild horses within and immediately adjacent to the WDHA are excess animals that require immediate removal in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship within the area (See EA, Page 4). The rationale for the BLM's determination is also summarized in the Decision Record.

Comment 3: Despite this decision, BLM is back with yet another EA designed to wipe out this small herd. By eliminating the wild horse herd, the BLM will be free to achieve the desired results of an Allotment Management Plan (AMP) prepared in 1999. This AMP, by the way, was created without the presence of any member of the wild horse advocacy community, even though advocates who wanted to participate made requests. The reason for rejecting these requests was that the BLM did not intend to manage for wild horses in the West Douglas Herd Area (HA) past the year 2007, so having a representative for the wild horses present for the design of the AMP was unnecessary.

Response 3: This comment is outside the scope of this environmental analysis**.** The BLM analyzed the 1999 Allotment Management Plan in accordance with the National Environmental Policy Act (NEPA) under CO-017-99-93-EA, and issued proposed and final decisions which were subject to administrative review by any potentially affected members of the public. The AMP was developed in conformance with the 1997 White River Resource Management Plan. The White River Resource Management Plan was also completed in accordance with NEPA and allowed for public review and comment of its management objectives. The current 2010 West Douglas Herd Area Gather Plan Environmental Assessment was completed to analyze the impacts associated with implementation of previous land use planning decisions.

Comment 4: It appears that the subsequent AMP is designed to increase Animal Unit Months (AUMs) for cow/calf pairs while eliminating the wild horse herd and forage allocated to wild horses added to livestock AUMs.

Response 4: This comment is outside the scope of this environmental analysis. Decisions to allocate forage to domestic livestock were made previously and remain in effect. For information, the 1997 White River Resource Management Plan allocated Animal Unit Months

(AUM) to allow for the management of 0-50 wild horses over the short term (zero to 10 years). The long-term objective (+10 years) was to remove all wild horses from the West Douglas Herd Area. Zero AUMs were allocated to wild horses in the 2005 West Douglas Herd Area Amendment of the White River Resource Management Plan/Record of Decision. Further, no additional AUMs were allocated to livestock as part of the 2005 Decision. However, in response to the public comments received relative to review of this EA, the BLM has added a table that shows the actual use of grazing permittees over the past 5 years in the final EA Page 38 Table 12.

Comment 5: Let's examine this statement piece by piece. Basically, you are saying that maintaining a herd of 150-200 adult wild horses would require intensive management. What kind of "intensive" demands would be required to simply allow the herd to grow naturally, without removals, until it reaches a population range which would insure the herd's future survival without inbreeding?[5]

Response 5: This comment is outside the scope of this environmental analysis. Please refer to the 2005 WDHAA, alternative B fully analyzed the anticipated impacts from managing a wild horse herd with a population of 29 to 60 wild horses. The types of anticipated intensive management required to manage such a small population of wild horses are provided in the 2007 Decision Record for this document.

Comment 6: As far as the difficulty of providing adequate horse habitat and suitable conditions for other competing uses, taking 1,000 AUMs from the cattle side and allocating them to the wild horses would solve this situation. BLM has the authority to reduce livestock grazing permits given them in CFR 4710.5 and 4710.6G.

Response 6: Refer to the BLM's response to Comment 4.

Comment 7: Regarding the "problem" of keeping wild horses in the Herd Area, the BLM needs to reexamine the substantial lost acreage taken away from the wild horse herd area and reinstate the many thousands of acres taken away which would allow for buffer zones so that the horses might reoccupy their traditional lands. Why was this acreage taken away in the first place? Adequate summer and winter range must be taken into account and an understanding of the horses/ natural migratory patterns to meet it biotic needs must be considered and understood as well.

Response 7: This comment is considered to be beyond the scope of this analysis. The boundaries for the WDHA and the Piceance-East Douglas Herd Management Area (PEDHMA) were established in the 1981 Unit Resource Analysis (URA), and have been in existence since the 1981. See Animal Protection Institute of America, 151 IBLA 396 (2000) (declining to entertain challenge to diminution of wild horse habitat in WRRMP).

[5] Genetically viable defined here as a population of horses 1 year and older that is at or above 150-200 individuals with a Ne (genetic effective number) of 50 or more. This is the bare minimum for genetic viability of wild horse and burro population.

Comment 8: Lastly, the argument that has been made for years that the area is too "rough" to manage wild horses in is ridiculous. If permittees can remove their cows on a regular basis, why can't the BLM remove some horses using bait and water trapping, and when necessary, helicopter drive trapping? This is obviously possible or you would not be asking the taxpayers to fund at considerable expense the total removal of the herd via helicopter roundups.

Response 8: This comment is beyond the scope of this environmental analysis. The 1997 RMP and 2005 WDHAA addressed the management of wild horses within the HA and determined that management of horses within the WDHA would not achieve a thriving natural ecological balance and multiple use relationship, and would be better accomplished within the PEDHMA. Additionally, the BLM has examined all current available information and determined that excess wild horses exist and require immediate removal consistent with Section 1333 (b) (2) of the WFRHBA.

Water and bait trapping are considered and addressed in the EA Page 12. The EA addresses the rough terrain as a factor in gathering, not managing, wild horses on Page 14. IM 2010-183 Helicopter Capture of Wild Horses and Burros

Comment 9: I would point out that you have "*season-long grazing*" by the majority of the cattle using this area: *The Twin Buttes Ranch Co. runs 1,157 cattle (cow/calf pairs) on the public lands throughout the year.*

Response 9: Refer to the BLM's response to Comment 4, also refer to EA page 36 table 8 regarding season of livestock use.

Comment 10: In 1990 the Government Accountability Office Report underscored that wild horse removals did not significantly improve range conditions.

Response 10: The more recent 2009 GAO report states: "BLM has made significant progress toward setting and meeting AML (the optimum number of animals which results in a thriving natural ecological balance and avoids range deterioration)." The vegetation, wildlife, and range sections of the current EA (see EA, pages 21-26, 38-34, and 34-41) explains how the removal of excess wild horses from the WDHA will continue to result in improved natural ecological balance and avoid range deterioration.

Comment 11: The Native Wild Equids: ….Because BLM wants to do away with the West Douglas herd, it hasn't even bothered to consider, much less analyze, the benefits of having a herd of wild horses in this area. This demonstrates BLM's single-minded, scientifically devoid approach to wild horse management. Telling is BLM's failure to consider *any* alternative to removal of the wild horses despite being commanded to do so by the plain language of the statute in the "least feasible management" requirement of 16 U.S.C. § 1333. As Judge Collyer observed, removal of wild horses from the range is the antithesis of least feasible management activity.

Response 11: See the BLM's response to Comments 1 and 2 above. The BLM analyzed the value of wild horses to the area in the 2005 WDHAA.

Comment 12: Please consider that the removal of a mustang costs already strapped American taxpayers over $2,000 in addition to a possible $2,098 to $470/year holding cost for the rest of the horse's life if they are not adopted or sold. Why not apply the initial savings of over $172,000 to range improvements, livestock and fence removals, noxious weed treatment, water improvements, and any number of projects that would improve the condition of the West Douglas area for wild horses and all the other wildlife species.

Response 12: Refer to the BLM's response to Comments 1 and 2 above. The BLM has determined excess wild horses exist within and outside the WDHA and in accordance with Section 1333(b) (2) of the WFRHBA and must be immediately removed.

Comment 13: In the EA the Bureau of Land Management (BLM) proposes to remove all 86 wild horses from the West Douglas Herd Area (WDHA), including what they state are horses outside the WDHA. This action would be in violation of the Law, as the Wild Free-Roaming Horses and Burros Act of 1971 (WFRHBA) requires that wild horses "are to be considered in the area where presently found, as an integral part of the natural system of the public lands." Additionally, this action violates Section 302 of the Federal Land Policy and Management Act (FLPMA) which states: *"Sec. 302. [43 U.S.C. 1732] (a) The Secretary shall man-age the public lands under principles of multiple use and sustained yield, in accordance with the land use plans developed by him under section 202 of this Act when they are available, except that where a tract of such public land has been dedicated to specific uses according to any other provisions of law it shall be managed in accordance with such law."* (Emphasis mine)

Response 13: See the BLM's responses to Comments 1, 2 and 12. Also refer to the EA, page 13-40.

Comment 14: On page 4 of the EA, under <u>Statutes:</u> BLM quotes Section 3(a) of the WFRHBA, which states: "The Secretary shall 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." As there has not yet been, and will not be, after this gather, either the achieving or maintaining of a thriving natural ecological balance by removing wild horses as long as there is no reduction in livestock grazing, the removal of the horses is neither in accordance with the requirements of the law, nor economically prudent.

Response 14: Refer to the BLM's response to Comments 3 and 4 above.

Comment 15: Regulations are not law, but must be in abidance with the law. The establishment of herd management areas through land use plans, as outlined in Title 43 of the Code of Federal Regulations Section 4710.1, is not in accordance with the law if it allows herd areas used by wild horses when the Act was passed, to not be managed for wild horses and to be zeroed out. This would violate both the WFRHBA and FLPMA Section

302, first paragraph. The BLM does NOT have the authority to decide where they will and will not manage for wild horses if the area was used by wild horses when the Act was passed.

Response 15: BLM's decision is in accordance with applicable statutes and regulations. BLM is still managing for wild horses in the area used by wild horses when the Act passed. Through the development of its land use planning alternatives, BLM has determined that a thriving natural ecological balance and multiple-use relationship could not be maintained by continued management of wild horses outside Piceance-East Douglas HMA. Refer to the EA, page 2 and the Decision Record for additional information.

Comment 16: This EA has failed to demonstrate that there is any excess of wild horses in the WDHA. The number of wild horses is less than it has been in any census in recent years. Additionally, the AUMs of use by wild horses, per this document, and using the formula: 86 horses x 12 months, there is only 1,032 AUMs of wild horse use per year. The 2010 West Douglas Herd Area census of wild horses reported the locations of only 86 wild horses in the area, including those purported to be "outside the HA". Exhibit B, the WDHA map from the 1996 WRRA Wild Horse Removal Plan/EA, clearly shows that that the HA included acreage that is not included in the current map.

Response 16: The BLM's determination of excess wild horses within and adjacent to the WDHA is discussed in the EA, page 4. Also see the Decision Record which summarizes the BLM's rationale and new excess determination.

Comment 17: Continued from comment 16 above: These acres were part of the original herd area and were, and are now, used by wild horses. As the horses said to be "outside the HA" are located within the herd area identified in the 1996 document, they are NOT "outside", but are still within the herd area, and therefore cannot be removed. Additionally, it appears that BLM has decided to exclude wild horses from the Oil Spring Mountain WSA. Nowhere in the law does it say that a WSA must eliminate wild horses. This is an arbitrary and capricious decision on the part of BLM, and the WSA was part of the original herd use area for wild horses, where they are to be considered "as an integral part of the natural system of the public lands."

Response 17: Refer to the BLM's response to Comment 7 and 16.

Comment 18: As the number of wild horses counted in the West Douglas Herd Area is lower than it has been in recent years, and would seem to indicate a birth rate that is not keeping up with the mortality rate, and whereas the use by livestock is ten times the use by wild horses, it would seem to indicate to any reasonable person that it is livestock that should be reduced and not wild horses.

Response 18: Refer to the BLM's response to Comment 16 above. Also refer to the EA pages 13-14.

Comment 19: This EA has failed to present evidence that there is ANY excess of wild horses in the West Douglas Herd Area, and has, once again, demonstrated its bias towards eliminating this herd for the benefit of the livestock permittees, specifically the Twin Buttes Allotment.

Response 19: Refer to the BLM's response to Comment 16.

Comment 20: BLM should not be gathering horses during the winter.

Response 20: Your comment is noted. Refer to the EA, Alternative B, pages 19 which discusses the impacts to wild horses associated with winter gathers in and around the WDHA.

Comment 21: On page 5, the EA states "before using helicopters or motor vehicles in the management of wild horses or burros, the authorized officer shall conduct a public hearing in the area where such use is to be made". When will the hearing take place and where will BLM post notice of the time and location?

Response 21: The hearing will be Wednesday September 15, 2010, 6:00p.m.-7:00p.m. in The Community Room at Mountain Valley Bank 400 Main Street Meeker, CO. notice of this hearing will also be posted in the local newspaper, and the BLM WRFO website: http://www.blm.gov/co/st/en/fo/wrfo.html. This information was added to the Final EA page 8.

Comment 22: On page 9, the EA states that "liquid nitrogen will be kept in an approved container and in the care of the BLM personnel". What is liquid nitrogen used for during a gather?

Response 22: Liquid nitrogen will be used for freeze branding of wild horses if necessary.

Comment 23: What are the dangers of this chemical to animals, humans, and the surrounding areas? What precautions are being taken to protect animals, humans, and the surrounding area?

Response 23: If properly handled risks are limited, in this application risks could include cold burn. Liquid Nitrogen will be stored in an approved container, and handled by experienced BLM personnel only. Liquid Nitrogen is non-toxic.

Comment 24: It is difficult to comment on the environmental impacts of trapping options and holding areas when the exact locations are not listed in the EA. Where are the locations? How will BLM determine them? How and when will that information be made available to the public?

Response 24: See Map 2. General areas have been identified for gather operations based on historical information from previous gathers conducted over the last 30 years. Factors such as weather and ongoing gather operations may cause horses to move into other areas. Specific locations cannot be determined in advance and are driven by current, on-the-ground, resource conditions that evolve as the gather progresses. BLM will determine specific trap locations based on where the horses are located just prior to the gather and throughout the gather operations. This information will be available to the public by contacting the WRFO.

Comment 25: In August, 2009, Colorado Wild Horse and Burro Coalition, Inc. *et al* v Salazar determined that in order to remove the West Douglas horses, the BLM must "first determine that an overpopulation exists and that the wild free-roaming horses...slated for removal are 'excess animals'" (p. 17). This determination was based on the lack of evidence that these horses were excess or that movement off the HA was due to overpopulation. BLM dismissed its appeal of this decision in December, 2009.

Response 25: Refer to the BLM's response to Comments 1 and 2.

Comment 26: How has BLM addressed this decision with regards to new evidence, gathered between August, 2009 and the date of the issuance of DOI-BLM-CO-110-2010-0088-EA, showing that the current population of WD horses is excess?

Response 26: Refer to the BLM's response to Comments 1 and 2. Also, refer to the EA, page 4, 23-24, and 37 through 39 as well as the discussion regarding BLM's excess determination within the Decision Record.

Comment 27: Is BLM required to appeal Colorado Wild Horse and Burro Coalition, Inc. et al v Salazar before initiating a new gather plan EA?

Response 27: No. In Colorado Wild Horse and Burro Coalition, Inc., et al. v. Salazar, the Court invalidated only a 2008 Gather Plan which was subject to review by the Court. The Court did not enjoin BLM from initiating a new gather plan.

Comment 28: If the purpose and need for this action is to remove all excess wild horses from the WD HA and since the purpose of DOI-BLM-CO-110-2010-0088-EA is solely to determine the environmental impacts of alternatives related to gather operations, why has BLM not provided a separate document addressing the decision of Colorado Wild Horse and Burro Coalition, Inc, et al v Salazar? If BLM *has* created such a document, where has that been made available to the public?

Response 28: Refer to the BLM's response to Comments 1 and 2. Also, refer to the EA, page 4 and the Decision Record.

Comment 29: SCOPING AND PUBLIC INVOLVEMENT: The Bureau's authority to zero out a herd area. Page 7 states: "BLM previously addressed this issue through the

analyses and decisions addressed within the of 1997 WRRMP and the 2005 WDHAA to the WRRMP and is outside the scope of this document."

With the exception of a footnote on p. 3, the EA neglects to mention Colorado Wild Horse and Burro Coalition, Inc. et al v Salazar at all, which is odd in that this case's decision is an important piece of WD HA history as well as an integral part of public involvement. Other history of the WD HA was included in background information in this EA. Why did WRFO exclude Colorado Wild Horse and Burro Coalition, Inc et al v Salazar as a part of that history?

Response 29: Information included as background for this EA was intended to provide an overview of BLM's land use planning decisions with respect to the WDHA. The background was not intended to provide an exhaustive discussion of all decisions implementing land use plans, including all previous gathers and all previous litigation involving the WDHA. In Colorado Wild Horse and Burro Coalition, Inc., et al. v. Salazar, the Court invalidated only a 2008 Gather Plan. The Court did not order any action with respect to land use planning decisions, and therefore was not discussed in detail. A copy of the Court's decision may be found the United States District Court for the District of Columbia's website at: https://ecf.dcd.uscourts.gov/cgi-bin/show_public_doc?2006cv1609-105.

Comment 30: PAGE 10. "If capture sites are anticipated for areas within the ACEC that have not been previously disturbed, pre-survey for special status plant species will be conducted prior to mobilization of vehicles and equipment by a BLM plant specialist. If BLM Sensitive plant species or federally listed plant species are located, another site will be selected at a distance greater than 328 feet (100 meters) from the edge of the population or occurrence and pre-surveyed similarly, as necessary". Since the Oil Springs Mountain Wilderness Study Area (ACEC) is managed for wilderness values, are motorized vehicles of any kind permitted within its boundaries? If not, how will BLM arrange for an alternate capture site or how will BLM arrange to put a capture site within ACEC boundaries?

Response 30: See the EA, page 67. For information, the Oil Spring Mountain Wilderness Study Area(WSA) and ACEC is managed for its wilderness characteristics, no motorized use would be allowed within the WSA however, helicopter use (flying over the WSA/ACEC) would occur to move wild horses to trap locations outside of the WSA boundaries.

Comment 31: I encourage the WRFO to consider access to the gather operations beyond media sites. LEOs and forms such as waivers could possibly be used to help observers understand parameters.

Response 31: Refer to the EA, page 8.

Comment 32: WINTER GATHERS: *Alternative B* states: "For winter gathers, December through February, distances to trap sites will be reduced to maximum of five miles when

snow depth is greater than one foot deep. Wild horses will be moved slower when snow depth hinder their natural movement" (p. 11). Under *Environmental Consequence of Alternative A, Proposed Action,* the EA states "all wild horses will experience varying levels of stress during herding, gather, handling and holding when gathered" (p. 13).

It is well-documented that running horses in extreme temperatures and in deep snow is dangerous and can lead to increased deaths, either from euthanasia due to injury or otherwise.

Response 32: Refer to the BLM's response to Comment 20.

Comment 33: **"Wild horses herded using helicopter drive trapping and helicopter assisted roping are herded cross country. Those wild horses gathered during water and bait trapping are not herded cross country" (p. 13). If wild horses are not herded cross-county during water or bait trapping, this suggests that bait trapping could be an effective alternative for protecting the horses and reducing deaths during a winter gather.**

Response 33: Refer to the EA, page 11. The use of bait or water trapping was considered but was not carried forward for detailed analysis.

Comment 34: **The Douglas Mountain gather in the late 1970s involved several gathers over 2 years. The final gather involved removing hard-to-reach horses, sort of the last hold-outs of the herd, the most challenging to catch. Tranquilizers were applied by dart gun from the air. Nine horses died in total, most as a result of circumstances involving darting. How will the harder-to-reach horses be gathered from the WD HA?**

Response 34: Refer to the EA, page 12-13.

Comment 35: The DOI-BLM-CO-110-2010-0088-EA states: "A veterinarian will be on site or on call during any winter gathers. If wild horses are sweating excessively, the speed and/or distance to the trap will be reduced further." (p. 11). Due to the remote location of the WD HA, difficult access in winter, and the risk involved in gathering horses in the dead of winter, I would suggest that the veterinarian be *on site* for the duration of winter gather operations. For example, if the vet were on-call, how fast could he/she be on-site in case of emergency, considering remoteness and winter road conditions? Where would the vet be based? What is the estimated travel time (in winter, driving at the speed limit or speeds that are appropriate for the road conditions) between base and gather operations? How much travel time would be reduced by having the vet on-site each day? Obviously, these questions cannot be answered until gather operations are underway; however, they are offered here as considerations.

Response 35: Your comment is noted. The BLM plans to have an APHIS veterinarian on-site throughout the gather operation, EA page 15.

Comment 36: *Annual gathers between the dates of March through June*: "This alternative was not carried forward since the time period corresponds with peak foaling periods, resulting in the increased separation of foals from their mare during herding operations, increased stress on mares resulting in increased abortion rates, mares abandoning foals and increased orphan foals." Good idea. Thank you. Keep in mind, however, that the WRFO 2010 Census Report states that "this year's foal" was cited on the North Piceance Herd Area (p. 11). While this, obviously, is a different herd in a different place, the WD HA is not far from the North Piceance HA. How does WRFO know that this does or does not occur on the WD HA?

Response 36: Your comment is noted. The BLM recognizes that the peak foaling season for North Piceance Herd Area also coincides with that of the WDHA and is one reason that the WRFO did not carry this alternative forward for detailed analysis.

Comment 37: CONGENITAL ABNORMALITIES: Page 14 states: "Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club feet, and other severe congenital abnormalities) would be humanely euthanized using methods acceptable to the American Veterinary Medical Association (AVMA).' Some have stated that the WD horses are inbred. That could mean that a horse simply has a bigger head. These horses are also smaller than other wild horses for a variety of reasons having nothing to do with inbreeding. What does BLM consider as a "severe congenital abnormality" with regards to this specific herd?

Response 37: For an explanation of the types of severe congenital abnormalities that may necessitate euthanasia, refer to the EA, page 17 and Washington Office Instruction Memorandum (IM) 2009-041, "Euthanasia of Wild Horses and Burros for Reasons to Health, Handling, and Acts of Mercy" which can be found at: http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2009/IM_2009-041.html.
Based upon this IM BLM would not euthanize an animal simply because it has a larger than normal head.

Comment 38: ADOPTION OR SALE WITH LIMITATIONS AND LONG TERM PASTURES: Page 15 states: "Adoption applicants are required to have at least a 400 square foot corral with panels that are at least six feet tall for wild horses over 18 months of age. Applicants are required to provide adequate shelter, feed, and water. The BLM retains title to the wild horse for one year and *most* of the wild horses and the facilities are inspected to assure the adopter is complying with the BLM's requirements" (emphasis mine).

What would preclude BLM from conducting compliance inspections on all adopters of the WD horses?

Response 38: This comment is outside the scope of this analysis as it pertains to the BLM's adoption and compliance policies which are already in place. However, the BLM conducts random compliance inspections as determined through the use of a statistical model. The purpose of the BLM's compliance inspections is to ensure that wild horses are being properly cared for. The West Douglas horses are no different than other adopted horses in that regard. Additionally, the BLM also relies on volunteers, county animal control officers, and others to assist in ensuring adopted wild horses are properly cared for.

Comment 39: The 1971 Wild Free-Roaming Horse and Burro Act states: "The Secretary shall cause such number of additional excess wild free- roaming horses and burros to be humanely captured and removed for private maintenance and care for which he determines an adoption demand exists by qualified individuals..." (p. 3). 2008 national adoption rates were indeed up by 64.5% since 2001; however, that figure is relative to the amount of horses and burros removed from the range annually. Adoption rates overall for that same time period are down by about half. In 2010, so far only 34% of the horses and burros removed have been adopted. BLM stated at the National Wild Horse Advisory Board meeting last month that there are 33,800 animals in long-term holding facilities.

How has Secretary Salazar and by extension the Colorado SO and the WRFO determined an adoption market for the WD horses?

Response 39: This comment is outside the scope of this environmental analysis. The Act states: "The Secretary shall cause additional excess wild free-roaming horses and burros for which an adoption demand by qualified individuals does not exist to be destroyed in the most humane and cost efficient manner possible." 16 U.S.C. § 1333(b)(2)(C). Please refer to the EA, pages 17-19, for a discussion of the care and treatment of horses upon completion of gather operations.

Comment 41: Based on the available evidence, it is clear that an EA is not an appropriate level of NEPA review for the proposed action and that an Environmental Impact Statement is required based on the significance of the impacts inherent to the proposed removal of all wild horses in one of the few remaining herds in the state of Colorado.

Response 41: Based on the analysis of environmental impacts documented in EA # DOI-BLM-CO-110-2010-0088-EA, the authorized officer has determined there are no significant environmental impacts and that preparation of an environmental impact statement is not required. See FONSI, dated September 3, 2010.

Comment 42: Wild horses are themselves both cultural and natural resources as stipulated in the preamble of the 1971 Wild Free-Roaming Horses and Burros Act (WFHBA). However, there cultural and ecological value is rarely considered by the BLM and is conspicuously absent in the analysis of the current "site-specific" EA. As iterated in past comments, this EA and other environmental analyses to which it is tiered have failed to comprehensively analyze the cumulative biological, behavioral, genetic, environmental, social, and cultural impacts of massive wild horse removals, especially the ongoing zeroing out of wild horse herds, as is proposed in the current EA.

Response 42: Refer to EA, pages 13-69.

Comment 43: The current EA fails to analyze a reasonable range of alternatives as required by NEPA. It is a testament to either BLM's utter lack of imagination about how to truly manage for multiple use, including the one wildlife species for which it is directly responsible, viz., wild equids, or the agency's absolute refusal to entertain viable alternatives presented by the wild horse advocacy community and by the public at large.

Response 43: This comment is noted. The BLM has developed and analyzed a range of alternatives that is responsive to the identified resource issues (EA, pages 8-13) and the purpose and need for the Proposed Action (EA, page 6) as required by the National Environmental Policy Act.

Comment 44: Most herds, including in Colorado, are not self-sustaining and require intensive management, often due to the BLM's failure to properly protect and manage the animals in the first place. How many wild horse herds require gathers and selective removals from inhospitable areas, application of fertility control, introduction of animals due to dangerously low populations, occasional removals from private lands, etc? The WDHA wild horses are no different in this regard. In fact, the WDHA fares quite well compared to many HAs throughout the West. Unless this decision is a move on the part of the BLM to set a precedent for zeroing out other herds in the future, which is yet another "significance" factor under NEPA, this rationale is illogical and indefensible.

Response 44: This comment is noted. While other herds throughout the west require management the WDHA does not contain an adequate balance of habitats that would allow for maintenance of Thriving Natural Ecological Balance with other permitted resources in the area. No specific amount of acreage was "set aside" for the exclusive use of wild horses and burros under the 1971 Wild Free-Roaming Horses and Burros Act. The Act directed the BLM to determine the areas where horses and burros were found roaming, and then to manage the animals within the boundaries of those areas. Detailed information regarding the removal of wild horses from the 19.4 million acres is detailed at the following: http://www.blm.gov/wo/st/en/prog/wild_horse_and_burro/wh_b_information_center/Fact_Sheet.html

Comment 45: It is inconceivable that the BLM cannot develop and implement mitigation measures to address any concerns about trespass onto private lands, especially in light of Secretary Salazar's new initiative designed to undertake specifically the types of challenges outlined in the current EA. The secretary's strategy will be presented to Congress later this year. It makes sense to discover whether a new direction in wild horse management would be applicable to the WDHA wild horses before proceeding with the proposed action to permanently eliminate wild horses from the WDHA.

Response 45: Refer to the BLM's response to Comments 1 and 2 above.

Comment 46: The three alternatives analyzed, including a "no action" alternative which discusses failure to engage in any management whatsoever rather than a continuation of ongoing management, actually reveals more than perhaps the agency intended. In fact, the current EA provides ample justification for maintaining, rather than removing the WDHA wild horses. Throughout, the EA, the findings indicate that wild horses at their current levels (whatever they may be-see below) are having relatively few adverse impacts, especially compared to other much greater multiple uses such as livestock grazing, ORV use, oil and gas activities, sport hunting, etc.

Response 46: Refer to the BLM's response to Comments 1, 2, and 10.

Comment 47: An inaccurate census means much more. It calls into question much of the data provided in the current EA, including estimated, actual and projected forage utilization, the accuracy of its population model and 20% recruitment rate claim, whether natural decimating factors are at play, the actual ecological carrying capacity of the habitat, what constitutes "excess" animals and "thriving natural ecological balance," etc.

Response 47: Refer to the EA, page 13-14. The current estimate of wild horses within and immediately adjacent to the WDHA is based on a direct (actual) count of the wild horses present.

Comment 48: As conceded in the EA, only 3200 acres, out of 128,141 acres, failed to meet the Public Land Health Standard in 2003, a miniscule amount of land. Plus, it must be acknowledged that this was due to grazing by all ungulates including domestic livestock which are allocated and consume tremendously more forage than wild horses and whose behavior is far more damaging to natural resources as indicated in numerous scientific studies and GAO reports.

Response 48: Refer to the EA, pages 13-40.

Comment 49: If the BLM were serious about a "thriving natural ecological balance" the agency would bite the bullet and reduce the disproportionate allocation of livestock AUMs to accommodate wild horses. According to the WFHBA, the "thriving natural ecological balance" is to be determined based on the relationship of wild horses and wildlife only. Domestic livestock are not to be considered in defining or achieving a "thriving natural ecological balance." Consequently, since such a balance is not permitted to apportion any amount of forage for domestic livestock use within the WDHA or any other HA for that matter. Should there be sufficient amounts of forage to provide some for domestic livestock without jeopardizing the "thriving natural ecological balance" standard, that would be permissible, however, it all existing forage is required to maintain the "thriving natural ecological balance" between wild horses and wildlife, then none would be apportioned to domestic livestock. If the BLM, as it should, substantively reduced the allocation of forage to livestock, that would be an example of truly exercising its multiple use mandate. Instead, agency officials once again shamefully capitulate to ranchers at the expense of wild horses with the proposed action in the current EA.

Response 49: Refer to the BLM's response to Comments 3, 4 and 10.

Comment 50: The EA discusses that winter gathers can be stressful to wild horses due to snow depth and cold temperatures, yet there is no discussion of summer gather conditions. Extreme heat can be as stressful. The EA doesn't describe mitigation measures for other climate conditions that could result in injury or death to wild horses during gathers (EA, p. 16).

Response 50: Refer to EA, pages 12-21.

Comment 51: The EA states that Congress prohibited the use of appropriated funds between 1987 and 2004 and again in 2010 for euthanasia of healthy horses. It is unknown if a similar limitation will be placed on the use of FY2011 appropriated funds. (EA, p. 16) The EA does not discuss whether the agency's policy re: euthanasia will change if such language is not incorporated into the FY2011 appropriations bill.

Response 51: Your comment is noted. This is beyond the scope of this document.

Comment 52: The EA also offers no discussion of what action the agency would take if its current policy of not selling animals to slaughter is violated by individuals who purchase wild horses. What actions, if any, has the agency taken heretofore? To what extent is the CO BLM doing compliance checks for adopted and sold animals? How is the BLM currently conducting compliance checks and what percentage of adopters are receiving on-site visits by BLM officials? The EA does not discuss the projected availability of space in both short-term and long-term holding facilities nor does it designate which long-term holding pastures (LTPs) will accept the WDHA and the distance of these pastures from the WDHA.

Response 52: Refer to the BLM's response to Comment 38.

Comment 53: The EA states that animals in LTPs remain available for adoption or sale to individuals interested in acquiring a large number of animals and can provide the animals with a good home. (EA, p. 14) However, the EA does not provide any information about the percentage of animals that are adopted or sold from these facilities and the process by which the animals are adopted, nor the average length of time animals remain in the LTPs. May potential adopters visit the facilities? Moreover, it must be noted that in other wild horse gather EAs (e.g., the Silver King HMA EA, the BLM indicates that LTPs provide permanent and lifelong facilities for wild horses.)

Response 53: This comment is outside the scope of this environmental analysis. The EA has been prepared to study the effects of the proposed action which is the gather and removal of

excess wild horses from the WDHA, and provided a section on anticipated impacts to wild horses, including care in LTPs within the wild horse sections Pages 13-21.

Comment 54: The EA provides information about the range, wild animals and livestock, but relatively little information about wild horse biology, genetics, and behavior, all very important for understanding the health and biotic needs of wild horses, how they interact with their environment, population dynamic, etc. Not a single preparer or reviewer of the EA appears to be a wild horse specialist. Melissa Kindall is identified as a range technician whose area of responsibility is wild horse management but that does not mean that she has any particular expertise in wild horses or their management. Does the BLM have trained wild horse and burro specialists on staff? What is the extent of their training?

Response 54: This comment is outside the scope of this environmental analysis. Decisions about staffing and training are internal to the BLM. The EA has been prepared in accordance with NEPA to study the effects of the proposed action which is to remove excess wild horses and has extensive section on anticipated impacts to wild horses. The EA utilizes the necessary specialist and expertise necessary to document the anticipated impacts to all of the resources provided within the document.

Comment 55: The EA claims that "each LTP is subject to a separate environmental analysis and decision making process." (EA, p15). AWI is unaware of any NEPA analysis done to evaluate the environmental impacts associated with the establishment and operation of wild horse LTPs. Indeed, in litigation over the Calico complex gather earlier this year, a federal court judge, in his preliminary ruling, raised concerns about the legality of LTPs in that there is mothering in the WFHBA that authorizes such facilities. Similarly, though AWI tries to keep abreast of all wild horse and burro management actions and frequently submits comments on various NEPA documents, it has never seen notice published on any NEPA analysis done on an LTP or received such a NEPA analysis for comment. In responding to this comment, the BLM should identify what level of NEPA review is provided for LTPs and, if possible, please send, at your convenience, the relevant NEPA documents for all existing LTPs to AWI.

Response 55: Your comment is noted. As stated in the EA, page 18, the BLM does complete site-specific environmental assessments of LTPs. The EA analyzed impacts to wild horses and burros from gather operations, capture and confinement, long term holding and adoption in starting on page 10. IDA's lawsuit (In Defense of Animals v. Salazar, Case No. 1:09-cv-02222-PLF) challenging the legality of long-term holding was dismissed by the U.S. District Court for the District of Columbia in a Decision dated May 24, 2010. The Judge's final decision does not find that long-term holding is in violation of federal law.

Comment 56: The BLM has failed to disclose a significant amount of information, evidence, or data necessary to substantiate many of the claims contained in the EA regarding rangeland resources including the condition of vegetation/forage species, soils, water quality, riparian areas, and other wildlife species. This information was required to have been disclosed and discussed by NEPA, which mandates that agencies, among other things, evaluate impacts before acting, disclose all relevant information about the action,

subject the information to accurate scientific analysis and ensure that the public can participate in the decision-making process.

Response 56: Relevant information is summarized in the EA, refer to each section in the EA for this information: Vegetation page 21, Soils page 52, Water Quality page 54, Riparian and wetland areas page 61, Wildlife Terrestrial page 28, Wildlife Aquatic page 50, Migratory Birds page 47, and Threatened endangered and Sensitive Animal Species page 41

Comment 57: BLM does not analyze the effect that this roundup or roundups is likely to have on the wild horses themselves although they are the subject of a federal law that requires BLM to protect them from harassment, capture and death and they are a part of the human environment that BLM has to consider under NEPA.

Response 57: This analysis has been added, Refer to the EA, page 15-17.

Comment 58: The EA incorrectly states that BLM's 1980 White River Resource Area, Management Framework Plan determined the entire West Douglas wild horses herd to be "excess." The EA incorrectly states that, in the 2005 West Douglas Amendment to the White River Resource Management Plan, all West Douglas wild horses were determined to be "excess animals."

Response 58: Refer to the BLM's response to Comments 1 and 2 above. Also see the Decision Record and EA, page 4.

Appendix E – Genetic Reports

For Gather Year 2001, Report Dated February 6, 2002

For Gather Year 2006, Report Dated June 1, 2010

Genetic Analysis of the West Douglas CO feral horse herd

E. Gus Cothran

2-6-2002

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The following is a report of the genetic analysis of the West Douglas, CO feral horse herd.

METHODS

A total of 32 blood samples were received by the Univ. of Kentucky on October 13, 2001. Seventeen genetic marker systems were analyzed. Seven systems were red blood cell alloantigen loci (the *A, C, D, K, P, Q* and *U* horse blood groups) tested by standard serological methods of aggulutination and compliment mediated hemolysis. The other 10 systems were biochemical polymorphisms detected by electrophoretic techniques. These systems were Albumin *(ALB)*, Alpha-1-beta Glycoprotein (*A1B*), Serum Cholinesterase *(ES)*, Vitamin D Binding Protein *(GC)*, Glucose Phosphate Isomerase *(GPI)*, Alpha Hemoglobin *(HB)*, Phosphoglucomutase (*PGM*), Phosphogluconate Dehydrogenase *(PGD)*, Protease Inhibitor *(PI)*, and Transferrin *(TRF)*. In addition to the above genetic systems, DNA was extracted from the blood samples and tested for variation at 12 equine microsatellite (mSat) systems. These were *AHT*4, *AHT*5, *ASB*2, *ASB*17, *ASB*23, *HMS*3, *HMS*6, *HMS*7, *HTG*4, *HTG*10, *LEX*33, and *VHL*20. These systems were tested using an automated DNA sequencer to separate Polymerase Chain Reaction (PCR) products.

A variety of genetic variability measures were calculated from the gene marker data. The measures were observed heterozygosity *(Ho)* which is the actual number of loci heterozygous per individual and is based upon biochemical loci only; expected heterozygosity *(He)* which is the predicted number of heterozygous loci based upon gene frequencies and was calculated for biochemical loci and all marker systems (*Het)*; effective number of alleles *(Ae)* which is a measure of marker system diversity; total number of variants *(TNV)*; estimated inbreeding level *(Fis)* which is calculated as 1-*Ho/He*. These same measures were calculated for the mSat data. However, the DNA data will not be reported due to limited comparative information.

Genetic markers also can provide information about ancestry in some cases. Genetic resemblance to domestic horse breeds was calculated using Rogers' genetic similarity coefficient, *S*. This resemblance was summarized by use of a restricted maximum likelihood (RML) procedure.

RESULTS AND DISCUSSION

Variants present and allele frequencies for the blood group and biochemical markers are given in Table 1. No variants were observed which have not been seen in horse breeds. Table 2 gives the values for the genetic variability measures of the West Douglas horse herd. Also shown in Table 2 are values for other Colorado feral horse populations plus values from a representative group of domestic horse breeds. The breeds were selected to cover the range of variability measures in domestic horse populations. Mean values for feral herds (based upon data from 54 herds) and mean values for domestic breeds (based upon 118 domestic horse populations) also are shown.

Mean genetic similarity of the West Douglas herd to domestic horse breed types are shown in Table 3. Table 4 shows the genetic similarity matrix for comparison of Colorado feral populations to each other. A dendrogram of relationship of the West Douglas herd to a standard set of domestic breeds (some breeds included in the analysis are not shown individually but are grouped into a breed class for the tree) is shown in Figure 1. This is a consensus tree from 20 individual RML runs. The numbers in the tree are the percentage of runs where the grouping to the right of the number occurred. Figure 2 shows the relationships among the Colorado feral herds.

Genetic variants: Two genetic variants that are uncommon in domestic horse breeds were observed in the West Douglas herd. These were the *PGD-D* variant and the *A-be* variants, each

seen in two individuals. The *PGD-D* variant does not seem to be associated with any particular breed type while the *A-be* variant is extremely rare.

A total of 57 variants were observed which is between the mean values of feral populations and domestic breeds. Of these, 17 occurred at a frequency of less than 0.05 and thus are at high risk of loss. This high proportion of rare alleles suggests a diverse origin of the herd.

Genetic variation: Individual variation of the West Douglas herd is extremely low (*Ho* = 0.269). This is the lowest variation seen in any of the Colorado herds and among the lowest observed in any horse population. *He* also is low but is somewhat higher than *Ho* indicating some inbreeding.

There is a high degree of allelic diversity however, as indicated above, much of the diversity is due to variants present only at very low frequency. The overall pattern of variability suggest a large population that has been reduced in size and has experienced a loss of genetic variation due to both genetic drift and inbreeding.

Genetic similarity: Highest genetic similarity of the West Douglas herd was with the Gaited North American Breeds followed by the Iberian Breeds. Highest individual breed *S* was with the Mountain Pleasure Horse which is a breed that shows affinity to much of the North American riding stock. This resemblance is supported by the position of the herd in the dendrogram (Figure 1). The origin of this herd is probably North American riding stock. The Iberian similarity is probably due to the Spanish ancestry of many of the North American breeds rather than direct Spanish ancestry of the West Douglas herd.

The West Douglas herd has highest similarity to the Little Bookcliffs herd among the other Colorado populations. This was followed by the Sand Wash samplings and the 2000 sample from the Spring Creek HMA. These results are somewhat surprising as the other herds

with lower *S* are geographically closer to the West Douglas herd. This discrepancy may be due to sample sizes and low overall genetic variation. However, examination of the individual types for each of the herds in the White River Resource Area and West Douglas does not reveal any evidence of direct relationship.

SUMMARY

The West Douglas herd has extremely low genetic variation, well below the proposed critical level for *Ho* of 0.31. Allelic diversity is relatively high but a large proportion of the observed variants are at high risk of loss. The loss of these alleles would likely lead to even lower heterozygosity. The pattern of variation suggest low effective population size and some inbreeding. Genetic similarity values and the RML cluster analysis indicate that this herd is primarily derived from North American riding horse breeds.

RECOMMENDATIONS

Maximum possible population size for this HMA should be maintained after introduction of some horses from outside the West Douglas area. Any horses from the White River Resource Area would be a good choice based upon *S* values. Three to four young mares would be an effective choice. The herd should be monitored for potential defects or reproductive problems that could arise from inbreeding.

Table 1. Allele frequenc for variants observed within the West Douglas, CO HMA in 2001.

System	Allele	Frequency
	D	.359
	F2	.391
	H2	.047
	O	.156
	R	.047
A1B	K	.969
	S	.031
Es	G	.016
	I	.984
Al	A	.219
	B	.781
Gc	F	.844
	S	.156
PGD	D	.031
	F	.953
	S	.016
PGM	F	.203
	S	.797
GPI	I	1.000
Hb	BI	.875
	BII	.125
Pi	G	.313
	H	.078
	L	.141
	L2	.109
	N	.016
	P	.063
	R	.156
	S	.047
	T	.063
	U	.016
A	adf	.388
	adg	.032
	b	.032
	c	.032
	e	.049
	be	.031
	-	.436
C	a	.646
	-	.354
D	d	.172
	dk	.141
	dghm	.375
	deo	.078
	bcm	.063
	cgm	.172
K	-	1.000
P	ac	.102
	ad	.102
	b	.047
	-	.749
?	abc	.016
	b	.232
	c	.016
	-	.736

U	a	.470
	-	.530

Table 2. Measures of genetic variation of feral horse herds from Colorado and mean values for North American Feral horses and Domestic horse breeds

Herd	*N*	*Ho*	*He*	*Het*	*Fis*	*TNV*	*Ae*
West Douglas	32	0.269	0.285	0.356	0.058	57	2.202
Sand Wash 2001	50	0.372	0.398	0.425	0.065	63	2.541
Spring Creek Basin	75	0.332	0.331	0.366	-0.004	58	2.038
Barcus Creek WRRA	37	0.311	0.348	0.364	0.107	56	1.972
Greasewood WRRA	11	0.345	0.287	0.298	-0.202	41	1.752
Hammond WRRA	9	0.322	0.286	0.322	-0.127	38	1.817
Little Duck Creek WRRA	15	0.287	0.327	0.347	0.123	47	1.873
84 Mesa WRRA	18	0.340	0.383	0.349	0.112	54	2.046
Spring Creek WRRA	5	0.300	0.248	0.265	-0.210	30	1.664
Square S Well WRRA	16	0.313	0.304	0.312	-0.025	44	1.917
West Fork Spring Creek WRRA	15	0.371	0.392	0.364	0.053	43	2.127
Little Bookcliffs	50	0.300	0.299	0.389	-0.004	59	2.322
Sand Wash	72	0.390	0.401	0.450	0.027	71	2.529
Feral Horse Mean	54	0.360	0.351	0.385	-0.035	53.50	2.218
Standard Deviation		0.051	0.053	0.067	0.118	12.50	0.339
Domestic Horse Mean	118	0.371	0.365	0.414	-0.014	65.40	2.358
Standard Deviation		0.049	0.043	0.035	0.065	11.10	0.253

Table 3. Rogers' genetic similarity of the West Douglas feral horse herd to major groups of domestic horses.

	Mean *S*	Std	Minimum	Maximum
Light Racing and Riding Breeds	0.806	0.023	0.764	0.844
Oriental and Arabian Breeds	0.812	0.033	0.745	0.858
Iberian Breeds	0.818	0.022	0.777	0.864
North American Gaited Breeds	0.828	0.034	0.765	0.868
Heavy Draft Breeds	0.800	0.032	0.720	0.845
True Pony Breeds	0.790	0.035	0.727	0.836

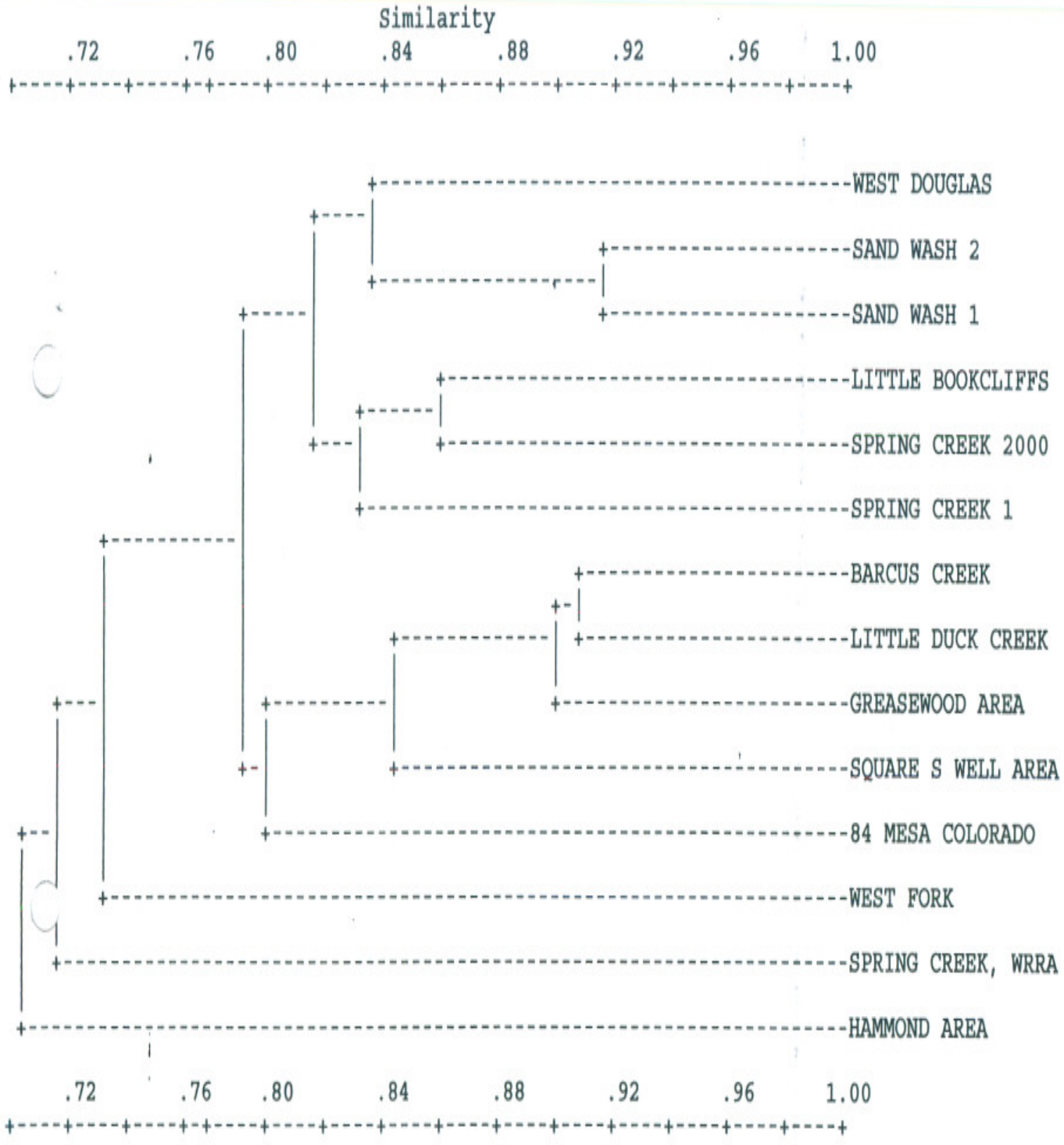
Table 4. Matrix of genet[illegible] similarity among Colorad[illegible]eral horse populations.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	.000													
2	.835	1.000												
3	.844	.839	1.000											
4	.756	.811	.829	1.000										
5	.787	.800	.781	.808	1.000									
6	.752	.818	.791	.868	.792	1.000								
7	.722	.739	.723	.744	.774	.721	1.000							
8	.754	.711	.765	.676	.666	.690	.655	1.000						
9	.762	.785	.801	.896	.795	.828	.715	.670	1.000					
10	.776	.792	.821	.907	.798	.835	.716	.710	.905	1.000				
11	.747	.758	.717	.719	.740	.705	.645	.713	.685	.707	1.000			
12	.834	.918	.843	.777	.774	.777	.735	.722	.747	.756	.738	1.000		
13	.755	.817	.812	.826	.783	.823	.713	.688	.812	.811	.714	.785	1.000	
14	.824	.816	.862	.822	.795	.777	.731	.734	.787	.796	.722	.813	.854	1.000

1-WEST DOUGLAS
2-SAND WASH 2
3-LITTLE BOOKCLIFFS
4-BARCUS CREEK
5-84 MESA COLORADO
6-SQUARE S WELL AREA
7-WEST FORK
8-HAMMOND AREA
9-GREASEWOOD AREA
10-LITTLE DUCK CREEK
11 SPRING CREEK, WRRA
12-SAND WASH 1
13-SPRING CREEK 1
14-SPRING CREEK 2000

Figure 1. Dendrogram of genetic similarity of the West Douglas feral horse herd to domestic horse breeds.

Figure 2. Dendrogram of genetic similarity among Colorado feral horse herds.



Appendix 1. Individual genetic types for West Douglas horses

	Biochemical Genetic Systems										Blood Group Systems						
ID	TRF	A1B	EST	ALB	GC	PGD	PGM	GPI	HB	PI	A	C	D	K	P	Q	U
01-14669	D F2	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B1	G R	a--d-	-	a	--cd--g-	k	m--	-	--	---	a
01-14670	F2O	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B2	G H	a--d-	-	a	--cd--g-	k	m--	-	a-	---	a
01-14671	D F2	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B2	H L	a--d-	g	a	---de-gh	-	m-o	-	--	-b-	-
01-14672	D O	K	K	I	I	A	B	F	F	F	F	S	S	I	I	B1B1	L2P	a--d-	-	a	---d--gh	-	m--	-	--	---	a
01-14673	D F2	K	K	I	I	B	B	F	F	F	D	F	S	I	I	B1B1	G R	a--d-	-	a	---d--gh	-	mn-	-	--	-b-	-
01-14674	D F2	K	K	I	I	B	B	F	F	F	F	F	S	I	I	B1B1	G L	a--d-	-	a	---d--gh	k	m--	-	a-	-b-	-
01-14675	D D	K	K	I	I	A	B	F	F	F	F	S	S	I	I	B1B1	R S	a--d-	-	a	--cd--gh	-	m--	-	a-	---	a
01-14676	F2R	K	K	I	I	A	A	S	S	F	F	F	F	I	I	B1B1	G G	a--d-	-	a	---d--gh	-	m--	-	--	---	-
01-14677	D D	K	K	G	I	A	B	F	S	F	F	S	S	I	I	B1B1	L2R	-----	-	a	--cd--g-	-	mn-	-	a-	---	a
01-14678	F2F2	K	S	I	I	A	B	F	S	F	F	F	S	I	I	B1B1	L L2	--c--	-	a	-bcd--gh	-	m--	-	--	-b-	a
01-14679	F2H2	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B1	G G	-----	-	a	--cd--g-	k	m--	-	--	---	a
01-14680	F2F2	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B2	G L2	a--d-	-	a	---d--gh	k	m--	-	--	---	a
01-14681	D F2	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B1	G G	-----	-	a	--cd--g-	-	mn-	-	--	---	a
01-14682	D F2	K	K	I	I	A	B	F	S	F	D	S	S	I	I	B1B1	T T	-----	-	a	--cd--gh	-	m--	-	--	-b-	-
01-14683	O O	K	K	I	I	B	B	F	S	F	F	S	S	I	I	B1B1	G R	a--d-	-	a	-bcd--gh	-	m--	-	a-	-b-	a
01-14684	D D	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B1	G H	a--d-	-	a	---d--gh	-	mn-	-	ab	-b-	-
01-14685	F2O	K	K	I	I	A	B	F	S	F	F	S	S	I	I	B1B1	H L	a--d-	-	-	---d--gh	k	m--	-	--	---	a
01-14686	F2F2	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B1	L P	a--d-	-	-	---d--gh	-	mn-	-	--	---	a
01-14687	D F2	K	K	I	I	A	A	F	F	F	S	S	S	I	I	B1B1	L N	ab-d-	-	a	---d----	-	-n-	-	a-	abc	-
01-14688	D F2	K	K	I	I	A	B	F	S	F	F	S	S	I	I	B1B1	L2R	-----	-	a	---d----	k	---	-	--	---	a
01-14689	F2O	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B1	G L2	----e	-	-	---de---	-	-no	-	--	---	a
01-14690	O O	K	K	I	I	A	B	F	S	F	F	F	S	I	I	B1B1	G P	----e	-	a	---de---	-	-no	-	ab	-b-	a
01-14691	H2H2	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B2B2	S U	-b---	-	a	---de---	-	-no	-	--	-bc	-
01-14692	D O	K	K	I	I	B	B	F	F	F	F	F	S	I	I	B1B1	G S	-----	-	-	---de---	k	--o	-	--	---	a
01-14693	D F2	K	K	I	I	A	B	F	F	F	F	F	S	I	I	B1B2	G L	a--d-	-	a	---d--gh	-	m--	-	a-	-b-	-
01-14694	D F2	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B1	L R	ab-de	-	a	--cd--gh	-	m--	-	ab	---	a
01-14695	D F2	K	K	I	I	B	B	F	F	F	F	F	S	I	I	B1B1	L R	a--de	-	a	--cd--gh	-	m--	-	--	-b-	a
01-14696	R R	K	K	I	I	B	B	F	F	F	F	F	F	I	I	B1B1	G R	a--d-	-	a	-bcd----	-	mn-	-	a-	-b-	a
01-14697	D F2	K	S	I	I	A	B	F	S	F	F	F	S	I	I	B1B1	T T	-bc-e	-	a	-bc---g-	-	m--	-	--	-b-	a
01-14698	D D	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B2	G R	a--d-	-	a	---d--gh	-	m--	-	a-	---	a
01-14699	F2F2	K	K	I	I	B	B	F	F	F	F	F	S	I	I	B1B2	H L2	a--d-	g	a	---d--gh	-	m--	-	--	---	a
01-14700	D O	K	K	I	I	B	B	F	F	F	F	S	S	I	I	B1B1	G P	a--d-	-	a	--cd--gh	-	m--	-	--	---	a

Genetic Analysis of the West Douglas HMA, CO

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The following is a report of the genetic analysis of the West Douglas HMA, CO.

A few general comments about the genetic variability analysis based upon DNA microsatellites compared to blood typing. The DNA systems are more variable than blood typing systems, thus variation levels will be higher. Variation at microsatellite loci is strongly influenced by allelic diversity and changes in variation will be seen in allelic measures more quickly that at heterozygosity, which is why more allelic diversity measures are calculated. For mean values, there are a greater proportion of rare domestic breeds included in the estimates than for blood typing so relative values for the measures are lower compared to the feral horse values. As well, feral values are relatively higher because the majority of herds tested are of mixed ancestry which results in a relatively greater increase in heterozygosity values based upon the microsatellite data. There are no specific variants related to breed type so similarity is based upon the total data set.

METHODS

A total of 35 samples were received by Texas A&M University, Equine Genetics Lab on October 30, 2006. DNA was extracted from the samples and tested for variation at 12 equine microsatellite (mSat) systems. These were *AHT*4, *AHT*5 *ASB*2, *ASB*17, *ASB*23, *HMS*3, *HMS*6, *HMS*7, *HTG*4, *HTG*10, *LEX*33, and *VHL*20. These systems were tested using an automated DNA sequencer to separate Polymerase Chain Reaction (PCR) products.

A variety of genetic variability measures were calculated from the gene marker data. The measures were observed heterozygosity *(Ho)* which is the actual number of loci heterozygous per individual; expected heterozygosity *(He),* which is the predicted number of heterozygous loci based upon gene frequencies; effective number of alleles *(Ae)* which is a measure of marker system diversity; total number of variants *(TNV)*; mean number of alleles per locus (*MNA*); the

number of rare alleles observed which are alleles that occur with a frequency of 0.05 or less (*RA*); the percent of rare alleles (*%RA*); and estimated inbreeding level *(Fis)* which is calculated as 1-*Ho/He*.

Genetic markers also can provide information about ancestry in some cases. Genetic resemblance to domestic horse breeds was calculated using Rogers' genetic similarity coefficient, *S.* This resemblance was summarized by use of a restricted maximum likelihood (RML) procedure.

RESULTS AND DISCUSSION

Variants present and allele frequencies are given in Table 1. No variants were observed which have not been seen in horse breeds. Table 2 gives the values for the genetic variability measures of the West Douglas horse herd. Also shown in Table 2 are values from a representative group of domestic horse breeds. The breeds were selected to cover the range of variability measures in domestic horse populations. Mean values for feral herds (based upon data from 126 herds) and mean values for domestic breeds (based upon 80 domestic horse populations) also are shown.

Mean genetic similarity of the West Douglas herd to domestic horse breed types are shown in Table 3. A dendrogram of relationship of the West Douglas herd to a standard set of domestic breeds is shown in Figure 1.

Genetic Variants: A total of 55 variants were seen in the West Douglas herd which is below the mean for feral herds and well below the mean for domestic breeds. Of these, 5 had frequencies below 0.05. This is not a high percentage of variants at risk of future loss. Allelic diversity as represented by *Ae* also is below the average for feral herds as is *MNA*.

Genetic Variation: Genetic variation, as indicated by heterozygosity, in the West Douglas herd is well below the feral mean but well above the critical level. *Ho* is slightly lower than *He* but not enough to indicate a significant level of inbreeding. The West Douglas herd was previously tested in 2002 and heterozygosity at that time, based upon blood typing data, was far below the feral mean and below the critical level. DNA data collected at that time showed *Ho* at 0.753; *He*=0.712, *Ae*= 3.57, *TNV* =70; *MNA* =5.83; RA= 20; and %Ra= 0.286. This indicates that variability has declined since 2002 when it was already low.

Genetic Similarity: Overall similarity of the West Douglas herd to domestic breeds was relatively low. This could be due to the low allelic diversity. Highest mean genetic similarity of the West Douglas herd was with North American Gaited breeds, followed very closely by the Light Racing and Riding breeds. As seen in Fig. 1, the West Douglas herd fits most closely to the Chilean Criollo and other South American Criollo horses, which indicates the most likely ancestry, is from the Spanish breeds. As with most trees involving feral herds, the tree is somewhat distorted. Blood typing results indicated closest relationship with the North American breeds. It is likely that the ancestry is from the North American breeds based upon all information.

SUMMARY

Genetic variability of this herd is low and has declined since 2002. Allelic diversity is particularly low which is indicative of variation loss based upon microsatellite data. The low variation would appear to be due to small population size. Ancestry appears to be primarily from North American breeds probably representing ranch stock.

RECOMMENDATIONS

Current variability levels are low enough that this herd should be monitored for possible inbreeding effects such as reduced fertility or deformities. The addition of a small number of young mares from another herd area in Colorado would help restore variation and prevent inbreeding problem. Four animals would be sufficient to get a good start.

Table 1. Allele frequencies of genetic variants observed in the West Douglas HMA feral horse herd.

VHL20																	
I	J	K	L	M	N	O	P	Q	R	S							
0.000	0.000	0.000	0.029	0.329	0.286	0.000	0.271	0.086	0.000	0.000							
HTG4																	
I	J	K	L	M	N	O	P	Q	R								
0.000	0.000	0.457	0.200	0.043	0.057	0.000	0.243	0.000	0.000								
AHT4																	
H	I	J	K	L	M	N	O	P	Q	R							
0.214	0.014	0.143	0.057	0.000	0.000	0.000	0.571	0.000	0.000	0.000							
HMS7																	
I	J	K	L	M	N	O	P	Q	R								
0.000	0.000	0.000	0.157	0.200	0.286	0.357	0.000	0.000	0.000								
AHT5																	
I	J	K	L	M	N	O	P	Q	R								
0.000	0.000	0.114	0.186	0.157	0.486	0.057	0.000	0.000	0.000								
HMS6																	
I	J	K	L	M	N	O	P	Q	R								
0.000	0.000	0.000	0.414	0.200	0.100	0.000	0.286	0.000	0.000								
ASB2																	
B	I	J	K	L	M	N	O	P	Q	R							
0.000	0.000	0.000	0.200	0.000	0.343	0.157	0.000	0.286	0.014	0.000							
HTG10																	
H	I	J	K	L	M	N	O	P	Q	R	S	T					
0.000	0.000	0.000	0.171	0.000	0.586	0.014	0.086	0.000	0.000	0.143	0.000	0.000					
HMS3																	
H	I	J	K	L	M	N	O	P	Q	R	S						
0.000	0.114	0.000	0.000	0.000	0.329	0.100	0.000	0.371	0.086	0.000	0.000						
ASB17																	
D	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
0.000	0.229	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.200	0.114	0.000	0.000	0.286	0.000	0.000	0.000	0.171
ASB23																	
G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V		
0.000	0.000	0.000	0.057	0.357	0.443	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.143	0.000		
LEX33																	
F	G	K	L	M	N	O	P	Q	R	S	T						
0.000	0.000	0.329	0.357	0.000	0.000	0.000	0.000	0.000	0.314	0.000	0.000						

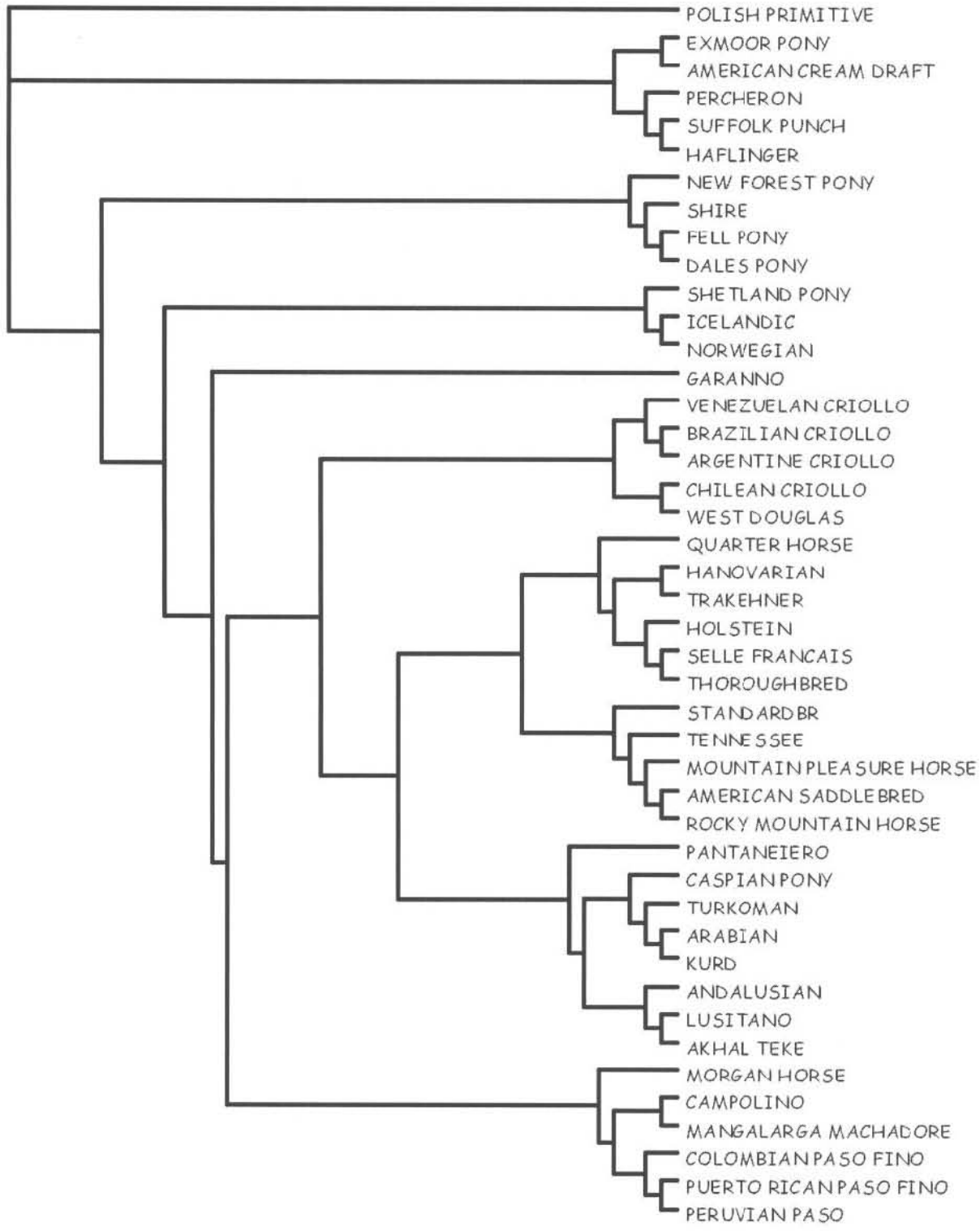
Table 2. Genetic variability measures.

	N	*Ho*	*He*	*Fis*	*Ae*	*TNV*	*MNA*	*Ra*	*%Ra*
WEST DOUGLAS CO	**35**	**0.686**	**0.691**	**0.008**	**3.33**	**55**	**4.58**	**5**	**0.091**
Cleveland Bay	47	0.610	0.627	0.027	2.934	59	4.92	16	0.271
American Saddlebred	576	0.740	0.745	0.007	4.25	102	8.50	42	0.412
Andalusian	52	0.722	0.753	0.041	4.259	79	6.58	21	0.266
Arabian	47	0.660	0.727	0.092	3.814	86	7.17	30	0.349
Exmoor Pony	98	0.535	0.627	0.146	2.871	66	5.50	21	0.318
Friesian	304	0.545	0.539	-0.011	2.561	70	5.83	28	0.400
Irish Draught	135	0.802	0.799	-0.003	5.194	102	8.50	28	0.275
Morgan Horse	64	0.715	0.746	0.041	4.192	92	7.67	33	0.359
Suffolk Punch	57	0.683	0.711	0.038	3.878	71	5.92	13	0.183
Tennessee Walker	60	0.666	0.693	0.038	3.662	87	7.25	34	0.391
Thoroughbred	1195	0.734	0.726	-0.011	3.918	69	5.75	18	0.261
Feral Horse Mean	126	0.716	0.710	-0.012	3.866	72.68	6.06	16.96	0.222
Standard Deviation		0.056	0.059	0.071	0.657	13.02	1.09	7.98	0.088
Minimum		0.496	0.489	-0.284	2.148	37	3.08	0	0
Maximum		0.815	0.798	0.133	5.253	96	8.00	33	0.400
Domestic Horse Mean	80	0.710	0.720	0.012	4.012	80.88	6.74	23.79	0.283
Standard Deviation		0.078	0.071	0.086	0.735	16.79	1.40	10.11	0.082
Minimum		0.347	0.394	-0.312	1.779	26	2.17	0	0
Maximum		0.822	0.799	0.211	5.30	119	9.92	55	0.462

Table 3. Rogers' genetic similarity of the West Douglas HMA feral horse herd to major groups of domestic horses.

	Mean *S*	Std	Minimum	Maximum
Light Racing and Riding Breeds	0.699	0.020	0.669	0.723
Oriental and Arabian Breeds	0.685	0.036	0.650	0.731
Old World Iberian Breeds	0.673	0.023	0.653	0.699
New World Iberian Breeds	0.662	0.021	0.636	0.691
North American Gaited Breeds	0.701	0.016	0.671	0.713
Heavy Draft Breeds	0.657	0.048	0.579	0.710
True Pony Breeds	0.657	0.022	0.623	0.684

Figure 1. Partial RML tree of genetic similarity to domestic horse breeds.

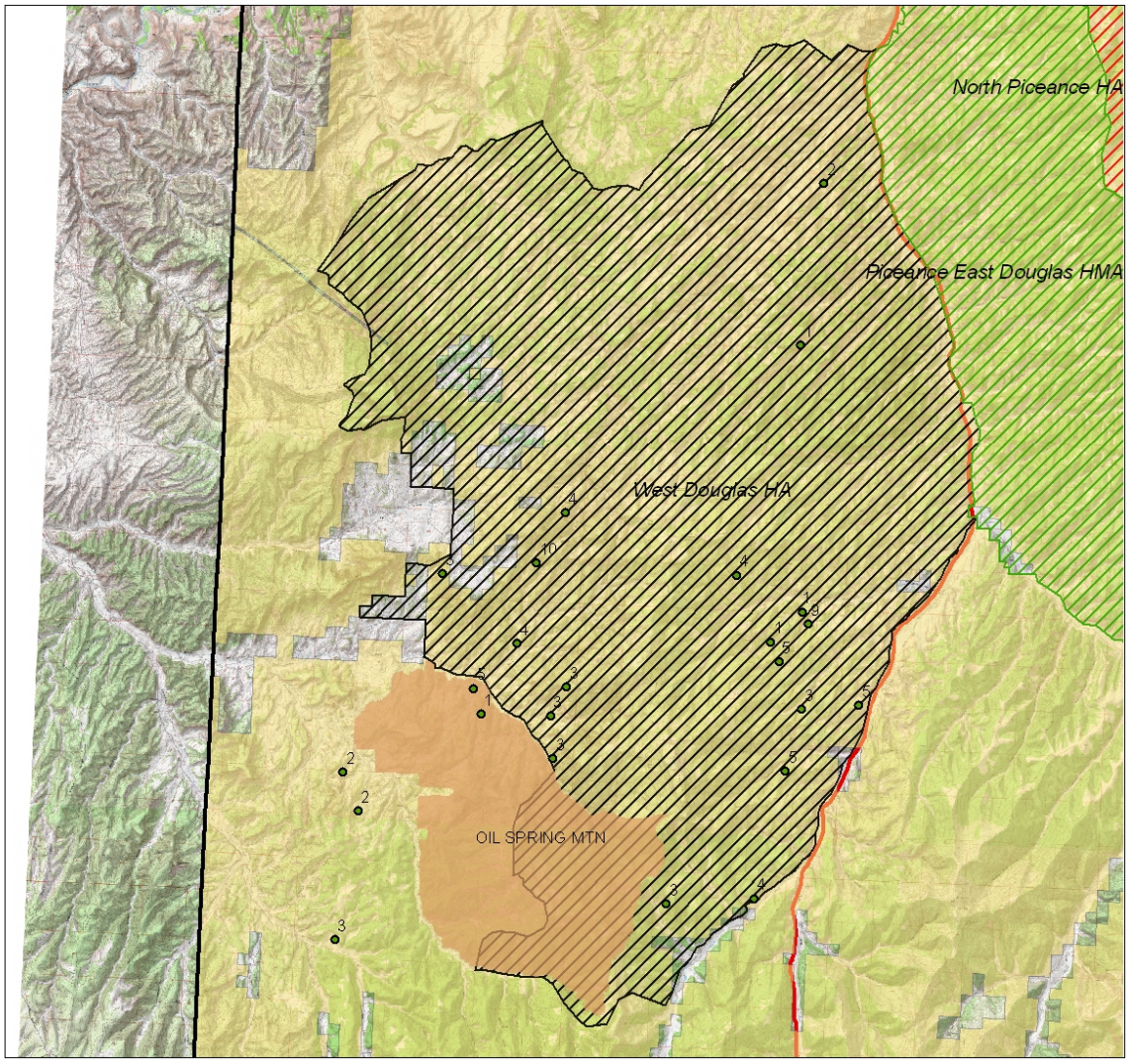


Appendix 1. DNA data for the West Douglas HMA, CO herd.

AID	VHL20	HTG4	AHT4	HMS7	AHT5	HMS6	ASB2	HTG10	HMS3	ASB17	ASB23	LEX33	LEX3
15622	PP	KK	OO	LN	LN	LP	KM	OO	MN	NR	LL	LL	LL
15623	MM	KL	OO	LO	LN	LP	NP	KK	IM	NR	LL	LL	LL
15624	MN	PP	JO	MO	MN	NN	MP	MR	NP	FO	KU	RR	LL
15625	NP	KK	H	LO	NN	MP	MM	MM	PP	FO	KL	KL	LL
15626	MM	KL	JO	MO	MN	MN	MQ	MR	NP	FR	LL	KR	MM
15627	MM	KK	HO	NN	LM	LM	NP	KK	IP	VV	KL	KR	LL
15628	MM	KK	HO	LO	KL	LL	NP	KM	MP	NR	KL	KL	LL
15629	NP	KK	OO	LN	KM	LP	KK	MM	MN	FN	KL	KL	LL
15630	MQ	LP	HO	NO	LN	LM	PP	MM	IP	FV	LU	KL	LL
15631	NP	KL	OO	NN	NN	LM	KK	MO	IP	RV	KU	KL	LL
15632	MN	LP	HO	MO	NN	MP	KM	RR	IN	RR	KU	KR	LL
15633	MP	KL	HJ	MO	KN	MN	MP	RR	MP	OR	KL	KL	MM
15634	NP	MP	HO	NO	MN	LM	MM	MM	IP	OR	JK	LR	LL
15635	MN	KK	OO	LN	LM	LP	PP	KM	MM	NR	KL	LL	LL
15636	PQ	KL	OO	NN	NN	LP	KP	MO	MP	FN	LL	LR	LL
15637	NN	KM	OO	LN	LL	LL	MP	KM	MP	RR	LU	KR	LL
15638	NP	KL	OO	NN	KN	LP	NP	MM	PP	FR	LL	KL	LL
15639	NP	PP	HI	OO	LN	LM	MM	MM	PQ	NN	KU	LR	LL
15640	MP	KN	KO	MN	KN	LP	NP	KM	MQ	RV	KL	KK	LL
15641	MP	KL	JO	OO	KL	LP	KP	MM	MM	NN	KL	KK	IL
15642	PQ	KP	JJ	LM	NN	LP	KK	MM	PP	OV	KL	KL	FL
15643	MN	KN	KO	MO	NO	LP	NP	KM	MQ	NV	KK	KR	LL
15644	NQ	KK	OO	LN	MN	MP	KP	MO	MM	FR	KL	LR	LL
15645	MN	KK	KO	MO	NO	LP	NP	KM	IQ	FF	JL	KR	LL
15646	MM	LP	HJ	MO	NN	LN	MM	NR	NP	FO	JL	RR	LL
15647	MP	KN	OO	LO	KO	LP	KP	MM	MQ	FN	KL	LR	LL
15648	LP	MP	HJ	MN	MN	MP	MM	KM	IM	OV	JK	KR	LL
15649	NP	PP	OO	OO	LM	LN	MM	MR	NP	OV	KU	KR	LL
15650	NP	KK	OO	NN	MM	LP	NP	MM	MM	FR	KL	LL	LL
15651	NN	LL	HJ	MO	NN	LN	KM	RR	MP	RR	KU	RR	LL
15652	MN	NP	HK	MO	KO	LP	MM	MO	PQ	FF	LL	KR	LL
15653	PP	PP	HO	OO	LN	LL	MN	MM	PP	NV	U	KL	LL
15654	MQ	KL	OO	NO	LN	MP	NP	KM	MM	FR	KL	LL	LL
15655	NQ	KL	JO	LM	NN	LM	KM	MM	PP	RV	LL	LR	FI
15656	LM	PP	HO	MO	NN	MP	MN	MM	MP	NV	KK	KR	LL

Map 1 -

2010 Inventory West Douglas Herd Area

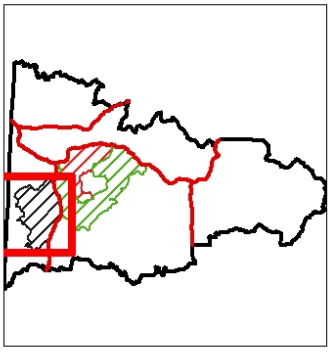


WDHA 2010
ACEC/WSA
North Piceance HA
Piceance East Douglas HMA
West Douglas HA
FieldOffice_Boundary_WRFO
BLM
CDW
County
FOR
NPS
PRI
STA

0 1 2 4 Miles

N

6/14/2010



Sources:
BLM, USGS, CDOW, etc.

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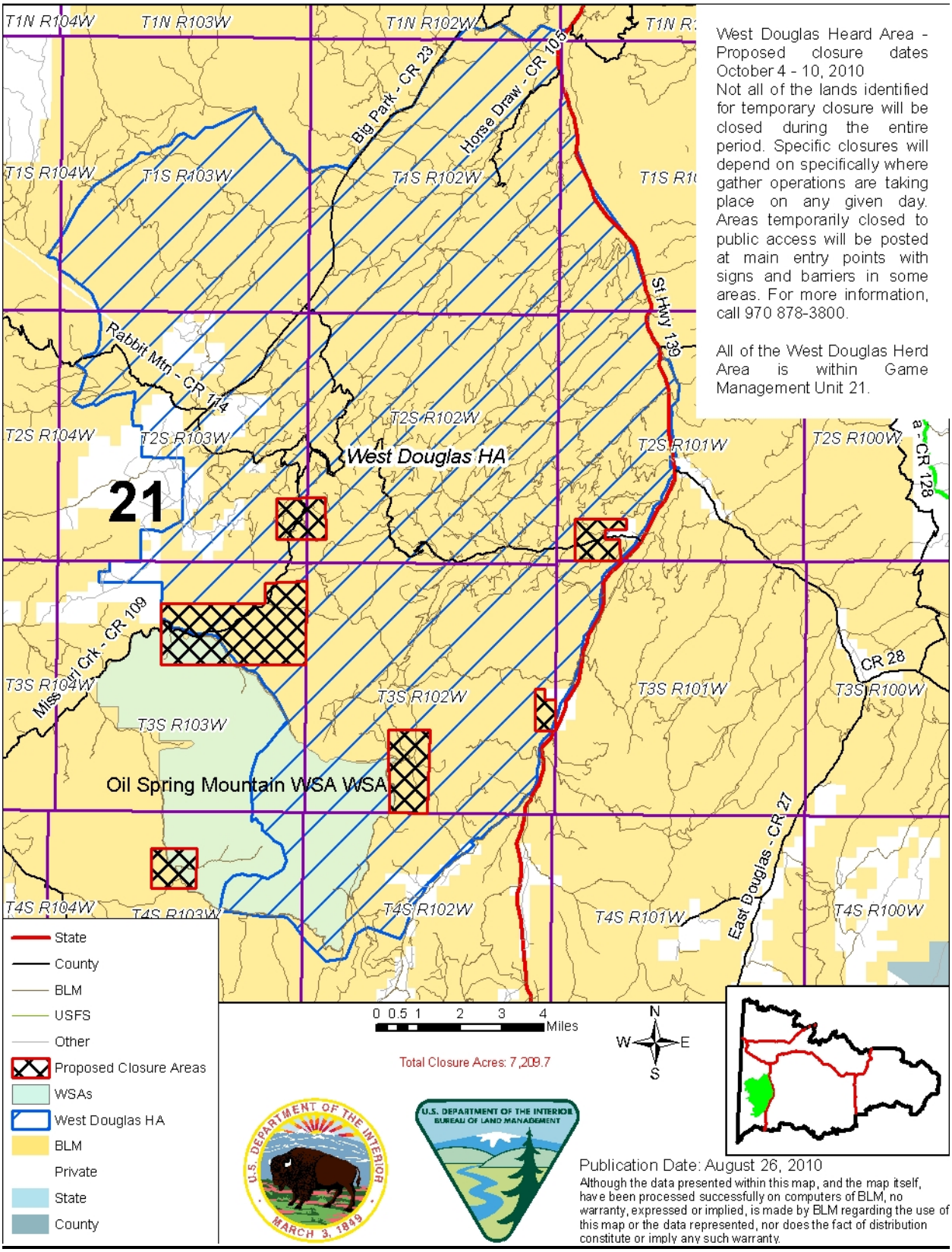
West Douglas Herd Area

Proposed Closure Locations - October 4 - 10, 2010



West Douglas Heard Area - Proposed closure dates October 4 - 10, 2010
Not all of the lands identified for temporary closure will be closed during the entire period. Specific closures will depend on specifically where gather operations are taking place on any given day. Areas temporarily closed to public access will be posted at main entry points with signs and barriers in some areas. For more information, call 970 878-3800.

All of the West Douglas Herd Area is within Game Management Unit 21.

Publication Date: August 26, 2010

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