

McCullough Peaks Herd Management Area Bait Trap Removal

Cody Field Office, Wind River/Bighorn Basin District, Wyoming

October 2012



The BLM's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

DOI-BLM-WY020-EA12-050

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Acronyms

AML	Appropriate Management Level
BLM	Bureau of Land Management
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EA	Environmental Assessment
EIS	Environmental Impact Statement
HMAP	Herd Management Area Plan
HMA	Herd Management Area
HSUS	Humane Society of the United States
IBLA	Interior Board of Land Appeals
MVP	Minimum Viable Population
PZP	Porcine Zonae Pullicida
RMP	Resource Management Plan
S&G	Standards and Guides (for Range land Health)
WH&B	Wild Horse and Burro
WHBA	Wild Free-Roaming Horses and Burros Act, 1971
WHHMA	Wild Horse Herd Management Area
WSA	Wilderness Study Area

1.0 INTRODUCTION

1.1 Background

This environmental assessment (EA) is tiered to the 2008 McCullough Peaks Herd Management Area (HMA) Gather & Fertility Control Implementation Plan (WY-020-EA08-86) and the Finding of No Significant Impact (FONSI) and Decision Record (DR) dated October 18, 2009 and the 2011 Fertility Control Application for Wild Horse Mares in the McCullough Peaks HMA (WY-020-EA11-9) and the FONSI and DR dated March 1, 2011 in accordance with the Council on Environmental Quality (CEQ) regulations, 40 CFR 1502.2, and incorporates by reference all the descriptions of the affected environment and impacts analyzed in the 2008/2009 Gather and Fertility Control Implementation Plan and EA and subsequent Finding of No Significant Impact and Decision Record. The decisions associated with these previous EA's were successfully implemented without any legal action. This EA has been prepared to analyze the impacts associated from small bait trap removals within the McCullough Peaks through 2018 (or as long as we can reasonably conclude that no new information and no new circumstances have substantially changed in the area of analysis). The 2008/2009 Gather & Fertility Control Implementation Plan and EA and the 2011 Fertility Control EA along with the associated FONSI's and DR's are available on the Bureau of Land Management (BLM), Cody Field Office (CYFO) website at:

<http://www.blm.gov/wy/st/en/info/NEPA/documents/cyfo/mcculloughpeakshma.html>

The BLM has determined that 70 to 140 wild horses (excluding current year's foals) are needed in order to ensure and achieve a thriving natural ecological balance. The proposed bait trap removal would begin in 2013 and continue at intervals, if necessary, through 2018 (or as long as we can reasonably conclude that no new information and no new circumstances have substantially changed in the area of analysis) only if adult horse numbers are above the upper AML of 140. The proposed action should help prevent deterioration of the rangelands and help maintain a thriving natural ecological balance and multiple use relationships. By achieving and maintaining AML in the McCullough Peaks HMA, BLM meets its objectives in this HMA, RMP, and the WY Consent Decree. A detailed list of objectives can be found in Appendix A.

After analyzing the monitoring data collected since the 2009 gather, the BLM has determined that excess wild horses are present in the McCullough Peaks HMA. The BLM's monitoring data further reaffirms the current AML of 70 to 140 wild horses (excluding current year's foals) as determined in the 1985 HMAP, and subsequent EA's, FONSI's and DR's. Currently, a fertility control program is being administered through 2015 (or longer) as part of current management of the HMA. This means that the BLM is managing for less than 140 adult wild horses (excluding current year's foals) in order to stay under the upper AML limit. The proposed action is designed to protect rangelands from deterioration, maintain a thriving natural ecological balance and multiple-use relationships.

1.2 Purpose and Need and Proposed action

The purpose and need of this EA is to assess the impacts associated with attaining AML and to maintain range conditions and continue to allow for improvement of the land.

To accomplish these goals, the BLM proposes to remove 20 horses for adoption by the use of bait trapping, as well as, continuing with the use of annual fertility control treatments as authorized under EA# DOI-BLM-WY020-EA11-9, Fertility Control Application for Wild Mares in the McCullough Peaks Herd Management Area. The Proposed Action in this EA considers the BLM's need to help maintain wild horse herd numbers to levels consistent with the AML and to make progress towards achieving standards of rangeland health.

1.3 Decision to be Made

The BLM would decide whether or not to remove 20 horses from the McCullough Peaks HMA in order to achieve AML immediately. Removal of the 20 horses would be by bait trapping methods. Also under consideration is maintaining the option through 2018 (or as long as we can reasonably conclude that no new information and no new circumstances have substantially changed in the area of analysis) to utilize bait trapping to facilitate fertility control administration and to utilize bait trapping in the future to remove wild horses that exceed the upper AML of 140. Bait trapping would occur mainly during the fall and winter months (November 1 to February 28) to avoid issues with foaling and sage grouse. Bait trapping removals would occur in increments of 20 or less on a given year if the population exceeds the 140 adult horses.

1.3 Issues identified during scoping

The BLM conducted internal (interdisciplinary) and external (public) scoping. On June 29, 2012, the BLM mailed a Scoping Notice to the public. The scoping notice was also available on the BLM Wyoming and Cody external websites. August 3, 2012, was the last day for scoping comments to be received, but comments were accepted after that date.

Approximately 6026 emails were received, 4334 were form letters from individuals and 117 were originals. In addition, 24 written comments were mailed to the Cody Field Office. A database of comments has been added to the administrative case file. Synopses of comments that were considered within the scope of the activity and decision(s) to be made and the BLM responses are listed below:

ISSUE, ECOLOGIC SITE CONDITIONS: Most comments suggested that eliminating or greatly reducing livestock grazing be considered.

BLM Response: Currently, livestock grazing has been voluntarily rested during 2012 and has previously been occurring at less than half of the active preference. Furthermore, reducing and or eliminating livestock grazing in the HMA is beyond the scope of the document.

ISSUE, APPROPRIATE MANAGEMENT LEVEL (AML): Most comments were supportive of no gather.

BLM Response: We will fully analyze the no action alternative. However, this alternative is not in conformance with any of the three management decisions for AML; the HMAP, the RMP, or the WY Consent Decree. The establishment of the AML is not intended to be a one-time determination but rather an adaptive process where adjustments are made based upon environmental changes and management needs. Establishment of the AML is a separate process.

ISSUE, GENETIC VIABILITY: Some comments addressed the genetic viability issue and that the lower number of 100 would result in loss of variability in the gene pool and would result in the demise of the herd.

BLM Response: Scribner, Meffe, and Groom (2006), in “Principles of Conservation Biology” state, “While the loss of genetic diversity is a concern, it is important to recognize that the rate of loss is usually slower than the time frame in which management actions can occur.” Small isolated populations tend to be at a higher level of risk associated with random events; small populations living on poor or degraded habitats are at an even higher risk because they lack the nutrition necessary to withstand these events.

Managing wild horses in a manner designed to maintain a thriving natural ecological balance within the productive capacity of the habitat is mandated by the Wild Free-Roaming Horses and Burros Act (WHBA).

Research with domestic breeding animals has shown that reduced genetic diversity and inbreeding may result when less than 50 breeding adults are contributing to the next generation (Soule, 1980). This effective genetic population size is a difficult number to determine. The McCullough Peaks HMA baseline genetic diversity has been determined by the analysis of blood samples collected during gathers in 1992, 1999, and 2004.

Genetic analysis reports are available on the Bureau of Land Management (BLM), Cody Field Office (CYFO) website at:

<http://www.blm.gov/wy/st/en/info/NEPA/documents/cyfo/mcculloughpeakshma.html>

ISSUE, PASSIVE MANAGEMENT: Majority of the comments prefer a (No Action Alternative) or passive management.

BLM Response: According to our RMP, the HMAP, and the Consent Decree between the BLM and State of Wyoming, we are required to manage for population levels that provide for thriving ecological balance.

ISSUE, PREDATOR MANAGEMENT: Many comments asked about the predator-killing activities within and around the HMA and how the activities may have impacted the thriving natural ecological balance in the HMA.

BLM Response: BLM does not manage wildlife population or initiate reintroduction programs for game and non-game species in Wyoming. This is the responsibility of the state wildlife management authority, in this case, the Wyoming Game and Fish Department. In any event, it is doubtful that predator control activities would impact the wild horses since there are very few predators in or near the HMA.

1.4 Relationship to Statutes, Regulations, Policies, Plans or Other Environmental Analyses

Gathering wild horses is in compliance with Public Law 92-125, the Wild Free-Roaming Horses and Burros Act of 1971, as amended by 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, requires the protection, management, and control of wild horses on public lands. The Migratory Bird Treaty Act 1918 and The Endangered Species Act 1973. In addition, the following Instruction Memoranda are incorporated by reference: IM 2006-023 Euthanasia of Wild Horses and Burros, IM 2005-206 Gather Policy and Selective Removal Criteria, and IM 2004-138, Gather Plan and Environmental Assessment Review for Content Requirements for Fertility Control

The proposed action is in conformance with all applicable regulations at 43 Code of Federal Regulations (CFR) 4700 and policies. And is also in conformance with the 1990, Cody Resource Area Resource Management Plan (RMP) and Environmental Impact Statement (EIS) as required by regulation (43 CFR 1610.5-3(a)).

Applicable management actions intended to reduce the wild horse population to AML and maintain it at this level would be in conformance with the approved RMP as found on page 38 of the Record of Decision:

- ***“Management Objective*** - *The wild horse management objective in the McCullough Peaks WHHMA is to maintain a viable herd that will maintain the free-roaming nature of wild horses in a thriving ecological balance and to provide opportunity for the public to view wild horses.”*
- ***“Management Actions*** – *The McCullough Peaks WHHMA will be managed to maintain a population of 100 wild horses until monitoring data shows that changes in the population level are necessary.”*

The McCullough Peaks HMA has been designated as suitable for long term sustained wild horse use in the Cody RMP.

The action is also in conformance with Instruction Memorandum No. WYW-2012-019, Expires 9/30/2013, “Greater Sage-Grouse Habitat Management Policy on Wyoming Bureau of Land Management (BLM) Administered Public Lands Including the Federal Mineral Estate”.

The “No Action” alternative would not be in conformance with the Cody RMP/EIS. Page 18, paragraph two, of the RMP amendment states: *“The livestock grazing management objective is to improve forage production and ecological range condition for the benefit of livestock use, wildlife, and watershed resources consistent with the Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming.”*

The gather will assist in maintaining the health of the public lands within the HMA. The *“Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming”* is available at <http://www.wy.blm.gov/range/sandgs.htm>.

Synopsis of Plans and Policy Effecting AML at McCullough Peaks HMA		
Year	Title	AML Number
1985	HMAP	70-140
1990	Cody RMP	Maintain 100
1992	HMAP evaluation	70-140
1993	IBLA Decision	100 adult horses
2003	Consent Decree	Operate at lower end of AML, but keep herd viable

In addition, the following Plans, Policies, and Analyses are incorporated by reference.

The Herd Management Plan (HMP, 1985, evaluated 1992) set AML for the HMA between 70-140 horses.

The 1990, Cody Resource Management Plan decision was to maintain 100 horses.

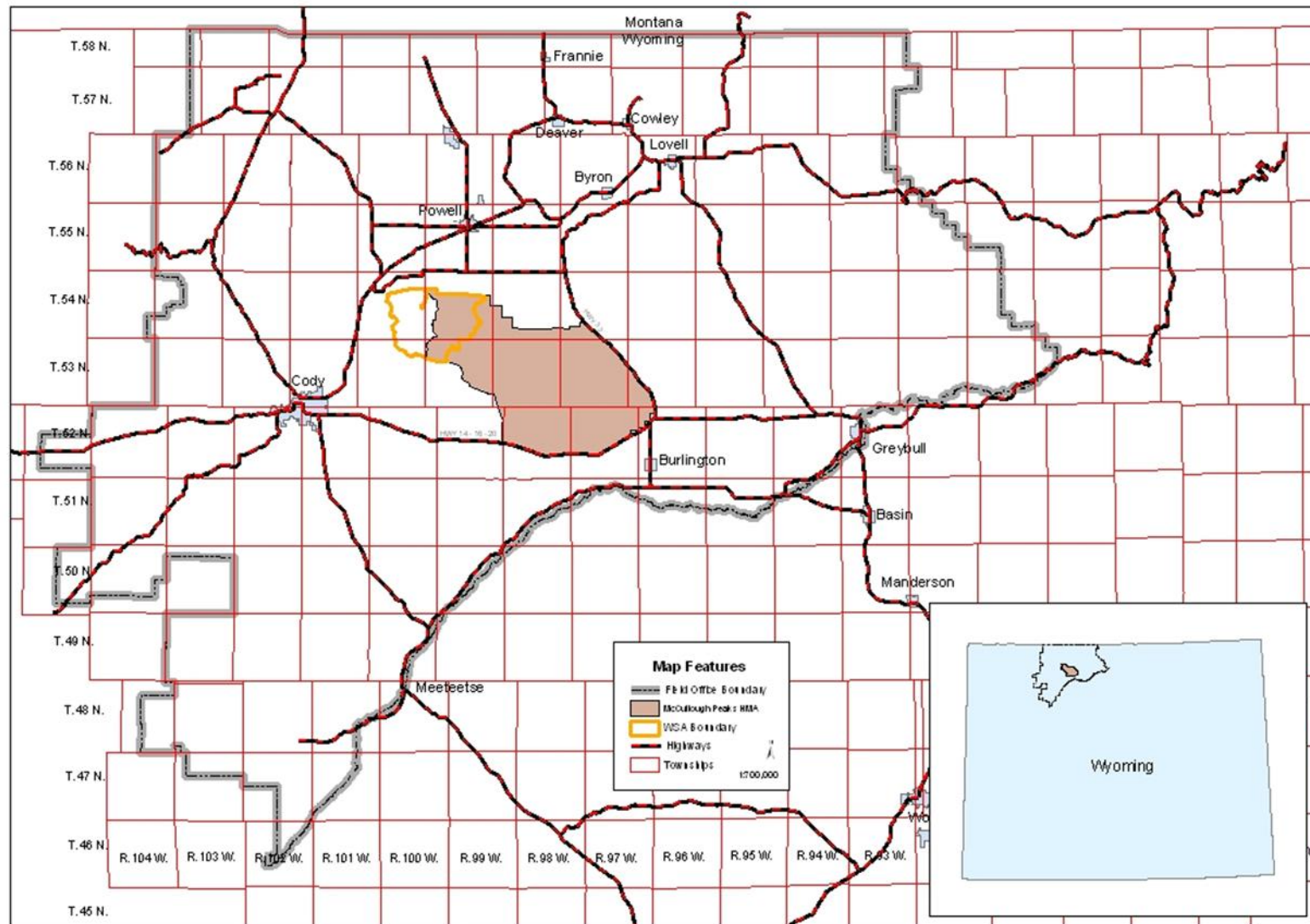
The definition of 100 horses was further clarified by the Interior Board of Land Appeals (1993) as, “100 adult horses.”

A Consent Decree (2003) between the BLM and the State of Wyoming expressed the State’s desire for the Bureau of Land Management (BLM) to gather at the lower level of the AML (70), but to also maintain a healthy herd.

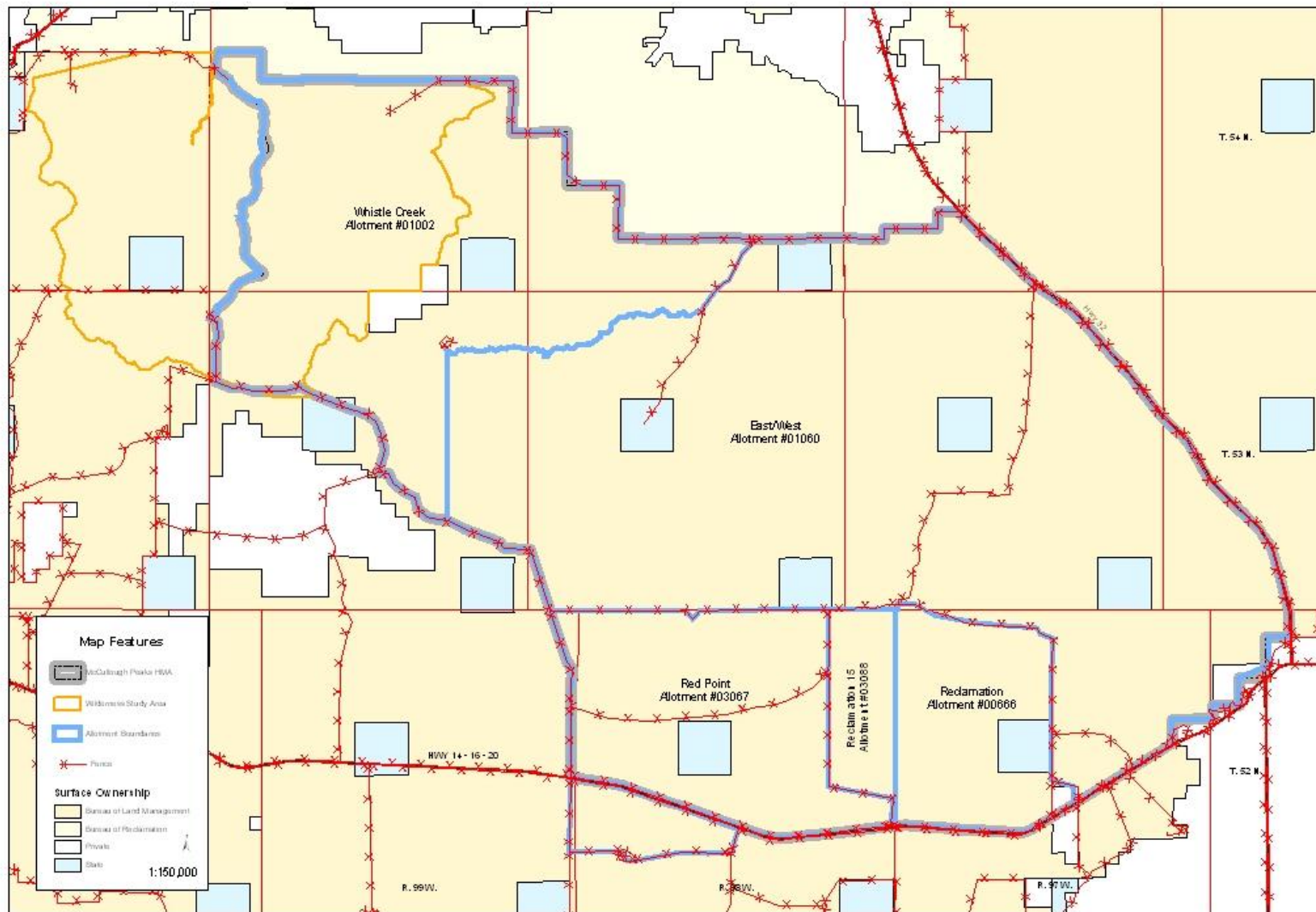
This EA incorporates by reference the McCullough Peaks Wild Horse Gather Environmental Assessments (1999, 2004 & 2009), EA No. WY-020-EA9-123, EA No. WY-020-EA04-036, and WY-020-EA08-86, respectively. These gathers were conducted in the fall of 1999, 2004 and 2009. The EA’s contain specific information on and analysis of the impacts of conducting a gather and fertility control implementation in the HMA.

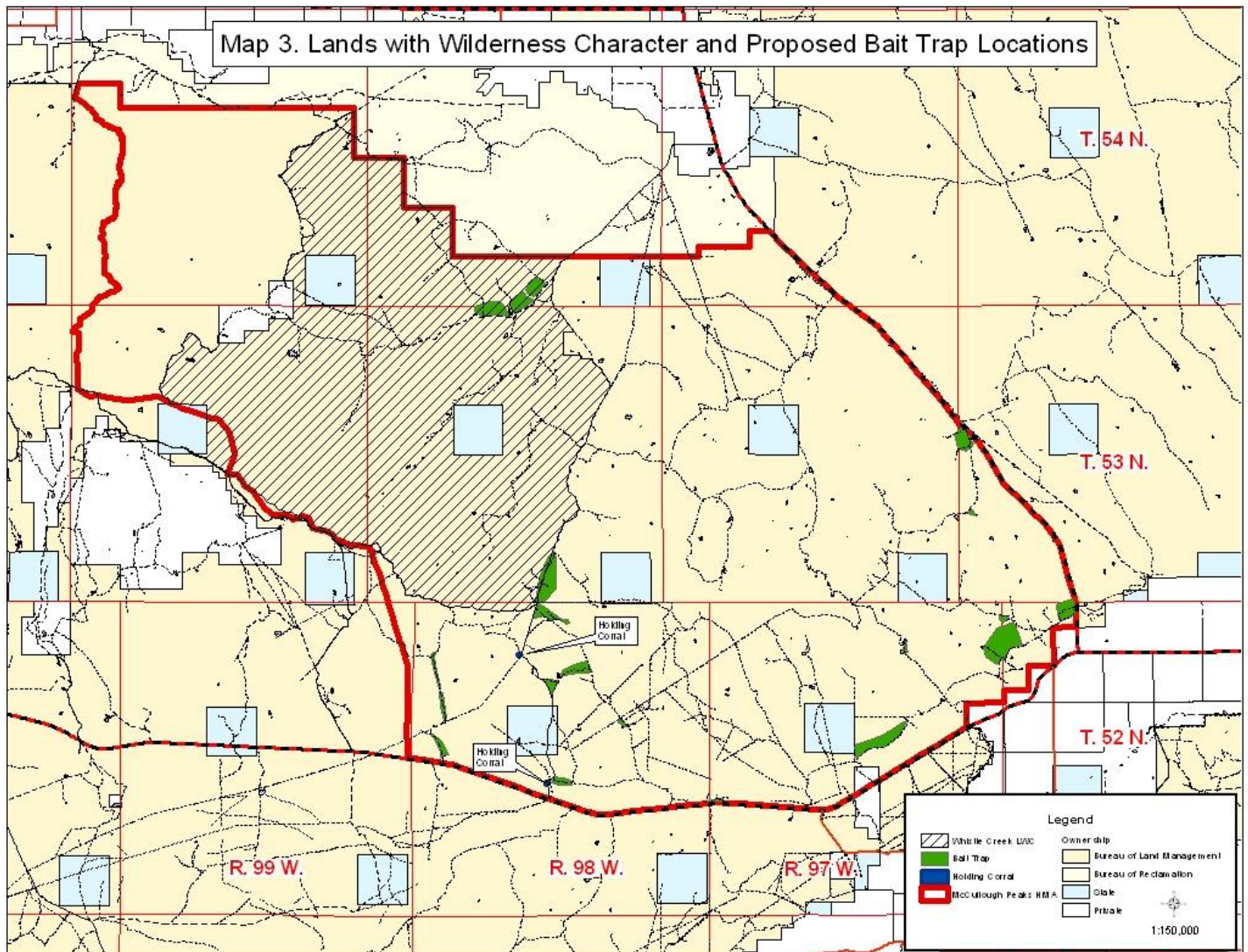
Finally, this EA incorporates by reference the Fertility Control Application for Wild Mares in the McCullough Peaks Herd Management Area Environmental Assessment (2011) EA No. DOI-BLM-WY-020-EA11-9. This EA contains specific information on and analysis of the impacts with the implementation of a remote darting application utilizing liquid porcine zona pellucida (pzp) into select mares over one year of age.

Map 1: General Location Map



Map 2: Grazing Allotments Within the McCullough Peaks HMA





2.0 ALTERNATIVES AND ELEMENTS COMMON TO ALL ALTERNATIVES

2.1 Alternatives Description

- Alternative I (Proposed Action) – Bait trap removal of 20 horses. Also under consideration is maintaining the option through 2018 (or as long as we can reasonably conclude that no new information and no new circumstances have substantially changed in the area of analysis) to utilize bait trapping to facilitate fertility control administration and to utilize bait trapping in the future to remove wild horses that exceed the upper AML of 140.
- Alternative II – No Action

2.2 Alternatives Considered but Eliminated from Further Analysis

These alternatives came about as a result of public scoping (June 29 – August 3, 2012). These were eliminated from further analysis because they either do not accomplish the management objectives, are not consistent with the RMP, regulation, and/or policy, and/or pose a health and safety issue for horses and personnel.

Fertility Control Only

An alternative calling for the continuation of the immuno-contraception program without gathering and subsequent removal of excess animals will not be considered in detail in the EA. Fertility control alone will not immediately reduce herd size below the AML, which is then in violation of the Wyoming Consent Decree, objectives listed in the HMAP and RMP. This also does not help achieve the goal of establishing and maintaining a thriving natural ecological balance.

For these reasons, a stand-alone fertility control would not be considered any further.

Alternative Gathering Methods

A helicopter gather is effective when gathering large numbers of wild horses in expansive HMA's. However, with this small removal of horses in an easily accessible HMA, bait trapping is more cost effective.

The helicopter and roping method of gathering entails moving wild horses to a roping site by helicopter and then capturing the horses by roping. While feasible, this technique has been used only in limited circumstances where a small number of wild horses were difficult to trap. It poses safety hazards to wild horses, personnel, and their saddle horses.

Also, rounding up wild horses with saddle horses alone has proven to be inefficient and impractical. And this also poses safety hazards to wild horses, personnel, and saddle horses.

For these reasons, these three types of gathering methods have been dismissed.

2.5. Alternative I (Proposed Action):

Bait trap removal of 20 horses in 2013, continue with fertility control, and utilize bait trapping as a tool for future management.

Alternative I would be to bait trap and remove 20 wild horses from the McCullough Peaks HMA and leaving approximately 140 adults on the HMA after the gather. There would be 20 horses offered for adoption.

Also under consideration is maintaining the option through 2018 (or as long as we can reasonably conclude that no new information and no new circumstances have substantially changed in the area of analysis) to utilize bait trapping to facilitate fertility control administration and to utilize bait trapping in the future to remove wild horses that exceed the upper AML of 140. Bait trapping would occur mainly during the fall and winter months (November 1 to February 28) to avoid issues with foaling and sage grouse. Bait trapping removals would occur in increments of 20 or less on a given year if the population exceeds the 140 adult horses.

Fertility control treatments would continue as described in EA WY-020-EA11-9, Fertility Control Application for Wild Mares in the McCullough Peaks HMA.

The BLM proposes to capture individual horses and bands; then, selectively remove 20 excess wild horses, beginning in early 2013. The proposed action would consist of removing excess animals targeting the 1-5 year old cohorts that are over-represented in the population, through a combination of bait and water trapping, along with some possible herding to move congregated animals away from or towards traps.

Multiple trap sites would be used to capture the wild horses. The traps would consist of portable panels set up either at water sources or areas frequented by wild horses. Certified weed-free hay or other attractants (such as mineral or processed cubes) would be used to lure horses to the area. Prior to any wild horses being captured, the trap or bait may be in place to accustom wild horses to their presence. When a band of horses or individuals enters the trap, the gate would be closed by BLM or contract personnel. Animals identified for removal would be sorted at the trap site and transported to a holding facility located in the HMA with horse/stock trailers pulled behind trucks. Any animals not identified for removal would be released back onto the range. When an animal is captured and must be held for the day before being transported to the holding facility, the animal(s) would be provided with feed and water at the trap site. Bait trap and holding corral sites would most likely be placed in areas shown on Map 3. Other sites may be used as necessary based upon flow and success of the bait trap operation.

Appropriate site-specific clearance and review for cultural resources and species of concern would be conducted at each trap site prior to set up (if an area is not previously utilized or is without developments on site). The trap sites would be located in previously disturbed areas and in areas with no or very little sagebrush. The holding corrals would be located in either, gravel pits, previously disturbed areas, areas lacking Wyoming big sagebrush, and outside the 0.6 mile buffer of sage grouse leks. The areas would be monitored for noxious weeds over the next several years. All sites would be assessed for post bait trap or holding corral reseeding. All capture and handling activities (including capture site selection) would be conducted in accordance with the standard operating procedures (SOPs) found in Appendix B.

In addition, all domestic animals would be removed during this bait trap removal as well. As per state law, the “estrays horses” would be turned over to the Wyoming Brand Inspector. As of October 7, 2012, there are 8 known domestic horses to be removed.

2.7 Alternative II (No Action):

The no action alternative is required by the National Environmental Policy Act (NEPA) to provide a baseline for impact analysis.

The wild horse population would be allowed to reach equilibrium by regulating their numbers through periodic elevated mortality rates caused by drought, disease, and insufficient forage, water and/or space availability or a combination of these factors.

3.0 AFFECTED ENVIRONMENT

Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified during scoping and/or the Interdisciplinary Team process. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

Resource issues or concerns, which may be or would be affected by the proposed action or alternatives, and are further described in this EA, are presented in Table 1.

Table 1.

Resource Issues/Concerns

Resource, Issue, and/or Concern	No Effect	May Affect	Would Affect
Wild horses			X
Grazing, Soils, Vegetation, & Water –Related Resources		X	
Wildlife		X	
Cultural Resources		X	
Invasive, Non-native Species		X	
Threatened, Endangered, BLM Sensitive Species		X	
Wilderness		X	
Recreation		X	
Paleontology		X	

3.1 Wild Horses

1) HMA Description and background

The Cody Field Office area is located in northwestern Wyoming and contains the McCullough Peaks Wild Horse Herd Management Area, which is located 15 to 27 miles east of Cody (see Map 1). The herd management area encompasses 109,814 acres of land (see Map 2).

Topography is highly variable, ranging from mostly flat to slightly rolling foothills carved by drainages, colorful badlands, and desert mountains featuring steep slopes, cliffs, and canyons. The HMA is bordered on the south by State Highway 14-16-20, on the east by State Highway 32, on the north by Bureau of Reclamation lands, and on the west partially by allotment boundary fences and natural terrain features (division between the Deer Creek and Whistle Creek drainages). There are numerous types and colors of horses in this HMA, and with the proximity to Cody and Yellowstone National Park, the HMA receives abundant interest from the public.

The McCullough Peaks HMA was last gathered in 2009, to remove wild horses in excess of the appropriate management level (AML). At that time, it was estimated that 110 horses were returned to the range (47 studs, 50 mares, and 13 foals). Of the 50 mares, 33 were treated with the fertility control drug PZP, and 17 adult mares were not treated.

Annual fertility control treatments, via dart gun, began in March of 2011. During 2011, 60 mares were treated with either primer and booster doses or booster shots, depending upon their previous treatment history. During 2012, 72 mares were treated with the one-year fertility control drug, ZonaStat-H (native pzp) via dart gun.

Several water development projects have been conducted in coordination and cooperation with Friends Of A Legacy (FOAL) in the last several years. Two water wells, equipped with windmills, stock tanks, and small mammal tanks within an exclosure have been completed in the Whistle Creek and Coon Creek drainages. One additional well was drilled in the Dry Creek pasture on the east end of the HMA however; this well did not produce any water.

In March of 2012, FOAL, BLM, and Double Doc Ranch cleaned four reservoirs in the Red Point pastures and one reservoir in the western edge of the Reclamation pasture.

Recently, a Memorandum of Understanding (MOU) was entered into by BLM - Cody Field Office, FOAL, and Marathon Oil Company. The primary objective of the efforts described in the MOU is to potentially augment the anticipated loss of free-flowing surface water in that portion of Dry Creek during all, or part, of the year so that alternative sources of water are available to wildlife and wild horses in the HMA. Currently, test wells are being drilled to determine if viable water exists in the Dry Creek drainage. In addition, numerous reservoirs are being identified and prioritized for silt removal and maintenance.

Water hauling to the wild horses began at the end of June this year and continues as of October 8, 2012.

2) Gather History and Population Characteristics

Since 1973, annual inventory aerial counts have been made (until recently due to budget cut/no funding). Gathers have occurred in 1983 (215 removed), 1987 (152 removed), 1992 (225 removed), 1995 (170 removed), 1999 (188 removed), 2004 (362 removed) and 2009 (94 removed). Population modeling (APPENDIX C), details the current population as of October, 2012.

Figure 1: Population Numbers in McCullough Peaks 1971 -2012.

Year	Pre-Removal	Post -Removal
1971	71	
72		
73	82	
74	106	
75	204	
76	179	
77	209	
78	244	
79	198	
80	229	
81	309	
82	358	
1983	459	244
84	247	
85	212	
86	145	
1987	291	100
88	142	
89	235	
90	280	
91	322	
1992	370	115
93	187	
94	246	
1995	326	156
96	146	
97	271	
98	255	
1999	323	135
2000	165	
01	236	
02	290	
03	410	
2004	462	85
05	118	
06	135	
07	161	
08	185	
2009	223	110
10	110	
11	130	
12	153 adults	

3) Genetic Diversity and Viability

Blood samples were collected from removed animals during the 1992, 1999, and 2004, gathers to develop genetic baseline data (e.g. genetic diversity, historical origins of the herd, unique markers). The samples were analyzed by Dr. Gus Cothran, a University of Kentucky now Texas A&M University, geneticist, to develop a genetic frequency for the herd, however there were no other interpretations made from the data.

At this time, there is no evidence to indicate that the McCullough Peaks HMA suffers from reduced genetic fitness. Provided that management continues as it has in the past which meant until the 2004 gather the wild horses were never reduced below 100 adult horses since 1987. (Refer to Population Modeling, Appendix C for more details regarding genetics).

The following summarizes what is known about the McCullough Peaks HMA as it pertains to genetic diversity:

- The McCullough Peaks HMA is isolated from other herds.
- Ne (genetic effective population size) for McCullough Peaks HMA has not been established.
- At this time there is no evidence to indicate that the McCullough Peaks HMA suffers from reduced genetic fitness. However, the gather in 2004, where the number of adult horses was reduced to 78 (Appendix C, Population Modeling), could have reduced the genetic fitness of this herd to a small degree.
- Available research suggests that maintaining 100 adult animals should allow for sustainability of existing genetic diversity within most wild horse herds.
- As more research is completed, and knowledge becomes available specific to the McCullough Peaks HMA, it will be applied to the HMA.

3.2 Grazing, Vegetation, Soils, and Water Related Resources

Rangelands in the McCullough Peaks HMA provide seasonal grazing for cattle. Rotational grazing management strategies have been implemented on a majority of the HMA. The livestock grazing permittees in the HMA have taken a substantial amount of voluntary non-use in recent years. The average actual livestock use was 22% of the total active preference during 2010 and 2011. During the 2012 grazing season non-use has been taken by all livestock grazing permittees in the HMA.

Refer to Map 2 for grazing allotment locations.

The following figure shows livestock grazing preference for the HMA.

	Figure 2: HMA Grazing Preference		
	<u>Active AUMS</u>	<u>Suspended AUMS</u>	<u>Grazing Preference</u>
#00666 Reclamation	292	463	755
#01002 Whistle Creek	718	0	718
#01060 East-West	3885	1431	5316
#03067 Red Point*(HMA)	602	*529	*1555
#03088 Reclamation 15	275	0	275

*The Red Point allotment has one pasture which falls outside of the HMA.
The 529 AUMs suspended and 1555 AUMs are totals for the entire allotment.

The following figure shows the utilization levels that were measured in the HMA.

Figure 3: Utilization Levels in the HMA

Allotment Name/Number/Pasture	2010		2011		2012	
	Cattle Use	Horses/Overall Use	Cattle Use	Horses/Overall Use	Cattle Use	Horses/Overall Use
Reclamation #00666/#03088	Spring 27-52%	not read	Fall 12-26%	44%	0%	43-51%
Whistle Creek #01002	Non-Use	8%	Non-Use	not read	0%	10-20%
East-West #01060 Dry Creek Pasture	Rest	17-57%	Spring 18-48%	35-55%	0%	46-49%
East-West #01060 Coon Creek Pasture	Non-Use	not read	Rest	not read	0%	11-40%
Red Point #03067 North Pasture	Fall 26-48%	not read	Fall 35%	not read	0%	69%
Red Point #03067 Middle Pasture	Rest	not read	Rest	not read	0%	45-56%

The following figure shows actual use in animal unit months (AUMs) from 2000 through 2012.

Figure 4: ACTUAL USE (AUMs)

Year	GR4901330 GR4901633 AUMs	GR4901666 AUMs	Grand Total LVSK AUMs	% of Active Preference	Total Horse AUMs	TOTAL AUMs used in HMA
2000	1031	567	1598	28%	2376	4073
2001	1709	1040	2749	48%	3540	6289
2002	1149	597	1746	30%	4350	6096
2003	1031	1004	2035	35%	6150	8185
2004	579	0	579	10%	6930	7509
2005	2304	0	2304	40%	1770	4074
2006	1223	178	1401	24%	2025	3426
2007	574	336	910	16%	2415	3325
2008	453	0	453	8%	2775	3228
2009	704	0	704	12%	3345	4049
2010	474	482	956	16%	1650	2606
2011	1247	366	1613	28%	1950	3563
2012	0	0	0	0%	2295	2295

Summary of Actual Use and AUM figures for cattle and wild horses in the HMA:

• Horse AUMs allocated in the HMA (AML of 70 to 140 adults)	=	1050 AUMs to 2100 AUMs
• Total Active Preference for Livestock in the HMA	=	5772 AUMS
<hr/>		
• 13 year average (2000 – 2012) actual use for livestock & wild horses	=	4517 AUMs
• 13 year average (2000 – 2012) horse numbers	=	214 horses (3210 AUMs*)
• 8 year average (1997 – 2004) Pre-PZP horse numbers	=	302 horses (4530 AUMs*)
• 8 year average (2005 – 2012) Post-PZP horse numbers	=	151 horses (2265 AUMs*)

(* horse AUMs calculated at 1.25 AUMs as per Herd Management Plan based on research from CSU)

Precipitation for HMA

The average growing season (April, May, June) precipitation received at the Whistle Creek rain gauge located in the northeastern corner of the HMA adjacent to Highway 32 has been 2.82 inches. The 34 year average (1979 -2012) annual precipitation for this location has been 6.38 inches.

The average growing season (April, May, June) precipitation received at the Emblem rain gauge, located on the southern boundary of the HMA adjacent to Highway 14-16-20, has been 3.24 inches. The 53 year average (1960 -2012) annual precipitation for this location has been 6.94 inches.

Whistle Creek Allotment (#01002)

In 1994, two 10 plot trend transects were established in the Whistle Creek Allotment and were re-read in 2006. Bluebunch wheatgrass and needle-n-thread grass were identified as the key species.

The percent composition by weight of the key species was 39% in 1994 and increased to 60% in 2006 at key area 3 (H-4). The pounds per acre of all living plants at key area 3 (H-4) in 1994 was 291 pounds and increased to 416 pounds per acre in 2006.

At key area 2 (H-3), the percent composition by weight of the key species was 29% in 1994 and increased to 50% in 2006. The pounds per acre of all living plants at key area 2 (H-3) in 1994 was 285 pounds and increased to 275 pounds per acre in 2006.

East-West Allotment (#01060)

In 1994, two 10 plot trend transects were established in the East-West Allotment and were re-read in 2006 and 2007. Gardner's saltbush, needle-n-thread, bottle-brush squirrel tail and Indian rice grasses were identified as the key species.

Coon Creek Pasture (#01060)

The percent composition by weight of the key species was 32% in 1994 and increased to 40% in 2006 at key area 2 (H-6). If all Gardner's saltbush was included into this total the percent composition increased would be 78%. The pounds per acre of all living plants at key area 2 (H-6) in 1994 was 204 pounds and increased to 299 pounds per acre in 2006.

Dry Creek Pasture (#01060)

The percent composition by weight of the key species was 62% in 1994 and increased to 66% in 2007 at key area 1 (H-5). The pounds per acre of all living plants at key area 1 (H-5) in 1994 was 261 pounds and increased to 347 pounds per acre in 2007.

Standards and Guidelines (S & G) conformance reviews, completed in 1999 and 2001 on three of the allotments (approximately 1/3 of HMA), found that standards were not met for healthy rangelands. In the spring of 1999 and 2000, improved livestock grazing strategies with built in plant recovery time were implemented in these allotments. The remaining two allotments (approximately 2/3 of the HMA) were scheduled for S & G reviews in 2007 or later depending on climatic conditions.

Conformance evaluations have been completed on the Red Point (#03067) allotment in 1998 and it failed the upland vegetative health Standard #3. In 2001, the Reclamation (#00666) and Reclamation 15 (#03088) allotments were completed and each failed Standards #1 (soil stability), #2 (riparian health), and #3 (upland vegetative health). Yearlong wild horse use was determined to be a contributing factor especially considering horse numbers in excess of AML. Allotment evaluations have been completed in 2000 & 2001 on the Reclamation allotments. Maintaining wild horse numbers at AML was a recommended management action in both documents.

These documents are available for public review at the Cody Field Office.

Approximately two-thirds of the herd area is badland-type vegetation of saltbush-grass. The remaining one-third is a sagebrush-grass type. Wyoming big sagebrush, Nuttall's saltbush, greasewood, bluebunch wheatgrass, western wheatgrass, Indian rice grass, blue grama, Sandberg's bluegrass, and saltgrass are the major plant species.

Whistle Creek and Coon Creek are two intermittent streams that originate in and flow from the project area. There are scattered cottonwood and willow trees along these two drainages. Dry Creek flows through the southeastern portion of the herd area and was previously classified as a perennial stream. However, since 2010 the amount of produced water that is allowed to be discharged into Dry Creek has been greatly reduced. At this time Dry Creek supports riparian/wetland vegetation including: Baltic rush, bulrushes, spike rush, streambank wheatgrass, and foxtail barley. There are numerous reservoirs of various sizes scattered throughout the herd area. In addition to these, pools of water collect in the dry washes/draws (drainages) following snow melt and precipitation events throughout the entire HMA.

Because of the use demands on riparian areas, management considerations have focused on protecting these areas from depletion and degradation. Fencing, utilization levels and rotations of domestic livestock have been effective tools in maintaining and improving the qualities of riparian ecosystems. Achieving and maintaining wild horse numbers at AML is an important factor in enhancing riparian function.

3.3 Wildlife

General

The herd area provides yearlong habitat for pronghorn, mule deer, sage-grouse, and various raptors, songbirds, amphibians, reptiles and small mammals. Other game species that have been seen in the herd area include: elk, whitetail deer, mountain lion, and black bear. The herd area provides excellent habitat for raptors like golden eagle, red-tailed hawk, and rough-legged hawk.

Threatened and Endangered Species

Threatened and/or endangered species include those species which are in danger of extinction or are threatened to become endangered due to drastic population declines and which have subsequently been listed as threatened or endangered pursuant to the Endangered Species Act (ESA) of 1973 (as amended).

A “may affect” or “no effect” determination must be made for “Threatened” or “Endangered” species identified on the “species list” for the Cody Field Office. If a may affect determination is made, then consultation with United States Fish and Wildlife Service must be initiated.

Lynx are listed as Threatened. In the Bighorn Basin, there is no suitable lynx habitat in the project area as it contains a sagebrush and xeric dominated shrub community.

Grizzly bear is listed as Threatened and does not occur in the affected environment.

Ute ladies’-tresses is listed as Threatened in Wyoming and occupies mid elevation riparian areas with a near surface floodplain. There is no potential habitat as mapped by the Wyoming Natural Diversity Database in the project area or the Bighorn Basin.

Black-footed ferret is listed as Endangered, since it is outside the Endangered Experimental Non-essential population area. There have been no observations of ferrets in the project area or anywhere except for the ferrets originally found in Meeteetse prairie dog complexes. There also are no prairie dog towns large enough to be considered ferret habitat for future reintroduction sites.

BLM Sensitive Species

BLM sensitive species have been identified for declining populations and for conservation concerns. The BLM manages their habitat in order to take no actions that would further cause the species to become listed as an Endangered Species. BLM sensitive animal and plant species potentially occurring in the project area and which may be affected include: white-tailed prairie dog, ferruginous hawk, greater sage-grouse, long-billed curlew, mountain plover, burrowing owl, sage thrasher, Brewer’s sparrow, sage sparrow, northern leopard frog, and the gray wolf. Seven of these sensitive species are more likely to occur within the project area than the remaining species based upon both prior observations and a review of habitat types. These species include:

Burrowing owls inhabit grasslands, basin-prairie shrublands and agricultural areas nesting in existing mammal burrows, especially those of prairie dogs (WGFD 1999). There are six burrowing owl nests recorded in the HMA.

The gray wolf, recently delisted, were extirpated from the western U.S. by the 1930s, in 1996 wolves were reintroduced to Yellowstone National Park, they were listed as Endangered Non-Essential Experimental population. There are no known packs, but there is a potential for dispersing wolves to move through the area.

Greater sage-grouse – The southern portion of the HMA is in the sage grouse core area. There are 13 historic greater sage grouse leks known to exist in the wild horse herd management area, and our records show five of these have been attended by sage-grouse recently. These five are located in the southern half of the wild horse herd area. The project area is important sage-grouse lek, nesting, and early brood rearing habitat.

Long-billed curlew - Long-billed curlews nest on the ground around water or emergent vegetation and inhabit (forage) in the sagebrush-grasslands of the eastern Great Plains, great basin-foothills, mountain foothills, and wet-moist meadow grasslands. There are no recorded observations of long-billed curlew within the project area and nesting activity has not been documented therein (WYNDD 2007).

Mountain plover - Mountain plover are a ground-nesting species that inhabit the high, dry, short-grass plains east of the Rocky Mountains as well as the sagebrush grasslands throughout Wyoming, and are documented to breed throughout Wyoming, especially in prairie dog colonies. Incidental observations of mountain plovers within the project area include three individual birds observed on May 28, 1986 and a single bird observed on May 29, 1986 in separate locations (WYNDD 2007).

White-tailed prairie dog - There are several small white-tailed prairie dog colonies scattered throughout the southern portion of the proposed project area. The aggregate size for these scattered colonies is estimated to be approximately 20 acres in total size based upon previous mapping efforts. These must be at least 200 acres of white-tailed prairie dog towns and in close proximity to be considered possible black-footed ferret habitat and 5,000 acres for reintroduction sites.

Northern Leopard Frog – Northern leopard frogs have been observed in Dry Creek and it is possible that they are present in Dry Creek within and/or downstream of the project area.

Persistent Sepal Yellowcress – many plant observations have been documented around reservoirs in the HM and more populations are likely around other unsurveyed reservoirs and bodies of water. This plant prefers moist sandy to muddy banks near the high water line. Persistent sepal yellowcress is a former Candidate species and is currently a BLM - Sensitive Species.

Migratory Birds

Habitat for migratory birds within the overall project area may be classified as a shrub-steppe habitat type. Priority species potentially occurring and nesting within the shrub-steppe habitat type include but are not limited to: Mountain Plover, Brewer's Sparrow, Sage Sparrow, Loggerhead Shrike, and Sage Thrasher.

3.4 Cultural Resources

Only a small fraction of the land surface within the HMA has been inventoried for heritage resources. Mostly these inventories have been in response to energy, highway, range, wild horse, and realty related activities requiring compliance with Section 106 of the National Historic Preservation Act. As a result, archaeologists have recorded approximately one hundred (100) archaeological properties. Prehistoric site types known to exist within the HMA include open camps, thermally altered rock and or lithic scatters. Historic site types include trash dumps, trails, roads, and structures associated with the local farming and ranching industries. The 2007, Red Point 3-D Seismic, Class III cultural resource inventory covered large portions of the HMA with principally linear survey corridors (CYFO #020-2007-078). This inventory encountered 15 cultural sites (seven (7) prehistoric, and eight (8) historic). Of these known sites three (3) are eligible for the National Register of Historic Places (NRHP), eleven (11) are not eligible, and one (1) is considered unevaluated. Additionally, the 2010, Whistle Creek Blue Grama Class III block inventory covered one thousand five hundred (1500) acres in the northern portion of the HMA.

This survey identified two (2) sites and fifty seven (57) isolated resources. None of these cultural resources were determined eligible for NRHP inclusion (CYFO# 020-2010-119).

3.5 Invasive, Non-Native Species

Noxious weed surveys, including invasive and non-native species, have been completed along roadways in and adjacent to the HMA. These surveys indicate that the following Park County listed noxious weeds occur:

<u>Scientific Name</u>	<u>Common Name</u>
<i>Cardaria draba</i>	White Top
<i>Acroptilon repens</i>	Russian Knapweed
<i>Centaurea maculosa</i>	Spotted Knapweed
<i>Cirsium arvense</i>	Canada Thistle
<i>Cirsium vulgare</i>	Bull Thistle
<i>Tamarix ramosissima</i>	Salt Cedar
<i>Hyoscyamus niger</i>	Black Henbane
<i>Cynoglossum officinal</i>	Houndstongue
<i>Convolvulus arvensis</i>	Field Bindweed
<i>Elaeagnus angustifolia</i>	Russian Olive

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

3.6 Wilderness Study Area (WSA)

The gather would occur near the McCullough Peaks WSA. The WSA is not congressionally designated as a Wilderness Area and therefore is not subject to the restrictions provided under the Wilderness Act of 1964. The WSA is subject to Handbook 8550-1 entitled “Interim Management Policy for Lands under Wilderness Review and the “Federal Land Policy and Management Act.”

The traps and any vehicle use would occur outside the WSA, so as not to impair the suitability of the area for preservation as wilderness.

Only one-half of the WSA lies within the HMA.

3.7 Citizens Proposed Wilderness

In April 2007, the BLM received information from the Biological Conservation Alliance (BCA) regarding “wilderness in character” lands in the McCullough Peaks area. This interest group petitioned the BLM to investigate approximately 60,000 acres for special management. The BLM has responded to BCA with regard that management decisions outside the current RMP would require study during the next land use planning phase or a plan amendment. Since the Cody RMP revision started in 2008, a full investigation into the BCA proposal would take place.

3.8 Lands with Wilderness Character (LWC)

BLM-managed public lands within the Cody Field Office area were inventoried to determine if they possess wilderness characteristics. The Whistle Creek LWC was identified in the general McCullough Peaks area. The LWC lies adjacent to, most of the proposed bait trap locations. This LWC was found to be basically natural and to have outstanding opportunities for solitude and primitive and unconfined recreation. Management of this LWC would be determined in the Big Horn Basin Resource Management Plan Revision which is in progress.

3.9 Recreation

The public enjoys seeing wild horses roaming free in the McCullough Peaks area. The BLM has issued 18 Special Recreation Permits (SRPs) that authorize commercial guided, recreational activities in the McCullough Peaks area. Fifteen of these SRPs authorize commercial outfitting and guiding operations for antelope and deer hunting on BLM-managed lands included within Antelope Hunt Area 78 and Deer Hunt Area 122. These particular hunt areas are very large and extend well beyond the McCullough Peaks. Actual hunting use by commercial SRP holders in the project area is low. The remaining 3 SRPs authorize interpretive tours in the McCullough Peaks area for the viewing of wild horses. Only one of these permit holders conducts regular trips into the project area for the purpose of viewing wild horses.

Recreation use within the HMA is moderate to high (within context of the Cody area recreation). Recreational activities include driving for pleasure, hiking, wildlife and wild horse viewing, mountain biking, horseback riding, ATV and motorcycle driving, rock hounding, photography and study of the area’s history. Some antelope, deer, and upland game bird hunting occurs.

Recreational access into and within the area is governed by the McCullough Peaks Travel Management Plan (BLM, 2004), which established a management prescription for off-road vehicle (ORV) use in the 119,839 acre travel management planning area. The Travel Management Plan does not include the entire HMA.

3.10 Paleontology

The HMA is situated in an area dominated by outcrops and subcrops of the Eocene Willwood Formation that represents an ancient river flood plain depositional environment. The Willwood Formation is well known as a world-class mammalian fossil deposit studied by numerous universities and colleges throughout the United States and the world; it contains one of the best known records of Eocene mammalian fauna and the most detailed biostratigraphic resolution, with more than 1,100 fossil mammal localities and more than 100,000 mammal fossils tied to measured sections within the Bighorn Basin (Bown et al. 1994). A paleontological inventory of areas disturbed by the Red Point Seismic Project was conducted in May and June of 2007 (ARCADIS U.S., Inc. 2007b). The inventory identified 34 new paleontological localities within the 492-acre inventoried area.

4.0 ENVIRONMENTAL EFFECTS

4.1 Direct and Indirect Impacts

(The threshold of impacts is directed at “real environmental issues” that affect the “quality of the human environment” as stated in the policy of CEQ regulations 40 CFR 1500.2b).

Direct impacts from the proposed action, with the exception of the No Action alternative, would consist of horse gathering activities disrupting general public recreation activities, disruption of wildlife species during the gather, and/or surface soils and vegetation disturbances.

Indirect effects may include a few less horses being viewable to the general public and commercial viewing operations, scarce wildlife in the vicinity of the gather and associated activities, and the creation of a possible vector site for the spread of weeds.

Standard Operating Procedures (SOP's), in Appendix B would be used for minimizing impacts of the bait trapping activities.

Resource specific impacts are discussed in the following sections.

4.1.1 Wild horses

Assumptions for analysis: This impact analysis assumes that a 100 percent capture rate would be attained for removal purposes. Animals within the ages 1-5 year olds would be the target population including any foals that may be with a mare in this age class. The Standard Operating Procedures (Appendix B) for handling are incorporated as part of the Proposed Action. The population model (Appendix C) is for illustration and alternative comparison purposes only and may not necessarily reflect actual populations or outcomes of management actions.

Alternative I: (Proposed Action)

Under the proposed action, excess wild horses would be captured and removed from the McCullough Peaks HMA utilizing a combination of bait and water trapping. Herding could be used in conjunction with the two techniques but not for actual capture off of horseback, rather for moving congregated animals away from trap sites, herding animals toward trap sites, or locating animals. Traps would be constructed of portable steel panels. The panels are 12 feet long and six foot tall. The traps – typically consisting of 15 to 25 panels – are placed either around a water trough (water trapping) or in an area with regular wild horse use for bait trapping. The traps would be constructed in a manner that allows wild horses to initially move freely through them until they are accustomed to their presence. The traps could be designed either in the shape of a “key hole”, the letter “Q”, or the letter “P” with a side pen to hold captured wild horses until ready for transport to the HMA holding facility and then to Rock Spring Corrals for adoption preparation. The traps would also have an alley attached for loading captured excess wild horses. The excess wild horses would be loaded onto horse/stock trailers and pulled behind appropriate motorized vehicles.

Prior to capture the trap sites could be baited before panels are set up to allow for wild horses to become accustomed to coming into an area for feed, salt or other attractant. The CYFO Wild Horse Specialist would be making the selections of which horses would be removed. However, in order to allow for unforeseen circumstances, the wild horses identified for removal have been photographed so as to allow for various personnel to conduct capture. Once

the panels are set up, two sides would be left open to allow wild horses to walk through or not completely closed with one side open. When trapping occurs one side would be closed off and wild horses would only be allowed to enter one side. That side would have a panel or a gate that would be closed by personnel at the trap as a wild horse identified for removal enters, or a band with a member(s) in it identified for removal enters. Once captured the wild horse(s) identified as excess would be sorted from other wild horses and either immediately loaded in a horse/stock trailer and transported to the HMA holding facilities, or sorted into the holding pen to await transport.

Water traps would be designed similar to a bait trap, except only one entrance would be in place with the initial panel setup. A water trap would leave a much wider opening initially to allow wild horses to enter and drink without creating a situation where the horses are unwilling to drink due to the presence of the panels. As the wild horses become more accustomed to the panels the mouth or opening would be slowly closed until there is only a gate or one panel for an opening. Once an identified animal is inside the trap, the gate would be closed by personnel tending the trap. After capture, the impacts would be the same as described above for a bait trap.

During the initial setup, game cameras would be placed on each trap to help monitor wild horse use and determine when to begin capture operations. The use of a saddle horse or horses to locate wild horses (especially in the low country) and/or herd wild horses away from bait sites would be a minimally used tool. Herding on foot would also be utilized if necessary to move animals away or to bait trap areas. Based upon past experience by BLM personnel through monitoring on foot and horseback, wild horses are more responsive to on foot herding and not agitated nor flighty. This method of herding would be the preferred and utilized only as needed as a management tool. The wild horses tend to be more agitated and flighty when they encounter people on horseback. Therefore, this method of herding would be utilized only as a last resort.

Impacts to individual animals could occur as a result of stress associated with the gather, capture, processing, and transportation of animals. The intensity of these impacts would vary by individual and would be indicated by behaviors ranging from nervous agitation to physical distress. Mortality to individuals from this impact is infrequent but can occur. Other impacts to individual wild horses include separation of members of individual bands and removal of animals from the population.

Population-wide impacts could occur during or immediately following implementation of the proposed action. Potential impacts include the displacement of bands during capture and the associated re-dispersal, modification of herd demographics (age and sex ratios), temporary separation of members of individual bands of horses, reestablishment of bands following release, and the removal of animals from the population. With the exception of changes to herd demographics (removed individuals), direct population-wide impacts would be temporary in nature with most, if not all, impacts disappearing with release.

Indirect impacts can occur to horses after the initial stress event and could include increased social displacement or increased conflict between studs. These impacts are known to occur intermittently during wild horse gather operations. Traumatic injuries could occur and typically involve biting and/or kicking bruises.

Less competition for forage and water resources would reduce stress and promote healthier animals. The action would bring the population within the AML.

In addition, only removing 20 animals improves the chances that all horses would be adopted by the public during the proposed adoption. This in turn potentially keeps 20 horses from entering long-term holding and saves significant amounts of money.

The Jenkins population modeling suggests that the wild horse population would have a -2.6% average growth rate in 10 years and the median “average” population size would be 133 horses which follows Dr. Cothran’s recommended population levels to maintain a healthy viable wild horse herd. The opportunity to conduct small bait trap removals (if necessary following this initial removal of 20) coupled with the one-year, native pzp fertility control treatment program allows for flexibility in management of the wild horse numbers. For instance, if more deaths are occurring then less mares would be treated with fertility control. On the other hand, if the fertility control is not quite as effective, then small bait trap removals of 5 to 20 horses could be conducted on certain years in order to stay below the upper AML limit of 140 adults.

Alternative II: (No Action):

Under the no action alternative, excess wild horses would not be removed from the McCullough Peaks HMA at this time. The animals would not be subject to the individual direct or indirect impacts as a result of the bait trapping operation. The population would remain above the AML and the current population of 153 wild horses would continue to increase at approximately a 19.2% growth rate and exceed the carrying capacity of the range over time. Though it may require many years for the population to reach catastrophic levels, by exceeding the upper limit of the management range (140), Alternative II poses the greatest risk to the long-term health and viability of the McCullough Peaks HMA wild horse population.

Over the course of time, the animals would deteriorate in condition as a result of declining forage availability and the increasing distance traveled between forage and water sources. The mares and foals would be affected most severely. The continued increase in population would eventually lead to catastrophic losses to the herd, which would be a function of the available forage and water and the degradation of the habitat. A point would be reached where the herd reaches the ecological carrying capacity and both the habitat and the wild horse population would be critically unhealthy.

This alternative would not be acceptable to the BLM nor most members of the public. The BLM realizes that some members of the public advocate “letting nature take its course,” however allowing horses to die of dehydration and starvation would be inhumane treatment and would clearly indicate that an overpopulation of wild horses existed in the HMA. The Wild Free-Roaming Horse and Burro Act of 1971, as amended, mandates the Bureau to “*prevent the range from deterioration associated with overpopulation*”, and “*remove excess horses in order to preserve and maintain a thriving natural ecological balance and multiple use relationships in that area*”. Additionally, Promulgated Federal Regulations at Title 43 CFR 4700.0-6 (a) state “*Wild horses shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat*”.

4.1.2 Grazing, Vegetation, and Water Resources

Alternative I: (Proposed Action)

Impacts under Alternative I are similar but vary in the degree based on the wild horse numbers. Alternative I would provide more forage than Alternative II. Reaching the AML and maintaining the populations at this level would assure that the quality and quantity of forage for domestic livestock, wildlife, and wild horses would be available. Improved quality and increased quantity of forage allows the continuation of authorized livestock use.

BLM data and past experience show that removal of excess horses from areas of wild horse concentration would improve habitat conditions, land health, and watershed function. This effect is most pronounced around water sources and would benefit grazing, vegetation, soils, and water-related resources. Maintaining wild horse populations at AML through the removal of excess wild horses enables livestock and wildlife populations to utilize the forage that would otherwise be used by the excess wild horses.

Alternative II: (No Action)

Alternative II poses the greatest risk to the long-term health and viability of the McCullough Peaks HMA wild horse population, wildlife populations, land health, water-related resources, and the vegetative resource.

The population of wild horses would compete for the available water and forage resources. The areas closest to water would experience severe utilization and degradation of the range resource. Over the course of time, the animals would deteriorate in condition as a result of declining forage availability and the increasing distance traveled between forage and water sources.

Irreparable damage to the resources, which would include primarily vegetative, soil and riparian-wetland resources, would have obvious impacts to the future of the McCullough Peaks HMA and all other uses of the resources, which depend upon them for survival.

4.1.3 Wildlife

Alternative I (Proposed Action):

General

Since the bait trap removal would occur in the late fall and winter (November 1 to February 28), there would be very little impact on all wildlife. During this period most plants have become dormant for the winter and have set seed. The ground is generally dry since the wettest period is during May. Most species have reproduced and reared their young, many are close to adult size by this time and are mobile enough to escape disturbance. The main impacts are on habitat.

The largest impact would be where the holding corrals are placed. This area would hold horses for a short duration and high intensity period. The ground may be very disturbed in this one spot. The northern most holding corrals would be placed on the west side of Whistle Creek road, in the previously used holding facility location. This location is previously disturbed, is not within in sage brush and is at the very edge of the .6 mile buffer. Impacts would be expected to be minimal as a result of the holding corrals being relocated at the same previously used area. The other holding facility would be well outside the .6 mile buffer area for sage-grouse leks. These impacts should be short-term and would not affect wildlife during this period.

Alternative I would lessen the effects of wild horse grazing in this habitat and work towards reaching the wildlife range health standard. Reduced grazing would allow for more plant recovery time in the long-term from grazing and should help to provide nesting cover and forage for many wildlife species.

Threatened and Endangered Species

There would be “no effect” on all listed species mentioned in the Affected Environment section. All of these species have never been observed in this project area, the affected area does not contain habitat, and these habitats and species would not be affected during the season which the project would be implemented (see Affected Environment for affect rationale).

BLM Sensitive Species

The species identified in the affected environment as BLM Sensitive Species and their habitat may be positively and negatively affected by Alternative I. Positive benefits include increased nesting habitat for bird species and better prey production from improved range condition for raptors. There would be fewer weeds due to competitive exclusion from improved range condition, which leads to better habitat. There would be less sediment loading of downstream water-related resources, which would benefit northern leopard frogs. The negative effects are

short-term. Trampling would alter nesting habitat for sagebrush nesting birds, but this disturbance would be corrected for in the coming spring when these shrubs re-sprout from existing branches. Since the gather would be outside the nesting season, there would be no nest loss due to trampling or disturbance. If baiting wild horses through a prairie dog town occurs, there may be some minor damage to burrow, which prairie dogs can handle as long as it is not prolong and severe. It does not appear that the gather activities would be either prolong or severe. Sage-grouse should not be affected during this project and the long-term effects are positive, since range condition would improve from this action.

Migratory Birds

The effects on migratory birds would be limited to habitat alteration from the gather. Just like effects mentioned in the sensitive species section, these same effects would occur for migratory birds. Most migratory birds would have migrated by now to their winter habitat, so the direct effects on these species would be very minimal. In the long-term, reducing grazing pressure on the range would benefit migratory birds.

Alternative II: (No Action)

General

The herd would increase with no limit except for the forage production and health of the range. Since horses consume more food and browse more effectively than native ungulates per pound, horses would eventually over utilize the range. The range would be grazed with increasing intensity and severity until the vegetation community has changed to the point, where weeds would occupy the available bare ground. Native plants would be grazed to the point where they can no longer persist. Native wildlife, which is adapted to these plants, would no longer have habitat or forage to survive. Massive erosion events would occur as the herd population grows exponentially without control. Forage competition with native ungulates would be so great; their herd size would eventually collapse. The habitat would be so over utilized; there would be no chance of reaching or attaining the wildlife range health standard. Increased sediment loading to downstream water would impacts species using associated habitats.

Threatened and Endangered Species

If there were no bait trap removal efforts, and the horse population were allowed to grow without limit, then the project “may affect” Ute’s ladies tresses. Any riparian areas would be grazed beyond capacity, any habitat that was there would be degraded. Since there has not been a survey, these areas would have to be surveyed to determine whether or not they exist in the project area. Even if the survey comes up with negative findings, the results would still not prove a negative presence and there still may be an effect on this listed species and its habitat. Consultation for this action with USFWS would need to occur. There would also be degradation of prairie dog town to the point where black-footed ferret surveys would also have to be conducted. This alternative’s effects, may affect black-footed ferrets. There would still be a “no effect” call on lynx and gray wolf.

BLM Sensitive Species

Sensitive species would all be impacted by the habitat degradation mentioned in the General section of this Alternative. All sensitive species would be negatively affected and this action may contribute to a justification for listing these species under the ESA.

Sage-grouse, which is an indicator species for rangeland health would surely show signs of population loss as their habitat would be lacking grass and forb cover and sagebrush would become too decadent for nesting suitability.

Degraded watershed condition/function would result in increased sediment loading in downstream waters having a negative effect on northern leopard frog and riparian habitats.

Migratory Birds

Migratory birds would be killed and nests lost due to the presence of an exponentially growing herd fenced into the herd area, becoming more concentrated and range degradation. These birds would be trampled on nests at an increasing rate, and their nesting habitat would be degraded for the long-term.

4.1.4 Cultural Resources**Alternative I: (Proposed Action)**

Following the requirements of the Wyoming State Protocol, direct or indirect impacts to historic properties, as defined by 36 CFR 800.2(e), are not anticipated to occur from implementation of Alternative I. All bait trap sites and temporary holding facilities would be surveyed at the Class III level for cultural resources prior to construction. The archeologist would review all proposed and previously used gather sites and temporary holding facility locations to determine if these have had a Class III cultural resources inventory, and/or if a new inventory is required. If cultural resources are encountered at proposed gather sites or temporary holding facilities, those locations would not be utilized unless they could be modified to avoid or mitigate adverse impacts to the cultural resource site(s).

Within the HMA, where Class III inventories have not been or would not be conducted, impacts to historic properties are limited to trampling. Naturally, fewer horses would result in lesser potential impacts to historic properties.

Alternative II: (No Action)

At the present time, a determination of no action would not adversely affect historic properties. However, a substantial increase in the number of horses over time may adversely affect historic properties by trampling.

4.1.5 Invasive Non-Native Species (weeds)**Alternative I: (Proposed Action)**

Impacts associated with Alternative I include potential importation or transportation of new non-native species (noxious weeds), spread of existing noxious weed seeds and plant parts to new areas in the HMA, and increases in the size of existing noxious weed infestations.

These impacts would potentially occur if contractor vehicles are carrying noxious weed seeds and plant parts when they arrive on site, or drive through existing infestations and spread seed into previously weed free areas, or if their livestock had been fed contaminated hay before arriving on site and the seeds pass through their digestive system. Only certified weed-free hay may be fed on public lands in Park County. The contractor together with the on-site BLM representative would examine vehicles and hay for noxious weed seeds or plant parts, prior to initiating the bait trapping. If noxious weed seeds or plant parts are found in hay or on vehicles, the hay would be removed from the area and the vehicles cleaned.

Proposed bait trap sites and holding sites would be examined for the presence of noxious weeds prior to construction. If noxious weeds were found, pre and post treatment of the area would be conducted by the BLM.

Potential indirect impacts would be related to wild horse population size. The proposed action would result in the lowest population size and would have the lowest potential for increasing the incidence of noxious weeds. The potential increase in noxious weeds would mainly be from ground disturbance.

Alternative II: (No Action)

Implementation of Alternative II (No Action) would allow impacts to vegetation and soils to increase each year that a gather is postponed, and utilization levels would continue to be in excess of objectives. Noxious weeds can increase with overuse of the range by grazing animals or surface disturbance, which would be a negative impact to the environment and native plants and animals.

4.1.6 Wilderness Study Area

Alternative I: (Proposed Action)

Impacts to the McCullough Peaks WSA under this alternative would be minimal but still slightly greater than the no action alternative. With fewer horses, there is less herbaceous forage used within the WSA. Only ½ of the WSA is encumbered by the HMA. Impacts from wild horse grazing are minimal. Bait trapping operations would not occur within the WSA, therefore there will be none to little impact to the WSA.

Alternative II: (No Action)

Impacts to the McCullough Peaks WSA under this alternative would be more horses present in the HMA and possibly more horses grazing and taking forage from the WSA.

4.1.7 Citizens Proposed Wilderness (CPW)

Alternative I: (Proposed Action)

There would be less of an impact to the citizens proposed wilderness area under this alternative. With fewer horses, there is less herbaceous forage used within the citizens proposed wilderness. The wilderness characteristics of naturalness, outstanding opportunities for solitude, and outstanding opportunities for primitive recreation in the Citizens Proposed Wilderness would be temporarily impaired during the bait trapping activities. Outstanding opportunities for solitude exist in those portions of the CPW which are away from the northeastern most portion of the Citizens Proposed Wilderness.

Alternative II: (No Action)

Impacts to the proposed Citizens Proposed Wilderness lands would be more noticeable with this alternative, in that there could be increased use of forage, should the horse numbers continue to grow without a bait trap removal. There would be no effect to the CPW under this alternative as there would be no bait trapping locations that would need to be utilized within the Citizens Proposed Wilderness.

4.1.8 Lands With Wilderness Character (LWC)

Alternative I: (Proposed Action)

There would be less of an impact to the Whistle Creek Lands With Wilderness Character (LWC) under this alternative. With fewer horses, there is less herbaceous forage used within the Whistle Creek LWC. The wilderness characteristics of naturalness, outstanding opportunities for solitude, and outstanding opportunities for primitive recreation in the Whistle Creek LWC would be temporarily impaired during the bait trapping activities. Outstanding opportunities for solitude exist in those portions of the LWC which are away from the northeastern most portion of the Whistle Creek LWC.

Alternative II: (No Action)

There would be no effect on the LWC as there would be no bait trapping locations utilized within the Whistle Creek LWC. Impacts to the Whistle Creek LWC lands would be more noticeable with this alternative, in that there could be increased use of forage, should the horse numbers continue to grow without a bait trap removal.

4.1.9 Recreation

Alternative I: (Proposed Action)

Recreation in the project would be temporarily impacted during bait trapping activities. However, this impact on recreation should be greatly reduced since bait trapping would occur during times with the least amount of recreation use in the McCullough Peaks. The timing of November 1 to February 28 is also outside of the main commercial tourism window, thus reducing impacts to SRP's. The slight reduction of wild horse numbers would affect public viewing opportunities. Although fewer horses would be viewable, the remaining horses would be in better condition than under Alternative II (no action). Additional recreational opportunities would be provided by wild horse adoption and adoption events. Adoption of wild horses provides the opportunity for a more in-depth and up-close recreational experience for interested and qualified members of the public.

Alternative II: (No Action)

There would be more horses under this alternative. However, over time, the condition of the wild horses would decline, as would the habitat. Increases in wild horse numbers would likely mean a decline in the opportunity to enjoy wildlife-related consumptive and non-consumptive recreation. There would be no opportunity to adopt a wild horse from this area.

4.1.10 Paleontology

Alternative I: (Proposed Action)

Impacts to paleontological resources may occur in areas where bait trapping and holding facilities are located. However, the following stipulations would apply to aid in protection of paleontological resources:

Cody Field Office Paleontological Resources Protection Stipulations

1. Collecting: The project proponent/Operator is responsible for informing all persons associated with this project including employees, contractors and subcontractors under their direction that they shall be subject to prosecution for damaging, altering, excavating or removing any vertebrate fossils or other scientifically significant paleontological resources from the project area. Collection of vertebrate fossils (bones, teeth, turtle shells) or other scientifically significant paleontological resources is prohibited without a permit. Unlawful removal, damage, or vandalism of paleontological resources will be prosecuted by federal law enforcement personnel.

2. Discovery: If vertebrate or other scientifically significant paleontological resources (fossils) are discovered on BLM-administered land during operations, the Operator shall suspend operations that could disturb the materials, and immediately contact the BLM Cody Field Office Manager (Authorized Officer). The Authorized Officer would arrange for evaluation of the find by a BLM Geologist or Paleontologist within an agreed timeframe, and determine the need for any mitigation actions that may be necessary. Any mitigation would be developed in consultation with the Operator, who would be responsible for the cost of site evaluation and mitigation of project effects to the paleontological resources. Depending on site evaluation, operations within 50 feet of a paleontological discovery will not be resumed until written authorization to proceed is issued by the AO.

3. Avoidance: All vertebrate or scientifically significant paleontological resources found as a result of the project/action will be avoided during operations. Avoidance in this case means "No action or disturbance within a distance of at least 50 feet of the outer edge of the paleontological locality".

Alternative II: (No Action)

Impacts to paleontological resources under this alternative would not occur.

4.2 Mitigation/Monitoring

All mitigation/monitoring procedures are listed in the Standard Operating Procedures (Appendix B) and as incorporated into the proposed action.

4.3 Residual Impacts

Residual impacts are those impacts left after the project has finished and mitigation and monitoring are complete. For the proposed action (wild horse bait trapping), the residual impacts would include surface disturbance where the corrals, panels, pens, and working area existed. This area is projected to be denuded of vegetation with some alteration of surface soil for a period of time until the area has been reclaimed.

4.4 Cumulative Impacts

Cumulative impacts are discussed in the Cody Resource Management Plan (RMP) and Final Environmental Impact Statement, (1990). Typical activities are described in that document and are incorporated by reference into this environmental analysis.

4.4.1 Past, Present, Reasonably Foreseeable Future Actions, and Incremental Effects

Past Actions

Past actions in the project area include BLM system roads, designation of a wilderness study area, communication sites, oil and gas wells and associated facilities, a 3-D seismic project, 2 pipeline rights-of-way, range improvements (fences, stock watering pits, water wells), vegetation manipulation, a BLM transportation plan, recreation livestock grazing and wild horse herd management area.

The McCullough Peaks Wilderness Study Area is still pending designation as wilderness or release from WSA status by Congress. It is managed under the interim management plan.

Communication sites lie in the northern portion of the HMA but do not impact the horses except that some traffic is associated with maintenance of facilities.

Oil and gas wells in the area are small work-over type wells, with associated access roads into the well location. There are two oil and gas pipelines that transect the HMA trending southwest to northeast. One is located near Whistle Creek Road and the other is located east of Bridger Butte. The pipeline ROW's have been completely re-vegetated and are marked by aerial number markers throughout the study area.

Range improvements include pasture fences for cattle, stock watering pits that were built years ago, and two stock watering tanks with windmills. Vegetation manipulation in the project area consists of prescribed burns and mechanical mowing.

The McCullough Peaks travel management plan designated open, closed, and prescriptive roads. Some access roads are open to vehicles, some are open to ATV's, and some are completely closed to motorized vehicle.

Recreation uses in the area consist of a Special Use Permit holder who takes tourists out for wild horse tours. Recreational activities include driving for pleasure, hiking, wildlife and wild horse viewing, mountain biking, horseback riding, ATV and motorcycle driving, rock hounding, photography and study of the area's history.

Other than the 3-D seismic project, which was temporary, all the uses listed above still occur in the project area.

Present Action:

Along with the bait trap removal and annual remote darting of the fertility control drug, the BLM Cody Field office has several Special Recreation Permit holders, who conduct horse tours in the area and hunting activities. Wild horse and livestock grazing also is currently happening.

Reasonably Foreseeable Future Actions:

Reasonably foreseeable future actions in the study area consist of continued oil and gas exploration, recreation visitor use and the development of water wells, stock tanks, reservoir cleanings, wild horse and livestock grazing.

Incremental effect of each Alternative:

Incremental effects of each alternative are as follows:

Alternative I: If this alternative is chosen, there would be fewer horses to maintain the herd. While this alternative would allow for range land health improvement, by decreasing the amount of foraging species, it may also result in an increase of wildlife species and an increase in permitted grazing. Recreation in the form of viewing wild horses may be impacted by less specimens and further driving into the HMA to find those horses remaining.

Alternative II (no action): If the current herd is not gathered, numbers would increase in the HMA. Impacts that could happen may be increased pressure on forage and range land health issues.

5.0 Consultation and Coordination

The scope of this EA was developed through consultation with the BLM resource specialists (meetings and subsequent conversations); consultation with other local, state, and federal agency resource personnel; review of company and agency files, field reconnaissance, and review of supporting documentation. Scoping notices were sent out to interested parties on June 29, 2012.

Additionally, the scoping notice was posted on the BLM Wyoming and Cody Field Office websites.

Notification of the bait trap removal to Friends Of A Legacy (FOAL) and other wild horse advocacy groups was accomplished through the Scoping Notice.

6.0 Public Notice and Availability

Public Scoping Notice was sent to interested persons, organizations, and the general public. The Scoping Notice was also posted on the BLM Wyoming and Cody websites, as well as the Cody NEPA log.

Scoping comments are available at the Cody Field Office. Substantive comments were incorporated into this EA. All other comments will remain with the administrative record.

7.0 List of Preparers:

7.1 U.S. Bureau of Land Management – Cody Field Office

Shirley Bye-Jech	Wilderness & Recreation
Kierson Crume	Cultural Resources & Native American
Destin Harrell	Wildlife, Migratory Birds, Special Status Species
Tricia Hatle	Range & Wild horses
Lisa Marks	Geology & Paleontology
Jerry Jech	Soil, Water, Riparian & Wetlands
Ann Perkins	NEPA coordination
Mike Wengert	Invasive non-native species

7.2 References Cited:

BLM. Wyoming State Office, (2001) Draft Management Guidelines for Sage Grouse and Sagebrush Ecosystems in Wyoming. 39pp.

Instruction Memorandum No. WYW-2012-019, Expires 9/30/2013, “Greater Sage-Grouse Habitat Management Policy on Wyoming Bureau of Land Management (BLM) Administered Public Lands Including the Federal Mineral Estate”.

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Singer F.J., Zeigenfuss L., (2000) Genetic Effective Population Size in the Pryor Mountain Wild Horse Herd: Implications for conserving genetics and viability goals in wild horses. U.S. Geologic Survey, Midcontinent Ecological Science Center, Ft. Collins CO. Resource Notes 29: 2 pp.

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APPENDIX A

OBJECTIVES AFFECTING MCCULLOUGH PEAKS HMA

1985 HMAP OBJECTIVES

Improve all acreage that is in a downward range trend, as measured by monitoring plots in key areas, to at least a static or upward trend in 15 years.

To maintain a healthy herd of 100 adult horses allowing a variation of plus 40 and minus 30 animals, through periodic removals.

1990 RMP/ROD OBJECTIVES

To maintain a viable herd that will maintain the free-roaming nature of wild horses in a thriving ecological balance.

To provide opportunity for the public to view wild horses.

RECLAMATION ALLOTMENTS OBJECTIVES in EVALUATION

Resource Goals, STANDARDS, and Objectives:

Cody Resource Management Plan (November 8, 1990)

Livestock Grazing Management

To improve forage production and ecological range condition for the benefit of livestock use, wildlife and watershed resources.

Wildlife Habitat Management

Maintain and enhance wildlife resources so that the forage production, quality of rangelands and wildlife habitat will be maintained or improved.

Watershed Management

Stabilize and conserve soils, increase vegetative production and to maintain or improve water quality.

Cultural and Paleontological Resources

Protect study and expand the interpretation of these resources.

Wild Horse Management

Maintain a viable herd in the McCullough Peaks WHHMA that will maintain the free-roaming nature of wild horses in a thriving ecological balance and to provide opportunity for the public to view wild horses.

Rangeland Program Summary Objective (September 19, 1991)

Improve forage production and ecological range condition for the benefit of livestock use, wildlife, and watershed resource.

RMP as Amended Objective (July 21, 1999)

“The livestock grazing management objective is to improve forage production and ecological range condition for the benefit of livestock use, wildlife, and watershed resources consistent with the Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming.”

Reclamation Allotments Objectives

1. Short-Term Objectives

Utilization of herbaceous key species will average 40% in allotments entered prior to August 15 and 50% in allotments grazed after August 15. In riparian areas, utilization of key woody species will average 30%.

2. Long-Term Objectives

Upland Trend

Upland Transect I

1. Increase the present herbaceous foliar cover from 5% to 15%.
2. Increase present key grass species (AGSP, STCO, & ORHY) foliar cover from 10% to 20%.

Upland Transect II

1. Increase the present herbaceous foliar cover from 5% to 15%.
2. Increase present key grass species (AGSP, STCO & ORHY) foliar cover from 9.6% to 20%. As long as significant progress is being made towards meeting either objective for Upland Transects I and II, changes in grazing management are not necessary.

Riparian Trend

Riparian Transect I

1. Increase the desirable herbaceous community types from the baseline 35% composition.
2. Decrease the undesirable herbaceous community type from the present 65% composition.
3. Decrease the woody species (TACH/Salt Cedar) from 17 plants to 0 plants in 5 years.

3. Sage Grouse Habitat Objectives

Sage grouse habitat evaluation and monitoring will be conducted in the next 4 years. Objectives to maintain or improve grouse nesting and brood rearing habitat will be developed and any changes to grazing management will be implemented as needed to be consistent with grouse habitat objectives.

APPENDIX B

STANDARD OPERATING PROCEDURES FOR WILD HORSE GATHERS

The following procedures for gathering and handling wild horses would apply whether a contractor or BLM personnel conduct a gather.

Prior to any gathering operation, the BLM would provide for a pre-capture evaluation of existing conditions in the gather area(s). The evaluation would include animal conditions, prevailing temperatures, drought conditions, soil conditions, road conditions, and a topographic map with wilderness study area boundaries, the location of fences, other physical barriers, and acceptable trap locations in relation to animal distribution. The evaluation would determine whether the proposed activities would necessitate the presence of a veterinarian during operations.

Trap sites and temporary holding sites would 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 when feasible.

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

1. Bait Trapping. This capture method involves utilizing bait (feed, supplement, mineral, etc.) to lure wild horses into a temporary trap.
2. Water Trapping. This method involves utilizing water sources to trap wild horses as they come to drink.

The following procedures would 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 is the safe and humane handling of all animals captured. All capture attempts shall incorporate 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 the bottom rail that 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 six feet high and shall be fully covered with plywood or metal without holes larger than two by four inches.
 - c. All runways shall be a minimum of 30 feet long and a minimum of six feet high for horses and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of one to five feet above ground level for burros and one to six 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 gather crew.

- d. All crowding pens including the gates leading to the runways shall be covered with a material will be covered a minimum of one to five feet above ground level, two to six 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.
- 2. No modification of existing fences would be made without authorization from the agency of jurisdiction.
- 3. When dust conditions occur within or adjacent to the trap or holding facility, the BLM or contractor would wet down the ground with water.
- 4. Alternate pens within the holding facility to separate mares, small foals, sick and injured animals, strays, or other animals determined to need separate pens from the other animals. Animals shall be sorted according to age, number, size, temperament, sex, and condition when in the holding facility to minimize, to the extent possible, injury due to fighting and trampling. Under normal conditions, the government would require that animals be restrained for the purpose of determining an animal's age or sex, or for other necessary procedures. In areas requiring one or more satellite traps, and where a centralized holding facility is utilized, additional holding pens would be provided to segregate animals transported from remote locations so they may be returned to their traditional ranges. Either segregation or temporary marking and later segregation would be at the discretion of the BLM.
- 5. 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, certified weed free hay at the rate of no less than two pounds of hay per 100 pounds of estimated body weight per day. An animal held at a temporary holding facility through the night is defined as a horse/burro feed day.
- 6. If there is a contractor, it is the responsibility of the contractor to provide security to prevent loss, injury or death of captured animals until delivery to final destination.
- 7. Animals shall be transported to their final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted for unusual circumstances. Animals to be released back into the herd management area following gather operations may be held up to 21 days or as directed by the cognizant employee. Animals shall not be held in traps and/or temporary holding facilities on days when there is no work being conducted. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three 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.

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. The following applies:
 - a. Gates shall be either a swinging panel or a regular metal gate that is intended for use with the portable panel system.

- b. All traps will be manned when actively capturing wild horses.
- c. Traps shall be left open in a manner that won't inadvertently trap a wild horse or wildlife when not actively trapping.

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.
2. All motorized equipment, including horse 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 horse 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 six feet six inches from the floor.
4. The rear door(s) of horse 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
5. Floors of horse and stock trailers and loading chutes shall be covered and maintained with wood shavings or other non-slip material to prevent the animals from slipping.
6. Animals to be loaded and transported in any trailer 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);
 - 6 square feet per horse foal (0.75 linear foot in an 8 foot wide trailer);
7. The BLM shall consider the condition and size of the animals, weather conditions, distance to be transported, or other factors when planning for the movement of captured animals. The BLM shall provide for any brand and/or inspection services required for the captured animals.

D. Safety and Communications

1. The Agencies involved shall have the means to communicate with all 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 would take steps necessary to protect the welfare of the animals.
 - a. All accidents occurring during the performance of any task order shall be immediately reported to the field office.

E. 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.

F. 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.

G. Public Participation

Opportunities for public viewing (e.g., media, interested public) of gather operations would be made available to the extent possible; however, the primary considerations would 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 would not be allowed to come into direct contact with wild horses or burros being held in BLM facilities. Only authorized BLM personnel or contractors may enter the corrals or directly handle the animals. The general public may not enter the corrals or directly handle the animals at any time or for any reason during BLM operations.

H. Responsibility and Lines of Communication

Patricia L. Hatle or delegate has direct responsibility to ensure human and animal safety. Cody Field Manager, Mike Stewart would take an active role to ensure that appropriate lines of communication are established between the field, field office, state office, national program office, and BLM holding facility offices. All employees involved in the gathering operations would keep the best interests of the animals at the forefront at all times.

All publicity and public contact and inquiries would be handled through the Cody Field Manager and Wind River Big Horn Basin Public Affairs Officer. These individuals would be the primary contact and would coordinate with the COR on any inquiries.

The BLM delegate (COR) would coordinate with the corrals to ensure animals are being transported from the capture site in a safe and humane manner and are arriving in good condition.

The BLM requires 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 would be vigorously enforced.

I. Additional requirements for personnel conducting gather operations also include:

1. Electric prods (hotshots) would not be used routinely on horses. They can be used when animal or human safety is in jeopardy or as a last resort. Handlers do not constantly carry prods. Prods are picked up only when necessary and then put away. Electric prods are never applied to sensitive areas such as the eyes or soft tissue areas.
2. Electric prod use would not be disguised, but used openly and transparently.
3. Handling aids, including electric prods and flags would not be used abusively.
4. Flagging would be used strategically, as excessive flagging desensitizes the animal and becomes useless if used too much.
5. Gates and doors would not be deliberately slammed or shut on horses or burros passing through.
6. Excessive yelling and unnecessary noises would not be utilized in the loading and unloading process.
7. There would be no hitting, kicking, striking or beating a horse.
8. Loading or unloading of transport vehicles is performed during daylight hours, or supplemental light is provided in the area to facilitate visibility.
9. Holes, gaps, or openings would be eliminated in the loading/unloading area to avoid injury.
10. Transport vehicles would be properly aligned with the loading/unloading ramps or docks. No gaps would exist between the unloading/loading docks or ramps and the bottom or floor of the trailer's exit. No gaps exist between the trailer and the side walls of the unloading area, whereby a horse's limbs or head can become stuck or injured.

APPENDIX C

POPULATION MODELING

Population Model Overview

WinEquus is a program to simulate the population dynamics and management of wild horses created by Stephen H. Jenkins of the Department of Biology, University of Nevada at Reno. For further information about this model, you may contact Stephen H. Jenkins at the Department of Biology/314, University of Nevada, Reno, NV 89557.

Detailed information is provided within the WinEquus program available at <http://unr.edu/homepage/jenkins>, and will provide background about the use of the model, the management options that may be used, and the types of output that may be generated.

The population model for wild horses was designed to help wild horse and burro specialists evaluate various management strategies that might be considered for a particular area. The model uses data on average survival probabilities and foaling rates of horses to project population growth for up to 20 years. The model accounts for year-to-year variation in these demographic parameters by using a randomization process to select survival probabilities and foaling rates for each age class from a distribution of values based on these averages. This aspect of population dynamics is called environmental stochasticity, and reflects the fact that future environmental conditions that may affect wild horse population's demographics can't be established in advance. Therefore each trial with the model will give a different pattern of population growth. Some trials may include mostly "good" years, when the population grows rapidly; other trials may include a series of several "bad" years in succession. The stochastic approach to population modeling uses repeated trials to project a range of possible population trajectories over a period of years, which is more realistic than predicting a single specific trajectory.

The model incorporates both selective removal and fertility treatment as management strategies. A simulation may include no management, selective removal, fertility treatment, or both removal and fertility treatment. Wild horse and burro specialists can specify many different options for these management strategies such as the schedule of gathers for removal or fertility treatment, the threshold population size which triggers a gather, the target population size following a removal, the ages and sexes of horses to be removed, and the effectiveness of fertility treatment.

To run the program, one must supply an initial age distribution (or have the program calculate one), annual survival probabilities for each age-sex class of horses, foaling rates for each age class of females, and the sex ratio at birth. Sample data are available for all of these parameters. Basic management options must also be specified.

Population Modeling - McCullough Peaks HMA

To complete the population modeling for the McCullough Peaks HMA, version 1.40 of the WinEquus program, created April 2, 2002, was utilized.

Objectives of Population Modeling

Review of the data output for each of the simulations provided many useful comparisons of the possible outcomes for each alternative. Some of the questions that need to be answered through the modeling include:

- Do any of the Alternatives “crash” the population?
- What effect does fertility control have on population growth rate?
- What effects do the different alternatives have on the average population size?

Population Data, Criteria, and Parameters utilized for Population Modeling

The following table displays the age structure for the existing population of horses as of October 2012.

Initial Age-Sex Distribution 2012

Age Class	McCullough Peaks Existing Population October 2012	
	Females	Males
Foals	6	4
1	11	9
2	13	8
3	7	7
4	2	2
5	3	6
6	3	4
7	7	9
8	3	7
9	3	0
10-14	19	16
15-19	7	2
20+	2	3
Total	86*	77
TOTAL POPULATION	153 adults plus 10 foals	

*Of the 86 females that are present, 70 are being treated with one-year fertility control shots, 10 are in the do not treat category (these mares have not foaled since the 2004 pzp treatments), and 6 are fillies born in 2012 and will not start fertility control treatments until approximately one year of age.

All simulations used the survival probabilities and sex ratio at birth data that has been collected by USGS and the BLM from 2005 through present day (October 7, 2012). The foaling rates were based upon data from the 2012 foaling season. This year should represent the most accurate information available regarding foaling rates in the McCullough Peaks HMA.

Survival probabilities and foaling rates utilized in the population model for Alternatives I and II are displayed in the following table:

Survival Probabilities and Foaling Rates

Age Class	Survival Probabilities		Foaling Rates Alternative I	Foaling Rates Alternative II
	Females	Males		
Foals	.875	.875	0	0
1	.969	.969	0	0
2	.951	.951	.23	.52
3	.951	.951	.29	.67
4	.951	.951	0	.76
5	.951	.951	.33	.89
6	.951	.951	.67	.76
7	.951	.951	.29	.90
8	.951	.951	0	.88
9	.951	.951	0	.91
10-14	.951	.951	.11	.81
15-19	.951	.951	.14	.82
20+	.951	.951	.0	.75

The following is the sex ratio at birth was utilized in the population modeling for Alternatives I and II:

Sex Ratio at Birth:

51% Females
49% Males

The following percent effectiveness of fertility control was utilized in the population modeling for Alternatives I and II:

Year 1: 95%

Year 2: 95%

Year 3: 95%

Year 4: 95%

Year 5: 95%

The following table displays the removal parameters (gate cut) utilized in the population model for Alternative I (Proposed Action). Gate cut means that every horse has equal chance for removal.

Removal Criteria

(Alternatives I and II)

<i>Age</i>	<i>Percentages for Removals</i>	
	Females	Males
Foal	100%	100%
1	100%	100%
2	100%	100%
3	100%	100%
4	100%	100%
5	100%	100%
6	100%	100%
7	100%	100%
8	100%	100%
9	100%	100%
10-14	100%	100%
15-19	100%	100%
20+	100%	100%

The following table displays the contraception parameters utilized in the population model for Alternative I and Alternative II:

Contraception Criteria

(Alternatives I & II)

Age Class (Mares)	Percentages for Fertility Treatment
1- 4 yrs	100%
5 – 9	100%
10+	100%

Population Modeling Criteria

The following summarizes the population modeling criteria for Alternative I (Proposed Action):

- Starting Year: 2012
- Initial gather year: 2013
- Gather interval: one time in 2013
- Gather for fertility treatment regardless of population size: Yes
- Continue to gather after reduction to treat females: Yes
- Sex ratio at birth: 49% males – 51% females
- Percent of the population that can be gathered: 100%
- Minimum age for long term holding facility horses: not applicable
- Foals are **NOT** included in the AML
- Simulations were run for ten years with 100 trials each

Population Modeling Results - McCullough Peaks HMA

Population Size in Ten Years

Out of 100 trials in each simulation, the model tabulated minimum, average, and maximum population sizes. The model was run from starting in 2012 and continuing for 11 years to determine what the potential effects would be on population size for the proposed action and alternatives. These numbers are useful to make relative comparisons of the different alternatives, and potential outcomes under different management options. The data displayed within the tables is broken down into different levels. The lowest trial, highest trial, and several in between are displayed for each simulation completed. According to the creator of the modeling program, this output is probably the most important representation of the results of the program in terms of assessing the effects of proposed management, because it shows not only expected average results but also extreme results that might be possible.

Population Sizes in 11 Years - Minimum

Alternative	I	II
Lowest Trial	41	124
10th Percentile	68	163
25th Percentile	84	163
Median Trial	108	163
75th Percentile	122	163
90th Percentile	134	163
Highest Trial	152	163

This table shows that in eleven years and 100 trials for each alternative, the lowest number of 0-20+ year old horses ever obtained was 41 under Alternative I. Additional interpretation may be made by comparing the various percentile points. For example, for the Alternative I, 10% of the trials resulted in fewer than 68 wild horses as the minimum population, and 10% of the trials resulted in a minimum population larger than 134 wild horses. In other words, 80% of the time, one could expect a minimum population between these two values for the Alternative I given the assumptions about survival probabilities, foaling rates, initial age-sex distribution, and management options made for this simulation. Alternative I may only partially allow for a genetically viable

population as stated in the Genetic Studies conducted in 1992, 1999, and 2004 by Dr. Gus Cothran. In fact, 25% of the time, the minimum population range of 41 to 84 horses falls within the population size in the early 1970's that was small enough for loss of genetic diversity to occur (Cothran, 1992 report). However, it must be taken into consideration that this is the "minimum population size" for the model and it can not take into account the flexibility that would be provided by the one-year fertility control treatments that can be stopped on individuals if needed.

Population Sizes in 11 Years - Average

Alternative	I	II
Lowest Trial	83	265
10th Percentile	111	356
25th Percentile	117	407
Median Trial	133	453
75th Percentile	144	515
90th Percentile	154	561
Highest Trial	165	662

This table displays the average population sizes obtained for the 100 trials run for each alternative. The average population size across eleven years ranged from a low of 83 wild horses under the Alternative I (Proposed Action), to a high of 662 wild horses under Alternative II (No Action).

Population Sizes in 11 Years - Maximum

Alternative	I	II
Lowest Trial	163	458
10th Percentile	169	671
25th Percentile	176	780
Median Trial	188	948
75th Percentile	198	1086
90th Percentile	210	1227
Highest Trial	232	1564

This table displays the largest populations that could be expected out of 100 trials for each alternative. The figures for the Lowest Trial represent what the population is likely to be in 2022 and display what would be expected for Alternative I (Proposed Action) and Alternative II (No Action).

Average Growth Rates in Ten Years

Average growth rates were obtained by running the model for 100 trials from 2012 to 2022 for the proposed action and each alternative. The following table displays the results obtained from the model:

Average Growth Rate in 10 Years

Alternative	I	II
Lowest Trial	-13.4%	10.9%
10th Percentile	-7.1%	15.2%
25th Percentile	-4.4%	17.0%
Median Trial	-2.6%	19.2%
75th Percentile	-0.5%	20.9%
90th Percentile	0.4%	22.4%
Highest Trial	2.5%	25.4%

For the median trial of Alternative I (Proposed Action of continuing fertility control and removal of 20 horses) the growth rate is -2.6% and is lower than the No Management - No Action (Alternative II). The range of growth rates is a reasonable representation of what could be expected to occur in a wild horse population.

Totals in 11 Years -- Gathered

Alternative	I	II
Lowest Trial	86	N/A
10th Percentile	137	N/A
25th Percentile	147	N/A
Median Trial	158	N/A
75th Percentile	170	N/A
90th Percentile	181	N/A
Highest Trial	207	N/A

Totals in 11 Years -- Removed

Alternative	I	II
Lowest Trial	0	N/A
10th Percentile	15	N/A
25th Percentile	23	N/A
Median Trial	31	N/A
75th Percentile	38	N/A
90th Percentile	48	N/A
Highest Trial	74	N/A

Totals in 11 Years – Treated

Alternative	I	II
Lowest Trial	40	N/A
10th Percentile	46	N/A
25th Percentile	50	N/A
Median Trial	53	N/A
75th Percentile	57	N/A
90th Percentile	60	N/A
Highest Trial	71	N/A

Population Modeling Summary – McCullough Peaks HMA

To summarize the results obtained by simulating the range of alternatives for the McCullough Peaks HMA wild horse gather, the original questions can be addressed.

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

Neither of the alternatives indicated that a crash is likely to occur to the population. However, the lowest trial, minimum population levels for Alternative I is below the recommend population size to retain genetic viability (Cothran, 1992, 1999, 2004). The growth rate for Alternative I is lower than expected for 80% of the trials. This indicates there is a slight risk that an adverse impact to the population could occur. However, it must be remembered that the one-year, reversible, fertility control treatments are being applied in the McCullough Peaks HMA as a measure to ward against negative impacts to the population.

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

As expected, the alternative implementing fertility control (Alternative I) reflects the lowest overall median growth rate. Conversely, the alternative implementing no fertility control and no removals has a more “normal” expected growth rate for a wild horse population.

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

It is clear that Alternative I (removal of 20 horses and continuing fertility control) results in the “ideal” median population size of 133 horses. This number is within the AML of 70 -140 and meets the numbers necessary (as stated by Cothran, 1992) to maintain genetic viability. The No Action, Alternative II results in the highest minimum populations for all trials. Population levels this high would be expected to result in resource damage.

- What effects do the different alternatives have on the genetic health of the herd?

Minimum population level for Alternative I is below the recommended population size to retain genetic variation (Cothran, 1992). Dr. Cothran states, “Loss of genetic variation can reduce the long term adaptability of a population and if population size is too small, inbreeding, which can reduce viability and fertility, also becomes a potential problem.” “Population size of the herd over the last 15 years (1977 to 1992) has been high enough to maintain genetic variation.” “However, the population size in the early 1970’s was small enough for loss of genetic diversity to occur.”