United States Department of the Interior
Bureau of Land Management

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Environmental Assessment (EA) UT-C010-2014-0035-EA

Project Title: Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan

Location: Iron and Beaver Counties, Utah

Applicant: None

United States Department of the Interior
Bureau of Land Management
Cedar City Field Office
176 East DL Sargent Drive
Cedar City, Utah 84721
Phone: (435) 865-3000

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1.0 PURPOSE AND NEED

1.1 Introduction

This EA is being prepared to analyze the potential impacts that could result with the implementation of the Proposed Action or alternatives to the Proposed Action. This EA assists the BLM in project planning, ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI). A Decision Record (DR), with a FONSI, are documents that briefly present the reasons why implementation of the Proposed Action will not result in "significant" environmental impacts (effects) beyond those already addressed in the Pinyon Management Framework Plan (MFP) (1983). If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the alternative selected.

1.2 Background

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

Since the passage of the WFRHBA, management knowledge regarding horse population levels has increased. For example, wild horses are capable of increasing numbers 15-20% annually (NAS 2013), resulting in the doubling of wild horse populations about every 3 years.

In April of 2005, the Appropriate Management Levels (AML) on the Bible Spring, Blawn Wash, Four Mile, and Tilly Creek herd management areas (HMAs) were adjusted to maintain an ecological balance based on changes in vegetation conditions and land tenure. At that time it was determined that the Bible Springs, Four Mile and Tilly Creek HMAs would be managed as a complex and possibly combined into one HMA in future land use plans.

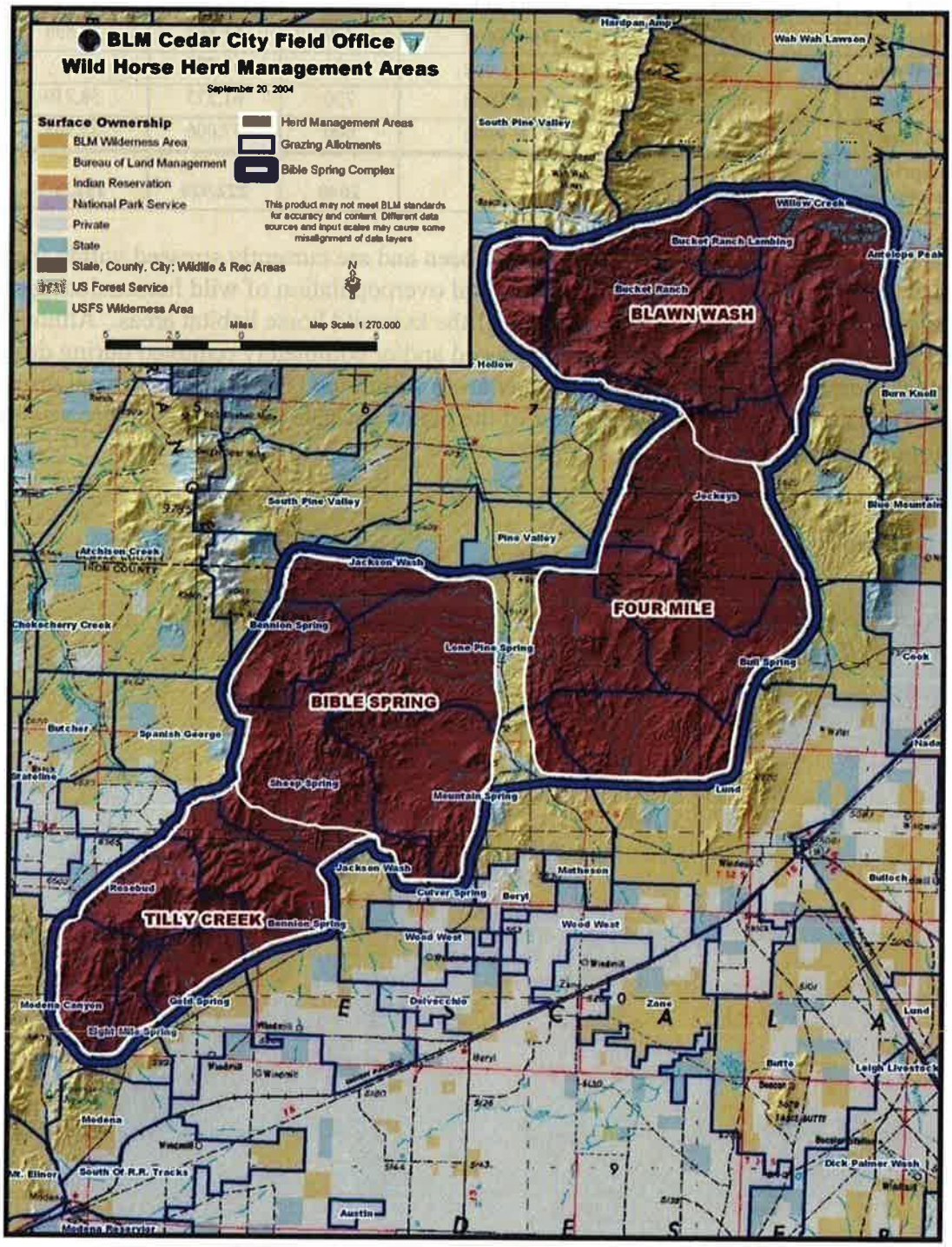
In 2001, a land exchange between the BLM and the State of Utah School and Institutional Trust Lands Administration (SITLA) placed the most critical wild horse habitat of the Blawn Wash HMA lands into SITLA administration. SITLA lands comprise 43% (25,970 acres) of the Blawn Wash HMA, which produces an estimated 70% of the forage in the HMA. The forage allocations within this area are now controlled by SITLA. Wild horses managed by the BLM could not be excluded from the SITLA lands without fencing the whole boundary of the SITLA lands, which would be very difficult due to the rough terrain. Also, it would be very costly. For these reasons it was determined that the Blawn Wash HMA would be managed at an AML of zero (Bible

Springs, Blawn Wash, Four Mile and Tilly Creek Wild Horse Appropriate Management Level (AML) Assessment, signed 4/18/2005 (EA# UT-040-04-47)). The current AMLs for the Complex HMAs are shown in Table 1 below.

Table 1. Current AML for Bible Springs, Blawn Wash, Four Mile, Tilly Creek HMAs

HMA	AML	Season of Use	AUMs	HA Acres	HMA Acres
Bible Springs	60-30	Year Long	720	61,863	57,890
Blawn Wash	0	Year Long	0	62,787	0
Four Mile	60-30	Year Long	720	61,273	58,710
Tilly Creek	50-20	Year Long	600	37,006	35,963
Bible Spring Complex	**170-80**		**2040**	**222,929**	**152,563**

Rangeland resources and wild horse health have been and are currently stressed within the Bible Springs Complex (Map 1). Drought conditions and overpopulation of wild horses during recent years have reduced forage production in some of the key wild horse habitat areas. Although livestock numbers have been continuously reduced and/or completely removed during drought conditions, excess wild horses overgraze many areas within the HMAs during critical growth periods. This, along with the reduced vigor of the plants because of the drought, causes mortality of key forage species throughout the HMAs.


BLM Cedar City Field Office
Wild Horse Herd Management Areas
September 20, 2004
Surface Ownership
BLM Wilderness Area
Bureau of Land Management
Indian Reservation
National Park Service
Private
State
State, County, City; Wildlife & Rec Areas
US Forest Service
USFS Wilderness Area
Herd Management Areas
Grazing Allotments
Bible Spring Complex
This product may not meet BLM standards for accuracy and content. Different data sources and input scales may cause some misalignment of data layers.
Miles
Map Scale 1:270,000
BLAWN WASH
FOUR MILE
BIBLE SPRING
TILLY CREEK
Hardpan Amp
Wah Wah Lawson
South Pine Valley
Willow Creek
Bucket Ranch Lambing
Antelope Peak
Bucket Ranch
Hollow
Burn Knoll
Jockeys
Blue Mountain
Pine Valley
Jackson Wash
Archison Creek
IRON COUNTY
Chokecherry Creek
Bennion Spring
Lone Pine Spring
Bull Spring
Cook
Butcher
Spanish George
Sheep Spring
Mountain Spring
Lund
Matheson
Bullock
Rosebud
Culver Spring
Beryl
Bennion Spring
Wood West
Delvecchio
Zane
Modena Canyon
Gold Spring
Eight Mile Spring
Butte
Leigh Livestock
Modena
South Of R.R. Tracks
Dick Palmer Wash
Austin
Modena Reservoir

1.3 Purpose and Need for the Proposed Action

The purpose of the proposed Bible Springs Complex Gather, Removal and Fertility Treatment Plan is to achieve a thriving natural ecological balance, achieve and maintain wild horse AML, collect information on herd characteristics, determine herd health, maintain sustainable rangelands, and maintain a healthy wild horse population within the Bible Springs Complex which includes the Bible Spring, Four Mile, Tilly Creek and Blawn Wash HMAs (Map 1).

The proposed wild horse gather is needed to remove excess wild horses in order to achieve a thriving natural ecological balance between wild horse populations, livestock, wildlife (elk), rangeland vegetation, and riparian resources, and protect the range from further degradation by wild horses. Other administrative actions (such as temporary livestock reductions, changes in grazing rotation, range improvements, fuels management etc.) would be ongoing and addressed in other documents. The gather and removal operations, along with fertility treatments, are planned to take place during more than one event in order to achieve the AML objective for the Bible Spring Complex.

Section 3 (b) (2) of the Wild Free-Roaming Horses and Burros Act (PL 92-195) as amended states that "Where the Secretary determines . . .that an overpopulation exists on a given area of the public lands and that action is necessary to remove excess animals, he shall immediately remove excess animals from the range so as to achieve appropriate management levels. The requirement for the authorized officer to remove excess animals immediately is also included in 43 CFR (Code of Federal Regulations) 4720.1.

1.4 Conformance with BLM Land Use Plan

The proposed action and alternative(s) are subject to the Pinyon Management Framework Plan (MFP) approved on June 1, 1983 and has been reviewed for conformance with this plan (43 CFR 1610.5, BLM MS 1617.3). The MFP decision (RM 1.8, WH1.1…) states, "…remove horses as required to maintain horse numbers at or below 1982 inventory levels…". The MFP also states that the number of herd units and the population of each herd would depend on the results of monitoring studies, range condition, viewing opportunities, cooperative management, and range developments.

In the Bible Springs, Blawn Wash, Four Mile and Tilly Creek Wild Horse Appropriate Management Level Assessment (EA# UT-040-04-47), the AML was adjusted in all four HMAs within the Bible Springs Complex (Table 1).

1.5 Relationship to Statutes, Regulation or other Plans

In conformance with the policy developed by the Utah State Director and approved by the Secretary of Interior, the action alternatives would be in compliance with the following.

Gathering excess wild horses is in compliance with Public Law 92-195 (Wild Free-Roaming Horse and Burro Act of 1971) as amended by Public Law 94-579 (Federal Land Policy and Management Act of 1976), and Public Law 95-514 (Public Rangelands Improvement Act of 1978). Public law 92-195, as amended, requires the protection, management, and control of wild free-roaming horses and burros on public lands. The preparation and transport of wild horses will be conducted in conformance with all applicable state statutes.

Alternatives 1 and 2 are in conformance with all applicable regulations at 43 Code of Federal Regulations (CFR) 4700 and policies. The following are excerpts from 43 CFR relating to the protection, management, and control of wild horses under the administration of the BLM.

- 43 CFR 4700.0-2. One of the objectives regarding wild horse management is to manage wild horses "as an integral part of the natural system of the public lands under the principle of multiple use . . .".
- 43 CFR 4700.0-6(a-c) requires that BLM manage wild horses "...as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat ... considered comparably with other resource values ..." while at the same time "...maintaining free-roaming behavior".

- 43 CFR 4700.0-6 (e). "Healthy excess wild horses for which an adoption demand by qualified individuals exists shall be made available at adoption centers for private maintenance and care."
- 43 CFR 4710.3-1. "HMA's shall be established [through the land use planning process] for maintenance of wild horse and burro herds."
- 43 CFR 4710.4. "Management of wild horses and burros shall be undertaken with the objective of limiting the animals' distribution to herd areas. Management of wild horses shall be at the minimum level necessary to attain the objectives identified in approved land use plans and herd management area plans."
- 43 CFR 4720.1. "Upon examination of current information and a determination by the authorized officer that an excess of wild horses or burros exists, the authorized officer shall remove the excess animals immediately."
- Under 43 CFR 4180 it is required that all BLM management actions achieve or maintain healthy rangelands.

All federal actions must be reviewed to determine their probable effect on threatened and endangered plants and animals (the Endangered Species Act).

Federal actions must also be reviewed to determine their probable effect on cultural and historic properties. This process is termed Section 106 consultation (Section 106 of the Historic Preservation Act).

Executive Order 13212 directs the BLM to consider the President's National Energy Policy and adverse impacts the alternatives may have on energy development.

The alternatives would also be in conformance with Decision Records and Finding of No Significant Impacts for the FY98 Wild Horse Gather/Removal Amendment, signed 12/29/97 (EA-UT-044-98-09), Blawn Wash Wild Horse Gather & Removal Plan, signed 1/5/94 (EA-UT-044-95-13), Blawn Wash and Bible Springs Wild Horse Gather Plan, signed 2/5/01 (EA-UT-044-01-09), Emergency Wild Horse Removal from 4 HMA's in SW Utah, signed 6/27/02 (EA-UT-040-02-31), Bible Springs, Blawn Wash, Four Mile and Tilly Creek Wild Horse Appropriate Management Level (AML) Assessment, signed 4/18/2005 (EA# UT-040-04-47), Bible Spring

Complex Wild Horse Gather, signed 10/03/05 (DNA# UT-040-05-041) and Bible Springs Complex Wild Horse Gather and Removal, signed 6/29/09 (EA-UTC010-09-0053).

The proposed action complies with BLM Utah Riparian Management Policy (Instruction Memorandum UT-93-93, March 1993). This policy states that riparian areas will be maintained in or improved to "Proper Functioning Condition." In addition, alternatives would comply with the following laws and/or agency regulations, other plans and are consistent with Federal, state and local laws, regulations, and plans to the maximum extent possible.

- Taylor Grazing Act (TGA) of 1934
- Federal Land Policy and Management Act (FLPMA) of 1976 (43 U.S.C. 1701 et seq.)
- Public Rangelands Improvement Act (PRIA) of 1978
- Endangered Species Act (ESA) of 1973 as amended
- Title 43 CFR 4700 Protection, Management, and Control of Wild Free-Roaming Horses and Burros
- Standards of Quality for Waters of the State, R317-2-6, Utah Administrative Code, December, 1997
- National Environmental Policy Act of 1969 (as amended)
- United States Department of the Interior Manual (910 DM 1.3).
- Standards and Guidelines for Healthy Rangelands, 1997 (BLM-UT-GI-98-007-1020)
- Fundamentals of Rangeland Health (43 CFR 4180)
- Greater Sage-Grouse Interim Management Policies and Procedures 2012-043

1.6 Identification of Issues

Identification of issues for this assessment was accomplished by considering the resources that could be affected by implementation of at least one of the alternatives, through involvement with the public and input from the BLM interdisciplinary team. Both Iron and Beaver County Commissioners have been in contact with the BLM requesting the removal of excess wild horses from private and public lands to within AML. The counties requested the use of fertility treatment methods on wild horses to reduce future population growth of wild horses. County resolutions have been passed to manage wild horse population with the counties at AML as directed by the WFRHBA. Public involvement was initiated by posting the proposal on the Utah BLM Environmental Notification Bulletin Board on April 8, 2014.

A Preliminary Environmental Assessment (EA) for the Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan DOI-BLM-UT-C010-2014-0035-EA was made available to the public at the Cedar City Field Office and on-line at http://www.ut.blm.gov/ or at https://www.blm.gov/ut/enbb/ for a 30-day review/comment period beginning on April 30, 2014 and ending May 30, 2014. As required by regulation [43 CFR 4740.1(b)], a public hearing was held in Cedar City, Utah on June 18, 2014 and will be held in subsequent years to discuss the use of helicopters and motorized vehicles in the management of Utah BLM's wild horses and burros. This meeting was advertised in papers and radio stations statewide. This specific gather was addressed at that public meeting as well as other gathers that may occur within the state of Utah over approximately the next 12 months. Similar meetings have been held each year in Utah since the passage of Federal Land Policy and Management Act of 1976. Comments received from the

Preliminary Environmental Assessment (EA) for the Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan DOI-BLM-UT-C010-2014-0035-EA and at those public meetings were considered and, if applicable, were addressed in management actions, NEPA documents, and decision documents using the most current direction from the National Wild Horse and Burro Program. Refer to section 5.0 Public Involvement and Appendix 10 to see comments and interest from the public and organizations.

Resources which are not present or are not affected by the Proposed Action or alternatives are included as part of the Interdisciplinary Team Checklist (Appendix 1). Rationale for dismissing specific resources is also contained as part of Appendix 1.

Those resources which may be affected by the alternatives are carried forward throughout this analysis, and are discussed briefly as follows.

Rangeland Health/Vegetation
Drought conditions and overpopulation of wild horses between 1999 and 2005 have reduced forage production in some of the key wild horse habitat areas. In 2007, 2008, 2013 and continuing in 2014, similar drought conditions and high populations of wild horses have occurred. Although livestock numbers were reduced and/or completely removed from the allotments in the Bible Spring Complex during these years, excess wild horses have overgrazed many areas during critical growth periods. As of April 1, 2014 precipitation data indicate that the HMA has received only 30-50% of normal moisture throughout the Complex. This places the Complex in extreme drought going in to the 2014 summer. Utilization completed in March 2014 showed heavy use on key areas that are within vegetative treatments throughout the Complex. These use levels normally occur on the HMA at the end of summer and not the beginning. This, along with the reduced vigor of the plants because of the drought, is causing mortality of key forage species throughout the four HMAs. Inadequate residual vegetation (forage) and litter remaining on certain key use areas would allow soil loss and erosion. Appendixes 2-4 contain the Rangeland Health Standards and Guidelines.

Livestock Grazing
Portions of 16grazing allotments are part of the Bible Spring Complex. All of these allotments have livestock grazing privileges. Of these, 15 are cattle allotments (Bennion Spring, Bucket Ranch, Bull Spring, Culver Spring, Gold Spring, Jackson Wash, Jockeys, Lone Pine, Lund, Modena Canyon, Mountain Spring, Pine Valley, Rosebud, Sheep Spring, Water Hollow) and one is a cattle and sheep allotment (Willow Creek). Overlap of areas of use between wild horses and livestock do occur on specific sites on all the allotments causing competition for forage, water, and cover. Wild horses, wildlife, and livestock compete directly for the same cover, water, and forage resources. Wild horses grazing year- long reduce forage availability for livestock. Grazing by excess wild horses during the critical growing season and drought conditions can reduce forage production, vigor, reproduction, and availability for several years. Water developments and facilities that are maintained by livestock permittees have been damaged by wild horses. The damage includes broken troughs, head boxes and pipelines. Detailed information about the authorized livestock use within the HMA is provided in the Term Grazing Permit Renewal EAs for these allotments (EA- EA-UT-040-06-35, UT-040-06-36, EA-UT-040-07-03, EA-UT-040-07-08, EA-UT-040-08-10, EA-UT-040-08-11, EA-UT-040-08-13, EA-UT-040-08-15, EA-UT-040-

08-16, EA-UT-040-08-17, EA-UT-040-09-14, and DOI-BLM-UT-C010-2011-0031-EA). These documents are available upon request from BLM Cedar City Field Office.

Soils
Under the current situation, with wild horses above AML and current livestock and wildlife levels, inadequate residual vegetation (forage) and litter remain on certain key use areas in the HMAs, as reflected in utilization studies and Rangeland Health Assessments from allotments within the HMAs. Wild horse trails, primarily those that traverse steep terrain going to and from water sources, are compacted by animal activity. Horses (and large ungulates) also contribute to soil compaction within riparian areas, reduced oxygenation, percolation and retarded plant growth. All these factors, which are caused at least in part by excess numbers above AML, directly affect the soil's exposure to erosive elements such as wind and water. A reduction in horse numbers would allow additional vegetation to remain on these key areas, thus providing additional protection to the soil surface.

Wetlands/Riparian Zones
Riparian/wetland areas occur within the Bible Springs Complex's four HMAs. Overgrazing of riparian areas occurs when horse numbers are high and moisture conditions are low within the HMAs. Standard Operating Procedures (SOPs) for the gather would result in limited to no impacts on riparian wetland zones. Long term impacts of management and population control of wild horse herds would improve overall functionality of riparian/wetland areas in the Bible Spring Complex.

Wildlife
Wild horses compete with wildlife for forage, particularly big game and Utah prairie dogs. Reducing the wild horse numbers within AML would improve forage conditions for wildlife. If not mitigated, gather and removal operations could destroy nests and burrows used by wildlife species, disturb wildlife and damage habitat.

Wild Horses and Burros
Rangeland resources and wild horse health have been and are currently being affected within the Bible Springs Complex, due to drought and excess wild horses. Excess wild horses above the AML have reduced available forage, resulting in increased competition for available resources. Wild horses have expanded outside of the HMAs in search of forage, water, and cover. In 2013, 14 head of wild horses were recorded to have died due to lack of forage and/or water in parts of the Complex. Some interchange between horses in the HMAs within the Bible Springs Complex and adjacent HMAs is occurring because of the excess numbers of wild horse currently in the area. The gather, removal and fertility control of wild horses from the Bible Springs Complex would have direct and indirect impacts to individual animals and the social structure of bands in the area. Most impacts would be short term (under 1 year), but some would be long term (greater than a year).

1.7 Summary
This chapter has presented the Purpose and Need of the Proposed Action, as well as the relevant issues (i.e., those elements that could be affected by the implementation of the Proposed Action). In order to meet the purpose and need in a way that resolves the issues, the BLM has developed a

range of alternatives. These alternatives, including the No Action Alternative, are presented in Chapter 2. The potential environmental impacts or consequences resulting from the implementation of each alternative are then analyzed in Chapter 4 for each of the identified issues.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1 Introduction

Based on identified issues, three alternatives are considered:

- Alternative 1: Proposed Action –Gather and Removal Excess Wild Horses within the Bible Spring Complex and Implement Fertility Control.
- Alternative 2: Gather and Removal Excess Wild Horses without Fertility Control.
- Alternative 3: No Action –No Gather, Removal or use of Fertility Control.

2.2 Description of Alternatives Considered in Detail

2.2.1 Alternative 1 – Proposed Action – Gather and Remove Excess Wild Horses from the Bible Spring Complex and Implement Fertility Control

Under the Proposed Action, the BLM would conduct gathers, approximately two to four times over a six to ten year period; to remove excess wild horses until the Bible Springs Complex wild horse population is at the lower AML (Refer to Table 2). If the lower AML were reached before the end of the 10 year period, additional gathers would be conducted to maintain the wild horse population in the Bible Spring Complex to within the AML. Fertility control would be used in the Bible Spring, Four Mile, and Tilly Creek HMAs to reduce the annual population growth. The primary use of fertility control would be to maintain the population within AML once achieved. It could be used previous to achieving AML if gather success, holding capacity limitations, population growth rates, other national gather priorities or other circumstances prevent achieving AML during a gather.

Table 2 shows the number of wild horses that would have to be gathered and removed to reach the lower and upper AML in the summer of 2014. Based on past gather success in the Bible Spring Complex area only 60-70% of the population can be gathered in a single year, thus requiring multiple gathers over more than a one year period in order to achieve AML. The gather, removal and fertility treatment numbers would vary each year over the 10 year period to accomplish the objective of achieving and maintaining the wild horse population to within AML. Other administrative factors (budget, adoptions, holding space, etc.) and gather success could also impact the numbers gathered, removed or treated during each operation over the 10 year period.

Regular population inventories would be conducted at a minimum of every 3-4 years to calculate the estimated population that would be used to determine the number of horses captured, removed and treated with fertility control each gather. A population inventory is planned for the Bible Spring Complex in FY 2015 would be used to adjust the estimated population, capture, remove, and treated numbers after March 1, 2015. This process would be followed over the 10 year period to achieve and maintain the wild horse population within AML.

The capture and removal operations would be done according to stipulations listed below. The gather area would include the Complex and lands where wild horses have strayed outside the Complex (up to 10 miles).

Table 2. 2014 Estimated Population, Capture and Removal Numbers

HMA (Inside and Outside)	AML	2014 Estimated Population (Post Foaling)**	Summer 2014 Gather Numbers to Lower AML*	Summer 2014 Removal Number to Lower AML*	Summer 2014 Gather Numbers to Upper AML*	Summer 2014 Removal Numbers to Upper AML*	Summer 2014 Fertility Treatment Number*
Bible Springs	**60-30**	437	407	407	377	377	0
Blawn Wash	**0**	137	137	137	137	137	0
Four Mile	**60-30**	102	72	72	42	42	0
Tilly Creek	**50-20**	79	59	59	29	29	0
Bible Spring Complex	**170-80**	**755**	**675**	**675**	**585**	**585**	**0**

* The gather and removal numbers are based on an estimated population of horses for the summer of 2014 and may be subject to change based on outside factors influencing the population level such as interchange between adjacent HMAs during gather operations, timing of gather, and success of the gather and removal operation(s). Because the AML within the Blawn Wash HMA is 0, gather and removal of all horses within the HMA would be attempted. Gather, removal, and fertility treatment numbers will be adjusted over the 10 year period to reflect excess wild horses and numbers treated to achieve or maintain the population within AML.

**Based on the National Academy of Science (NAS) report released in 2013 the estimated population could be 20%-30% lower than the actual population.

The management emphasis would be to achieve and/or maintain the estimated wild horse AML, collect information on herd characteristics, conduct research, collect genetic samples, determine herd health and establish a thriving ecological balance with the other resources within the complex. The information gained from these actions would then be used in future management of wild horses within the CCFO.

Authorized wild horse capture techniques would be used to capture excess wild horses from the Bible Spring Complex. These techniques include:

- Helicopter Drive Trapping
- Water and Bait Trapping
- Roping

One or a combination of capture techniques may be utilized. The selected technique(s) would depend on herd health and season (fall, winter, or summer) in which the gather is scheduled in order to maximize gather success and minimize impacts to wild horses.

Design Features to Minimize Impacts

- Multiple capture sites (traps) may be used to capture wild horses from the HMAs.
- Whenever possible, capture sites will be located in previously disturbed areas. Generally, these activity sites will be small (less than one half acre) in size.
- No new roads will be constructed.
- No trap sites will be located on areas where threatened, endangered, and special status species occur without clearance.
- Trap sites will be located a minimum of 0.5 mile from known Utah prairie dog colonies. No trap site will be located within identified Utah prairie dog habitat without clearance.
- All capture and handling activities will be conducted in accordance with the most current policies and procedures of the BLM.
- Helicopter gathers and water/bait trap gathers of a large size (more than 20 horses) will not be conducted between March 1 and June 30.
- During capture operations, safety precautions will be taken to protect all personnel, animals, and property involved in the process from injury or damage.
- Only authorized personnel will be allowed on site during the removal operation.
- No hazardous material will be used, produced, transported or stored in conjunction with this proposed action. Small amounts of carefully managed chemicals may be used to treat sick or injured animals at the capture sites.

National Selective Removal Policy

- Gather operations will be conducted in accordance with the Standard Operating Procedures (SOPs) described in Appendix 5 and/or the National Wild Horse Gather Contract as adjusted or amended through the National and State wild horse and burro program direction.
- When gather objectives require gather efficiencies of 50-80% or more of the animals to be captured from multiple gather sites (traps) within the HMAs, the helicopter drive method and helicopter assisted roping from horseback will be the primary gather methods used. Post-gather, every effort will be made to return released animals (if any) to the same general area from which they were gathered.
- Given a summer or early fall gather window, bait and/or water trapping may be used provided the gather operations timeframe is consistent with current animal and resource conditions. Bait and/or water trapping may also be selected as the primary method to maintain the population within AML and other special circumstances as appropriate.
- An Animal and Plant Inspection Service (APHIS) or other licensed veterinarian may be on-site during gathers, as needed, to examine animals and make recommendations to BLM for care and treatment of wild horses. Decisions to humanely euthanize animals in field situations will be made in conformance with BLM policy.
- Data including sex and age distribution, reproduction, survival, condition class information (using the Henneke rating system), color, size and other information may also be recorded, along with the disposition of that animal (removed or released). Hair and/or blood samples will be acquired every gather in accordance with current guidance (IM # 2009-062), to determine whether BLMs management is maintaining acceptable genetic diversity (avoiding inbreeding depression).
- The *Washington Office IM 2010-135, Gather Policy and Selective Removal Criteria and Management Considerations for Reducing Population Growth Rates,* will be followed to

prioritize the selection criteria for horses removed from the Bible Spring Complex except for the Blawn Wash HMA where all horses gathered would be removed:

a). *Age Class -Four Years and Younger*

Wild horses 4 years of age and younger should be the first priority for removal and placement into the national adoption program.

b). *Age Class – Eleven to Nineteen Years Old*

Wild horses aged 11 to 19 years of age should be removed from the HMA only if management goals and objectives for the herd cannot be achieved by removing horses 4 years and younger or if specific exceptions prevent them from being turned back and left on the range.

c). *Age Class – Five to Ten Years Old*

Wild horses 5 to 10 years of age are the lowest priority for removal and should be removed only if management goals and objectives for the herd cannot be achieved through the removal of animals identified in a) and b) above.

d). *Age Class – Twenty Years and Older*

Wild horses 20 years and older should not be removed from an HMA unless specific exceptions prevent them from being turned back and left on the range. In general, this age group can survive on the HMA but can have greater difficulty adapting to captivity and the stress of handling and shipping if removed.

Data Collection

Wild horse herd data which may be collected includes data to determine population characteristics (age/sex/color/etc.), assess herd health (pregnancy/parasite loading/physical condition/etc.) and determine herd history and genetic profile (hair sampling) (IM # 2009-062).

Wild Horse and Burro Specialists would be responsible for collecting population data. Data collected during the gather and adoption preparation operations may be used to determine which individual wild horses would be selected for return to the HMAs and would aid in future analysis in Herd Management Area Plans. The extent to which data is collected would vary to meet specific needs pertaining to each HMA. The following data may be collected:

1. Collecting Blood and Hair Samples:

Unless there is a previously recognized concern regarding low genetic diversity in a particular herd, it is not necessary to collect genetic information at every gather. Typical herds should be sampled every ten to 15 years (two to three gather cycles). The HMAs within the Bible Springs Complex are due to have genetic information collect during this 10 year period. Genetic sampling may occur more than once during the period of the proposed action.

Hair samples would be collected and analyzed to compare with establish genetic baseline data (genetic diversity, historical origins, unique markers, and norms for the population). The samples

would be collected from the animals released back into the HMAs (if any) and from some of the animals removed from the HMAs.

Minimum sample size is 25 animals or 25% of the post-gather populations, not to exceed 100 animals per HMA or separate breeding population. A sample is defined as 30 hairs with roots (about the diameter of a pencil). Hair samples would be taken from both mares and studs. Age would not be a defining factor in determining which animals to sample.

The test would consist of looking at 29 systems (17 typing and 12 DNA). The data would be compared to similar data from both domestic and other wild horse populations. The primary value of this data is to compare it to baseline samples to identify genetic drift and any narrowing of diversity through inbreeding. A sample of DNA would be preserved for each horse tested. Samples would be sent to Dr. Gus Cothran at the College of Veterinary Medicine at Texas A&M University for analysis. BLM qualified personnel would collect the hair samples.

Blood and/or hair samples may be taken for the purposes of furthering genetic ancestry studies and incorporation into the Herd Management Area Plans (HMAPs).

2. Herd Health and Viability Data Collection
Data related to age, sex, color, overall health, pregnancy, or nursing status would be collected from each animal captured. The sex and age of each release animal gathered would be recorded during sorting procedures at the gather holding facility and/or at the preparation facility. An estimate of the number, sex and age of horses evading capture would also be recorded.

Information on reproduction and survival would be collected to the extent possible, through documentation of the wild horses captured during the gather, and the age of those released following the gather. In addition, blood or hair samples may be collected from individuals within the herd for health records and/or viability data collection.

3. Characteristics:
Color and size of the animals would be recorded. Any characteristics as to type (or similarities to domestic breeds) would be noted if determined. The genetic analysis would provide a comparison of domestic breeds with the wild horses sampled. Any incidence of negative genetic traits (parrot mouth, club feet etc.) or other abnormalities would be noted as well. A representative population of wild horses depicting historical and desired Spanish Barb characteristics would be selected for release.

4. Condition Class:
A body condition class score would be recorded based on the Henneke System.

5. Other Data:
Other data such as temperament may be collected as determined by the Authorized Officer or Wild Horse Specialist.

Fertility Control
Fertility control would be used in the Bible Spring, Four Mile, and Tilly Creek HMAs to reduce the annual population growth. The primary use of fertility control would be to maintain the

population within AML once achieved. It could be used previous to achieving AML if gather success, holding capacity limitations, population growth rates, other national gather priorities or other circumstances prevent achieving AML during a gather.

Authorized and trained personnel would inoculate the mares released back into the Bible Spring, Four Mile, and Tilly Creek HMAs with an immunocontraceptive vaccine, Porcine Zona Pellucidae (PZP). The PZP vaccine would be administered in accordance with Washington IM 2009-090 (Appendix 6) or the current guidance and best practices directed by the National Program Office. The use of PZP or other fertility control would not be used in a manner that would threaten the health of individual animals or the long-term viability of any herd. A trained applicator would be selected to administer the vaccine during scheduled gathers or during remote delivery (darting) operations. The applicator would be responsible for securing the necessary vaccine, transporting all application materials and other equipment to the gather site, administering the treatment, and filing a treatment report.

All mares captured and treated would be freeze-marked with two 3.5-inch letters on the left hip for treatment tracking purposes. The only exceptions to this requirement would be when mares were treated remotely and can be clearly and specifically identified through photographs.

Fertility control will have the greatest beneficial impact where:

1. Annual herd growth rates are typically greater than 5%.
2. Post-gather herd size is estimated to be greater than 50 animals.
3. Treatment of at least 50% of all breeding-age mares within the herd is possible using either application in conjunction with gathers or remote delivery (darting). A maximum of 90% of all mares should be treated and our goal should be to achieve as close to this percentage as possible in order to maximize treatment effects.

If one or more of the conditions above are not met the beneficial impacts would be reduced. However, the use of PZP may still be used to reduce the population growth within an HMA.

The wild horses that are gathered would be subject to one or more of several outcomes listed below.

Temporary Holding Facilities During Gathers

Wild horses gathered would be transported from the trap sites to a temporary holding corral near the HMA in goose-neck trailers or straight-deck semi-tractor trailers. At the temporary holding corral, the wild horses will be aged and sorted into different pens based on sex. The horses would be provided an ample supply of good quality hay and water. Mares and their un-weaned foals would be kept in pens together. All horses identified for retention in the HMA would be penned separately from those animals identified for removal as excess. All mares identified for release would be treated with fertility control vaccine.

At the temporary holding facility, a veterinarian, when present, would provide recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious

physical defect (such as severe tooth loss or wear, club foot, and other severe congenital abnormalities) would be humanely euthanized using methods acceptable to the American Veterinary Medical Association (AVMA).

Transport, Short Term Holding, and Adoption Preparation
Wild horses removed from the range as excess would be transported to the receiving short-term holding facility in a goose-neck stock trailer or straight-deck semi-tractor trailers. Trucks and trailers used to haul the wild horses would be inspected prior to use to ensure wild horses could be safely transported. Wild horses would be segregated by age and sex when possible and loaded into separate compartments. Mares and their un-weaned foals may be shipped together depending on age and size of foals. Mare and un-weaned foals would not be separated for longer than 12 hours. Transportation of recently captured wild horses would be limited to a maximum of 8 hours.

Upon arrival, recently captured wild horses would off-loaded by compartment and placed in holding pens where they would be fed good quality hay and water. Most wild horses begin to eat and drink immediately and adjust rapidly to their new situation. At the short-term holding facility, a veterinarian would provide recommendations to the BLM regarding care, treatment, and if necessary, euthanasia of the recently captured wild horses. Any animals affected by a chronic or incurable disease, injury, lameness or serious physical defect (such as severe tooth loss or wear, club foot, and other severe congenital abnormalities) that was not diagnosed previously at the temporary holding corrals at the gather site would be humanely euthanized using methods acceptable to the AVMA. Wild horses in very thin condition or animals with injuries are sorted and placed in hospital pens, fed separately and/or treated for their injuries. Recently captured wild horses, generally mares, in very thin condition may have difficulty transitioning to feed. A small percentage of animals can die during this transition; however, some of these animals are in such poor condition that it is unlikely they would have survived if left on the range. At short-term corral facilities, a minimum of 700 square feet is provided per animal.

After recently captured wild horses have transitioned to their new environment, they are prepared for adoption or sale. Preparation involves freeze-marking the animals with a unique identification number, vaccination against common diseases, castration, and de-worming.

2.2.2 Alternative 2: Gather and Removal of Excess Wild Horses without Fertility Control.

Under this alternative, the BLM would conduct gathers as outlined in Alternative 1 - Proposed Action. However no fertility treatments would be applied. If gather objectives are not met, additional gathers in following years would occur until the population reaches the lower AML of 80 head within the Bible Spring Complex. The population would then be controlled within in AML (80-170 head) through gathers and removals.

2.2.3 Alternative 3 - No Action Alternative- No Gather, Removal or use of Fertility Control

Under the No Action Alternative, no wild horse gathers, removals, or use of fertility control would be undertaken to control the size of the wild horse population at this time. Wild horse populations of the Bible Spring Complex would not be actively managed at this time.

2.3 Alternatives Considered but Eliminated from Further Analysis

Wild Horse Management Implementing Fertility Control without Removals to Achieve AML

This alternative would not allow for population regulation by removing wild horses to achieve AML on the Bible Spring Complex. Wild horse management under this alternative would involve inoculating mares with PZP or other fertility control vaccine as outlined above. Gather, data collection, and handling techniques would be followed in accordance with the Proposed Action. Mares inoculated during the summer or fall of 2014 and other years the vaccine was administered would foal normally in the spring following treatment. Reproduction would be limited the following year or years after treatment.

In addition to not meeting the selection criteria for implementing fertility control research, this alternative was eliminated from further consideration due to the inability to achieve population objectives (AML). The current population within the Bible Spring Complex exceeds the AML as established in the Pinyon MFP and the Decision Record for EA-UT-040-04-47. Implementing fertility control without removing wild horses would not address the immediate issue of achieving AML. Population modeling shows that using this alternative with the current immunocontraceptive available would not control the population of wild horses and would not be in conformance with the WFRHBA, Pinyon MFP, and Decision Record for EA-UT-040-04-47. The WFRHBA mandates the BLM to prevent the range from deterioration associated with overpopulation, preserve and maintain a thriving natural ecological balance in consideration with multiple use relationships.

Remove or Reduce Livestock within the HMA

This alternative would involve no removal of wild horses and instead address the excess wild horse numbers through the removal or reduction of livestock within the HMA. This alternative was not brought forward for detailed analysis because it is outside of the scope of the analysis, is inconsistent with the Pinyon MFP, the Decision Record for EA-UT-040-04-47 and the Wild Horse and Burro Act, which directs the Secretary to immediately remove excess wild horses, and is inconsistent with multiple use management. Available data also indicates that wild horse use – including where livestock use has been excluded – has resulted in excessive vegetative utilization and impacts to rangelands that are recovering from wildfire or where fuels reduction treatments have been completed. Reduction and/or removal of livestock alone would not achieve utilization and vegetative objectives, as excess wild horses would continue impact these areas that have not received livestock use for 2 - 10 years.

Livestock grazing can only be reduced on permits following the process outlined in the regulations found at 43 CFR Part 4100. Several reductions and changes have been made to livestock grazing within allotments associated with the Bible Spring Complex through this process. The elimination of livestock grazing in an area would require an amendment to the Pinyon MFP. Such changes to livestock grazing cannot be made through a wild horse gather decision.

Livestock permit renewals were completed from 2007 – 2014 on the allotments within and adjacent to the Bible Spring Complex. Each of these renewals had environmental assessments and decision records completed. These decisions established stocking rates for livestock, established

seasons of use, areas of use, kind and class of livestock and management actions to improve livestock distribution. These management actions included the establishment of grazing systems, allowable use levels, salting and herding practices. Some livestock reductions were made in these decisions on allotments within the Bible Springs Complex. Livestock grazing continues to be evaluated for allotments and use areas within the Bible Spring Complex. Monitoring and evaluation of livestock grazing is in accordance with the Pinyon MFP's Rangeland Program Summary Section IV, 17, which states:

> Rangeland studies and monitoring programs will be continued and/or initiated to determine if rangeland management objectives are being achieved and if proposed grazing use levels must be adjusted. This monitoring program will continue on all allotments. Particular attention will be given those areas where there is high resource conflict or there is the possibility of rapid improvement or deterioration of the rangeland resources. The concentration of rangeland monitoring will be on those allotments in the "I" category.
>
> The monitoring program will evaluate changes in range condition and trend which includes determination of plant vigor, plant character, plant density, plant phenology, ground cover and degree of forage utilization on key species. Four primary studies will be used in this evaluation: (1) actual grazing use, (2) forage utilization, (3) range trend, and (4) climate analysis. In addition, data on wildlife habitat, riparian vegetation, and watershed condition will be collected and used as needed. When results of studies are evaluated and it is determined that the objectives are not being achieved on a specific allotment, modifications could include changes in grazing systems, livestock numbers, season of use, additional rangeland developments, or any combination of these alternatives.

The BLM is currently authorized to remove livestock from the HMA, "if necessary to provide habitat for wild horses or burros, to implement herd management actions, or to protect wild horses or burros from disease, harassment or injury" under CFR 4710.5. This authority is usually applied in cases of emergency and not for general management of wild horses or burros in a manner that would be inconsistent with the land-use plan and the separate decisions establishing the appropriate levels of livestock grazing and wild horse use, respectively.

Gather the HMA to the AML Upper Limit

A post-gather population size at the upper level of the AML range would result in the AML being exceeded the next foaling season. This would be unacceptable for several reasons.

The AML represents "that 'optimum number' of wild horses which results in a thriving natural ecological balance and avoids a deterioration of the range" (Animal Protection Institute, 109 IBLA 119;1989). The Interior Board of Land Appeals (IBLA) has also held that, "Proper range management dictates removal of horses before the herd size causes damage to the rangeland. Thus, the optimum number of horses is somewhere below the number that would cause resource damage" (Animal Protection Institute, 118 IBLA 63, 75; 1991).

The upper level of the AML established within a HMA represents the maximum population at which a thriving natural ecological balance would be maintained. The lower level represents the

number of animals to remain in a HMA following a wild horse gather, in order to allow for a periodic gather cycle, and to prevent the population from exceeding the established AML between gathers.

Additionally, gathering to the upper range of AML would result in the need to follow up with another gather within one year (with resulting stress on the wild horse population), and could result in overutilization of vegetation resources and damage to the rangeland if the BLM were unable to gather the excess horses in the HMA on an annual basis. This alternative would not reduce the wild horse population growth rate of 20% in the HMAs of the Bible Spring Complex and the BLM would not be able to conduct periodic gathers and still maintain a thriving natural ecological balance. For these reasons, this alternative did not receive further consideration in this document.

Fertility Control Treatment Only Including Using Bait/Water Trapping To Dart Mares with PZP Remotely (No Removal)

Population modeling was completed to analyze the potential impacts associated with conducting gathers about every 3 years over the next 20 year period to treat captured mares with fertility control. Under this alternative, no excess wild horses would be removed. The use of bait or water trapping would still not remove excess wild horses. While the average population growth would be reduced to about (16) % per year, AML would not be achieved and the damage to the range associated with wild horse overpopulation would continue. This alternative would not meet the Purpose and Need for the Action, and would be contrary to the WFRHBA, and was dismissed from further study.

The use of remote darting to administer PZP within HMAs where the horses are not accustomed to human activity has been shown to be very difficult. In the Cedar Mountain HMA during a two year study where administration of PZP by remote darting was to occur not a single horse was successfully darted. This method has been effective in some HMAs where the wild horses are more approachable but the Bible Spring Complex is not such an area, so this method of administering PZP was dismissed from further study.

Bait or Water Trap Only

An alternative considered but eliminated from detailed analysis was use of bait and/or water trapping as the primary gathering method. The use of bait and water trapping, though effective in specific areas and circumstances, would not be timely, cost-effective or practical as the primary gather method for this HMA due to the size of the area and the remoteness of many of the water sources. However, water or bait trapping may be used to achieve the desired goals of Alternatives 1 and 2 if gather efficiencies are too low using a helicopter, a helicopter gather cannot be scheduled or to help maintain AML once achieved. This alternative was dismissed from detailed study as a primary gather method for the following reasons: (1) the project area is too large to effectively use this gather method; (2) road access for vehicles to potential trapping locations necessary to get equipment in/out as well as to safely transport gathered wild horses is limited; and (3) the presence of scattered water sources on both private, state and public lands inside and outside the HMAs would make it almost impossible to restrict wild horse access to the extent necessary to effectively gather and remove the excess animals through bait and/or water trapping to achieve management goals.

Wild Horse Numbers Controlled by Natural Means
This alternative was eliminated from further consideration because it is contrary to the WFRHBA which requires the BLM to prevent the range from deterioration associated with an overpopulation of wild horses. It is also inconsistent with the Pinyon MFP, which directs that Cedar City Field Office BLM conduct gathers as necessary to achieve and maintain the AML. The alternative of using natural controls to achieve a desirable AML has not been shown to be feasible in the past. Wild horses in the Bible Springs Complex are not substantially regulated by predators. In addition, wild horses are a long-lived species with documented foal survival rates exceeding 95% and they are not a self-regulating species. This alternative would result in a steady increase in numbers which would continually exceed the carrying capacity of the range until severe and unusual conditions that occur periodically-- such as blizzards or extreme drought-- caused catastrophic mortality of wild horses (See Appendix 7, Population Modeling).

Gather and Release Excess Wild Horses Every Two Years and Apply Two-Year PZP to Horses for Release.
Another alternative considered was to gather a substantial portion of the existing population (90%) and implement fertility control treatment only, without removal of excess horses was modeled using a two-year gather/treatment interval over a 10 year period. The effectiveness of the 22 month PZP is somewhat in questions based on the most recent pen trials. However, for the modeling a percent effectiveness of 94% the first year, 82% the second, and 68% the third year was used. Based on WinEquus population modeling (See Appendix 7), this alternative would not result in attainment of AML for the HMA. The wild horse population would continue to have an average population growth rate of -1.2% to 8.4% adding to the current wild horse overpopulation, albeit at a slower rate of growth than the No Action Alternative. The modeling reflected an average population size in 11 years of 841 to 1589 wild horses under a two year treatment interval. In 90% of the trials, this alternative would not decrease the existing overpopulation of wild horses, resource concerns and rangeland deterioration would continue, and implementation would result in substantially increased gather and fertility control costs relative to the alternatives that remove excess wild horses to the AML range. In addition to not achieving AML, the time needed to complete a gather would also increase over time, because the more frequently an area is gathered, the more difficult wild horses are to trap. They become very evasive and learn to evade the helicopter by taking cover in treed areas and canyons. Wild horses would also move out of the area when they hear a helicopter, thereby further reducing the overall gather efficiency. The horses would also become so wary of traps used in water or bait traps that they would avoid any waters where traps are or were set up. Frequent gathers would increase the stress to wild horses, as individuals and as entire herds. It would become increasingly more difficult over time to repeat gathers every two years to successfully treat a large portion of the population. For these reasons, this alternative was dropped from detailed study.

Use Alternative Capture Techniques Instead of Helicopters to Capture Excess Wild Horses
An alternative using capture methods other than helicopters and bait/water trapping, was suggested by the public. As no specific alternative methods were suggested, the BLM identified chemical immobilization, net gunning, and wrangler/horseback drive trapping as potential methods for gathering horses. Net gunning techniques normally used to capture big games also rely on helicopters. Chemical immobilization is a very specialized technique and strictly

regulated. Currently, the BLM does not have sufficient expertise to implement either of these methods and they would be impractical to use given the size of the Bible Spring Complex, access limitations and approachability of the horses.

Use of wrangler on horseback drive-trapping to remove excess wild horses can be fairly effective on a small scale, but due to the number of excess horses to be removed, the large geographic size of the Bible Spring Complex, access limitations and approachability of the horses this technique would be ineffective and impractical. Horseback drive-trapping is also very labor intensive and can be very harmful to the domestic horses and the wranglers used to herd the wild horses. For these reasons, this alternative was eliminated from further consideration.

2.4 Summary

The alternatives being addressed in this document cover a reasonable range of alternatives for meeting the purpose and need. No other alternatives have been developed by the public or the Cedar City Field Office staff at this time.

3.0 AFFECTED ENVIRONMENT

3.1 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 in the Interdisciplinary Team Checklist (Appendix 1) and presented in Chapter 1 of this assessment. This chapter provides the baseline for comparison of impacts described in Chapter 4.

3.2 General Setting Resources/Issues Brought Forward for Analysis

The four HMAs are located in western Iron and Beaver counties, Utah approximately 30 miles west of Minersville, Utah in the Wah Wah and Indian Peak mountain ranges. The Bible Spring Complex (Bible Spring, Blawn Wash, Tilly Creek and Four Mile HMA) is approximately 213,122 acres.

The Blawn Wash HMA has both the highest and lowest elevation of the four HMAs, with elevations ranging from 9,117 feet to 5,443 feet. The other three HMAs have similar low elevations, around 5,500 feet, with higher elevations ranging from 7,680 feet to 8,586 feet. Average annual precipitation in all four HMAs is 12.5 inches a year, depending on elevation. In 2005 the precipitation was near 150 % of normal throughout the Bible Spring Complex. In 2000, 2006, 2010 and 2011 annual precipitation was near normal. In 2012 and 2013 was normal or slightly below normal, but because of the timing of precipitation, it had little effect on the recovery of vegetation or the recharge of springs and seeps creating drought conditions most of the year. In 1999, 2001 2002, 2003, 2004, 2007, and 2014 drought conditions and below normal precipitation occurred, with 2002, 2003 and first ½ of 2014 being severe drought years (BLM precipitation data). Vegetation, springs, and seeps continue to struggle to recover from so many years of below normal precipitation.

Available water within the complex is the limiting factor regarding the wild horse populations. Water is limited to isolated springs and man-made developments that supply water to permitted livestock, wildlife and wild horses. Several springs primarily used by wild horses were dry during the summers of 2000, 2001, 2002, 2003, 2004, 2007, 2008, 2012, 2013 and 2014 forcing animals onto winter ranges and into areas outside of the HMAs traditionally unoccupied by horses.

3.2.1 Rangeland Resources & Vegetation

Rangeland Health Assessments were completed on 16 grazing allotments within the gather area from 2007 through 2011 as indicated by the Monitoring Report for the Bible Spring Complex. Nested frequencies, utilization, Rangeland Health Assessments, actual use, climate, etc. were utilized to determine whether the Standards and Guidelines for Healthy Rangelands were being achieved. With the exceptions of Modena Canyon, Pine Valley and Willow Creek, all of the allotments or portions of allotments that occur within the Bible Spring Complex failed to meet at least one of the Standards. The riparian, soils and wildlife sections of this document contain more information on those Standards. Causal Factors for not meeting standards included, but were not limited to, Pinyon Pine/Juniper (PJ) encroachment, drought and grazing by livestock, wildlife and wild horses. If it was determined that livestock were a causal factor toward the non-attainment of the Standards and Guidelines changes to livestock grazing were made through the

grazing permit renewal process. These changes included livestock reductions, changes to season of use, identification of grazing management systems, changes in kind of livestock, and other livestock management actions. Wildlife grazing or impacts that are identified as causal factors are addressed during annual coordination with Utah Division of Wildlife Resources and habitat improvement projects.

Vegetation production and vigor has been reduced by the past and present droughts. Drought is defined as prolonged dry weather generally when precipitation is less than 75% of average annual amount (Society for Range Management 1974). Precipitation is the most important single factor determining the type and productivity of vegetation in an area. Forage production increases rapidly as precipitation increases up to about 20 inches per year (Holechek, 1989). Slight reduction from normal precipitation can cause severe reductions in plant yield in areas with less than 12 inches of precipitation (Klages 1942). During the period from 1999-2004 and 2012-2014, average annual precipitation never exceeded 12 inches within the Bible Springs Complex, and averaged around 75% of the normal precipitation for that area.

The current drought cycle has had a tremendous influence on rangeland vegetation. As described above, year-long grazing by wild horses has put additional stress on key forage species already affected by drought. Some key forage species have been lost. Recovery could take 5 to 15 years, depending on how severely the drought affected a particular area. Two or more years of drought have far greater impact on vegetation than one year of drought followed by normal or above-normal precipitation.

The complex supports multiple vegetation types including grasslands, sagebrush, sagebrush/grasslands, Pinyon/Juniper, mountain fir, and mountain fir/mountain shrub (Table 3). The PJ woodland type dominates the HMAs and is very dense with minimal understory forage. Open areas outside the PJ canopy are dominated by big sagebrush with Indian ricegrass, wheatgrass, bluegrass, and squirreltail grass as the primary forage species.

Table 3. Wild Horse Management Units – Acres of Vegetation per HMA

HMA Name	Vegetation Cover	Acres	Percent
BIBLE SPRING	Sagebrush/perennial grass	5,582.71	9.64
BIBLE SPRING	Pinyon-Juniper	25,446.18	43.96
BIBLE SPRING	Pinyon	10,041.79	17.35
BIBLE SPRING	Grassland	91.86	0.16
BIBLE SPRING	Juniper	13,741.26	23.74
BIBLE SPRING	Sagebrush	2,739.76	4.73
BIBLE SPRING	Mountain fir	246.19	0.43
	Total	**57,889.75**	**100.00**
HMA Name	**Vegetation Cover**	**Acres**	**Percent**
BLAWN WASH	Juniper	10,122.74	16.72
BLAWN WASH	Sagebrush	7,238.39	11.95
BLAWN WASH	Sagebrush/perennial grass	370.38	0.61
BLAWN WASH	Pinyon-Juniper	22,662.52	37.42
BLAWN WASH	Pinyon	19,742.66	32.60
BLAWN WASH	Grassland	15.67	0.03
BLAWN WASH	Mountain fir/Mountain shrub	406.31	0.67
	Total	**60,558.68**	**100.00**
HMA Name	**Vegetation Cover**	**Acres**	**Percent**
FOUR MILE	Pinyon-Juniper	28,017.27	47.72
FOUR MILE	Sagebrush/perennial grass	1,299.17	2.21
FOUR MILE	Grassland	360.28	0.61
FOUR MILE	Pinyon	483.13	0.82
FOUR MILE	Juniper	22,133.97	37.70
FOUR MILE	Sagebrush	6,416.20	10.93
	Total	**58,710.03**	**100.00**
HMA Name	**Vegetation Cover**	**Acres**	**Percent**
TILLY CREEK	Pinyon	9,543.08	26.54
TILLY CREEK	Sagebrush/perennial grass	671.96	1.87
TILLY CREEK	Pinyon-Juniper	12,759.24	35.48
TILLY CREEK	Juniper	9,369.58	26.05
TILLY CREEK	Grassland	58.47	0.16
TILLY CREEK	Sagebrush	3,561.00	9.90
	Total	**35,963.33**	**100.00**

Within portions of the HMA, chaining and/or burning PJ woodlands followed by aerial seeding, changed much of the PJ woodlands to a grassland and shrub community. The projects were completed to improve wildlife habitat, reduce fuels that increase fireoccurance or behavior, and emergency stabilization after wild fires. These projects reduced tree cover to 6% or less and produced a large amount of available forage such as grass and browse species. Vegetation species diversity was also greatly increased within the HMAs through these projects. A few of these treatments were completed in the last 10 years, but many are now 20-30 years old, and PJ or sagebrush has re-invaded these areas, reducing vegetation diversity. This reduction in plant species diversity has placed the HMAs in the 'functioning at risk' category (4700, Standards and

Guidelines Study files 2007-2014). Proposed or new vegetative treatments are outside the scope of this document and may be addressed in future planning and environmental analysis.

Bible Spring Seeding 1969

Bible Spring Seeding 2007

Reseeded areas have an expected life span of 15-20 years before sagebrush and pinyon/juniper out-compete seeded species and once again become the major cover type. Most of the seeded areas produced forage for 10 to 20 years longer than expected. Between when the drought began in 1998 and now in 2014 most of the older seedings have lost some of their productivity due to age. Production of forage species was limited by the drought and some plants died, increasing the grazing on surviving forage species. From 1999 to 2004, wild horse populations in the 4 HMAs were at the highest point since the passage of the Wild Horse and Burro Act in 1971. Heavy and severe utilization near water and on treated areas by wild horses, wildlife and livestock contributed to the loss of seeded species and the invasion of sagebrush and pinyon/juniper. The current estimated population of wild horses is now higher than 1999-2004 population and the drought conditions are similar to that time.

Utilization studies that have been completed during the past 20 years, along with Cedar City staff observations, suggest that as wild horse populations increase, they contribute to the decrease of forage species. This is especially true in grassland, sagebrush/grassland and seeded areas.

The grasses in the reseeded and key foraging areas were grazed by wild horses, cattle and wildlife during the critical spring season and utilized moderately-to-severely. Livestock grazing systems that eliminated repeated critical growing period within the same pasture on annual basis were identified during the grazing permit renewal process throughout the Bible Springs Complex.

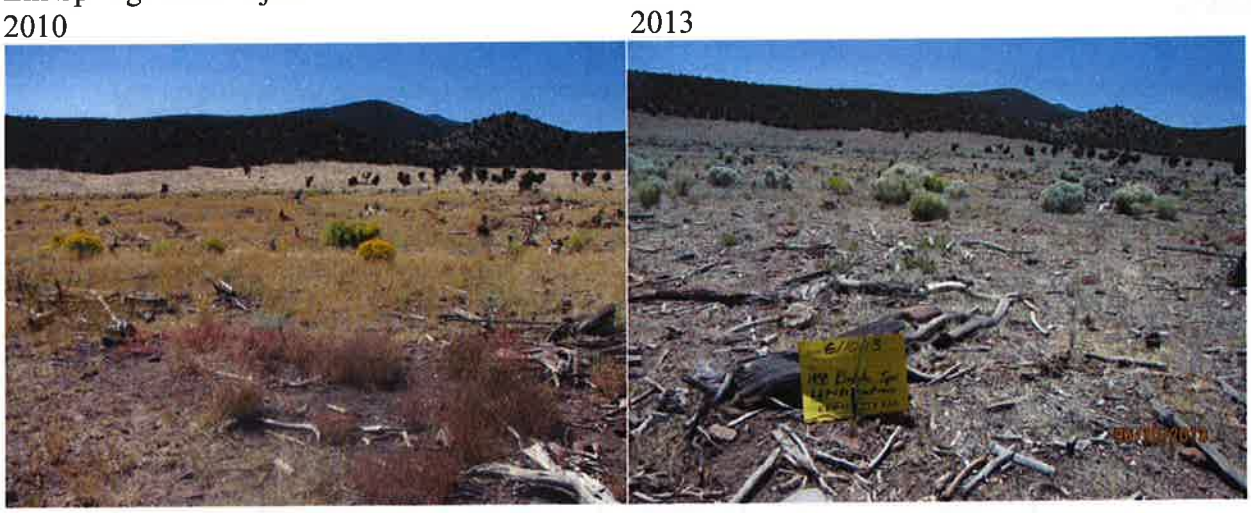
Broken Ridge ESR project

2011 2013

Year-long grazing by wild horses has been one contributing factor to the decline of many of the treated and seeded areas. Horses, because they are territorial, are grazing the same areas repeatedly throughout the spring during critical growing periods for grasses. High populations of wild horses can reduce the available forage for not only the year the grasses are grazed, but also for years to come. Horses will graze the most desirable forage plants first before grazing on other species. Wild horses are capable of cropping forage much more closely than wild or domestic ruminants, causing a loss of the most desirable forage species and reducing plant diversity. The Elk Spring ESR Project in Wilson Canyon is an example of this. This is an area that hasn't received livestock grazing since1993 and has only been used by wildlife and wild horses. The heavy to severe use currently being made on area is reducing the available forage and the species diversity.

Elk Spring ESR Project

2010 2013



From 1996 to 2001 and 2007 to present the excess number of wild horses (numbers over AML) within the four HMAs has reduced the amount of available forage for all grazing animals.

3.2.2 Livestock

Approximately 2,474 sheep Animal Unit Months (AUMs) and 14,873 cattle AUMs are permitted on 16 allotments that have some portion of the allotment within the HMAs (Table 4). Four other allotments have a very small acreage within the HMAs, but do not have AUMs allocated to wild horses (not included within Table 4).

It is estimated that the portions of allotments within the HMA's account for 5,696 cattle AUMs and 1,533 sheep AUMs. Soil Vegetation Inventory Method (SVIM) data from 1980 showed that approximately 8,165 cattle AUMs, 2,353 sheep AUMs, 322 Wildlife AUMs, and 3,116 Wild Horse AUMs were available for use in the HMAs. Since 1980, drought and the age of seeded areas and land exchanges have reduced the amount of forage available for all animals within the HMAs. The Bible Springs, Blawn Wash, Four Mile and Tilly Creek Wild Horse Appropriate Management Level Assessment, signed 4/18/2005 (EA# UT-040-04-47) adjusted the AUMs for wild horse in these HMAs.

Livestock forage allocations based on existing livestock preference were included in the 1983 Pinyon MFP. All of the livestock permits have been renewed within the Bible Springs Complex since 2007. Adjustments to livestock grazing permits have included seasons-of-use, kind-of-livestock, AUM's, and numbers of livestock, to improve or maintain the vegetative condition on the allotments. For the past ten years actual livestock use within the HMAs or in the allotments has been substantially reduced or even eliminated during the years of drought. As livestock grazing permits are evaluated, additional adjustments to the total livestock grazing may be made through the permit renewal process based on current vegetative and climatic monitoring information.

Table 4. Allotment, Season of Use, Numbers, Kind of Livestock and AUM's in the four HMA's.

Allotment	Livestock Number	Livestock Kind	Grazing Begin	Period End	%Public Land	AUMs
Bennion Spring	300	cattle	02/01	11/30	36%	1076
Bucket Ranch	335	cattle	06/01	09/30	25%	336
Bull Spring	104	cattle	06/01	02/28	94%	877
	26	cattle	06/01	02/28	94%	219
Culver Spring	40	cattle	02/20	04/30	44%	41
Gold Spring	133	cattle	04/01	10/15	67%	580
Jackson Wash	300	cattle	03/01	02//28	65%	2340
Jockeys	27	cattle	10/16	05/14	100%	188
	100	cattle	05/15	10/15	100%	506
	27	cattle	10/16	05/14	100%	188
	100	cattle	05/15	10/15	100%	506
Lone Pine Spring	200	cattle	06/01	11/30	91%	1095
Lund	260	cattle	03/01	02/28	67%	2090
Modena Canyon	40	cattle	07/01	09/30	100%	121

Mountain Spring	100	cattle	06/01	11/30	93%	560
Pine Valley	146	cattle	05/15	09/15	82%	486
	36	cattle	05/15	09/15	82%	122
Rosebud	118	cattle	05/01	11/30	10%	83
Sheep Spring	19	cattle	07/01	11/15	100%	86
Water Hollow	272	cattle	05/01	11/30	90%	1722
Willow Creek	387	sheep	10/20	05/31	100%	570
	245	cattle	10/20	05/31	72%	1299
	1287	sheep	10/20	05/31	100%	1904
	116	cattle	10/20	05/31	41%	352
					TOTAL AUMs	**17,347**

During years of drought, the reduction in the amount of available forage and the utilization of forage by wild horses caused most operators to place a substantial portion of their grazing preference in non-use, as approved by the BLM. Reasons for non-use vary with the operator and area, but often include recognition that either there is not sufficient forage for both the present numbers of wild horses and the preference level of livestock grazing or the economics of the range livestock industry are down. Although voluntary reductions in cattle AUMs have been taken by permittees, horse numbers have remained at or above the upper AML levels throughout most of the drought years.
Wild horses will drive away livestock and wildlife from watering and feeding areas (Miller, 1981). When these resources become depleted, wildlife and wild horses will move to new locations, while livestock must be removed. Historically when these HMAs were managed separately, attempts were made to reduce the horse population in one HMA and many horses would move to an adjacent HMA. This would reduce the number of horses that could be removed during the gather, prohibiting BLM from reaching gather objectives. This movement of horses temporarily reduces competition with livestock and wildlife in one area, while increasing it in another area for a short-term period (1-2 years). Eventually the horses slowly migrate back into the best forage and water locations. Vegetation in these areas continues to be impacted by wild horses, exacerbated by drought conditions.

There are numerous water developments throughout the four HMAs. These developments range from springs dug out with a pick and shovel to pipelines with troughs. Developed springs normally have pipelines that run to one or more troughs. Most of the developments have been completed for livestock grazing, with additional benefits for wildlife and wild horses. These developments require maintenance annually from the livestock permittee before livestock are allowed on an allotment. When permittees do not turn any livestock out on an allotment or area due to drought or other reasons, these developments are not maintained and fall into disrepair. This has resulted in reduced water sources for all animals when water is most needed. The BLM has hauled water onto the HMAs for wild horses several times during the past ten years, but this is not sustainable for long periods of time.

Wild horses have dug out holes where there is a seep of water, allowing them to get a drink. However, over time this will compact the soil and can seal off the seep. Horses by nature will paw at a water source, causing damage to some water troughs. Wild horses have also been known to dig up and break pipelines near air vents, because they can smell the water at that location, adding to the maintenance cost of a pipeline and troughs. This has also caused adverse feelings toward wild horses from those who have to maintain the pipeline.

Some fences have been damaged by wild horses in their natural movement and in their search for water. Most of these fences were in place before the passage of the WFRHBA. These fences inhibit the "Natural and free roaming nature of the wild horses," but are necessary for livestock management.

3.2.3 Soils

Soils within the proposed gather area are highly variable in terms of parent material, erosiveness, productivity and other aspects. Detailed soil descriptions and maps may be found in the Soil Survey of Iron – Washington Area, Utah (Natural Resource Conservation Service (NRCS), 1996) for that portion of the analysis area in Iron County. No similar data is available for the Beaver County portion of the analysis area.

BLM is required to keep an inventory of how well grazing allotments are meeting Utah BLM's Rangeland Health (RLH) Standards, which includes rating soil conditions in terms of current conditions and causal factors for those conditions. The results of RLH assessments will be the basis of soils analysis for this proposal. RLH Standard 1 requires productive upland soils as evidenced by sufficient cover and litter to protect soil surfaces from erosion, the absence of erosion indicators and appropriate kind and amounts of vegetation to allow properly functioning ecological conditions. The Key Forage method has been used as recently as spring, 2014 to monitor how much vegetation has been removed (primarily by large ungulates), and may be used to reflect whether or not adequate protective vegetation cover and litter has been left on-site to protect soils surfaces from erosion.

Rangeland Health Assessments were completed on 16 grazing allotments within the gather area from 2007 through 2011 as indicated by the Monitoring Report for the Bible Spring Complex. Four of the allotments (25 percent) did not meet Standard 1. These allotments are Gold Spring, Lone Pine Spring, Lund and Mountain Spring. Indicators used to reach the "not meeting" conclusion were excessive plant pedestals, bare ground, litter movement and soil loss. Many of the sites lacked resistance to soil erosion and lacked residual vegetation (and litter) following grazing by all herbivores. Flow patterns were identified both in and outside of animal trails and hoof action from livestock, wild horses and wildlife was found to be contributing to the compaction and loss of soil in areas within one half mile of water sources, including riparian areas.

In the Eight Mile Pasture of the Gold Spring Allotment, wild horses were specifically noted as lingering in the evaluation area and causing overutilization of protective plant cover. In the Lone Pine Spring Allotment, flash flooding had occurred in the Mountain Spring Wash and excessive utilization (as high as 78 % removal) has and is occurring on the recently completed Broken Ridge Emergency Fire Stabilization reseeding. The flash flooding damage is indicative of upland watershed issues (inability to hold water on-site) and excessive utilization rates are contributing to

lack of protective cover and excessive water flows off-site. The Lund Allotment is experiencing excessive wild horse grazing, which has led to excessive soil movement in the Upper Four Mile Pasture. In the Mountain Spring Allotment, excessive bare ground has led to water flow patterns and high levels of soil loss from the Mountain Spring Pasture while excessive utilization, largely attributable to wild horses, has left protective soil cover lacking in the Bible Spring Pasture.

In regard to residual vegetation cover, recently renewed grazing permits generally include a widely recognized utilization objective to not exceed 50 percent on key forage species. This utilization figure is important in the management of grazing allotments for several reasons, including key forage plant health, ability to support a reasonable amount of wild ungulate use after livestock are removed and to offer protection to the soil surface as required by Rangeland Health Standard 1. In addition to those allotments not meeting Standard 1, there are five allotments (31 percent) that met Standard 1, but are receiving excessive utilization (greater than 50 %), which is a threat to the long-term soil stability of the allotments. Recent utilization studies completed on Bucket Ranch, Bull Spring, Jackson Wash, Jockeys and Sheep Spring indicate that utilization objectives are being exceeded. For specifics of use levels and areas where excessive use is occurring, please see the Monitoring Report and are available for review at the BLM's Cedar City Field Office.

In summary, 56 percent of the grazing allotments within the Bible Springs Complex are either failing to meet Standard 1 for upland soil health or utilization objectives established by land use plans and by decisions to implement grazing permit renewals. Wild horses are contributing to the failure to meet the standards and objectives.

3.2.4 Wetland/Riparian Resources

There are approximately 27 miles of lotic habitat and 17 acres of lentic habitat associated with the four HMA's (Table 5). Common riparian/wetland species are willows, cottonwoods, sedges, rushes, Woods rose, and Kentucky bluegrass. There are approximately 16 miles and 12 acres rated in proper functioning condition (PFC), 10 miles and 5 acres rated as functioning at risk (FAR), and 1 mile and 0.5 acres rated as nonfunctional (NF). A list of these resources may be found in Appendix 9.

Damage to wetland and riparian areas often increases during drought years when wild horses may trample and dig in these areas in search of water. Because many of the springs within the Bible Springs Complex are non-functional due to drought conditions, the riparian vegetation is already stressed.

Table 5. Summary of Riparian Condition Ratings

HMA	Proper Functioning Condition		Functional at Risk – trend up		Functional at Risk – trend unknown		Functional at Risk – trend down		Nonfunctional	
	miles	acres	miles	acres	miles	acres	miles	acres	miles	acres
Blawn Wash	11	9.8			2.0		3.7	0.02		

Four Mile				0.1	0.1		0.92	0.34	0.14	0.06
Bible Spring								0.06	0.6	
Tilly Creek	5.23	2.02	1.7		0.9	0.05	1.06	4.82		0.1
TOTAL	**16.23**	**11.82**	**1.7**	**0.1**	**3.0**	**0.05**	**5.68**	**5.24**	**0.74**	**0.16**

3.2.5 Wildlife

For more information, see the technical report for wildlife species attached to Appendix 1.

Threatened and Endangered Species

The Utah prairie dog is listed as a threatened species under the Endangered Species Act. The Bible Spring Wild Horse Complex is adjacent to three Utah prairie dog complexes: Pine Valley, Water Hollow and Jockey Springs. Prairie dog populations are cyclic and are currently at low numbers in the Pine Valley, Water Hollow and Jockey Spring areas.

A portion of the Tilly Creek Herd Management Area contains greater sage-grouse brood-rearing habitat. Brood rearing habitat is typically defined for early-brood rearing and late-brood rearing activities. Early-brood rearing activities are maintained relatively close to the nesting site where young chicks feed primarily on insects and native forbs. Late spring/early summer grazing would generally impact the habitat and the ability of the vegetative communities to provide adequate cover for brood-rearing sage-grouse.

Special Status Wildlife Species

Special Status Wildlife Species are recognized by management under BLM's 6840 Manual and Instruction Memorandum No. UT-2007-078. These species are known to occur or to have a high probability of occurrence within the Great Basin Region based on habitat types within the proposed project area, Utah Natural Heritage Program Records of Occurrence, and GAP Analysis (Utah Conservation Data Center):

Bald Eagle (*Haliaeetus leucocephalus)*:
Lowland riparian habitat provides primary breeding habitat (nesting) for bald eagles and agricultural lands are used as secondary breeding habitat (nesting or foraging). Bald eagles are rare winter visitors to the West Desert area including the 4 HMAs. There are no known bald eagle winter roost sites or nest sites on or near these HMAs.

Kit Fox (*Vulpes macrotis)*: The primary breeding habitat for this sensitive species is high desert scrub.

Ferruginous Hawk (*Buteo regalis*): The primary breeding habitat for this species is pinyon-juniper and secondary breeding habitat is shrubsteppe. Edges of pinyon-juniper woodlands, utility structures (transmission poles), cliffs, and isolated trees serve to provide nesting as well as perching structures for ferruginous hawk.

Burrowing Owl (*Athene cunicularia*) The primary breeding habitat for this species is high desert scrub; grasslands are used as secondary breeding habitat. Nesting may occur in sparsely

vegetated sagebrush-steppe and desert scrub habitats. Abandon wildlife burrows associated with badger, ground squirrels, etc. are an important component of the habitat.

Pygmy Rabbit (*Brachylagus idahoensis*): Pygmy rabbits are considered sagebrush obligate and are reliant upon big sagebrush species for cover and food. Primary breeding habitat is shrubsteppe communities. A pygmy rabbit was identified and documented within the East Pasture of the Pine Valley Allotment.

Short-eared Owl (*Asio flammeus*): The Short-eared owl is a ground-nesting species, usually found in grassland, shrublands, and other open habitats (UCDC 2007). Populations of short-eared owls are largely dependent on the cyclic abundance of small mammals (Parrish et al. 2002).

Big Game

Big game species that occur in these HMAs are mule deer, elk, and pronghorn antelope. All three species are year-long residents. During spring, summer, and early fall, deer feed primarily on a variety of forbs and grasses, with light use on big sagebrush, black sagebrush, and bitterbrush. In fall and winter, deer shift their diet to shrubs including big sagebrush, black sagebrush, bitterbrush, Gambel oak and curlleaf mountain mahogany. Primary antelope forage plants include a variety of grasses and forbs in late spring, summer, and early fall, and big sagebrush, black sagebrush, winterfat, and bud sage in late fall, winter, and early spring. Elk rely primarily on grasses year-long for forage, but will use some forbs in spring and summer and shrubs in winter.

Migratory Birds

A variety of avian fauna inhabit the Wild Horse Herd Management Areas during the spring, summer, and fall months. The Utah Partner's in Flight (PIF), USFWS Birds of Conservation Concern and BLM/State Sensitive Species have identified the Black rosy finch, Black-throated gray warbler, Brewer's sparrow, Broad-tailed hummingbird, Gray vireo, Lewis's woodpecker, loggerhead shrike, prairie falcon, sage sparrow and Virginia's warbler as occurring in the area. Additionally, Golden eagles may occur on the HMAs area year round. A majority of the Bible Springs Complex would be used for foraging.

3.2.6 Wild Horses

The AML of 80-170 wild horses (Table 1) for the Bible Spring Complex was set in the Bible Springs, Blawn Wash, Four Mile and Tilly Creek Wild Horse Appropriate Management Level Assessment, signed 4/18/2005 (EA# UT-040-04-47), and is in conformance with the land use plan that allocated forage for wild horses, livestock, and wildlife. The CCFO has attempted since the completion of the MFP in 1983 to maintain the wild horse population on the four HMAs within the Bible Spring complex within the AML. Gathers and removals have been conducted within the different HMAs in 1982, 1983, 1984, 1985, 1988, 1989, 1991, 1994, 1995, 1998, 2000, 2001, 2002, 2006, 2007, 2008, 2009, 2010, 2012, and 2013 to attempt to keep the horse population within the AML or to remove wild horses from private lands adjacent to the HMAs. Only the 2006 and 2009 gathers were done on all four of the HMAs at once as a complex. The gathers in 2010, 2012 and 2013 were small private land gathers. The horse populations on the different HMAs have varied within AML from 1980 to present. Gathers of wild horses within this complex has proven to be difficult due to heavy tree cover, terrain, and horse movement. As

the population increases, it becomes harder to gather the number of horses needed to reduce the population to within AML.

The current estimated population of 755 wild horses as of the summer of 2014 would continue to increase at a rate of 15-20% annually. The current estimated population of the Bible Spring Complex was developed after completion of an aerial population inventory flight in March of 2012 using the direct count method (Appendix 8). The total number of horses counted during the inventory was of 318 horses in the HMAs and 54 horses counted outside the HMAs, but near the HMAs (BLM Wild Horse Population Inventory Files). Based on the Bible Spring Complex population increasing by 20% each year and subtracting horses removed from private lands adjacent to the HMAs, by the summer of 2014 the estimated population for the Bible Spring Complex would be 755 head. That is 344~~280~~% above the upper AML number.

Because horses have a cecal digestive system and can cover longer distances than can domestic ruminants, wild horses can remain in good health under forage conditions fatal to domestic ruminants (Holechek, 1989). In 1999 and 2000, range conditions within these HMAs became so bad that even with almost no livestock use and several hundred head of wild horses removed, health of some horses declined to critical conditions. Some horses were lost to starvation and dehydration during those years. In 2013, fourteen wild horses died in the Complex due to lack of forage and/or water.

The overriding limiting factor for the carrying capacity of the horses in the four HMAs is not the available forage, although this is a concern, but is the supply of reliable water during the summer months. Upland vegetation in proximity to reliable water sources is used heavily by wild horses, wildlife, and livestock, while vegetation in areas farther from water (i.e., a neighboring HMA) is used slightly or not at all. There are many areas within the four HMAs that have adequate forage, but are not usable for most of the year due to lack of water and/or seasonal condition (i.e snow depth). During drought conditions, as has occurred during 1999-2004 and the last few years, several water sources dry up, concentrating wild horses on the remaining water sources and limiting the number of horses that a particular HMA can support. The increased concentration of wild horses at these sites reduces vegetation and causes soil compaction. Water was hauled to a variety of locations to spread the use out and to sustain wild horses, but this is not sustainable for long periods of time.

Currently, none of the four HMAs has an AML large enough to maintain a viable population on their own without introduction of horses from outside the HMAs. However, these HMAs have viable populations because of the interchange of horses between HMAs and introduction of horses from other HMAs. Horses from the different HMAs will move from one adjacent HMA to another in search of food, water, shelter, a new band, or because of pressure from other resource uses. This allows for genetic mix of the population in the Bible Spring Complex. In future land use planning documents it is anticipated that the HMAs in the Bible Spring Complex would be managed as one HMA.

Blood samples were collected from horse gathers conducted in 1999-2002 on each of these HMAs and samples sent to Gus Cothran at the University of Kentucky for genetic analysis. The report on the Tilly Creek HMA wild horse's genetic viability was received in April of 2003.

Reports on the genetics of the horses in the other three HMAs have not yet been received, but it is believed the other reports will have similar findings due to the interchange of horses between HMAs.

The levels of variation within the Tilly Creek herd were near the average for wild horse populations. However, the pattern of variation suggests that variation within this herd is declining. A fairly high proportion of the allelic diversity is at clear risk of loss. (Cothran, 2003).

Although no immediate action is needed in the Tilly Creek herd, it is being monitored. Horses from outside the HMA may need again to be introduced to maintain diversity once the population is within AML.

Intermixing of wild horses between HMAs has helped maintain the genetic viability of the four HMAs. During the years of drought there has been more movement than normal, as the horses have moved in search of other reliable water sources. Much of this movement has been between the four HMAs, but some has been between other HMAs outside the Bible Spring Complex (i.e., Eagle and Sulphur HMAs) and outside of any HMAs.

In 1980 it was estimated that 3,116 AUMs were available for wild horse use within the four HMAs. The Pinyon MFP allocated 2,820 AUMs to wild horses. From 1997 to 2000 and 2013 the estimated population of wild horses within the Bible Springs HMA was triple the AML. From 1991 to 1999 the estimated population of wild horses within the Blawn Wash HMA fluctuated around double the AML. Four Mile and Tilly Creek HMAs estimated populations remained near AML from 1985 to 2010, but from 2011 to present have been double AML. If horse populations were allowed to continue to double or triple throughout the four HMAs, wild horses could realistically utilize all of the available AUM's allocated for other resources, causing increased competition, reduced horse health (or death), and placing vegetation communities at risk. This scenario is exacerbated by drought conditions that have occurred over the past several years. Similar conditions in 1999-2002 of high wild horse population combined with drought reduced horse health and several wild horses died on the range.

Bible Spring 2001 Bible Spring 2014

Removals from the HMAs have been sporadic due to changing priorities and budget constraints. Populations in the four HMAs have varied dramatically from 1971 to present. In 2006 and 2009

gathers were conducted with 181 and 371 head removed respectfully. Current direction is to plan for gathers on a four-year cycle. The lowest populations were observed in 1971 and the highest populations were in 1999, 2000 and currently. The highest populations of wild horses occurred during the first part of the last extended year drought and 2014 drought. This had a dramatic effect on wild horse health, water availability and abundance of vegetative resources. In 1999, wild horses were in poor to very poor condition. Over the period of the 1999-2004 drought, several wild horses died because of the harsh conditions. Currently, the Bible Spring Complex is experiencing similar conditions.

4.0 ENVIRONMENTAL IMPACTS

4.1 Introduction

The potential consequences of each alternative are discussed in this section in order to provide the scientific and analytical basis for comparison of each alternative.

4.2 Alternative 1-Proposed Action Alternative:

4.2.1 Rangeland Resources and Vegetation

Competition for forage and water between wild horses, elk, and livestock would be directly reduced. A reduced number of wild horses within the Bible Spring Complex would improve rangeland health and keep use levels within management plan objectives.

A reduced demand for forage would help improve the vigor of vegetation, allow for seedling establishment, increase ground cover, and thereby maintain a thriving natural ecological balance. The recovery from the extended drought would be allowed and should show improved vegetative trend of key forage species, if precipitation remains near or above long-term average levels. Long-term rangeland health would improve within the allotments as key forage and riparian areas would receive less use, especially during time of drought when wild horses are hardest on these areas.

Reducing the wild horse population to within AML would contribute to maintaining sufficient vegetation and litter within HMAs to protect soil from erosion, meet plant physiological requirements, facilitate plant reproduction, and reduce potential for spread of noxious weeds.

For helicopter round ups, direct impacts to vegetation would include short-term (1 to 10 days) disturbance of native vegetation immediately in and around temporary trap sites, and holding and handling facilities. For bait trapping, the direct impacts to vegetation would be longer (5-365 days) but would still be considered short term. There would be direct impacts to the vegetation immediately in and around temporary trap sites, and holding, sorting and animal handling facilities. Impacts are created by vehicle traffic and hoof action of penned horses and can be locally severe in the immediate vicinity of the corrals or holding facilities. Keeping the sites approximately ½ acre in size would minimize the disturbance area. Since most trap sites and holding facilities are re-used during recurring wild horse gather operations, any impacts would remain site specific and isolated in nature. In addition, most trap sites or holding facilities are selected to enable easy access by transportation vehicles and logistical support equipment and would therefore generally be near or on roads, pullouts, water haul sites or other previously disturbed flat spots. These common practices would minimize the effects of these impacts.

The use of fertility control on wild horse gathers would not impact rangeland resources and vegetation directly, but would have indirect impacts if wild horse populations were reduced or maintained within AML for longer periods of time. The lower wild horse populations would extend the beneficial impacts described in this section.

4.2.2 Livestock

Livestock located near gather activities may be temporarily disturbed or displaced by helicopter and increased vehicle traffic during the gather operation. This displacement would be temporary and the livestock would move back into the area once gather operations moved. Past experience has shown that gather operations have little impacts on grazing cattle and sheep.

Indirect impacts to livestock grazing would be an increase in forage availability and quality, reduced competition for water and forage, and improved vegetative resources that would lead toward a thriving ecological condition over the course of 6 to 10 years.

Annual authorized livestock use may be adjusted due to a number of factors, including rangeland health or drought. Managing wild horses at the AML through gather and removals with or without fertility control would help with long-term sustainability of authorized livestock use within the HMAs at the permitted levels. Managing wild horses within AML would reduce the likelihood of adjustments to current active livestock permits attributable to overuse of resources by wild horses. This action would have no direct impact on current livestock permits in terms of active AUMs, season of use and/or terms and conditions. Adjustments to livestock permits (if any) would be made during the livestock allotment permit renewal process.

4.2.3 Soils

The Proposed Action would have a direct impact to soils directly in the trap area. These areas would be disturbed by the hoof action of wild horses when they are concentrated in the trap area to be loaded on the trailers. The disturbance would be ¼ to ½ acre in size at each trap and would normally be in area already disturbed like a road, wash, or previous trap site. Most operations would occur when soils are dry or frozen reducing the impact to soils. Past trap site locations have recovered within a year with vegetation to stabilize the soils. No compaction of soils have occurred from past gather operations.

This analysis assumes that livestock use would continue at levels as established by grazing permit renewal decisions, big game numbers would continue as established by herd management plans and state law and removal of wild horses would be as proposed to within the AML levels specified for each HMA or Herd Area.

The proposed action would have the indirect impact of aiding four grazing allotments (Gold Spring, Lone Pine Spring, Lund and Mountain Spring) to move towards attainment of Rangeland Health Standard 1. In general, the reduction of wild horses to proposed levels would reduce utilization levels, which would allow more residual vegetation and litter to remain on site and protect the soil resource. Reduction of wild horse numbers would aid another five allotments to achieve established utilization objectives. The additional five allotments are Bucket Ranch, Bull Spring, Jackson Wash, Jockeys and Sheep Spring. Increased litter would provide additional protection from wind and water erosion, promote infiltration, detain surface flows and retard soil moisture loss by evaporation, thus allowing for better vegetative productivity. Indicators, such as pedestals, bare ground, litter movement, flow patterns, etc. should lessen with implementation of the proposed action. Further, reduced numbers of horses should result in less compaction of wet sites, such as riparian areas and enhance soil and vegetation production there.

4.2.4 Wetland/Riparian Resources

The Proposed Action would not have any direct impacts to riparian wetland zones or water quality. Trap sites and temporary holding facilities would not be constructed on riparian resources.

The Proposed Action would indirectly impact riparian wetland zones and water quality due to the decreased utilization by wild horses in these sensitive areas allowing for the possibility of riparian wetland areas to improve through natural processes. Implementing the Proposed Action would decrease competition for water sources and alleviate pressures exerted on riparian habitat due to wild horses congregating around these sensitive areas. The functionality of riparian resources would improve towards a more properly functioning condition with the removal of excess wild horses and implementation of fertility control.

4.2.5 Wildlife

Activities such as using helicopters and roping can have short-term effects on wildlife due to human noise and activity and potential surface disturbances. Direct impacts from bait and water trapping would vary by wildlife species. The intensity of these impacts would vary by individual and would be indicated by behaviors ranging from nervous agitation to physical distress. Temporary disturbance or displacement would occur to wildlife during set up of traps or if they were unable to escape when horses were captured in a trap. Since traps are monitored, it is very unlikely wildlife would become trapped.

There is the potential that wild horses might trample and collapse underground dens and burrows of species such as the kit fox, pygmy rabbit, and burrowing owl. If occupied dens are collapsed, the inhabitants could be killed. If they are not killed, additional stress and energy would be expended to dig out the collapsed burrow or dig a new burrow, which would affect the individual fitness of the animal. Temporary displacement may occur during the gather, however, the impacts are expected to be minimal to these species.

Greater sage-grouse and/or its habitat could be impacted temporarily and short term through disturbance and/or displacement. After gather activties have ceased, grouse would be expected to return to the area. Removal of wild horses would benefit sage-grouse in the short-term through improved access to water sources and in the long-term through improved habitat conditions, both at water sources/riparian areas and in upland habitat containing sagebrush.

Bald eagles typically rely on riparian and water-associated habitat for winter roosting. Horse grazing can affect wintering eagles by congregating in riparian areas and degrading the ecological function of the area. Reducing wild horse numbers would decrease this impact.

Short-term impacts to migratory birds could include the occasional destruction of nests and eggs due to trampling by horses, or associated nest abandonment of birds intolerant to disturbances. Indirect impacts may be associated with changes in vegetation as a result of wild horse grazing management practices, which may lead to loss of nesting, roosting, or foraging habitat.
Wildlife and wildlife habitat would be indirectly affected by the improvements in resource health from the removal of excess horses and fertility control. Implementing the Proposed Action would

reduce utilization on key forage species, improving the quantity and quality of forage available to wildlife and decreasing competition for water sources.

4.2.6 Wild Horses

The Proposed Action would decrease the existing overpopulation of wild horses using gathers, removals and fertility control over the next 10 years to achieve and then maintain AML. The target population when the objectives of this alternative are reached would result in a total population at approximately 125 horses in the Complex.

Normally gather success in the Complex is between 60-70% using the helicopter drive trap method. Because it will take several successive gather operations (2-4) over a period of up to ten years to get the wild horse population of the Complex to low end of AML, bands of horses would continue to leave the boundaries of the HMA into areas not designated for their use in search of forage and water. The stated objectives for wild horse herd management area, to "prevent the range from deterioration associated with overpopulation", and "preserve and maintain a thriving natural ecological balance and multiple use relationship in that area" would not be met with just the first gather operation, but would be met as proposed over time.

Until the population in the Complex is brought within AML, individuals in the herd would still be subject to increased stress and possible death as a result of continued competition for water and forage. Although lessened, the areas experiencing heavy and severe utilization levels by wild horses would remain near current levels and impacts to rangeland resources (concentrated trailing, riparian trampling, increased bare ground, etc.) throughout the HMAs would be expected to continue until the project area's population can be reduced to the AML range and concentration of horses can be reduced.

Removal of excess wild horses would improve herd health. Decreased competition for forage and water resources would reduce stress and promote healthier animals. Wild horse populations above AML compete for forage, water, and cover allocated to wildlife and livestock. High populations of wild horses impact riparian areas with increased trailing, vegetative use, and trampling. Wild horses will drive away livestock and native ungulates from watering and feeding areas (Miller 1981). The removal of excess animals coupled with anticipated reduced reproduction (population growth rate) as a result of fertility control should result in improved health and condition of mares and foals as the actual population comes into line with the population level that can be sustained with available forage and water resources, and would allow for healthy range conditions (and healthy animals) over the longer-term. Reduced population growth rates with the use of fertility control would be expected to extend the time interval between gathers and reduce disturbance to individual animals as well as to the herd social structure over the foreseeable future.

Bringing the wild horse population back to low range AML by achieving the proposed action would reduce damage to the range from the current overpopulation of wild horses and allow vegetation resources to start recovering. Once AML is achieved and fertility treatments are conducted on a regular basis, the number of gathers needed to maintain AML would be reduced. As a result, there would be fewer disturbances to individual animals and the herd and a more stable wild horse social structure would be provided.

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

Indirect impacts can occur after the initial stress event, and may include increased social displacement or increased conflict between stallions. These impacts are known to occur intermittently during wild horse gather operations. Traumatic injuries may occur, and typically involve bruises from biting and/or kicking, which do not break the skin.

The gathers would occur frequently making wild horses more difficult to trap. The horses would become very evasive and learn to evade the helicopter by taking cover in treed areas and canyons. Wild horses would also move out of the area when they hear a helicopter, thereby further reducing the overall gather efficiency. Frequent gathers would increase the stress to wild horses, as individuals and as entire herds. It would become increasingly more difficult over time to repeat gathers if the gathers are within two year intervals to successfully treat mares with PZP.

Fertility Control Treatments

Each released mare would receive a single dose of the two-year PZP contraceptive vaccine or similar vaccine/fertility control. When injected, PZP (antigen) causes the mare's immune system to produce antibodies; these antibodies bind to the mare's eggs and effectively block sperm binding and fertilization (Zoo Montana, 2000). PZP is relatively inexpensive, meets BLM requirements for safety to mares and the environment, and can easily be administered in the field. In addition, among mares, PZP contraception appears to be completely reversible. One-time application at the capture site would not affect normal development of a fetus should the mare already be pregnant when vaccinated, hormone health of the mare, or behavioral responses to stallions (Kirkpatrick et al, 1995). The vaccine has also proven to have no apparent effect on pregnancies in progress, the health of offspring, or the behavior of treated mares (Turner et. al, 1997).

Mares receiving the vaccine would experience slightly increased stress levels associated with handling while being vaccinated and freeze-marked. Serious injection site reactions associated with fertility control treatments are rare in treated mares. Any direct impacts associated with fertility control, such as swelling or local reactions at the injection site, would be minor in nature and of short duration. Most mares recover quickly once released back to the HMA, and none are expected to have long term impacts from the fertility control injections.

Ransom et al. (2010) found no differences in how PZP-treated and control mares allocated their time between feeding, resting, travel, maintenance, and social behaviors in three populations of wild horses, which is consistent with Powell's (1999) findings in another population. Likewise, body condition of PZP-treated and control mares did not differ between treatment groups in Ransom et al.'s (2010) study. Turner and Kirkpatrick (2002) found that PZP-treated mares had

higher body condition than control mares in another population, presumably because energy expenditure was reduced by the absence of pregnancy and lactation.

In two studies involving a total of four wild horse populations, both Nunez et al. (2009) and Ransom et al. (2010) found that PZP-treated mares were involved in reproductive interactions with stallions more often than control mares, which is not surprising given the evidence that PZP-treated females of other mammal species can regularly demonstrate estrus behavior while contracepted (Shumake and Wilhelm 1995, Heilmann et al. 1998, Curtis et al. 2002). Ransom et al. (2010) found that control mares were herded by stallions more frequently than PZP-treated mares, and Nunez et al. (2009) found that PZP-treated mares exhibited higher infidelity to their band stallion during the non-breeding season than control mares. Madosky et al. (in press) found this infidelity was also evident during the breeding season in the same population that Nunez et al. (2009) studied, resulting in PZP-treated mares changing bands more frequently than control mares. Long-term implications of these changes in social behavior are currently unknown.

Water/Bait Trapping

Bait and water trapping would be used in some small areas of the Complex to remove small number of wild horse or to conduct fertility treatments. This method is slightly less stressful to the horses, but after frequent gathers wild horses would become more difficult to trap using this method. Horses would begin to avoid water sources or areas where the traps are set. During past water trap operations, some wild horses near death have been observed avoiding going into a water trap. Water trap operations had to be stopped and panels removed to allow these horses to drink before dying.

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

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

When actively trapping wild horses, the trap would be checked on a daily basis. Horses would be either removed immediately or fed and watered for up to several days prior to transport to a holding facility. Existing roads would be used to access the trap sites.

Generally, bait/water trapping is most effective when a specific resource is limited, such as water during the summer months. For example, in some areas, a group of wild horses may congregate at a given watering site during the summer because few perennial water resources are available nearby. Under those circumstances, water trapping could be a useful means of reducing the number of horses at a given location, which can also relieve the resource pressure caused by too many horses. As the proposed bait and/or water trapping in this area is a lower stress approach to

gathering of wild horses, such trapping can continue into the foaling season without harming the mares or foals. Conversely, it has been documented that at times water trapping can be stressful to wild horses due to their reluctance approaching new, human structures or intrusions. In these situations, wild horses may avoid watering or may travel greater distances in search of other watering sources or panels may have to be removed to let the horse drink.

Transport, Short Term Holding, and Adoption Preparation
During transport, potential impacts to individual horses can include stress, as well as slipping, falling, kicking, biting, or being stepped on by another animal. Unless wild horses are in extremely poor condition, it is rare for an animal to die during transport.

Recently captured wild horses, generally mares, in very thin condition may have difficulty transitioning to feed. A small percentage of animals can die during this transition; however, some of these animals are in such poor condition that it is unlikely they would have survived if left on the range.

During the preparation process, potential impacts to wild horses are similar to those that can occur during transport. Injury or mortality during the preparation process is low, but can occur.

Mortality at short-term holding facilities averages approximately 5% (GAO-09-77, page 51), and includes animals euthanized due to a pre-existing condition, animals in extremely poor condition, animals that are injured and would not recover, animals which are unable to transition to feed; and animals which die accidentally during sorting, handling, or preparation.

Wild Horses Remaining or Released into the HMA following Gather
The wild horses that are not captured may be temporarily disturbed and move into another area during the gather operations. With the exception of changes to herd demographics, direct population wide impacts have proven, over the last 25 years, to be temporary in nature with most if not all impacts disappearing within hours to several days of when wild horses are released back into the HMA. No observable effects associated with these impacts would be expected within one month of the gather operations or release, except for a heightened awareness of human presence.

As a result of lower density of wild horses across the HMA following the removal of excess horses, competition for resources would be reduced, allowing wild horses to utilize preferred, quality habitat. Confrontations between stallions would also become less frequent, as would fighting among wild horse bands at water sources. Achieving the AML and improving the overall health and fitness of wild horses could also increase foaling and foaling survival rates over the current conditions.

The primary effects to the wild horse population that would be directly related to this proposed gather would be to herd population dynamics, age structure or sex ratio, and subsequently to the growth rates and population size over time. The remaining wild horses not captured would maintain their social structure and herd demographics (age and sex ratios).

Impacts to the rangeland as a result of the current overpopulation of wild horses would be reduced under the proposed action. Fighting among stud horses would decrease since they would protect

their position at water sources less frequently; injuries and death to all age classes of animals would also be expected to be reduced as competition for limited forage and water resources is decreased.

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

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

A few foals may be orphaned during gathers. This may occur due to:

- The mare rejecting the foal. This occurs most often with young mothers or very young foals;
- The foal and mother becoming separated during sorting and cannot be matched;
- The mare dying or being humanely euthanized during the gather;
- A foal being ill, weak, or needing immediate special care that requires removal from the mother;
- The mother not producing enough milk to support the foal.

Occasionally, foals are gathered that were already orphans on the range (prior to the gather) because the mother rejected it or died. These foals are usually in poor, unthrifty condition. Orphans encountered during gathers are cared for promptly and rarely die or have to be euthanized. Nearly all foals that would be gathered would be over four months of age and some would be ready for weaning from their mothers. In private industry, domestic horses are normally weaned between four and six months of age.

Gathering the wild horses during the fall/winter reduces risk of heat stress, although this can occur during any gather, especially in older or weaker animals. Adherence to the SOPs as well and techniques used by the gather crew or contractor help minimize the risks of heat stress. Heat stress does not occur often, but if it does, death can result.

4.3 Alternative 2 - Gather and Remove Excess Wild Horses within the Bible Spring Complex without Implementing Fertility Control

Rangeland Resources and Vegetation
Under this alternative, AML would be more difficult to maintain as the growth rate (population increase) would be higher than Alternative 1. This would result in more frequent gathers of the Bible Spring Complex once the AML was achieved. Increased gathers means greater short-term

disturbance of vegetation and soils in and around temporary trap sites and holding and handling facilities.

Impacts of the gather and removal would be similar to those described in Proposed Action, but there would be not impacts due to released mares being treated with PZP. However, without slowing reproduction, a steady increase in the number of wild horses through natural foaling rates would result in impacts to vegetation. Removal of excess wild horses would be beneficial to vegetative resources but plant communities may not receive as much opportunity to recover as under the Alternative 1.

Livestock
Impacts of the gather and removal without fertility control would be similar to the Proposed Action; however, wild horse populations may increase at a faster rate and exceed the high end of the AML increases competition between livestock and wild horses sooner.

Soils
Impacts to the soil resource would be essentially the same under Alternative 2 as under the Proposed Action Alternative. Protective vegetative cover and soil surfaces would respond equally well, whether horses were simply removed to reach AML or whether removals and fertility control were implemented.

Wetland/Riparian Resources
Alternative 2 would not have any direct impacts to riparian wetland zones or water quality. Trap sites and temporary holding facilities would not be constructed on riparian resources.

As in the Proposed Action, Alternative 2 would indirectly impact riparian wetland zones and water quality due to the decreased utilization by wild horses in these sensitive areas allowing for the possibility of riparian wetland areas to improve through natural processes. Implementing the Proposed Action would decrease competition for water sources and alleviate pressures exerted on riparian habitat due to wild horses congregating around these sensitive areas. The functionality of riparian resources would improve towards a more properly functioning condition (PFC) with the removal of excess wild horses.

Wildlife
Impacts to wildlife would be the same as those described for the proposed action. However, a faster increase of wild horse populations under this alternative would decrease the term of the beneficial impacts of the proposed action to wildlife species.

Wild Horses
Impacts from this alternative would be similar to the Alternative 1 Proposed Action, however, none of the impacts of fertility control would occur. The lower AML may be achieved through this alternative but the population would exceed the high end of AML sooner than the proposed action.

4.4 Alternative3-No Action

4.4.1 Rangeland Resources and Vegetation

Under the No Action Alternative, wild horses would continue to increase in population size beyond the capacity of the habitat to provide water and forage. Heavy and severe use of vegetation resources by wild horses would continue and increase, resulting in further degradation of plant communities, increased soil erosion, and susceptibility to invasive species. Downward trends in key perennial species would be expected in conjunction with reductions in ecological condition and soil stability. The vegetative functional groups (i.e. grass, shrubs, trees etc.) would be changed as grasses are over utilized during critical growing seasons. Vegetation would also experience reduced production resulting in reduced forage availability to wildlife, livestock, and wild horses. Eventually rangeland health would be reduced below a threshold that would be difficult to recover from. Considerable progress towards the Standards and Guidelines for Healthy Rangelands would not occur.

4.4.2 Livestock

Because horses compete directly with cattle for resources, there is the potential for authorized livestock to be reduced in line with forage availability, which could impact permittees. Dietary overlap exists between wild horses and livestock. Under the No Action Alternative, wild horse populations would be allowed to continue to increase above the AMLs established in the Decision Record for EA-UT-040-04-47. Managing wild horses above AML within the Bible Spring Complex could cause livestock permittees to experience reduced forage resources resulting in long-term changes in grazing management.

4.4.3 Soils

Under the No Action Alternative, wild horse populations would continue to increase beyond the capacity of the habitat to provide water and forage. Heavy and severe use of desirable vegetation resources by wild horses would continue and increase. Horses are opportunistic feeders and as their populations increased, may eventually have to choose non-forage species, such as three-awn grass, rabbitbrush and junipers for their survival, which would result in even less litter and residual vegetation left on site than under the current situation. Current indicators of poor soil conditions would remain on four allotments currently not meeting Rangeland Health Standards. Additional indicators, such as increased overland flows, rills and gullies could occur as additional soil was lost from the allotments. Wind erosion could become a factor, where it is not currently. Horses would have to expand their ranges because of the distances they would need to travel from water to obtain forage. Ultimately, the 12 allotments currently meeting Rangeland Health Standard 1, five of which are experiencing excessive utilization already, would no longer meet Standard 1 (or other standards) as soil conditions deteriorated. It is also likely that wild horses would expand outside their current HMAs as long as they were not restricted by adequate fencing. Under the No Action Alternative, additional trailing, trampling and compaction would occur at riparian zones and other water sources. Decreased percolation and water holding capacity and increased surface runoff from these water sources would result.

4.4.4 Wetland/Riparian Resources

The No Action Alternative would not have direct impacts to riparian/wetland resources. Indirect impacts would result from continued and increased utilization on riparian vegetation as wild horse populations continued to increase. Riparian areas currently rated at Proper Functioning Condition (PFC), could experience downward trends caused by utilization of riparian vegetation and browse, and trampling by populations of wild horses in excess of AML. Riparian areas rated below PFC (Functional at Risk and Non-Functional) would likely not improve, and downward trends would continue. Wild horses have been identified through Proper Functioning Condition Assessments as a contributing factor in riparian areas within the Bible Spring Complex not being in PFC.

4.4.5 Wildlife

Under the No Action Alternative, important wildlife upland and riparian habitats would continue to be impacted to a greater degree as the wild horse population was allowed to increase. Downward trends in key perennial species would be expected in conjunction with reductions in ecological condition. As this occurs, vegetation would also experience reduced production levels resulting in reduced forage available to wildlife. Wild Horse grazing would continue to change vegetation cover and height, which changes the forage available to Utah prairie dogs, and the interactions between cover, predators, and Utah prairie dogs. Wild horses would increasingly compete with wildlife species for habitat that is suitable for nesting, foraging and burrowing. The potential impacts from disruption due to increased human activity and helicopter use would not occur.

4.4.6 Wild Horses

The No Action Alternative would not meet the purpose and need and would violate the Wild Free-Roaming Horses and Burros Act, Federal Regulations, BLM/USFS policy and Resource Advisory Council Standards and Guidelines. 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 clearly indicates that an overpopulation of horses exists in the HMA. The No Action Alternative would not allow for data collection of genetic information of the wild horses in the Bible Spring Complex.

The No Action Alternative would allow wild horse populations to increase beyond the carrying capacity of the rangeland resources within the four HMAs. The general health of the wild horse population in the Bible Spring Complex would be reduced as horse numbers increased. Large die-offs may occur if the population increases to a point where available forage and water are depleted. This would be especially true during drought or other events such as wildfire.

Short-term herd dynamics would not be impacted under the No action. Horses would continue to be free-roaming and follow natural patterns. However, if populations increased beyond the carrying capacity, herd dynamics could be impacted because of declines in individual horse health. Near normal populations exhibit a 1:1 sex ratio. Population shifts favoring males could occur as males are better adapted to compete for resources during changing environmental conditions. Data on the genetic viability of the wild horses within the Bible Spring Complex would not be collected.

4.5 Monitoring

Under all alternatives, the following monitoring would be required to determine if the program goals are being met. CCFO personal, would collect and maintain the data.

- Population inventory conducted every three years on the HMAs as required by the WFRHBA and BLM policy.

- Vegetation monitoring studies (rangeland health, trend and utilization) would continue to be conducted in conjunction with livestock, wildlife and wild horse use.

4.6 Mitigation

Appropriate mitigation measures are contained in the Proposed Action as Design Features Standard Operating Procedures.

4.7 Cumulative Impacts Analysis

Cumulative environmental impacts result when incremental impacts associated with the Proposed Action are combined with other past, present and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Table 6 lists projects in the area which may contribute to cumulative impacts to resources of concern.

Table 6. Past, Present and Reasonably Foreseeable Future Actions

Project	Name/Description	Status		
		Past	Present	Future
Blawn Wash HMA Gather and Removals	Gathers and Removals done in 1984 (21), 1985 (33), 1988 (30), 1991 (51), 1995 (45), 2000 (33), 2001 (150), 2006 (112), 2007 (40), 2008 (4) and 2009 (139).	X		
Four Mile HMA Gather and Removals	Gather and Removals done in 1984 (15), 1985 (6), 1986 (58), 1989 (51), 1998 (31), 2001 (19), 2002 (36), 2006 (30), 2009 (93), and 2012 (13).	X		
Bible Spring HMA Gather and Removals	Gather and Removals done in 1976 (28), 1982 (22), 1984 (13), 1994 (25), 2001 (99), 2002 (21), 2006 (46), 2008 (21), 2009 (121), 2010 (23) and 2013 (19).	X		
Tilly Creek HMA Gather and Removals	Gather and Removals done in 1982 (21), 1985 (40), 1989 (11), 2002 (22) and 2009 (27).	X		
Historic Livestock Grazing (1870s)	1870's to 1934 unregulated grazing on public lands led to vegetative community changes resulting in the current environment.	X		
Livestock Grazing Permit Renewals and authorizations	Livestock grazing permit renewals on Bennion Spring, Bucket Ranch, Bull Spring, Culver Spring, Gold Spring, Jackson Wash, Jockeys, Lone Pine Spring, Lund, Modena Canyon, Mountain Spring, Pine Valley, Rosebud, Sheep Spring, Water Hollow, and Willow Creek Allotments.	X	X	X
Vegetation Manipulation	Manipulation of vegetation from one type (P/J) to another (shrub/grassland) through the use of machines, hand cutting, planting, burning, and other approved methods.	X	X	X

Project	Name/Description	Status		
		Past	Present	Future
Wildfire	Wildfires are common events in southern Utah	X	X	X
Wildfire Suppression and Rehabilitation	Wildfire suppression and rehabilitation activities throughout CCFO.	X	X	X
Range Improvements	Water developments providing water resources to livestock, wildlife, and wild horses. Construction of fences to aid in management of livestock.	X	X	X

Rangeland/Vegetation Resources

Rangeland and vegetative resources in the area has been impacted by a decrease in forage from historic livestock grazing practices, wildfires and wild horses. The impacts from historic livestock grazing are being alleviated through the implementation of Rangeland Health Standards; forage lost from wildfires is being mitigated through post-fire rehabilitation. The proposed action would help to mitigate the loss of forage for wildlife and livestock from wild horse competition. All of these activities would cumulatively help to improve rangeland and vegetation resources in the area.

Range improvement projects may be proposed in the future. Water developments and fences aid in distributing grazing distribution and improve rangeland and vegetative resources. Water developments would provide an additional water source to wild horses. Construction of fences within Bible Spring Complex boundaries could inhibit the free-roaming nature of wild horses.

Livestock

Livestock grazing in the region has evolved and changed considerably since it began in the 1870s, and is one factor that has created the current environment. At the turn of the century, large herds of livestock grazed on unreserved public domain in uncontrolled open range. Eventually, the range was stocked beyond its capacity, causing changes in plant, soil and water relationships. Some speculate that the changes were permanent and irreversible, turning plant communities from grass and herbaceous species to brush and trees. Protective vegetative cover was reduced, and more runoff brought erosion, rills and gullies.

In response to these problems, livestock grazing reform began in 1934 with the passage of the Taylor Grazing Act. Subsequent laws, regulations, and policy changes have resulted in adjustments in livestock numbers, season-of-use changes, and other management changes. Given the past experiences with livestock impacts on resources on Public Lands, as well as the cumulative impacts that could occur on the larger ecosystem from grazing on various public and private lands in the region, management of livestock grazing is an important factor in ensuring the protection of Public Land resources.

Past range improvements including fences, ponds, wells etc. have been completed in the allotments. Range improvements are valuable to livestock managers, allowing permittees to control livestock distribution and limiting concentrations.

Soils

Soils have been affected by grazing from wildlife, wild horses and livestock as well as other ground disturbing activities. Projects in the field office which have helped to alleviate these

impacts include vegetation treatments, livestock grazing rotation systems, decreased livestock utilization and structural projects such as rock gabions. The actions alternatives would help to lessen cumulative impacts while the No Action alternative would increase the impacts.

Wildlife

The greatest impacts to wildlife species in the area are the result of habitat degradation from drought, invasive weeds, livestock and wild horse grazing, OHV use and vegetation treatments on SITLA and private land. The proposed action would help to off-set these impacts by reducing the amount of forage utilized by wild horses.

Wild Horses

Wild horses are primarily impacted by the decrease of available forage resulting from drought, population growth, wildfires, wildlife and livestock grazing, range improvements, noxious weeds and surface disturbing activities. Actions which help to mitigate these impacts include the implementation of Rangeland Standards which help to balance uses to promote healthy rangelands. Past, present and future activities to improve rangeland health include altered livestock grazing utilization levels, wildfire rehabilitation, noxious weed treatments, vegetation treatments and reclamation of surface disturbance.

While all of these activities should help to improve forage, rapidly increasing wild horse populations can still result in an impact to herd health. Past, present and future wild horse removals and fertility treatments would help to mitigate the impacts wild horse health from population levels.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

The issue identification section of Chapter 1 identifies those issues analyzed in detail in Chapter 4. The ID Team Checklist provides the rationale for issues that were considered but not analyzed further. The issues were identified through the public and agency involvement process described in sections 5.2 and 5.3 below.

5.2 Persons, Groups, & Agencies Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Utah State Historic Preservation Office (SHPO)	Consultation for undertakings, as required by the National Historic Preservation Act (NHPA) (16 USC 470)	No cultural resources would be affected. The project will be reviewed by SHPO as part of the quarterly submittal as per existing protocol.
Paiute Indian Tribe of Utah	Consultation as required by the American Indian Religious Freedom Act of 1978 (42 USC 1531) and NHPA (16 USC 1531)	In accordance with the Memorandum of Understanding between the Paiute Tribe of Utah and the BLM, this project does not require formal consultation.

5.3 Summary of Public Participation

Public Involvement was initiated on this Proposed Action on April 8, 2014 by posting on the BLM Electronic Notification Bulletin Board. Both Iron and Beaver County Commissioners have been in contact with the BLM requesting the removal of excess wild horses from private and public lands to within AML. The counties requested the use of fertility treatment methods be used on wild horses to reduce future population growth of wild horses. County resolutions have been passed to manage wild horse population with the counties at AML as directed by the WFRHBA. Additional request over the past two years for removal of wild horses from private and state lands have been received by the land owners adjacent to the Bible Spring Complex.

A Preliminary Environmental Assessment (EA) for the Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan DOI-BLM-UT-C010-2014-0035-EA as made available to the public at the Cedar City Field Office and on-line at http://www.ut.blm.gov/ or at https://www.blm.gov/ut/enbb/ for a 30-day review/comment period beginning on April 30, 2014 and ending May 30, 2014. The comments received during this period were summarized and addressed Appendix 10.

All comments received on the Preliminary Environmental Assessment (EA) for the Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan DOI-BLM-UT-C010-2014-0035-EA during the 30 day comment period were reviewed and considered prior to finalizing this EA. Letters, faxes, and e-mails were received both in support of and in opposition to the gather plans. Numerous form letters were also received. These are letters that are generated from a singular website from a non-governmental organization, such as an animal advocacy group. Comments identified in the form letters were considered along with the rest of the

comments received, but as one collective comment letter. Form letters are not counted as separate comments due to their duplicative nature. However, where individuals added their own comments to the form, the personalized comments were considered as separately submitted comments.

As required by regulation [43 CFR 4740.1(b)], a public hearing was held in Cedar City, Utah on June 18, 2014 and will be held in subsequent years to discuss the use of helicopters and motorized vehicles in the management of Utah BLM's wild horses and burros. This meeting was advertised in papers and radio stations statewide. This specific gather was addressed at that public meeting as well as other gathers that may occur within the state of Utah over approximately the next 12 months. Similar meetings have been held each year in Utah since the passage of Federal Land Policy and Management Act of 1976. Comments received from the Preliminary Environmental Assessment (EA) for the Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan DOI-BLM-UT-C010-2014-0035-EA and at those public meetings were considered and, if applicable, were addressed in management actions, NEPA documents, and decision documents using the most current direction from the National Wild Horse and Burro Program.

Although the BLM's review of public comments did not indicate that substantative changes to the conclusions presented in the preliminary EA were warranted, they did lead to changes throughout the document to better explain and clarify BLM's analysis in response to comments, which resulted in a more comprehensive and complete document.

5.4 List of Preparers

Those responsible for completing this EA are listed as part of the Interdisciplinary Team Record (Appendix 1).

Chad Hunter (BLM-CCFO-Rangeland Management/Wild Horse Specialist) – Team Leader, Vegetation, Livestock Grazing, Wild Horses

Sheri Whitfield (BLM-CCFO-Wildlife Biologist) – Special Status Species (T&E), Wildlife.

Dan Fletcher (BLM-CCFO- Assistant Field Office Manager) – Rangeland Standards and Guidelines, Livestock Grazing, Monitoring Report.

Adam Stephens (BLM-CCFO-Rangeland Management Specialist) – Riparian/Wetlands, Livestock Grazing.

Jessica Bulloch (BLM-CCFO-Natural Resource Specialist) – Rangeland Standards and Guidelines, Invasive Species

Craig Egerton (BLM-CCFO-Natural Resource Specialist) – Rangeland Standards and Guidelines, soils, Forestry, Water resources.

Kent Dastrup (BLM-CCFO-GIS Specialist) – GIS Support, Maps, Tables

Gina Ginouves (BLM-CCFO-Planning/NEPA Specialist)- NEPA Review, Editing

6.0 REFERENCES

Animal Protection Institute of America v. Nevada BLM. 1989. 118 Interior Board of Land Appeals 20. IBLA 89-206, 90-243.

Animal Protection Institute of America v. Nevada BLM. 1989b. 109 Interior Board of Land Appeals 112. IBLA 88-591, 88-638, 88-648, 88-679.

Animal Protection Institute of America et al. v. Rock Springs District, Wyoming BLM. 1991. 118 Interior Board of Land Appeals 63. IBLA 90-412, 90-413, 90-414.

Bureau of Land Management (BLM). Wild Horses and Burros Management Handbook. H-4700-1. Bureau of Land Management, Washington, D.C.

Cothran, Gus E., 1997. Genetic Analysis of Two Feral Horse Herd, pp.8

Kirkpatrick, J.F., R. Naugle, I.K.M. Lui, J. W. Turner Jr., M. Bernoco (1995) Effects of Seven Consecutive years of PZP Contraception on Ovarian Function in Feral Mares, Biology of Reproduction Monograph Series 1: Equine Reproduction VI: 411-418.

Klages, K.H.W. 1942. Ecological Crop Geography. The Macmillan Company, New York

Holecheck, Jerry L., Pieper, Rex D., and Herbel, Carlton H., 1989. Range Management Principles and Practices, Chapter 2, pp. 21, 26, 372

Hubbard, R. E., and R. M. Hansen. 1976. Diets of wild horses, cattle, and mule deer in the Piceance Basin, Colorado. Journal of Range Management 29(5):389-392.

Miller, R. 1981. Male aggression, dominance, and breeding behavior in Red Desert horses. Z Tielropychol. 57:340-351

National Academy of Sciences, 2013. Using Science to Improve the BLM Wild Horse and Burro Program.

Society for Range Mgt. 1974. A glossary of terms used in Range Management, 2nd Edition. Society for Range Management, Denver, Colo.

Toombs, T.P. 2007. Utah Prairie Dog Habitat Evaluation Guide. Environmental Defense Publication.

Turner Jr , J.W., I.K.M. Lui, Rutberg, A., J.W., Kirkpatrick, (1997) Immunocontraception Limits Foal Production in Free Roaming Feral Horses in Wyoming, J. Wildl. Manage. 61 (3):873-880.

Turner Jr., J.W., Lui, I.K.M., Flanagan, D.R., Rutberg, A.T., Kirkatrick J.F. (2007) Immunocontraception in Wild Horses: One Inoculation Provides Two Years of Infertility, J. Wildl. Manage. 71(2):662-667.

USDI Bureau of Land Management. 1983. Pinyon Management Framework Plan. BLM, Cedar City, Utah. As amended.

USDI Bureau of Land Management. 2008. Programmatic biological assessment for grazing permit renewals for Utah prairie dog habitat in the Cedar City Field Office. Cedar City Field Office. Unpublished report. 50 pages.

USDI Fish and Wildlife Service. 2007. Biological Opinion for the Existing Utah BLM Resource Management Plans (RMP). Memo to Director, BLM, Utah State Office. 255 pages.

USDI Fish and Wildlife Service. 2008. Programmatic Biological Opinion for the Grazing Permit Renewals for Utah Prairie Dog Habitat in the Cedar City Field Office, Bureau of Land Management, Utah. Memo to Field Office Manager, BLM, Cedar City Field Office. 38 pages.

USDI Fish and Wildlife Service. 2009. Endangered, Threatened, Proposed and Candidate Species, Utah Counties. http://www.fws.gov/mountain-prairie/endspp/CountyLists/Utah.pdf

USDI – BLM, HMA Study file 4700 # UT-441, UT-444, UT-440, UT-449

USDI – BLM, EA# UT-040-04-47 Bible Springs, Blawn Wash, Four Mile and Tilly Creek Wild Horse Appropriate Management Level (AML) Assessment, signed 4/18/2005

USDI – BLM, EA-UT-044-06-035 Term Grazing Permit Renewal Wah Wah Lawson, Bucket Ranch & Bucket Ranch Lambing Allotments

USDI – BLM, EA UT-044-07-003 Term Grazing Permit Renewal For Leon & Bradley Bowler (Modena Canyon, Gold Spring, Eight Mile Spring, Mt. Elinor, Stateline Allotments)

USDI – BLM, EA- UT-044-07-008 Term Grazing Permit Renewal Atchison Creek, Butcher, Modena, Rosebud & Spanish George Allotments

USDI – BLM, EA UT-044-06-036 Term Grazing Permit Renewal for Frisco, Bagnall, & Willow Creek Allotments

USDI – BLM, EA-UT-040-08-10 Term Grazing Permit Renewal for Sheep Spring and South of Railroad Tracks Allotments.

USDI – BLM, EA UT-044-08-011 Term Grazing Permit Renewal For Beryl, Culver Spring, Delvecchio, Kane Spring, North Highway & Zane Allotments.

USDI – BLM, EA-UT-040-08-13 Term Grazing Permit Renewal for Water Hollow Allotment

USDI – BLM, EA-UT-040-08-15 Term Grazing Permit Renewal for Lone Pine Spring et al. (Lone Pine Spring and Mountain Spring Allotments)

USDI – BLM, EA-UT-040-08-16 Term Grazing Permit Renewal for Bennion Spring and Jackson Wash Allotments.

USDI – BLM, EA-UT-040-08-17 Term Grazing Permit Renewal for Bull Spring et al. (Bull Spring and Pine Valley Allotments).

USDI – BLM, EA-UT-040-09-14 Term Grazing Permit Renewal for Lund Allotment.

USDI – BLM, DOI-BLM-UT-C010-2011-0031-EA Term Grazing Permit Renewal for Jockeys Allotment.

USDI – BLM, Allotment Study files 1020, Atchison Creek, Bennion Spring, North Pine Valley, South Pine Valley, Indian Peak, Hamblin, Fairview and Stateline Allotments.

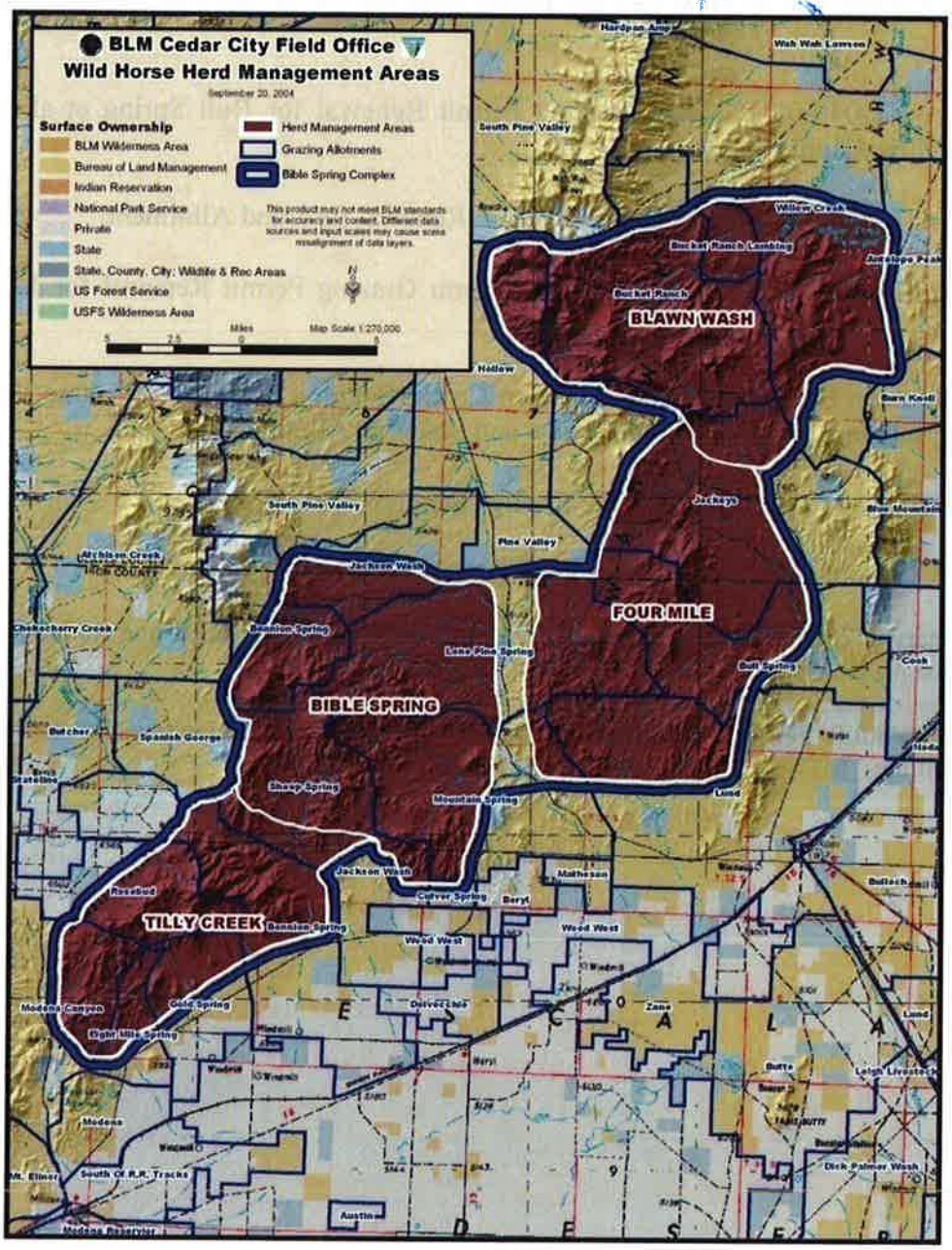
USDI – BLM, Monitoring Report for the Bible Spring Complex 2014

Http://www.fs.fed.us/database/feis/plants/tree/pinedu/management considerations.html

USDA – BLM. January 8, 2004. Land Use Plan Decisions, Implementation Decisions, and Administrative Remedies. Instruction Memo No. 2004-079. 1610(210) P.

ZooMontana (2000) Wildlife Fertility Control: Fact and Fancy. ZooMontana Science and Conservation Biology Program, Billings, MT.

Map 1. Wild Horse Herd Management Areas.



Appendix 1. Interdisciplinary Team Analysis Record Checklist

Project Title: Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan

NEPA Log Number: EA-UTC010-2014-0035

File/Serial Number:

Project Leader: Chad Hunter

DETERMINATION OF STAFF: ***(Choose one of the following abbreviated options for the left column)***

NP = not present in the area impacted by the proposed or alternative actions
NI = present, but not affected to a degree that detailed analysis is required
PI = present with potential for relevant impact that need to be analyzed in detail in the EA
NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form.
The rationale column should include NI and NP discussions.

RESOURCES AND ISSUES CONSIDERED:

Determi-nation	Resource	Rationale for Determination	Signature	Date
NI	Air Quality	Air quality in the area is good as is typical of relatively undeveloped areas of the western U.S. The area meets NAAQS. Nothing in the proposal would affect current conditions.	C. Egerton	4/21/14
NP	Areas of Critical Environmental Concern	None within Field Office boundaries.	Dave Jacobson	4-15-2014
NI	Cultural Resources	This gather will have no effect to significant cultural resources. The corral locations will be located on an area of existing disturbance. The possibility of finding intact cultural resources in these areas is minimal to non-existent. If an existing disturbed area cannot be located for the corral area, a cultural resource inventory will take place prior to the gather. If cultural resources are located during this inventory, the corral area will be moved to another location, which does not contain cultural resources.	N. Thomas	4/10/14
NI	Greenhouse Gas Emissions	Releases of greenhouse gasses (GHG's), such as carbon monoxide, would occur as a result of operation of internal combustion engines being operated during the gather. The removal would occur in a very remote portion of Iron and Beaver counties and occur using improved county roads and lesser roads. Release of GHG's would be consistent with current levels of releases in the area and very short term.	C. Egerton	4/21/14
NI	Environmental Justice	No minority or economically disadvantaged groups would be affected.	Chad Hunter	4/7/14
NP	Farmlands (Prime or Unique)	There are likely soils in the herd unit capable of being prime or unique farmlands if irrigation water were to be supplied. As there is no irrigation water supplied, there are no prime or unique farmlands present.	C. Egerton	4/21/14
NI	Fish and Wildlife	Review traps locations and other facility/staging areas to insure no unnecessary impact to wildlife or habitat. A reduction in wild horse numbers would be beneficial to wildlife and habitat.	S. Whitfield	04/09/14

Determi-nation	Resource	Rationale for Determination	Signature	Date
NI	Floodplains	Nothing in the proposal would affect the functioning of a floodplain, nor would any of the alternatives effect the function of a floodplain. Therefore the action is consistent with Executive Order 11988.	C. Egerton	4/21/14
NI	Fuels/Fire Management	There would be no impacts to Fire/Fuels Management.	S Peterson	4/21/14
	Geology / Mineral Resources/Energy Production	There are three pending potassium prospecting permits in the gather area but no on-the-ground activity planned in the 2014 calendar year. The project proposal would not substantially affect any mineral resources that might be present in the project area.	E. Ginouves	4/9/2014
PI	Hydrologic Conditions	Hydrologic conditions will be combined with soils for analysis purposes.	C. Egerton	4/21/14
NI	Invasive Species/Noxious Weeds	The addition of the stipulation requiring the use weed free hay during any bait trapping, and for any feeding purposes of wild horses and/or domestic horses out in the field.	Jessica Bulloch	4/21/14
NI	Lands/Access	The project as proposed will not affect any existing rights-of-way as long as prior existing rights are respected and coordinated.	B. Johnson	4/21/14
PI	Livestock Grazing	Livestock and wild horses compete directly for vegetative, water, and cover resources. Higher populations of wild horses mean more competition with livestock. Wild horse populations that are within AML reduce competition. When wild horse populations are above AML the livestock numbers must be reduced to not over utilize the vegetative and water resources.	Chad Hunter	4/7/14
NI	Migratory Birds	Review trap locations and other facility/staging areas to insure no unnecessary impact to wildlife or habitat. A reduction in wild horse numbers would be beneficial to wildlife and habitat.	S. Whitfield	04/09/14
NI	Native American Religious Concerns	Based on previous government to government consultations with the Paiute Indian Tribe of Utah, the Hopi Tribe and data from recent ethnographic studies, this action would not adversely affect the physical integrity or limit access to any known sacred sites.	N. Thomas	4/28/14
NI	Paleontology	The project area encompasses surficial geologic units which rank as Class 1 (very low) and Class (low) in the Bureau's potential fossil yield classification system. The probability of impacting vertebrate fossils or scientifically significant invertebrate or plant fossils is very low to low. Any assessment or mitigation is unnecessary.	E. Ginouves	4/9/2014
PI	Rangeland Health Standards	This is addressed as part of the rangeland heath/vegetation section of the EA and in other resource sections such as riparian.	Chad Hunter	4/7/14
NI	Recreation	Other than a minor amount of dispersed recreation, there are no existing recreation resources which would be affected as a result of this proposal.	Dave Jacobson	4-15-2014
NI	Socio-Economics	The proposed action will not in its self change the socio-economics of the area.	Chad Hunter	4/7/14
PI	Soils	Under the current situation of currently permitted livestock numbers, wildlife numbers being what they are and wild horses above AML, inadequate residual vegetation (forage) and litter remain on areas of grazing allotments within the analysis area (as evidenced by Rangeland Health Information). Lack of protective ground cover directly affects the soil's exposure to the erosive elements of wind and	C. Egerton	4/21/14

Determi-nation	Resource	Rationale for Determination	Signature	Date
		water. A reduction in horse numbers would allow additional vegetation to remain on these key areas, thus providing additional protection to the soil surface.		
NI	Special Status Plant Species	Ostler's ivesia and Pink Egg Milkvetch are known to occur within the project area; However, due to the location and proximity of these species it is expected that there would be little to no impact associated with the proposed action. Ostler's ivesia occurs on steep terrain and large quartzite outcrops at 6400 – 7900 feet elevation. It is likely that wild horse traps/staging areas would not be located in these areas due to elevations and steep slopes at which they occur. Pink Egg Milkvetch is known to occur within the Four Mile HMA. This SSS Plant occurs in PJ, sagebrush, and mixed desert shrub communities at 5800 -7550 feet elevation. This special status species is located in one location which is inaccessible to vehicle travel and would not be expected to be impacted by the proposed action.	Jeff Reese JR	04/07/14
	Special Status Animal Species	See Attached Wildlife Technical Report	S. Whitfield	04/09/14
NI	Wastes (hazardous or solid)	The proposal should not produce any hazardous or solid wastes. Should any release occur, all State and Federal regulations shall be followed.	R. Peterson	04/08/14
NI	Water Resources/Quality (drinking/surface/ground)	This remote analysis area is characterized by numerous small water sources where water quality is undetermined by the State. There are neither watersheds which contribute to, nor 303(d) listed waters in the analysis area. Drinking water is not present in the analysis area. Waters in the analysis area are primarily Class 4 waters, which are protected for agricultural uses, including livestock watering. It is likely that a large group of horses watering at an undeveloped site, such as a spring or seep could contribute to short-term exceedances of water quality standards (siltation, fecal coliforms), but such exceedances would be short term as is not the nature of wild horses to rest exceedingly at water sources. The project proposal would not substantially impact water quality. Project stipulations, such as removing wild horses from trap sites as quickly as possible, would minimize adverse impacts to water quality resulting from water trapping operations. A reduction in wild horse numbers to AML levels could have the result of allowing more protective vegetation in riparian areas and could offer some resultant improvement to water quality.	C. Egerton CE	4/21/14
PI	Wetlands/Riparian Zones	Project stipulations minimize impacts to wetland/riparian areas. A reduction in wild horse numbers would be beneficial to riparian areas.	A. Stephens	04/09/2014
NP	Wild and Scenic Rivers	There are no WSRs in the field office management area	Dave Jacobson	4-15-2014
NP	Wilderness/WSA	The project area is not within any WSA or Wilderness.	Dave Jacobson	4-15-2014
NI	Woodland / Forestry	No substantial impacts are anticipated on forest/woodland vegetation via gather activities. The proposed action would reduce animal impacts to vegetation in the area and thereby contribute to improved vigor, etc. of understory species, but really little impact on overstory (woodland) species.	J. Sathe JS	4-21-204
PI	Vegetation	The proposed management and removal of excess wild horses would benefit vegetative communities.	Chad Hunter CH	4/7/14

Determi-nation	Resource	Rationale for Determination	Signature	Date
NI	Visual Resources	Project as proposed is consistent with existing VRM classifications which is VRM class IV.	Dave Jacobson	4-15-2014
PI	Wild Horses and Burros	See main text in the EA.	Chad Hunter	4/7/14
NI	Lands with Wilderness Characteristics	The project would not change the character of the land scape in areas that have been identified as having lands with wilderness characteristics such as units UT-C010-108 and UT-C010-103. The areas would still have wilderness characteristics after the proposed gather.	Dave Jacobson	4-15-2014

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator	Nina Menounos	6/23/14	
Authorized Officer	Dan Fletcher Acting	6-23-14	

Attachment 1. Wildlife Technical Report

Bureau of Land Management
Cedar City Field Office
Technical Report: Special Status and General Wildlife Species

Project Name: Bible Springs Complex Wild Horse Gather & Removal & Fertility Treatment Plan
Environmental Assessment: UT-C010-2014-0035
Prepared By: Sheri Whitfield, Wildlife Biologist

Design Features

A wildlife site inventory for all special status species would be completed prior to any ground disturbing activities. Clearances would be completed by a BLM biologist and design features would be incorporated to avoid and/or minimize impacts to special status species.
No trap sites will be located on areas where threatened, endangered, and special status species occur without clearance.
Avoid horse gathers during the greater sage-grouse brood-rearing April 1 – July 15.
Trap sites would be located a minimum of 0.5 mile from known Utah prairie dog colonies. No trap site would be located within identified Utah prairie dog habitat without clearance.
Whenever possible, capture sites would be located in previously disturbed areas. Generally, these activity sites would be small (less than one half acre) in size.

Relationship to Planning

Utah Prairie Dog Revised Recovery Plan 2012
1962 Bald and Golden Eagle Protection Act
Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), as amended.
BLM Manual 6840- Special Status Species Management
Migratory Bird Treaty Act
Utah Comprehensive Wildlife Conservation Strategy (CWCS)
Utah Partners in Flight Avian Conservation Strategy Version 2.0.
Birds of Conservation Concern 2008
Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds
BLM MOU WO-230-2010-04, To Promote the Conservation of Migratory Birds
IM 2008-050, Migratory Bird Treaty Act - Interim Management Guidance
Best Management Practices for Raptors and Their Associated Habitats in Utah (IM: 2006-096)
Greater Sage-Grouse Interim Management 2012-043 Policies and Procedures

Threatened and Endangered Species

The following table identifies the threatened, endangered, candidate, and petitioned species that are known to occur in Beaver and Iron County (IPAC USFWS 2014).

Common Name	Scientific Name	Status	Habitat suitability or known occurrence of the species in or near Project Area.	Determination
California condor	*Gymnogyps californianus*	E	The Bible Springs Complex is in known distribution. Occurrence would be rare and would be closely associated with feeding on carrion.	No Affect[2]

Greater sage-grouse	*Centrocercus urophasianus*	C	Please see the EA for a discussion of this species and potential impacts.	N/A
Least chub	*Lotichthys phelethontis*	C	No suitable habitat is present in the Bible Springs Complex.	N/A
Mexican spotted owl	*Strix occidentalis lucida*	T	No suitable habitat is present in the Bible Springs Complex.	No Affect[2]
Southwestern willow flycatcher	*Empidonax traillii extimus*	E	No suitable habitat is present in the Bible Springs Complex.	No Affect[2]
Utah prairie dog	*Cynomys parvidens*	T	Please see the EA for a discussion of this species and potential impacts.	No Affect[3]
Virgin River chub	*Gila seminude*	E	No suitable habitat is present in the Bible Springs Complex.	No Affect[1]
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	PT	No suitable habitat is present in the Bible Springs Complex.	No Affect[2]
Woundfin	*Plagopterus argentissinum*	E	No suitable habitat is present in the Bible Springs Complex.	No Affect[1]

[1] The Virgin River chub and Woundfin will not be discussed further. These species are not present in Iron or Beaver County. There would be no water depletion from a hydrologic unit (8-digit HUC) in these counties that is occupied by the species in an adjacent county. No further coordination with FWS is required.
[2] Refer to the Biological Assessment of Livestock Grazing in Bald Eagle, Mexican Spotted Owl, Southwestern Willow Flycatcher, California condor, and Western Yellow-Billed Cuckoo Habitat on Bureau of Land Management Lands, Beaver and Iron Counties, Utah (USDI BLM 2006) for additional information. The U.S. Fish and Wildlife Service concurred with BLM's findings in this Biological Assessment on 6 May 2006. There has been no substantial new information since the 2006 consultation. These species will not be discussed further in this document.
[3]Only the Utah prairie dog will be discussed in this EA since the other listed species were either covered under the 2006 consultation or would not be affected by this project.

Utah Prairie Dog: The Utah prairie dog is listed as a threatened species under the Endangered Species Act. The Bible Spring Wild Horse Complex is adjacent to three Utah prairie dog complexes: Pine Valley, Water Hollow and Jockey Springs. Prairie dog populations are cyclic and are currently at low numbers for the Pine Valley, Water Hollow and Jockey Spring areas.

BLM coordinated with the U.S. Fish and Wildlife Service on the development of conservation measures for all listed species in Utah as part of a programmatic Section 7 consultation on Utah BLM land use plans. The FWS issued BLM a Biological Opinion on 19 June 2007 (USDI FWS 2007).

Greater Sage-Grouse: A portion of the Tilly Creek Herd Management Area contains greater sage-grouse brood-rearing habitat.
Brood rearing habitat is typically defined for early-brood rearing and late-brood rearing activities. Early-brood rearing activities are maintained relatively close to the nesting site where young chicks feed primarily on insects and native forbs. Late spring/early summer grazing would generally impact the habitat and the ability of the vegetative communities to provide adequate cover for brood-rearing sage-grouse.

Special Status Wildlife Species

Special Status Wildlife Species (excluding species listed under ESA) recognized by management under BLM's 6840 Manual and Instruction Memorandum No. UT-2007-078. These species are known to occur or have a high probability of occurrence within the Great Basin Region based on habitat types within the proposed project area, Utah Natural Heritage Program Records of Occurrence, and GAP Analysis (Utah Conservation Data Center):

Bald Eagle: The bald eagle is a UDWR Sensitive Species (UDWR 2008) and was de-listed in the lower 48 States of the United States from the Federal List of Endangered and Threatened Wildlife (Federal Register / Vol. 72, No. 130 / Monday, July 9, 2007 / Rules and Regulations) in 2007.

Lowland riparian habitat provides primary breeding habitat (nesting) for bald eagles and agricultural lands are used as secondary breeding habitat (nesting or foraging). Bald eagles are rare winter visitors to the West Desert area including the 4 HMAs. There are no known bald eagle winter roost sites or nest sites on or near these HMAs.

Kit Fox: The kit fox is a UDWR Sensitive Species (UDWR 2008). The kit fox was designated as a Tier II species in the Comprehensive Wildlife Conservation Strategy (UDWR 2005). Primary breeding habitat is high desert scrub.

Ferruginous Hawk: The Ferruginous hawk is a UDWR Sensitive Species (UDWR 2008), Utah Partners in Flight Priority Species (Parrish et al. 2002), and Bird of Conservation Concern (USFWS 2008). The ferruginous hawk was designated as a Tier II species in the Comprehensive Wildlife Conservation Strategy (UDWR 2005). Primary breeding habitat is pinyon-juniper and secondary breeding habitat is shrubsteppe. Edges of pinyon-juniper woodlands, utility structures (transmission poles), cliffs, and isolated trees serve to provide nesting as well as perching structures for ferruginous hawk.

Burrowing Owl: The burrowing owl is a UDWR Sensitive Species (UDWR 2008) and Bird of Conservation Concern (USFWS 2008). The burrowing owl was designated as a Tier II species in the Comprehensive Wildlife Conservation Strategy (UDWR 2005). Primary breeding habitat for this species is high desert scrub and grasslands are used as secondary breeding habitat. Nesting may occur in sparsely vegetated sagebrush-steppe and desert scrub habitats. Abandon wildlife burrows associated with badger, ground squirrels, etc. are an important component of the habitat.

Pygmy Rabbit: The pygmy rabbit is a UDWR Sensitive Species (UDWR 2008). It is designated as a Tier II species in the Comprehensive Wildlife Conservation Strategy (UDWR 2005). Pygmy rabbits are considered sagebrush obligate and are reliant upon big sagebrush species for cover and food. Primary breeding habitat is shrubsteppe communities. A pygmy rabbit was identified and documented within the East Pasture of the Pine Valley Allotment.

Short-eared Owl: Short-eared Owl is a BLM/State Wildlife Species of Concern in Iron County (Utah Sensitive Species List by county, last updated March, 2011). Threats include habitat loss, human disturbance, and invasive animal species (UDWR 2005).

The Short-eared Owl is a ground-nesting species, usually found in grassland, shrublands, and other open habitats (UCDC 2007). Populations of short-eared owls are largely dependent on the cyclic abundance of small mammals.

Big Game

Big game species that occur in these HMAs are mule deer, elk, and pronghorn antelope. All three species are year-long residents. During spring, summer, and early fall, deer feed primarily on a variety of forbs and grasses, with light use on big sagebrush, black sagebrush, and bitterbrush. In fall and winter, deer shift their diet to shrubs including big sagebrush, black sagebrush, bitterbrush, Gambel oak and curlleaf mountain mahogany. Primary antelope forage plants include a variety of grasses and forbs in late spring, summer, and early fall, and big sagebrush, black sagebrush, winterfat, and bud sage in late fall, winter, and early spring. Elk rely primarily on grasses year-long for forage, but will use some forbs in spring and summer and shrubs in winter.

Migratory Birds

A variety of avian fauna inhabit the Wild Horse Herd Management Areas during the spring, summer, and fall months. The Utah Partner's in Flight (PIF), USFWS Birds of Conservation Concern and BLM/State Sensitive Species have identified Black rosy finch, Black-throated gray warbler, Brewer's sparrow, Broad-tailed hummingbird, Gray vireo, Lewis's woodpecker, loggerhead shrike, prairie falcon, sage sparrow and Virginia's warbler as occurring in the area.

Additionally, Golden eagles may occur on the Wild Horse Herd Management area year round. A majority of the Bible Springs Complex would be used for foraging.

ENVIRONMNETAL CONSEQUENCES

Common to All

Activities such as (i.e. helicopters, roping) can have short-term effects on wildlife due to human noise and activity and potentially surface disturbances.

Bait and water trapping direct impacts would vary by individual wildlife species. The intensity of these impacts would vary by individual and would be indicated by behaviors ranging from nervous agitation to physical distress. Temporary disturbance or displacement would occur to wildlife only during set up of traps or unable to escape when horses are captured in a trap. Traps are used for wild horses and since traps are monitored, it is very unlikely wildlife would become trapped.

Impacts are not expected to occur to wildlife habitat since trap sites and temporary holding facilities would be located primarily in already disturbed sites. If traps are located in intact wildlife habitat, a clearance would be required to determine potential impact.

Fertility control would likely decrease the wild horse population and lessen the competition between wildlife and horses for forage; however this would be a short-term affect. Some wildlife present in or near trap sites or holding facilities would be temporarily displaced. Wildlife and wildlife habitat would be indirectly affected by the Proposed Action as it pertains to resulting improvements in resource health from the removal of excess horses.

Implementing the Proposed Action would reduce utilization on key forage species, improving the quantity and quality of forage available to wildlife and decrease competition for water sources.

Threatened and Endangered Species

Utah Prairie Dog: Wild horse grazing has the potential to result in impacts to the Utah prairie dogs. Potential beneficial impacts include improvements to forage quality from certain grazing regimes. Impacts associated with grazing include physical impacts to prairie dog colonies, and/or loss of potential forage through removal or weed infestations. Impacts from livestock grazing in Utah prairie dog habitat was described in the Programmatic Biological Assessment, Grazing Permit Renewals for Utah Prairie Dog Habitat in the Cedar City Field Office (BLM 2008). When wild horse numbers exceed the Appropriate Management Level, or graze outside of their management areas, competition for forage and impacts to habitat may occur between wild horses and prairie dogs. Removal of wild horses from the Bible Spring Complex would result in beneficial effects on Utah prairie dogs and their habitat through decreased disturbance from the horses within colonies and decreased forage utilization.

Traps would be located outside of Utah prairie dog habitat, but if this did occur, a BLM wildlife biologist would be survey the surrounding area for Utah prairie dogs. The biologist will be tasked to ensure that

trap locations avoid direct disturbance to Utah prairie dog populations. Conservation measure has been developed and it is expected that no direct impact to Utah prairie dogs or their habitat would occur during the Bible Springs Complex gather.

Greater Sage-Grouse: A temporary short-term impact to greater sage-grouse and/or its habitat could be impacted through disturbance and/or displacement. Removal of wild horses would benefit sage-grouse in the short-term through improved access to water sources and in the long-term through improved habitat conditions, both at water sources/riparian areas and in upland habitat containing sagebrush. Conservation measures have been developed to minimize impacts to greater sage-grouse.

BLM Sensitive Wildlife Species

Impacts from grazing on BLM/ State Sensitive Species would include competition for habitat; competition for forage; and destruction and degradation of habitat. Wild horses would compete with wildlife species for habitat that is suitable for nesting and burrowing in upland habitats such as sagebrush/grasslands and pinyon/pine-juniper woodlands. Impacts include competition for and degradation of nesting habitat, especially for ground nesting birds, such as burrowing owl, ferruginous hawk, and short-eared owl.

During the Bible Springs horse gather there is the potential that wild horses might trample and collapse underground dens and burrows of species such as the kit fox, pygmy rabbit, and burrowing owl. If occupied dens are collapsed, the inhabitants could be crushed and killed. If they are not killed, additional stress and energy would be expended to dig out the collapsed burrow or dig a new burrow, which would affect the individual fitness of the animal and ultimately of the population. Temporary displacement may occur during the gather however, the impacts are expected to be minimal to these species.

Bald eagles typically rely on riparian and water-associated habitat for winter roosting. Horse grazing could affect wintering eagle by congregating in riparian areas and degrading the ecological function of the area. Eagles would be especially affected if a riparian area was so degraded that forage species such as fish and waterfowl were no longer available. While there are currently no records of bald eagle occurrences within the four HMA's, it should be noted that if a new bald eagle winter roost site is discovered on BLM lands within HMA's in the future, the BLM will monitor the site and determine if grazing is affecting eagles at the roost.

Big Game

Competition for forage between big game and horses is greatest during the spring and summer months when deer, elk, and pronghorn are feeding primarily on grasses and forbs. Competition is reduced in fall and winter when deer and pronghorn shift their diets to browse and most elk move to wintering areas in Pine and Hamlin Valleys.

Competition between wildlife and wild horses increases during periods of drought when less forage is available. Additionally, forb consumption is crucial during the early spring months for does in order to maintain a healthy body condition while meeting the nutrient requirements of nursing fawns. Removing wild horses would reduce the competition during this important fawning period.

Migratory Birds

To avoid disturbance to active migratory bird nests, sites containing little nesting vegetation would be selected for trap sites and holding facilities. Short-term impacts that may occur during the horse gather would be the occasional destruction of nests and eggs due to trampling by horses, or associated nest abandonment of birds intolerant to disturbances. Indirect impacts may be associated with changes in vegetation as a result of wild horse grazing management practices, which may lead to loss of nesting, roosting, or foraging habitat. Habitat degradation appears to be one of the largest factors influencing

migratory bird populations. Removing excess wild horses would help ensure that enough residual vegetation remain to provide adequate cover requirements to meet the needs of nesting birds. Gathers during the fall and winter would avoid the migratory bird nesting season.

NO ACTION ALTERNATIVE

Wildlife
Under the No Action Alternative, important wildlife upland and riparian habitats would continue to be impacted to a greater degree as the wild horse population is allowed to increase.

Threatened and Endangered Species
Utah Prairie Dog: Under the No Action wild horse grazing would continue to impact the Utah prairie dogs because Utah prairie dogs and horses utilize the same vegetation. Grazing will continue to change vegetation cover and height, which changes the forage available to Utah prairie dogs, and the interactions between cover, predators, and Utah prairie dogs.

Greater Sage-Grouse: Under the No Action wild horses would continue to utilize water resources and riparian areas occupied during sage-grouse during the late brood-rearing season. Grazing by wild horses would continue to change vegetation cover and height, required by sage-grouse for nesting and hiding.

Special Status Wildlife Species
Under the No Action impacts would continue between BLM/ State Sensitive Species and wild horses which continue; competition for forage; and destruction and degradation of habitat. Wild horses would compete with wildlife species for habitat that is suitable for nesting, foraging and burrowing.

Big Game
Competition between horses and wildlife would continue and probably increase as the horse population increases. Downward trends in key perennial species would be expected in conjunction with reductions in ecological condition. As this occurs, vegetation would also experience reduced production levels resulting in reduced forage available to wildlife.

Migratory Birds
Under the No Action Alternative, important upland and riparian habitats would continue to be impacted to a greater degree as the wild horse population is allowed to increase. Upland and riparian vegetation communities that provide nesting and foraging habitat for birds would continue to be impacted.

CUMULATIVE EFFECTS

Wildlife
Direct impacts are expected to be minimal as a result of timing and duration of the gather; however, some impacts could occur. Indirect impacts are associated with changes in vegetation communities as a result of grazing by wild horses, livestock and elk, which can alter the wildlife species present within an area based on these changes. Certain habitat alterations can favor one wildlife species over another, which might mean an area becomes more suitable for one species and less suitable for another.

Vegetation treatments on SITLA and private lands would impact the forage available for mule deer long-term by eliminating key browse species. Removal of the wild horse populations would reduce competition between elk and the horses. Direct competition between wild horses, big game and other wildlife would continue to occur for perennial grasses, forbs, water and shelter.

Wild horse populations have and would continue to influence the available forage for wildlife. As wild horse population increase the competition between wildlife and wild horses for limited resources would increase. As wild horses and wildlife are managed within the population goals and appropriate management levels (AML) this competition would be reduced.

Declines in migratory bird populations are becoming well documented through cooperative efforts among conservation groups, federal, and state agencies and can be attributed to many factors such as habitat fragmentation (breeding and non-breeding habitats), alteration of vegetative communities, urban expansion, natural disasters, and brood parasitism. Migratory birds are also impacted by human disturbance associated with land use and recreational activities in the allotments.

The construction of fences on public lands has impacted and continues to impact the natural, free-ranging behavior of wildlife. The majority of fences constructed on public land were not constructed as "wildlife friendly". Through recent development and research, the BLM has developed standard stipulations for the construction of wildlife friendly fences. The cumulative impacts that fences have on wildlife populations within the allotments are relatively unknown. Wildlife mortality has been documented throughout the west as a result of direct impacts with fences. Increasing the visibility of fences within crucial wildlife habitat may alleviate concerns with direct mortality.

Increased OHV use would likely have an adverse effect on BLM special status species. OHV users may increase in these areas as human populations increase. This may have detrimental effects to these various species such as reductions in suitable habitat and may adversely impact forage, cover and living.

Wildfires may be beneficial by creating early seral stage habitat. However, large scale fires, especially at the lower elevation and precipitation zones, may lead to the conversion of native habitats to cheatgrass. Wildfire suppression can be beneficial by providing a means to control the number of acres that are burned and may assist in limiting habitat fragmentation that can occur from large scale fires. Following a wildfire, rehabilitation of the burned area may occur if needed, which is expected to improve habitat values through the prevention of cheatgrass and other invasive species.

REASONABLY FORSEEABLE FUTURE

Wildlife

Past, present and future projects with regards to properly planned vegetation and wildlife habitat improvement, invasive weed treatment, and range improvement are beneficial for wildlife. These projects generally ensure the quality of habitat and forage for wildlife species.

Direct competition between wild horses, greater sage-grouse, big game and other wildlife will continue to occur for perennial grasses, forbs, water and shelter.

Wild horse populations have and would continue to influence the available forage for wildlife. As wild horse population increase the competition between wildlife and wild horses for limited resources would increase. As wild horses and wildlife are managed within the population goals and appropriate management levels this competition would be reduced.

Utah prairie dogs and their habitat would continue to be impacted from wild horses outside of the HMAs and/or increasing wild horse numbers above AML. There would likely be competition for forage when wild horses congregate in prairie dog habitat.

Greater sage-grouse and their habitat would continue to be impacted from wild horses required for nesting and hiding cover during the brood-rearing season.

Abundance of small bird, mammal and reptile populations can be reduced because of habitat alteration. Wild horses grazing can reduce the vegetation cover required to support adequate prey populations; however, lower ground cover makes prey more easily seen and captured by owls.

Since grazing by wild horses occurs throughout the area, it is reasonable to assume that impacts similar to those identified continue to occur. This additive impact may affect wildlife habitat or corridors, and the greater ecosystems by altering vegetation associations or decreasing water quality. These systems and the health of the region as a whole are important for the survival of many native species.

REFERENCES

Toombs, T.P. 2007. Utah Prairie Dog Habitat Evaluation Guide. Environmental Defense Publication.

UNHP. 2008. Threatened, Endangered, Sensitive, Heritage, Locality GIS Database. Utah Natural Heritage Program, Salt Lake City, Utah.

USDI Bureau of Land Management. 2008. Programmatic biological assessment for grazing permit renewals for Utah prairie dog habitat in the Cedar City Field Office. Cedar City Field Office. Unpublished report. 50 pages.

USDI Fish and Wildlife Service. 2007. Biological Opinion for the Existing Utah BLM Resource Management Plans (RMP). Memo to Director, BLM, Utah State Office. 255 pages.

USDI Fish and Wildlife Service. 2008. Programmatic Biological Opinion for the Grazing Permit Renewals for Utah Prairie Dog Habitat in the Cedar City Field Office, Bureau of Land Management, Utah. Memo to Field Office Manager, BLM, Cedar City Field Office. 38 pages.

USDI Fish and Wildlife Service. 2009. Endangered, Threatened, Proposed and Candidate Species, Utah Counties. http://www.fws.gov/mountain-prairie/endspp/CountyLists/Utah.pdf

Utah Division of Wildlife Resources (UDWR) 2005. Utah Comprehensive Wildlife Conservation Strategy (CWCS). Publication Number 05-19/

Appendix 2. Fundamentals of Rangeland Health

The Fundamentals of Rangeland Health stated in 43 CFR 4180 are:

1. Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity and the timing and duration of flow.

2. Ecological processes, including the hydrologic cycle, nutrient cycle and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

3. Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established Bureau of Land Management objectives such as meeting wildlife needs.

4. Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special status species.

The fundamentals of rangeland health combine the basic precepts of physical function and biological health with elements of law relating to water quality, and plant and animal populations and communities. They provide direction in the development and implementation of the standards for rangeland health.

Appendix 3. Utah Standards for Rangeland Health (1997)

Standard 1. Upland soils exhibit permeability and infiltration rates that sustain or improve site productivity, considering the soil type, climate, and landform.

As indicated by:

a) Sufficient cover and litter to protect the soil surface from excessive water and wind erosion, promote infiltration, detain surface flow, and retard soil moisture loss by evaporation.

b) The absence of indicators of excessive erosion such as rills, soil pedestals, and actively eroding gullies.

c) The appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community [DPC], where identified in a land use plan, or (2) where the DPC is not identified, a community that equally sustains the desired level of productivity and properly functioning ecological conditions.

Standard 2. Riparian and wetland areas are in properly functioning condition. Stream channel morphology and functions are appropriate to soil type, climate and landform.

As indicated by:

a) Streambank vegetation consisting of, or showing a trend toward, species with root masses capable of withstanding high streamflow events. Vegetative cover adequate to protect stream banks and dissipate streamflow energy associated with high-water flows, protect against accelerated erosion, capture sediment, and provide for groundwater recharge.

b) Vegetation reflecting: Desired Plant Community, maintenance of riparian and wetland soil moisture characteristics, diverse age structure and composition, high vigor, large woody debris when site potential allows, and providing food, cover and other habitat needs for dependent animal species.

c) Revegetating point bars; lateral stream movement associated with natural sinuosity; channel width, depth, pool frequency and roughness appropriate to landscape position.

d) Active floodplain.

Standard 3. Desired species, including native, threatened, endangered, and special-status species, are maintained at a level appropriate for the site and species involved.

As indicated by:

a) Frequency, diversity, density, age classes, and productivity of desired native species necessary to ensure reproductive capability and survival.

b) Habitats connected at a level to enhance species survival.

c) Native species reoccupy habitat niches and voids caused by disturbances unless management objectives call for introduction or maintenance of nonnative species.

d) Appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community [DPC], where identified in a land use plan conforming to these Standards, or (2) where the DPC is identified a community that equally sustains the desired level of productivity and properly functioning ecological processes.

Standard 4. BLM will apply and comply with water quality standards established by the State of Utah (R.317-2) and the Federal Clean Water and Safe Drinking Water Acts. Activities on BLM Lands will support the designated beneficial uses described in the Utah Water Quality Standards (R.317-2) for surface and groundwater. [1]

As indicated by:

a) Measurement of nutrient loads, total dissolved solids, chemical constituents, fecal coliform, water temperature and other water quality parameters.

b) Macro-invertebrate communities that indicate water quality meets aquatic objectives.

[1] BLM will continue to coordinate monitoring water quality activities with other Federal, state and technical agencies.

Appendix 4. Utah Guidelines for Grazing Management (1997)

1. Grazing management practices will be implemented that:

(a) Maintain sufficient residual vegetation and litter on both upland and riparian sites to protect the soil from wind and water erosion and support ecological functions;

(b) Promote attainment or maintenance of proper functioning condition riparian/wetland areas, appropriate stream channel morphology, desired soil permeability and infiltration, and appropriate soil conditions and kinds and amounts of plants and animals to support the hydrologic cycle, nutrient cycle and energy flow;

(c) Meet the physiological requirements of desired plants and facilitate reproduction and maintenance of desired plants to the extent natural conditions allow;

(d) Maintain viable and diverse populations of plants and animals appropriate for the site;

(e) Provide or improve, within the limits of site potentials, habitat for Threatened or Endangered Species;

(f) Avoid grazing management conflicts with other species that have the potential of becoming protected or special status species;

(g) Encourage innovation, experimentation and the ultimate development of alternatives to improve rangeland management practices;

(h) Give priority to rangeland improvement projects and land treatments that offer the best opportunity for achieving the Standards.

2. Any spring or seep developments will be designed and constructed to protect ecological process and functions and improve livestock, wild horse and wildlife distribution.

3. New rangeland projects for grazing will be constructed in a manner consistent with the Standards. Considering economic circumstances and site limitations, existing rangeland projects and facilities that conflict with the achievement or maintenance of the Standards will be relocated and/or modified.

4. Livestock salt blocks and other nutritional supplements will be located away from riparian/wetland areas or other permanently located, or other natural water sources. It is recommended that the locations of these supplements be moved every year.

5. The use and perpetuation of native species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands non-intrusive, non-native plant species are appropriate for use where native species (a) are not available, (b) are not economically feasible, cannot achieve ecological objectives
as well as nonnative species, and/or (d) cannot compete with already established native species.

6. When rangeland manipulations are necessary, the best management practices, including biological processes, fire and intensive grazing, will be utilized prior to the use of chemical or mechanical manipulations.

7. When establishing grazing practices and rangeland improvements, the quality of the outdoor recreation experience is to be considered. Aesthetic and scenic values, water, campsites and opportunities for solitude are among those considerations.

8. Feeding of hay and other harvested forage (which does not refer to miscellaneous salt, protein and other supplements) for the purpose of substituting for inadequate natural forage will not be conducted on BLM lands other than in (a) emergency situations where no other resource exists and animal survival is in jeopardy, or (b) situations where the Authorized Officer determines such a practice will assist in meeting a Standard or attaining a management objective.

9. In order to eliminate, minimize or limit the spread of noxious weeds, (a) only hay cubes, hay pellets or certified weed-free hay will be fed on BLM lands, and (b) reasonable adjustments in grazing methods, methods of transport and animal husbandry practices will be applied.

10. To avoid contamination of water sources and inadvertent damage to non-target species, aerial application of pesticides will not be allowed within 100 feet of a riparian/wetland area unless the product is registered for such use by the EPA.

11. On rangelands where a standard is not being met, and conditions are moving toward meeting the standard, grazing may be allowed to continue. On lands where a standard is not being met, conditions are not improving toward meeting the standard or other management objectives, and livestock grazing is deemed responsible, administrative action with regard to livestock will be taken by the Authorized Officer pursuant to CFR 4180.2(c).

12. Where it can be determined that more than one kind of grazing animal is responsible for failure to achieve a Standard, and adjustments in management are required, those adjustments will be made to each kind of animal, based on interagency cooperation as needed, in proportion to their degree of responsibility.

13. Rangelands that have been burned, seeded or otherwise treated to alter vegetative composition will be closed to livestock grazing as follows: (1) burned rangelands, whether by wildfire or prescribed burning, will not be grazed for a minimum of one complete growing season following the burn; and (2) rangelands that have been seeded or otherwise chemically or mechanically treated will not be grazed for a minimum of two complete growing seasons.

14. Conversions in kind of livestock (such as from sheep to cattle) will be analyzed in light of Rangeland Health Standards. Where such conversions are not adverse to achieving a Standard, or they are not in conflict with BLM land use plans, the conversion will be allowed.

Appendix 5. Standard Operating Procedures for Conducting Wild Horse Gathers

(Methods for Humane Capture of Wild Horses from the Bible Spring Complex)
(FLPMA – 16 USC 1338a, Wild Horse and Burro Handbook – H-4710-1, 43 CFR 4700)

The gather method employed for this capture operation requires that horses be herded to a trap of portable panels and on extremely rare occasions to ropers who, after roping the animal, will bring it to the trap or have a trailer taken to the roped animal. Gathering would be conducted by using agency personnel or contractors experienced in the humane capture and handling of wild horses. The same rules apply whether a contractor or BLM personnel are used. The following stipulations and procedures will be followed during the contract period to ensure the welfare, safety and humane treatment of the wild horses in accordance with the provisions of 43 CFR 4700.

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

a. Helicopter Drive Trapping

This capture method will involve driving horses into a pre-constructed trap using a helicopter. The trap is constructed of portable steel panels consisting of round pipe. Wings are constructed off the ends of the panel trap to aid in funneling horses into the trap. The wings are constructed of natural jute, (or similar netting which will not injure a horse), which is hung on either trees or steel T-posts. This sort of wing forms a very effective visual barrier to the horses that they typically will not run through. When the trap is ready for use, a helicopter will start moving horses toward the trap and into the wings.

In heavily wooded areas, it may be necessary to use wranglers in support of the helicopter to move the horses. The helicopter will act more as a spotter for the ground crew in this situation.

The contractor/BLM shall attempt to keep bands intact except where animal health and safety become considerations which would prevent such procedures. The contractor/BLM shall ensure that foals shall not be left behind.

At least one saddle-horse should be immediately available at the trap site to perform roping if necessary. Roping shall be done as determined by the Contracting Officer's Technical Representative (COTR) or Project Inspector (PI). Under no circumstances shall animals be tied down for more than one hour.

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

b. Helicopter Assisted Roping

Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. Under no circumstances shall horses or burros be tied down for more than one hour.

Roping shall be performed in such a manner that bands will remain together. Foals shall not be left behind.

2. Other Non-Helicopter Capture Methods

a. Water Trapping

This method involves setting up a trap around a well used water source and employing a self-closing gate with a triggering device or finger gates. Finger gates can be used only with the prior approval and under the supervision of the COTR/PI. Water traps equipped with trip wires would be checked every 10 hours for trapped animals. Water traps may also be manually closed using a pull rope, which requires personal to be at the trap site to close the gate.

It may be necessary to exclude access to other neighboring water sources to encourage use by the target population at the trap site. All exclosures constructed for the purpose of the gather would be flagged and highly visible to the horses, wildlife, and the public. The wires, twine, and flagging would be promptly removed following completion of the trapping.

All water traps and exclosures would be constructed (whenever possible) to accommodate wildlife access points. These points would be where wildlife could get to water by going underneath the panels, such as along trails, washes or low spots.

Placement of portable corral panels would be permitted during foaling season to allow wild horses to become accustomed to them.

b. Bait Trapping

Bait trapping using hay or other enticements may be used as an additional or alternative method of capture. This method would involve setting up a panel trap in an area accessible to the horses and feeding of enticements in the trap over a period of time to habituate the target animal to the bait. Once virtually all horses (or burros) in an area were coming in to the bait, they would be trapped. The principal limitation of this method is that forage must be limited or the bait must be more desirable than the surrounding forage.

c. Net Gunning

The net-gunning aerial capture technique uses weighted nets to individually capture wild animals. Net gun capture is a valuable tool when specific animals are targeted for restraint, relocation or removal. The technique is not applicable when a large number of animals require capture.

When using nets, drug and electrical immobilization are rarely required. Individual animals are located, herded by the pilot as slowly as possible into an open area and then are netted from the helicopter using weighted, soft mesh net. As the horse or burro becomes tangled in the net they become somewhat disoriented and further slow down. Some animals come to a complete standstill when surrounded by the net. Others become tangled to the point where they roll onto the ground.

Immediately after netting an animal the crew members approach the animal. The horse or burro is rolled onto its side, cross-hobbled and blindfolded. A muzzle is used in cases where an animal acts aggressive. The net is then rolled away from the horse or burro and the animal can be handled for collection of biological samples. If transport is required, the hobbled, blindfolded animal is rolled into a soft canvas bag. The bag is laced closed with a strong nylon rope. The rope is attached to a hook on the belly of the helicopter and the animal is transported to the destination. Transport time to small, portable corrals is usually under 10 minutes per animal.

Once at the destination, the horse or burro is gently lowered into the small, portable corral. The ground crew unhooks the transport rope and removes the bag from around the animal. The blindfold and hobbles are removed. The horse or burro immediately gets onto their feet, appearing only slightly disoriented.

d. Chemical Capture

The chemical capture technique has similar benefits to the net gunning technique in the fact that individual animals may be captured. Chemical capture is a valuable tool when specific animals are targeted for restraint, relocation or removal. The technique is not applicable when a large number of animals require capture.

When using chemical capture a drug will be administer through the use of a dart gun and dart. The dart will be loaded with a chemical recommended by a veterinarian and approve by the BLM Authorized Officer on site. The dart is then shot out of a gun using the appropriate propellant for that gun. As the dart impacts the animal the chemical is released and the animal is subdued by the chemical. The use of this method is limited to within 100 yards or the range of the dart gun. The chemical can be administered from the ground or by air.

Once the animal is subdued by the chemical ground crews must imminently approach the animal and hobble or halter the animal. As the chemical wears off and the animal case once again move with normal function saddle horses may be used to move the animal where it can be loaded into a trailer. If the animal is already in a location where it can be loaded then the animal may be tied down for no longer then 1 hour and loaded directly into the trailer.

3. Stipulations for Portable Corral Traps/Exclosures

Capture traps would be constructed in a fashion to minimize the potential for injury to wild horses or burros and BLM/contractor personnel. Gates would be wired open at all unmanned trap sites, and would be left closed only when needed to hold horses or burros inside. Trapped horses or burros would not be held inside the traps for a period exceeding 10 hours, unless provided with feed (weed free hay) and water.

The Utah Division of Wildlife Resources would be notified as soon as possible if any wildlife became injured during capture operations. Wildlife caught inside traps would be released immediately.

4. Contract Helicopter, Pilot and Communications

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

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

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

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

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

5. Non-Contract Helicopter Operations

An Aircraft Safety Plan and flight hazard analysis will be appropriately approved and filed and copies distributed to the necessary individuals prior to commencing the removal operation. Daily flight plans will also be filed. If a BLM contract helicopter is used, all BLM, Aircraft Safety and Operations standards will be adhered to.

There will be daily briefings with the helicopter pilot, Authorized Officer and all personnel involved in the day's operation. The purpose of this meeting is to discuss in detail all information gathered during the familiarization flight such as hazards, location of horses, potential problems, etc. Discuss any safety hazards anticipated for the coming day's operation or any safety problems observed by the Authorized Officer or anyone else, outline the plan of action, delineate course of actions, specifically position the hazers and their responsibilities, logistics, and timing. After each flight, removal personnel will discuss any problems and suggest solutions. This may be accomplished over the radio or on the ground as the need dictates.

A flight operations plan will be filed with the Cedar City Interagency Dispatch Center. This plan will describe the area to be flown and the expected time frames of flight operations. A weather forecast will be acquired from the dispatcher. There will be no flights on days of high or gusty, erratic winds or days with poor visibility.

Two-way radio communication between the helicopter and the ground crew will be maintained at all times during the operation.

An operation or contractor's log will be maintained for all phases of the operation. The log will be as detailed as possible and will include names, dates, places and other pertinent information, as well as, observations of personnel involved.

6. Animal Handling and Care

Prior to any gathering operations, the COTR/PI will provide for a pre-capture evaluation of existing conditions in the gather areas. The evaluation will include animal condition, prevailing temperatures, drought conditions, soil conditions, road conditions, and a topographic map with location of fences, other physical barriers, and acceptable trap locations in relation to animal distribution. The evaluation will determine whether the proposed activities will necessitate the presence of a veterinarian during operations. If it is determined that capture efforts necessitate the services of a veterinarian, one would be obtained before capture would proceed.

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

The Authorize Officer and pilot may take a familiarization flight identifying all natural hazards (rims, canyons, winds) and man-made hazards in the area so that helicopter flight crew, ground personnel, and wild horse safety will be maximized. Aerial hazards will be recorded on the project map.

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

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

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

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

Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the COTR.

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

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

a. Trap Site Selection

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

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

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

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

b. Trap/Facility Requirements

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

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

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

All runways shall be of sufficient length and height to ensure animal and wrangler safety and may be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet above ground level for burros and 1 foot to 6 feet for horses.

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

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

When holding facilities are used, and alternate pens are necessary to separate mares with small foals, animals which will be released, sick and injured animals, and estrays from the other animals or to facilitate sorting as to age, number, size, temperament, sex, and condition; they will be constructed to minimize injury due to fighting and trampling. In some cases, the Government will require that animals be restrained for determining an animal's age or for other purposes. In these instances, a portable restraining chute will be provided by the Government. Either segregation or temporary marking and later segregation will be at the discretion of the COTR.

If animals are held in the traps and/or holding facilities, a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day will be supplied. Animals held for 10 hours or more in

the traps or holding facilities shall be provided good quality hay (certified weed free on BLM lands) at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day.

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

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

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

The contractor/BLM shall restrain sick or injured animals if treatment is necessary. A veterinarian may be called to make a diagnosis and final determination. Destruction shall be done by the most humane method available. Authority for humane destruction of wild horses (or burros) is provided by the Wild Free-Roaming Horse and Burro Act of 1971, Section 3(b)(2)(A), 43 CFR 4730.1, BLM Manual 4730 - Euthanasia is in accordance with BLM policy as expressed in Instructional Memorandum No. 2006-023.

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

a. The animal shows a hopeless prognosis for life.
b. Suffers from a chronic or incurable disease.
c. Requires continuous care for acute pain and suffering.
d. Not capable of maintaining a Henneke body condition rating of one or two.
e. Has an acute or chronic injury, physical defect or lameness that would not allow the animal to live and interact with other horses, keep up with its peers or exhibits behaviors which may be considered essential for an acceptable quality of life constantly or for the foreseeable future.
f. Suffers from an acute or chronic infectious disease where State or Federal animal health officials order the humane destruction of the animal as a disease control measure.

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

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

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

8. Motorized Equipment

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

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

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

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

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

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

11 square feet/adult horse (1.4 linear foot in an 8 foot wide trailer)
06 square feet/horse foal (0.75 linear foot in an 8 foot trailer)

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

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

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

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

9. Special Stipulations.

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

If possible, traps would be constructed so that no riparian vegetation is contained within them. Impacts to riparian vegetation and/or running water is located within a trap (and available to horses) would be mitigated by removing horses from the trap immediately upon capture. No vehicles would be operated on riparian vegetation or on saturated soils associated with riparian/wetland areas.

Whenever possible, gathering would be conducted when soils are dry or frozen and conditions are optimal for safety and protection of the horses and wranglers. Also, whenever possible, scheduling of gathers would be done to minimize impacts with big game hunting seasons.

Gathers would not be conducted 6 weeks on either side of peak foaling season, which for this gather is April 15th, to reduce the chance of injury or stress to pregnant mares or mares with young foals.

The helicopter would avoid eagles and other raptors, and would not be flown repeatedly over any identified active raptor nests. No unnecessary flying would occur over big game on their winter ranges or active fawning/calving grounds during the period of use.

Standard operating procedures in the setting-up and construction of traps will avoid adverse impacts to wildlife species, including threatened, endangered, or sensitive species.

Weed free hay will be used for bait trapping, and feeding purposes of wild horses and/or domestic horses at trap sites. Hay feed at Temporary Holding Facilities placed on federal lands will be certified weed free hay or approved by the authorized officer on site.

10. Herd Health and Viability Data Collection

The following information will be collected from each animal captured: age, sex, color, overall health, pregnancy or nursing status.

In addition, blood or hair samples may be collected from individuals within the herd. Certain other activities including immunocontraceptive research, radio collaring, respiratory disease, and freeze marking may be conducted.

a. Population Management Plan/Selective Addition or Removal

Blood samples may be taken for the purposes of furthering genetic ancestry studies and incorporation into the Population Management Plans which will be developed for each HMA/complex.

On occasion, it may be necessary to enhance and maintain genetic diversity a few animals with compatible characteristics may be introduced from other HMAs. Introduced animals will be taken from areas with similar habitat.

b. Immunocontraceptive Research

When the immunocontraceptive vaccine is used, delivery of the vaccine will be conducted by trained individuals, using approved delivery methods. The vaccine will be administered to the large muscle on the hip and/or as the approved delivery methods directs.

c. Respiratory Disease Research

Serum and nasal samples may be taken from all saddle horses and Judas horses within 48 hours before or after the first day of each gather. Swabs would be used to collect samples of nasal discharge or of the material drainage from the abscess from clinically ill wild horses during routine restraint. Data gathered from this research would be used in future management of wild horse during gathering and holding.

11. Public Participation

Prior to conducting a gather a communications plan or similar document summarizing the procedures to follow when media or interested public request information or viewing opportunities during the gather should be prepared.

The public must adhere to guidance from the agency representative and viewing must be prearranged.

12. Safety

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

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

All BLM personnel, contractors and volunteers will wear protective clothing suitable for work of this nature. BLM will alert observers of the requirement to dress properly (see Wild Horse and Burro Operational Hazards, BLM File 4720, UT-067). BLM will assure that members of the public are in safe observation areas. Observation protocols and ground rules will be developed the public and will be enforced to keep both public and BLM personal in a safe environment.

The handling of hazardous, or potentially hazardous materials such as liquid nitrogen and vaccination needles will be accomplished in a safe and conscientious manner by BLM personnel or the contract veterinarian.

13. Responsibility and Lines of Communication

The local WH&B Specialist / Project Manager from the CCFO, have the direct responsibility to ensure the contractor's compliance with the contract stipulations.

Gather Research Coordinator (GRC) from the CCFO, will have the direct responsibility to ensure compliance with all data collection and sampling. The GRC will also ensure appropriate communication with Field Office Manager, WO260 National Research Coordinator, College of Veterinary Medicine at Texas A&M University, and Animal Plant Health Inspection Service (APHIS).

The CCFO Assistant Manager will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, State Office, Salt Lake Regional Wild Horse Corrals and Delta Wild Horse Corrals.

All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

14. Glossary

Appropriate Management Level - The number of wild horses and burro which can be sustained within a designated herd management area which achieves and maintains a thriving natural ecological balance keeping with the multiple-use management concept for the area.

Authorized Officer - An employee of the BLM to whom has been delegated the authority to perform the duties described in these Standard Operating Procedures. See BLM Manual 1203 for explanation of delegation of authority.

Census - The primary monitoring technique used to maintain a current inventory of wild horses and burros on given areas of the public lands. Census data are derived through direct visual counts of animals using a helicopter.

Contracting Officer (CO) - Is the individual responsible for an awarded contract, deals with claims, disputes, negotiations, modifications, payments and appoints COTRs and PIs.

Contacting Officers Technical Representative (COTR) - Acts as the technical representative for the CO on a contract. Ensures that all specifications and stipulations are met. Reviews the contractor's progress, advises the CO on progress, problems, costs, etc. Is responsible for review, approval, and acceptance of services.

Evaluation - A determination based on studies and other data that are available as to if habitat and population objectives are or are not being met and where an overpopulation of wild horses and burros exists and whether actions should be taken to remove excess animals.

Excess Wild Horses or Burros - Wild free-roaming horses or burros which have been removed from public lands or which must be removed to preserve and maintain a thriving ecological balance and multiple-use relationship.

Gather Research Coordinator (GRC)- A BLM employee that is designated by the Field Office Manager prior to each gather, who identifies potential problem areas in research data collection, determines need for additional field assistance to meet sampling requirements, ensures compliance with all data sampling, and communicants and coordinates all data gather during a gather with the Field Office Manager, WO260 National Research Coordinator, Colorado State University Center of Veterinary Epidemiology and Animal Disease and Surveillance Systems (CSU-CVEADSS), and Animal Plant Health Inspection Service (APHIS).

Genetically Viable - Fitness of a population as represented by its ability to maintain the long-term reproductive capacity of healthy, genetically diverse members.

Health Assessment - Evaluation process based on best available studies data to determine the current condition of resources in relation to potential or desired conditions.

Healthy Resources - Resources that meet potential or desired conditions or are improving toward meeting those potential or desired conditions.

Herd Area - The geographical area identified as having been used by wild horse and burro populations in 1971, at the time of passage of the Wild Free-roaming Horse and Burro Act.

Herd Management Area - The geographical area as identified through the land use planning process established for the long-term management of wild horse and burro populations. The boundaries of the herd management area may not be greater than the area identified as having been used by wild horse and burro populations in 1971, at the time of passage of the Wild Free-roaming Horse and Burro Act.

Invasive Weeds - Introduced or noxious vegetative species which negatively impact the ecological balance of a geographical area and limit the areas potential to be utilized by authorized uses.

Metapopulation (complex) - A population of wild horses and burros comprised of two or more smaller, interrelated populations that are linked by movement or distribution within a defined geographical area.

Monitoring - Inventory of habitat and population data for wild horses and burros and associated resources and other authorized rangeland uses. The purpose of such inventories is to be used during evaluations to make determinations as to if habitat and population objectives are or are not being met and where an overpopulation of wild horses and burros exists and whether actions should be taken to remove excess animals.

Multiple Use Management - A combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals watershed, domestic livestock, wild horses, wild burros, wildlife, and fish, along with natural, scenic, scientific, and historical values.

Project Inspector - Coordinates with the COTR assigned to a contract to support his/her responsibility for review, approval, and acceptance of services.

Research - Science based inquiry, investigation or experimentation aimed at increasing knowledge about wild horses and burros conducted by accredited universities or federal government research organizations with the active participation of BLM wild horse and burro professionals.

Science Based Decision Making - Issuance of decisions affecting wild horses and burros, associated resources and other authorized rangeland uses incorporating best available habitat and population data and in consultation with the public.

Studies - Science based investigation of specific aspects of wild horse and burro habitat or populations in supplement to established monitoring. These investigations would not be established following rigid experimental protocols and could include drawing blood on animals to study genetics, disease and general health issues and population dynamics such as reproduction and mortality rates and general behavior.

Thriving Natural Ecological Balance - An ecological balance requires that wild horses and burros and other associated animals be in good health and reproducing at a rate that sustains the population, the key vegetative species are able to maintain their composition, production and reproduction, the soil resources are being protected, maintained or improved, and a sufficient amount of good quality water is available to the animals.

Appendix 6. Standard BLM Operating Procedures for Fertility Control Treatment

WO IM 2009-090, Attachment 1

The following management and monitoring requirements are part of the proposed action:

The 22 month pelleted Porcine zona pellucida (PZP) vaccine would be administered by trained BLM personnel.

The fertility control drug would be administered with two separate injections: (1) a liquid dose of PZP is administered using an 18 gauge needle primarily by hand injection; (2) the pellets are preloaded into a 14 gauge needle. These are loaded on the end of a trocar (dry syringe with a metal rod) which is loaded into the jabstick which then pushes the pellets into the breeding mares being returned to the range. The pellets and liquid are designed to release the PZP over time similar to a time release cold capsule.

Delivery of the vaccine would be as an intramuscular injection while the mares are restrained in a working chute. 0.5 cubic centimeters (cc) of the PZP vaccine would be emulsified with 0.5 cc of adjuvant (a compound that stimulates antibody production) and loaded into the delivery system. The pellets would be loaded into the jabstick for the second injection. With each injection, the liquid and pellets would be propelled into the left hind quarters of the mare, just below the imaginary line that connects the point of the hip and the point of the buttocks.

All treated mares would be freeze-marked with two 3.5-inch letters on the left hip for treatment tracking purposes. The only exception to this requirement is that each treated mare can be clearly and specifically identified through photographs or markings. This step is to enable researchers to positively identify the animals during the research project as part of the data collection phase.

At a minimum, estimation of population growth rates using helicopter or fixed wing surveys would be conducted the year preceding any subsequent gather. During these surveys it would not be necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e. # of foals to # of mares).

Population growth rates of herds selected for intensive monitoring would be estimated every year post-treatment using helicopter or fixed wing surveys. During these surveys it would not be necessary to identify which foals were born to which mares, only an estimate of population growth is needed (i.e. # of foals to # of mares). During routine HMA field monitoring (on-the-ground), if data on mare to foal ratios can be collected, these data should also be shared with the NPO for possible analysis by the USGS.

A PZP Application Data sheet would be used by the field applicators to record all the pertinent data relating to identification of the mare (including a photograph if the mares are not freeze-marked) and date of treatment. Each applicator would submit a PZP Application Report and accompanying narrative and data sheets would be forwarded to the NPO (Reno, Nevada). A copy of the form and data sheets and any photos taken would be maintained at the field office.

A tracking system will be maintained by NPO detailing the quantity of PZP issued, the quantity used, disposition of any unused PZP, the number of treated mares by HMA, field office, and state along with the freeze-mark applied by HMA.

Appendix 7. Population Modeling: Bible Spring Complex 2014 Population Modeling

To complete the population modeling for the Bible Spring Complex, 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 use full 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?
- What effects do the different alternatives have on the genetic health of the herd?

Population Data, Criteria, and Parameters utilized for Population Modeling
All simulations used the survival probabilities, foaling rates, and sex ratio at birth that was supplied with the Winn Equus population for the Garfield HMA.

Sex ratio at Birth:
42% Females
58% Males

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

Year 1: 94%

The following table displays the contraception parameters utilized in the population model for Alternative 2-4:

Contraception Criteria

Age	Percentages for Fertility Treatment
1	100%
2	100%
3	100%
4	100%
5	100%
6	100%
7	100%
8	100%
9	100%
10-14	100%
15-19	100%
20+	100%

Population Modeling Criteria

The following summarizes the population modeling criteria that are common to the Proposed Action and all alternatives:

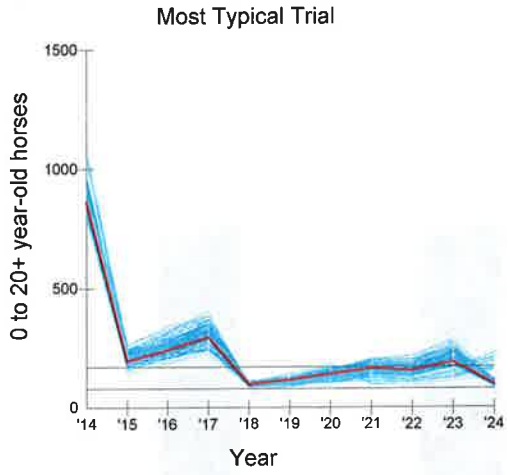
- Starting year: 2014
- Initial Gather Year: 2014
- Gather interval: regular interval of three years
- Gather for fertility treatment regardless of population size: Yes
- Continue to gather after reduction to treat females: Yes
- Sex ratio at birth: 58% males
- Percent of the population that can be gathered: 80%
- Minimum age for long term holding facility horses: Not Applicable (Gate Cut)
- Foals are included in the AML
- Simulations were run for 10 years with 100 trials each

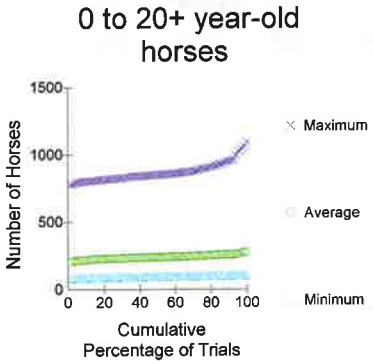
The following table displays the population modeling parameters utilized in the model:

Population Modeling Parameters Modeling Parameter	Alternative 1: Proposed Action-Gather and Removal of Excess Wild Horses and Application of Fertility Control Two	Alternative 2: Gather and Removal of Excess Wild Horses without Fertility Control.	Alternative 3: No Action – Continue Existing Management. No Gather and Removal
Management by removal only	No	Yes	No
Threshold Population Size Following Gathers	80	80	N/A
Target Population Size Following gather	80	80	N/A
Gather for fertility control regardless of population size	Yes	No	N/A
Gather continue after removals to treat additional females	Yes	Yes	N/A
Effectiveness of Fertility Control: Year 1	N/A	94%	94%
Effectiveness of Fertility Control: Year 2	N/A	N/A	N/A
Effectiveness of Fertility Control: Year 3	N/A	N/A	N/A

Results Alternative 1: Proposed Action –Gather and Removal of Excess Wild Hores and Application of Fertility Control.

Population Size



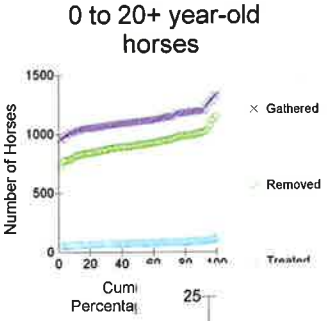


Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	77	202	779
10th Percentile	84	216	802
25th Percentile	88	227	822
Median Trial	93	236	850
75th Percentile	97	247	894
90th Percentile	100	255	954
Highest Trial	104	276	1096

* 0 to 20+ year-old horses

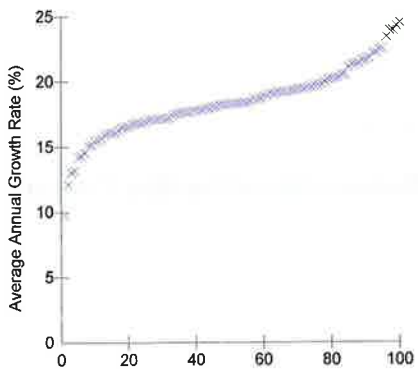
In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 77 and the highest was 1096. In half the trials, the minimum population size in 11 years was less than 93 and the maximum was less than 850. The average population size across 11 years ranged from 202 to 276.



Totals in 11 Years*

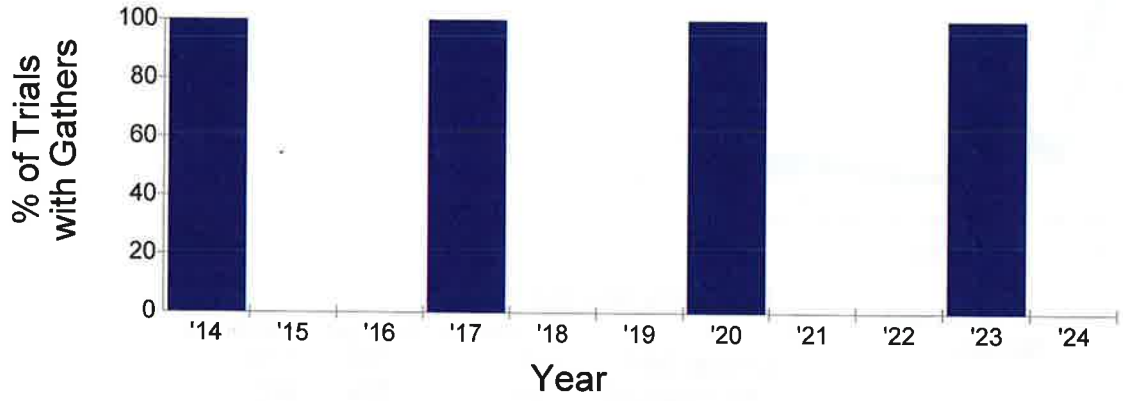
	Gathered	Removed	Treated
Lowest Trial	960	716	53
10th Percentile	1022	808	60
25th Percentile	1059	850	68
Median Trial	1105	904	74
75th Percentile	1174	974	82
90th Percentile	1198	1008	94
Highest Trial	1335	1148	128

* 0 to 20+ year-old horses



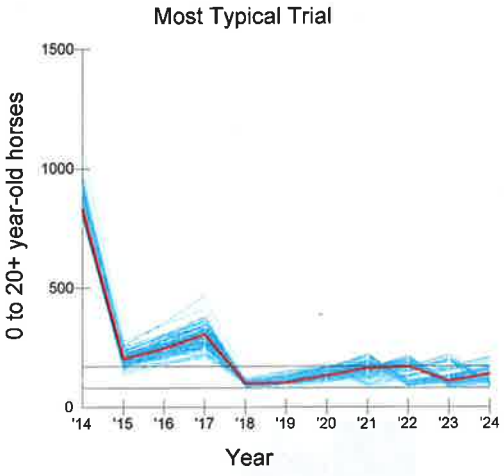
Average Growth Rate in 10 Years

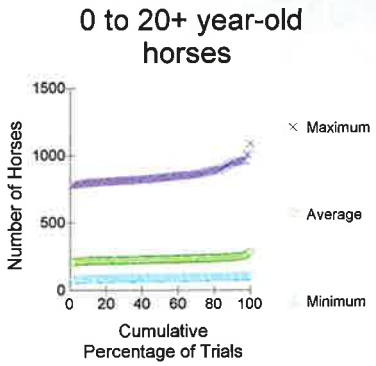
Lowest Trial	9.7
10th Percentile	15.4
25th Percentile	17.0
Median Trial	18.3
75th Percentile	19.7
90th Percentile	21.7
Highest Trial	24.5



Results Alternative 2: Gather and Removal of Excess Wild Horses without Fertility Control

Population Size



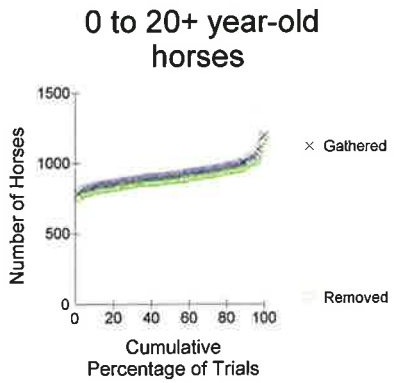


Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	78	204	778
10th Percentile	83	214	798
25th Percentile	87	218	811
Median Trial	92	226	836
75th Percentile	96	234	878
90th Percentile	100	244	944
Highest Trial	107	279	1088

* 0 to 20+ year-old horses

In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 78 and the highest was 1088. In half the trials, the minimum population size in 11 years was less than 92 and the maximum was less than 836. The average population size across 11 years ranged from 204 to 279.

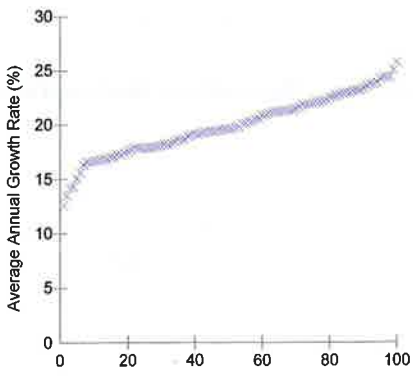


Totals in 11 Years*

	Gathered	Removed
Lowest Trial	781	754
10th Percentile	838	806
25th Percentile	874	842
Median Trial	914	879
75th Percentile	964	927
90th Percentile	1015	978
Highest Trial	1196	1158

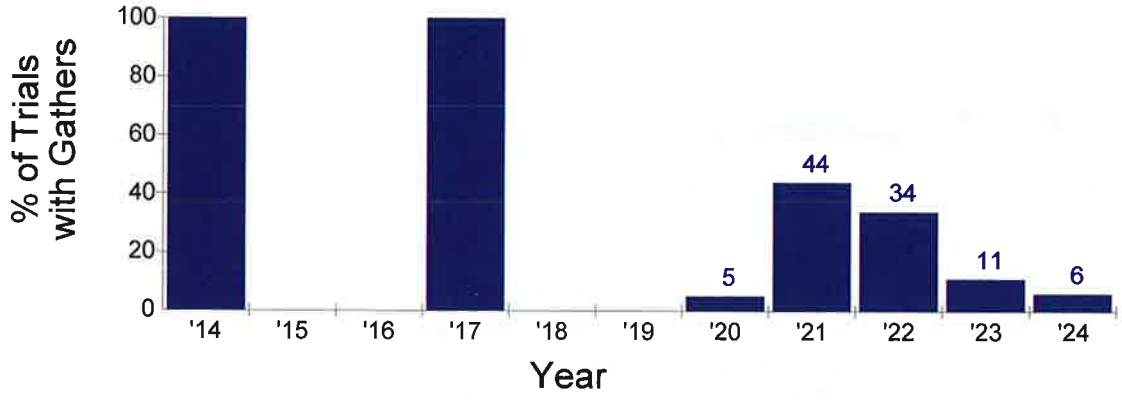
*

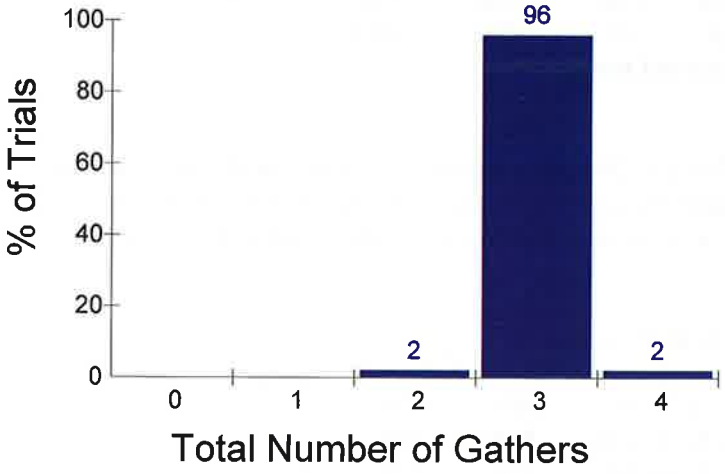
Average Growth Rate in 10 Years



0 to 20+ year-old horses

Lowest Trial	12.5
10th Percentile	16.7
25th Percentile	17.9
Median Trial	19.6
75th Percentile	22.0
90th Percentile	23.4
Highest Trial	25.7

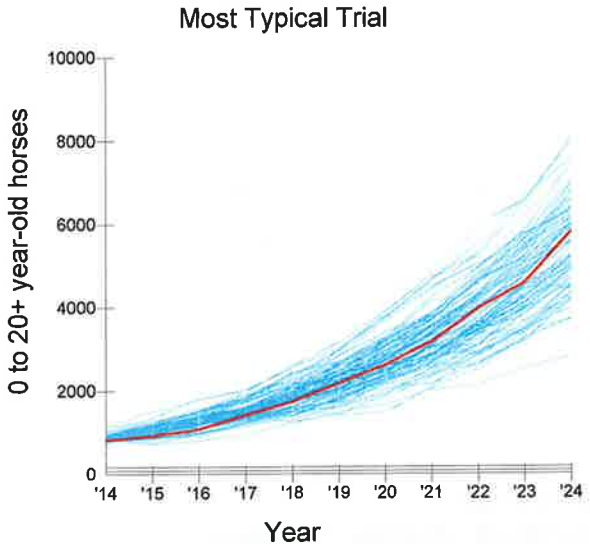




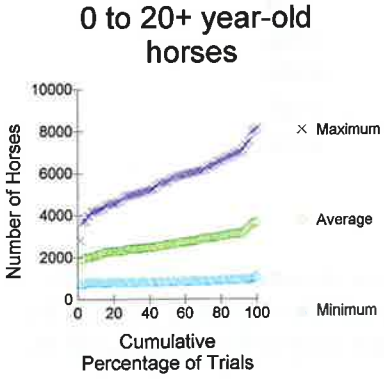
Results Alternative 3: No Action – No Gather, Removal or use of Fertility Control

Results - No Action

Population Size



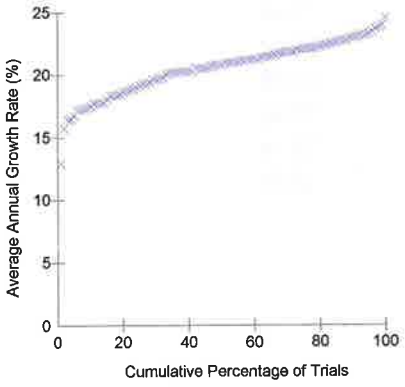
Population Sizes in 11 Years*



	Minimum	Average	Maximum
Lowest Trial	712	1559	2799
10th Percentile	792	2079	4222
25th Percentile	807	2301	4836
Median Trial	836	2578	5647
75th Percentile	882	2921	6387
90th Percentile	940	3111	6992
Highest Trial	1132	3652	8150

* 0 to 20+ year-old horses

In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 712 and the highest was 8150. In half the trials, the minimum population size in 11 years was less than 836 and the maximum was less than 5647. The average population size across 11 years ranged from 1559 to 3652.



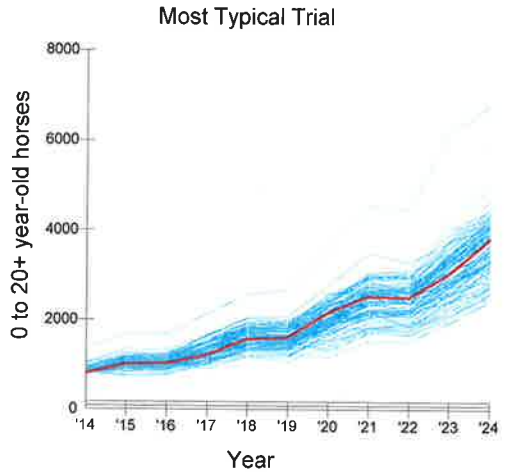
Average Growth Rate in 10 Years

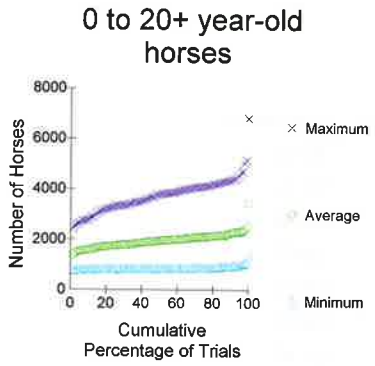
Lowest Trial	12.9
10th Percentile	17.6
25th Percentile	19.2
Median Trial	20.9
75th Percentile	22.1
90th Percentile	23.0
Highest Trial	24.5

* 0 to 20+ year-old horses

Alternative Considered but Not Analyzed: Fertility Control Only.

Population Size



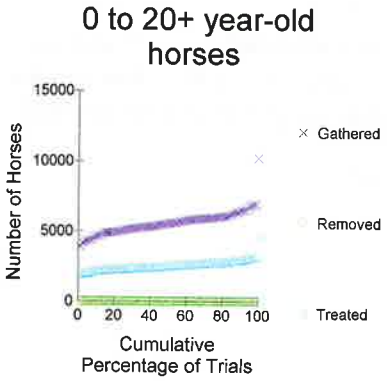


Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	744	1369	2427
10th Percentile	797	1578	2821
25th Percentile	813	1750	3329
Median Trial	832	1942	3786
75th Percentile	878	2088	4096
90th Percentile	932	2258	4366
Highest Trial	1389	3430	6786

* 0 to 20+ year-old horses

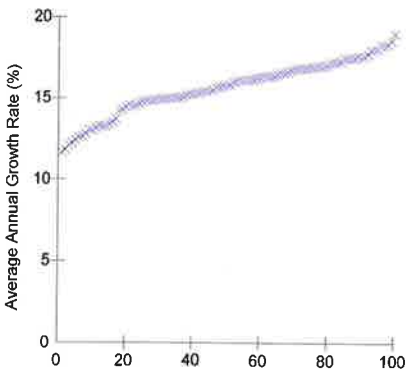
In 11 years and 100 trials, the lowest number 0 to 20+ year-old horses ever obtained was 744 and the highest was 6786. In half the trials, the minimum population size in 11 years was less than 832 and the maximum was less than 3769. The average population size across 11 years ranged from 1369 to 3430.



Totals in 11 Years*

	Gathered	Removed	Treated
Lowest Trial	3876	0	1846
10th Percentile	4637	0	2180
25th Percentile	5069	0	2318
Median Trial	5566	0	2544
75th Percentile	5984	0	2766
90th Percentile	6466	0	2954
Highest Trial	10236	0	4585

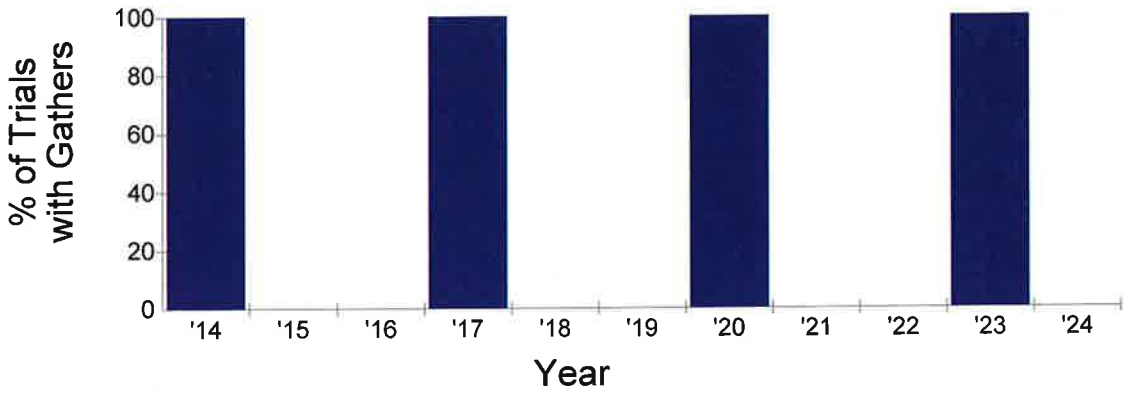
* 0 to 20+ year-old horses



Average Growth Rate in 10 Years

Lowest Trial	11.6
10th Percentile	13.1
25th Percentile	14.8

Median Trial	15.8
75th Percentile	16.9
90th Percentile	17.6
Highest Trial	19.0



Appendix 8. Population Inventory

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Color Country Field Office
Cedar City Field Office
176 East DL Sargent Drive
Cedar City, UT 84721
Telephone (435) 586-2401
www.blm.gov/ut/st/en/fo/cedar_city.html

In Reply Refer To:
UTC012
4710

March 28, 2012

MEMORANDUM

To: Wild Horse Files (UT-440, UT-441, UT-444, UT-449)

From: Chad Hunter (CCFO Wild Horse/Range Mgt. Specialist)

Subject: Wild Horse helicopter inventory of the Bible Springs Complex (Blawn Wash, Four Mile, Bible Spring and Tilly Creek Herd Management Areas (HMAs))

This memorandum outlines the findings of a helicopter inventory of wild horses on the Bible Spring Complex, which is made up of the Blawn Wash Herd Area (HA), Four Mile HMA, Bible Spring HMA, and Tilly Creek HMA. The flight was done on **March 21th and 22th, 2012**. A Hughes MD500 helicopter from Sky-Hawk helicopters in St. George, Utah was used. Josh Fitts was the pilot while Chad Hunter and Adam Stephens acted as BLM helicopter crew members. Chad Hunter acted as flight manager and Matt Huse acted as helicopter manager. The crew members recorded numbers, locations, body conditions, yearling numbers and colors of the horses observed during the flight. The helicopter manager completed the safety plan, card checks, arranged flight following, OAS-23, OAS-91, and other helicopter checks and paperwork. Color Country Dispatch coordinated the use of air space in the Desert MOA that occurs over part of the Tilly Creek HMA. A Trimble GeoXM and Ag-nav were used to record the number of horses, number of yearlings, colors of horses, and location of horses recorded. It also recorded the flight path that was reviewed during refueling to make sure the area was being adequately covered.

The flight originated at BLM's Air Tanker Base at the Cedar City, Utah airport at approximately 1100. Matt Huse reviewed the cards for the helicopter and pilot. A safety briefing was given and flight plans for the day was reviewed.

A mobile Skyhawk fuel truck provided fuel for the inventory. It took 6 hours or 3 fuel cycles to cover the Blawn Wash HA and Four Mile HMA. The second day it took 6 hours to cover the

Bible Spring and Tilly Creek HMA. The flights also covered areas outside of the HA and HMA boundaries. The Cost of the flights were approximately $1,000 an hour with helicopter, fuel truck and extended hours. Cost for the inventory flight was approximately $12,000.

The objective was to complete a population inventory of wild horses for the Bible Spring complex. Most transects were approximately 1 mile apart. Areas that were known to be heavily treed with low numbers of horses, were not flown or had larger transects to save helicopter time.

The Blawn Wash HA and Four Mile HMA were flown on March 21st. The Bible Springs and Tilly Creek HMAs were flown on March 22nd. Some areas outside of the HA and HMAs where horses were known to be were flown.

Weather conditions were warm and clear on the 21th and partly cloudy on the 22th. Temperatures were in the 50's and 60's. Winds were around 5-10 mph. The mountains had snow cover at high elevations on North facing slopes with South facing slopes clear. The main Jockey and Pine Valley roads were used by the fuel truck and Helicopter Manager to access fueling sites.

Most horses were in Henneke Body Class 5 (Moderate), which is normal for this time of year. There were a few older horses spread throughout the flight that were in body class 3 (Thin).

A total of 318 horses were observed on the Bible Springs Complex (Blawn Wash (30), Four Mile (49), Bible Spring (201), Tilly Creek (38)) during the flight. There were 57 yearlings/foals (Blawn Wash (5), Four Mile (4), Bible Spring (37), Tilly Creek (6)). It is estimated that 80% of the horses on the HMA were counted. The estimated population for the total complex and the individual HMAs are below.

There were also 54 head of wild horses counted outside the Bible Spring Complex, but in the general location around Blawn Wash HA (43) and Bible Spring HMA (11). All of these horses could spend a time within the adjacent HMAs.

The total for the *Bible Spring Complex* not including those horses counted outside the HA and HMAs is 318 (including 57 horses that were yearlings/foals) were counted in 65 bands.

Bible Spring Complex population increase this last year was **18%**. 57(f) ÷ 318(a) x 100 = 18%

The total for the *Blawn Wash* HA is 30 (including 6 horses that were yearlings/foals) were counted in 8 bands.

Blawn Wash HMA population increase this last year was 20%. 6(f) ÷ 30(a) x 100 = 20%

The total for the *Four Mile* HMA is 49 (including 5 horses that were yearlings/foals) were counted in 9 bands.

Four Mile HMA population increase this last year was 10%. 5(f) ÷ 49(a) x 100 = 10%

The total for the *Bible Spring* HMA is 201 (including 40 horses that were yearlings/foals) were counted in 37 bands.

Bible Spring HMA population increase this last year was 20%. 40(f) ÷ 201(a) x 100 = 20%

The total for the *Tilly Creek* HMA is 38 (including 6 horses that were yearlings/foals) were counted in 11 bands.

Tilly Creek HMA population increase this last year was **16%**. 6(f) ÷ 38(a) x 100 = 16%

Populations

Bible Spring Complex
318 head total = 80% 318= .80(X) 318 ÷.80= X X= 398

Estimated Population 398 head for Bible Spring Complex

Key points to note with 2012 Census.

- Reproduction rate this year was 18% compared to the normal 20% increase.
- Estimated population increased after the population inventory.
- It is believed that horses have moved from the HMAs along the Utah/Nevada border into the Tilly Creek and Bible Spring HMAs in search for forage and water.
- It is believed that several horses located outside of the Blawn Wash HA and Bible Springs HMA send time during the year inside these areas.
- It is believed some domestic horses have been released into the HMAs.

Blawn Wash HMA
30 head total = 80% 30= .80(X) 30 ÷.80= X X= 36

Estimated Population 38 head

Four Mile HMA
49 head total = 80% 49= .80(X) 49 ÷.80= X X= 59

Estimated Population 61 head

Bible Spring HMA
201 head total = 80% 201= .80(X) 201 ÷.80= X X= 241

Estimated Population 251 head

Tilly Creek HMA
38 head total = 80% 38= .80(X) 38 ÷.80= X X= 46

Estimated Population 48 head

OUTSIDE HA OR HMA

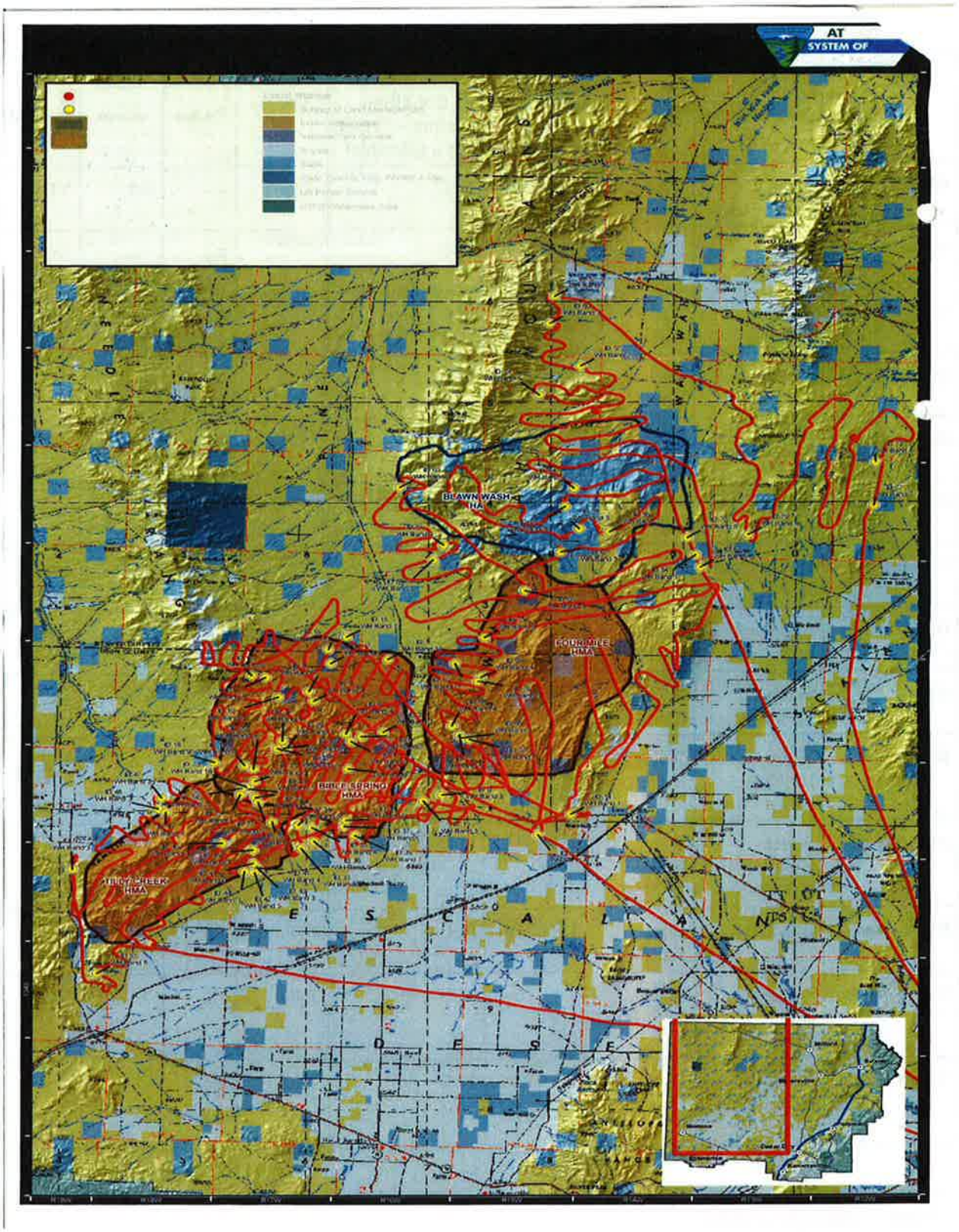
54 head total = 80% 54= .80(X) 54 ÷ .80= X X= 67

Estimated Population 67 head

Outside population increase this last year was 11%. 6(f) ÷ 54(a) x 100 = 11%

/Chad Hunter

Attachments
1. Map of Fight Path and Band Locations


AT
SYSTEM OF
BLAWN WASH HMA
FOUR MILE HMA
BIBLE SPRING HMA
TRIPP CREEK HMA
E S C A L A N T E

Appendix 9. Riparian Resources in HMAs

HMA	Name of Site	Allotment	Study Number	Functional Condition Rating – Trend (if applicable)	Year Assessed	Miles	Acres	Fenced
Blawn Wash	Willow Creek Spring	Bucket Ranch	LE-2004	PFC[1]	2006	----	6.0	YES
Blawn Wash	Willow Creek I	Bucket Ranch	LO-2005	PFC	2006	0.6	----	NO
Blawn Wash	Willow Creek II	Bucket Ranch	LO-2006	PFC	2006	4.3	----	NO
Blawn Wash	Center Creek	Bucket Ranch	LO-2001A	PFC	2006	3.7	----	NO
Blawn Wash	Hospital Spring	Bucket Ranch	LE-2004A	FAR-down	2003	3.7	----	NO
Blawn Wash	Quartz Creek I	Bucket Ranch	LO-2002	FAR[2] – na[3]	2006	1.3	----	NO
Blawn Wash	Quartz Creek II	Bucket Ranch	LO-2003	FAR – na	2006	0.7	----	NO
Blawn Wash	Unnamed seep	Bucket Ranch	LE-2003	FAR – down	2003	----	0.01	NO
Blawn Wash	Skellys Spring	Bucket Ranch	LE-2005A	FAR – down	2003	----	0.01	NO
Blawn Wash	Water Hollow Upper	Water Hollow	LE-1034	PFC	2009	----	1.3	NO
Blawn Wash	Water Hollow Lower	Water Hollow	LE-1035	PFC	2009	----	2.5	NO
Blawn Wash	Brush Spring	Water Hollow	LE-1027	PFC	2007	1.0	----	NO
Blawn Wash	Water Hollow Canyon	Water Hollow		PFC	2007	1.0	----	NO
Blawn Wash	Water Hollow Spring	Water Hollow	LO-1026	PFC	2007	0.4	----	NO

[1] Proper Functioning Condition
[2] Functional-at-risk
[3] Trend not apparent

HMA	Name of Site	Allotment	Study Number	Functional Condition Rating – Trend (if applicable)	Year Assessed	Miles	Acres	Fenced
Four Mile	Prout Wash	Jockeys	LO-1038	FAR - down	2008	0.42	----	NO
Four Mile	Jockeys Spring	Jockeys	LE-2008	NF[4]	2004	----	0.01	NO
Four Mile	The Seeps	Jockeys	LO-1039	NF	2008	0.14	----	YES
Four Mile	Teton Spring	Jockeys	LE-1020	NF	2008	----	0.03	YES
Four Mile	Bull Spring	Bull Spring	LO-1045	FAR – down	2007	0.5	----	NO
Four Mile	Cattle Spring	Bull Spring	LE-1010	FAR - down	2007	----	0.3	NO
Four Mile	Flint Spring	Bull Spring	LP-1010	NF	2007	----	0.01	NO
Four Mile	Cowboy Spring	Four Mile	LE-1079	FAR – up	1997	----	0.1	YES
Four Mile	Trap Spring	Lund	LE-1059	FAR – down	2008	----	.02	NO
Four Mile	Brush Patch Spring	Lund	LE-1026	FAR – na	2008	0.1	----	NO
Four Mile	Jensen Spring	Lund	LE-2009	NF	2004	----	0.01	YES
Four Mile	Marsden Spring	Lund	LE-1058	FAR-down	2008	----	0.02	YES
Four Mile	Unnamed Spring	Lund	LE-1063	FAR-na	2009	----	1.27	YES
Bible Spring	Bible Spring	Mountain Spring	LE-2010	FAR – down	2007	----	0.06	YES
Bible Spring	Meadow Spring	Mountain Spring	LO-1034	NF	2007	0.5	----	YES
Bible Spring	Trail Draw	Jackson Wash	LO-2041	NF	2008	0.1	----	NO
Tilly Creek	Rosebud Spring	Rosebud	LO-1021	FAR – NA	2009	0.5	----	NO
Tilly Creek	Serviceberry Spring	Rosebud	LE-1069	FAR – NA	2009	----	0.05	NO

[4] Nonfunctional

HMA	Name of Site	Allotment	Study Number	Functional Condition Rating – Trend (if applicable)	Year Assessed	Miles	Acres	Fenced
Tilly Creek	Unnamed spring	Rosebud	LE- 1095	PFC	1995 (PFC) (Photos; Not rated in 2009)	----	0.02	NO
Tilly Creek	Negro Liza Spring I	Bennion Springs	LE-2025	FAR - down	2007	----	0.87	NO
Tilly Creek	Negro Liza Spring II	Bennion Springs	LE-2026	FAR - down	2007	----	0.04	NO
Tilly Creek	Negro Liza Spring III	Bennion Springs	LE-2027	FAR - down	2007	----	0.34	NO
Tilly Creek	Negro Liza Spring IV	Bennion Springs	LE-2028	FAR - down	2007	----	0.02	NO
Tilly Creek	Negro Liza Spring V	Bennion Springs	LE-2029	FAR - down	2007	----	0.02	NO
Tilly Creek	Negro Liza Spring VI	Bennion Springs	LE-2030	FAR - down	2007	----	0.03	NO
Tilly Creek	Negro Liza Wash I	Bennion Springs	LO-2039	FAR - down	2007	0.08	----	NO
Tilly Creek	Negro Liza Wash II	Bennion Springs	LO-2054	PFC	2007	1.0	----	NO
Tilly Creek	Negro Liza Wash III	Bennion Springs	LO-2007	FAR-down	2007	0.23	----	NO
Tilly Creek	Negro Liza Wash IV	Bennion Springs	LO-2038	FAR-down	2007	0.08	----	NO
Tilly Creek	Pinto Creek	Bennion Springs	LO-1074	PFC	2007	1.63	----	NO
Tilly Creek	Pinto Spring	Bennion Springs	LE-2035	FAR-down	2007	----	0.25	YES
Tilly Creek	Spanish George Spring	Bennion Springs	LO-2036	FAR- down	2012	0.67	----	NO
Tilly Creek	Spanish George Spring	Bennion Springs	LE-2036	FAR- down	2012	----	1.05	NO
Tilly Creek	Newel Spring Creek	Gold Spring	LO-2022	FAR-up	2006	0.4	----	NO

HMA	Name of Site	Allotment	Study Number	Functional Condition Rating – Trend (if applicable)	Year Assessed	Miles	Acres	Fenced
Tilly Creek	Newel Spring	Gold Spring	LE-2015	PFC	2006	----	2.0	YES
Tilly Creek	Sawmill Spring	Gold Spring	LO-2075	PFC	2008	1.3	----	NO
Tilly Creek	Gold Spring Wash (upper)	Gold Spring	LO-2026	FAR-up	2006	0.3	----	NO
Tilly Creek	Gold Spring Wash	Gold Spring	LO-2025	FAR-up	2006	1.0	----	NO
Tilly Creek	Tilly Creek	Gold Spring	LO-2008	PFC	2006	1.3	----	NO
Tilly Creek	Eight Mile Spring	Eight Mile Hills	LE-2014	FAR – down	2006	----	2.2	NO
Tilly Creek	Wilson Canyon	Sheep Spring	LO-2085	FAR – na	2008	0.4	----	NO
Tilly Creek	Mustang Spring	Sheep Spring	LE-2012	NF	2007	----	0.1	NO

Appendix 10. Comments and Responses

A preliminary environmental assessment was made available to interested individuals, agencies and groups for a 30 day public review and comment period that opened on April 30, 2014 and closed on May 3-, 2014. Written comments were received from 20 individuals by mail or fax. Comments were received by the State of Utah and 4 counties. E-mail comments and form letters were received from approximately 38,000 individuals. Approximately 37,800 of these letters were in a form letter format. Comments received after June 4, 2014 were not accepted. Many of these comments contained overlapping issues/concerns which were consolidated into 216 comments and 17distinct topics. Below is a detailed summary of the comments received and how BLM used these comments in preparing the final environmental assessment. In addressing the comments the references are to the Preliminary EA unless otherwise specified.

No.	Commenter	Comment	BLM Response
OPPOSED TO THE GATHER			
1.	Individuals	I oppose the Interior Department's proposal to round up and remove of wild horses from within and around the Bible Springs Complex in Utah.	Comment noted. Approximately 38,000form letters were received with the same comments. With regard to public opposition of wild horse gathers, comments received from the public are used as a means to improve management and ensure that issues have been identified and addressed. It is not a means to tally votes on the most popular form of management. BLM has a responsibility per the WFRHBA to remove excess wild horses, ensuring the health of wild horses and of the rangeland.
2.	The Cloud Foundation	We are strongly opposed to the Proposed Action – Gather and Remove Excess Wild Horses within the Bible Springs Complex over a six to ten year period. The current plan does not adequately outline or consider the use of fertility vaccine to slow population growth until AML is reached. By starting a fertility control program NOW the need for future roundups could be eliminated.	Comment noted.
3.	Individual	Stop all wild mustang / burro round ups. Stop all traps and holding pens of wild mustangs and burros.	Comment noted.
4.	Individual	Stop transporting wild horses, and domestic, and burros to other countries for	The Department of the Interior and the Bureau of Land Management care deeply

No.	Commenter	Comment	BLM Response
		slaughter. Stop the killings of mares and foals and family units of wild horses. Stop the poachiong and kill buyers of our noble wild horses and burros. Stop the cattle ranchers from abusing our land and wild horses.	about the well-being of wild horses, both on and off the range, and the BLM does not and has not sold or sent horses or burros to slaughter. Consequently, as the Government Accountability Office noted in a report issued in October 2008, the BLM is not in compliance with a December 2004 amendment (the so-called Burns Amendment to the 1971 Wild Free-Roaming Horses and Burros Act) that directs the Bureau to sell excess horses or burros "without limitation" to any willing buyer. The Wild Free-Roaming Horses and Burros Act does not give the BLM authority to sell the excess horses for slaughter. However it is stated in the Wild Free-Roaming Horses and Burros Act: "…determine whether appropriate management levels should be achieved by the removal or destruction of excess animals, or other options (such as sterilization, or natural controls on population levels)"; and "the Secretary shall cause additional excess wild free-roaming horses and burros for which an adoption demand by qualified individuals does not exist to be destroyed in the most humane and cost efficient manner possible". Current BLM policies prohibit the euthanasia of excess wild horses that are healthy.
5.	Individual	Even in desert areas, wild horse density of one horse per one to a few hundred acres of habitat is entirely bearable by the ecosystem and within the carrying capacity provided the horses themselves are not being set up for a very unnatural, horse-empty situation and are allowed their free-roaming lifestyle as is consistent with the true intent of the act. Yet this "setup" is precisely what you propose for them in your E.A! Your plan will result in a greatly thwarted and dysfunctional wild horse herd	This comment is outside the scope of this document. Beneficial effects of wild horses on the functioning of ecosystems within these HMAs have not been documented. Section 3.2.1 Wild Horses Pg. 23 states: "Year-long grazing by wild horses has been one contributing factor to the decline of many of the treated and seeded areas. Horses, because they are territorial, are grazing the same areas repeatedly

No.	Commenter	Comment	BLM Response
		that comes no way near to filling its natural niche and role in the ecosystem. The horse should be considered a North American native wildlife species and to a greater degree than many other bovid and cervid species due to their much greater length of coevolutionary presence. And they should be recognized for their many positive contributions to the ecosystem as post-gastric, as contrasted to ruminant, digesters. These points I discuss in depth both in my book "The Wild Horse Conspiracy" and in my recent (1/2014) professional article "The horse and burro as positively contributing returned natives in North America" --both of which describe the components of a successful Reserve Design strategy for long-term viable, ecologically well integrated, mutually benefiting as well as naturally self-stabilizing populations in the wild.	throughout the spring during critical growing periods for grasses. High populations of wild horses can reduce the available forage for not only the year the grasses are grazed, but also for years to come. Horses will graze the most desirable forage plants first before grazing other species. Wild horses are capable of cropping forage much more closely than wild or domestic ruminants, causing a loss of the most desirable forage species and reducing plant diversity".
6.	Individual	Each region has a unique heritage, and the mustang heritage of the Bible Springs Complex is a great American treasure, with major Spanish colonial mustang admixture. It would be a terrible injustice to set them up for failure and dysfunction by adopting the plan you propose plan in your Environmental Assessment. Please redo this, exercise your right to reduce livestock, and apply your right to secure adequate water as Implied Federal Water Rights that come with the WFHBA (see p. 126 of my book), as well as similarly securing all other viable habitat components for a viable, wild, free-roaming wild horse population.	This comment is outside the scope of this document.
SUPPORTING THE GATHER			
7.	Individual	I do however agree with you rounding up SOME wild horses. I know that if they keep repopulating, overpopulation will come into play. I believe that 350 Wild Horses should be rounded up, tamed and sold A YEAR. With this new method wild horses will still be able to repopulate, but it	Comment noted.

No.	Commenter	Comment	BLM Response
		won't get to be overwhelming.	
8.	Individuals	I am in support of the proposed plan to gather wild horses on the Bible Springs Environmental Assessment. The EA follows the mandates of the Free Ranging Wild Horse and Burro Act by removing excess wild horses from the range when they become over appropriate management levels (AML) as they are now.	Comment noted.
9.	State of Utah Office of the Governor, Public Lands Policy Coordination Office	The state supports the goal of the proposed action, that is, the permanent and immediate removal of approximately 607-697 wild horses from the Bible Spring Complex in 2014 to bring the remaining horse population into compliance with the established AML numbers (80-170). In fact, the numbers should be brought to the lower end of that range in order to allow for expected population growth in the following years. The state supports treating the remaining mares with PZP contraceptive vaccine to maintain herd numbers within the AML on a long term basis. Unfortunately, while the EA contemplates the gather and removal of 607-697 wild horses in the summer of 2014, the EA also states that "BLM would conduct gathers approximately two to four times over a six to ten year period, to remove excess wild horses until the Bible Springs Complex wild horse population is at the lower AML." Gathers of the 697 wild horses extended over a 10 year period to bring the HMAs within AML is inadequate to meet the requirements of the WFRHBA and the existing RMP. Gathers to bring the wild horses within AML should be conducted immediately, with maintenance gathers conducted as needed.	Comment noted. See section 2.2.1 Alternative 1 – Proposed Action – Gather and Remove Excess Wild Horses within the Bible Spring Complex and Implement Fertility Control pg. 8. This paragraph clearly states: "The gather, removal and fertility treatment numbers would vary over the 10 year period to accomplish the objective of achieving and maintaining the wild horse population to within AML. **Other administrative factors (budget, adoptions, holding space, etc.) and gather success could also impact the numbers gathered, removed or treated during each operation over the 10 year period.** Based on the current estimated population and a 20% increase due to foaling in the spring of 2014, Table 2 shows the number of wild horses that would have to be gathered and removed to reach the lower and upper AML in the summer of 2014. Regular population inventories would be conducted at a minimum of every 3-4 year **to calculate the estimated population that would be used to determine the number of horses captured, removed and treated with fertility control each gather**".
10.	State of Utah Office of the	Rangeland conditions are experiencing long-term damage because fragile semi-	Comment noted.

No.	Commenter	Comment	BLM Response
	Governor, Public Lands Policy Coordination Office	desert rangelands of the West Desert are subject to wild horse numbers which are continually allowed to exist over the controlling RMP's AML for these lands. The SITLA 800 acre chaining and seeding on trust lands within the Blawn Wash HA has been damaged by excessive wild horse numbers in the vicinity. This damage is a result of the direct failure by BLM to take action to address the presence of wild horses within the Blawn Wash HA.	See sections 3.2.1 Rangeland Resources and Vegetation, 4.2.1 Rangeland Resources and Vegetation that address impacts of wild horses on vegetation including areas treated and seeded within the Complex. The 800 acres project referred to was completed late in the fall of 2013. It would still be early to determine the successful establishment of the seeded species. No vegetative monitoring information or data on the success of the seeding or impacts of wild horses to the seeding have been provided to the BLM.
11.	State of Utah Office of the Governor, Public Lands Policy Coordination Office	The State is encouraged by and supports BLM's efforts to address the overpopulation of wild horses in the Bible Springs Complex. Currently, the estimated numbers of wild horses in the area are well over the Appropriate Management Level (AML), as set by BLM's Own management plans. Unfortunately the number of wild horses on the entire range has been permitted to increase without adequate enforcement of the AML by the BLM. Enforcement of the AML, and removal of excess horses to meet that requirement, is required by the Wild Free Roaming Horses and Burros Act of 1971 (WFRHBA) and interpretive case law within the Department, such as the administrative decision in Animal Protection Institute (see 118 IBLA 63, 74;1991)	Comments noted.
12.	Individuals And Cattlemen's Association	Following are some of the reasons why sportsmen support this proposal: • The EA follows the mandates of the Free Ranging Wild Horse and Burro Act by removing excess wild horses from the range when they become over appropriate management levels (AML) as they are now; • The EA is in line with the Utah Rangeland Health mandates adopted by the BLM and are required to be followed by	Comments noted.

No.	Commenter	Comment	BLM Response
		the permittees, therefore, the BLM should follow the same standards when managing wild horses; • If followed, the EA provides for maintenance of wild horse populations to be at AML which will protect the fragile range from being over-grazed and thereby provide habitat for wildlife, livestock and wild horses; and • The EA provides for annual maintenance program to keep the wild horse populations in check for years to come.	
13.	Beaver County Commission	Beaver County supports the above referenced project to gather and remove excess wild horse and the application of fertility control methods. We applaud BLM's long overdue efforts to adhere to the Wild Horse and Burro act of 1971 and the AML Assessment of 2005. Though we understand there are constraints and opposition in administering such laws and plans, it is imperative and compulsory that you do so in order to "achieve a thriving natural ecological balance, maintain rangelands, and a healthy wild horse population."	Comment noted.
14.	Individual	Knowing the complexity of these issues I nevertheless simply expect nothing less than to gather the over populations down to the lower AML immediately before the range is decimated any further to prevent irreparable harm to the range and all of the wildlife resources dependent upon it.	Comment noted.
15.	Individual	I have read the full environmental impact study that has been released by your department and I find it to be very well written complete with all very actuate facts and figures. This statement is realistic and it is obvious that the wild horse population needs to be controlled. The long term solution presented is the proper approach.	Comment noted.
16.	Millard County Commission	The proposed gather of wild horses from the Bible Springs Complex is essential to stop deterioration of the range, especially in the current drought conditions. Millard	Comment noted.

No.	Commenter	Comment	BLM Response
		County supports the BLM regarding the Bible Springs gather of wild horses. Millard County has similar issues with wild horses in our county. Millard County supports the following points: • The proposed gather of wild horses from the bible Springs Complex is essential to stop deterioration of the range, especially in the current drought conditions; • The EA supports the BLM Rangeland Health policies that all permittees are required to adhere to; • The EA supports multiple-use concepts the BLM is required to follow; • The proposed gather will have a positive impact on range lands which support wildlife, livestock grazing, and; • The BLM should be held at the same grazing standards grazing permittees are held to, in the management of wild horses	
17.	Rocky Mountain Elk Foundation	The Rocky Mountain Elk Foundation has spent tens of thousands of dollars on big game habitat; range improvements and water projects in Southwest Utah. We have been alarmed at the unfettered growth of feral horses in the whole region. We are disappointed at the lack of the B.L.M.'s management that has allowed the feral horse population to increase by over 200% of management objective. This inexcusable lack of management has been magnified by extreme drought conditions. We ask that the proposed feral horse gather in the Bible Springs Complex continue in a prompt manner. The B.L.M. should abide by its' own BLM Rangeland Health policies that require all users, including feral horses to abide by the management plan already in place. This removal of feral horses is needed to stop the degradation of	Comment noted.

No.	Commenter	Comment	BLM Response
		range lands that also support big game species and livestock grazing. The BLM should be held to the same grazing standards that livestock permit holders are held to. The Utah Wildlife Board recently was forced to drastically increase antlered and antlerless elk permits causing the South west Desert Elk herd to fall well below management objectives. This is unacceptable to Utah sportsmen who have and continue to spend funds on improvements. Please follow your own management objectives. Please address the concern of Utah RMEF members and hundreds of thousands of Utah sportsmen and bring the feral horse population into management population objective.	
18.	Kane County Commission	This is a comment for the record concerning the Horse/Burro overpopulation that has been allowed to occur in the Utah Nevada desert. The Federal Lands Policy Management Act was intended to provide for management of the Federal Estate for multiple use and sustained yield. Instead of managing for environmental health and sustainability, current policy regarding the horse/burro overpopulation problem has been guided more by emotion. Gathering the feral animals is necessary to stop the deterioration of the range lands. This is even more important during drought conditions that currently prevail. The BLM is under mandate to manage for Multiple Use and the EA supports that concept. All of the range permittees are required to follow good policy and the BLM should also. The BLM should be held to the same grazing standards that the permittees are held to.	Comment noted.

No.	Commenter	Comment	BLM Response
		The proposed gather will have a positive impact on the rangelands and will benefit other wildlife and those whose livelihoods and industry are dependent on the ability to maintain their grazing AUMS. The Gather is good for the environment, the other wild life, the grazers and their livestock, and the economy. Please allow the gather to proceed. The proposed gather of wild horses from the Bible Springs Complex is essential to stop deterioration of the range, especially in the current drought conditions; - The EA supports the BLM Rangeland Health policies that all permittees are required to adhere to; - The EA supports multiple-use concepts the BLM is required to follow; - The proposed gather will have a positive impact on range lands which support wildlife, livestock grazing, and; - The BLM should be held at the same grazing standards grazing permittees are held to, in the management of wild horses	
19.	Emery County Commissioner	The real tragedy is the permanent affect this overgrazing by horses and burros has on the rangeland and water sources. Some ranges will recover eventually once the horses and burro numbers are reduced to acceptable numbers, but some ranges will be permanently impacted. If nothing is done, horses and burros certainly will be wiped out by natural means; other wildlife will also suffer. I suggest the BLM in Utah refer to the field office Resource Management Plans (RMP). RMP's establish acceptable numbers of wild animals and need to be followed. The only way to manage wild horses and burros is to budget for the process and then manage these herds to avoid catastrophe.	Comment noted. See sections 3.2.1 Rangeland Resources and Vegetation, 4.2.1 Rangeland Resources and Vegetation that address impacts of wild horses on vegetation including areas treated and seeded within the Complex.

No.	Commenter	Comment	BLM Response
		I encourage the BLM in Utah to spend the money and time to correctly manage feral equine across the entire state. In the Bible Springs area, to save the rangeland the BLM must take all the horses necessary off the range to bring the numbers into compliance with the AML	
20.	Individual	I applaud the efforts of the BLM to finally step up to the plate and address this growing problem. By growing I am referring to the feral horse population and the amount of damage to the environment they are creating. This has become a big issue in western Utah and action definitely needs to be taken.	Comment noted.
21.	Western Rangelands Conservation Association	In regards to the recent EA in the Bible Springs complex, the Western Rangelands Conservation Association (WRCA) encourages the BLM to follow the proposed action number 1 with an increase in the numbers gathered to immediately bring horse numbers within the AML.	Comment noted.
22.	State of Utah Office of the Governor, Public Lands Policy Coordination Office	Wild horses found outside of HMA boundaries within the Bible Springs complex should be removed when found and/or reported. These horses are damaging rangelands on scattered trust land sections and removing forage SITLA has sold to its grazing permittees. Wild horse numbers within the Blawn Wash HA must be kept at "zero" so the forage on trust lands can be fully available to SITLA grazing permittees, and so that the approved RMP allotment for this unit is achieved. Currently in 2014, all annual forage growth sold to SITLA grazing permittees on the Bucket Ranch Allotment has been removed (50-60% utilization) by excessive wild horse numbers. Last, the primary focus of removing horses off private lands is not to keep horses within AML, but to eliminate damage the horses are doing to private holdings,	Comment noted. Section 2.2.1 Alternative 1 – Proposed Action – Gather and Remove Excess Wild Horses from the Bible Spring Complex and Implement Fertility Control was edited with the addition of the following to clarify the possible gather area. "The gather area would include the Complex and lands where wild horses have strayed outside the Complex (up to 10 miles)." In accordance with the 1971 WH&B Act and 43 CFR 4720.2. If wild free-roaming horses or burros stray from public lands onto privately owned land, the owners of such land upon written request shall arrange to have the animals removed as soon as practicable.

No.	Commenter	Comment	BLM Response
		regardless of whether the wild horses are within AML for the area. BLM must not cause damage to private lands by its management actions, or lack thereof, due to wild horses.	
23.	Beaver County Commission	Furthermore, this project conforms to Beaver County's general plan, resolutions, and ordinances as follows: Beaver County's General Plan states: "multiple use and sustained-yield management principles shall be applied in public land use and natural resource planning and management in Beaver County. Land management agencies should develop and implement management plans and make other resource-use decisions that: support valid existing transportation, mineral, and grazing privileges in Beaver County at the highest reasonable sustainable levels; are designed to produce and provide the desired vegetation for the watersheds, timber, food, fiber, livestock forage, and wildlife forage; meet the needs of wildlife, provided wildlife populations are kept at a reasonable sustainable levels so as to not interfere with originally permitted AUM levels under the Taylor Grazing Act." (BC Resource Management Plan, III -1). Resolution 2014-06, a resolution to manage wild horse numbers within Beaver County at appropriate management levels (AML) as specified in the Wild Horse and Burro Act of 1971. This Resolution calls on the Secretary of Interior and other members of the BLM organization to "allocate appropriate funding for the removal, and the destruction of those wild horses that are above the AML in each Herd Management Area, and….. approve and allocate appropriate funding for the fertility treatment methods to reduce future unsustainable growth of wild horses." The	Comment noted.

No.	Commenter	Comment	BLM Response
		reasoning for these directives is also given in the Resolution, ".....the rangeland and existing ecosystem cannot sustain the wild horse population as it exists now, nor can it sustain future unchecked and unmanaged growth of wild horse populations."	
24.	Individual	They have no natural predator. They, more than any other wild animal, need to be managed by humans. They need to be put to good use such as in a slaughter facility.	Comment noted.
25.	Utah Farm Bureau Federation	The gather proposed in the EA supports the overriding Rangeland Health obligations incorporated in the Wild Horse and Burro Act and the Public Rangeland Improvement Act. Recognizing the multiple use-sustained yield mandate, the proposed gather underscores that all permitted uses are required to adhere to the RMP, AML and other obligations.	Comment noted.
26.	Utah Farm Bureau Federation	The proposed gather is a positive step in the agency addressing the negative impacts of the wild horse over-population in the Bible Springs Complex area and recognizing the forage and water support livestock and a broad range of wildlife.	Comment noted.
27.	Individual	I urge the BLM to follow suit of the Board of Big Game Control, who recently approved the removal of over 400 elk in this area, and remove all excess horses down to the 300 AML level previously established. The future of our native wildlife in this area are at stake. Any attempt to raise the set AML's and increase the population levels would be a travesty.	Comment noted.
28.	Individual	This letter is in regards to the gather that needs to be done on the Bible Springs HMA. This gather is critical to the welfare of the range health in this area. The over-population of the Wild Horse is mutilating this fragile desert landscape. With no end in sight to the drought, drastic measures need to be taken to maintain appropriate numbers in the horse herds.	Comment noted.
29.	Individuals	The proposed gather will have a very positive effect on range lands which	Comment noted.

No.	Commenter	Comment	BLM Response
		support wildlife and livestock grazing.	
30.	Individuals	We don't want all the horses removed. But we do want the numbers held at what they were in 1971.	Comment noted.
31.	Individual	Recognizing that the wild horse population in the Bible Springs Complex is out of compliance with the AML, and recognizing the area continues to be impacted by drought, the proposed gather is prudent and provides recognition by the agency that there is a need to address the detrimental impacts on the forage rights of livestock ranchers.	Comment noted.
GATHER METHODS			
32.	Wild Horse Observers Association	There is no reason to use helicopters for round ups because there are more humane methods including lure traps.	The WFRHBA mandates the gather and removal of excess wild horses and specifically authorizes the use of helicopter in Section 9 of the Act. —*In administering this Act, the Secretary may use or contract for the use of helicopters or, for the purpose of transporting captured animals, motor vehicles. Such use shall be undertaken only after a public hearing and under the direct supervision of the Secretary or of a duly authorized official or employee of the Department"* [emphasis added]. The Public Rangelands Improvement Act (PRIA) of 1978 (Pub. L. 95-514, Sec. 4, Oct. 25, 1978, 92 Stat. 1805.) also addresses this issue with the direction to *"continue the policy of protecting wild free-roaming horses and burros from capture, branding, harassment, or death, while at the same time facilitating the removal and disposal of excess wild free-roaming horses and burros which pose a threat to themselves and their habitat and to other rangeland values*|| [emphasis added].
33.	Individual	Use bait trapping exclusively. The goal is for bait-trapping to replace helicopter roundups. Bait-trapping should not be just another method of gathering horses but the method. I urge BLM-Cedar City to embrace the superior bait-trapping	Refer to section 2.2.1 Alternative 1: Proposed Action and section 2.3 Bait or Water Trap Only. The project area is too large to effectively use this as the primary gather method.

No.	Commenter	Comment	BLM Response
		approach whenever it is necessary to gather wild horses.	Road access for vehicles to potential trapping locations necessary to get equipment in/out as well as safely transport gathered wild horses is limited. The presence of scattered water sources on private, state and public lands inside and outside the HMAs specifically in the fall, winter, and spring would make it almost impossible to restrict wild horse access to the extent necessary to effectively gather and remove the excess animals through bait and/or water trapping to achieve management goals.
34.	Individual	Helicopters are not safe. Avoid this dangerous method for counting and gathering wild horses. As they say, the life you save may be your own.	This comment is outside the scope of this document..
35.	Individual	Good people don't roundup horses and burros using helicopters as this terrifies the animals and can cause injury, totally inhumane. Good people would use cowboys on horseback to roundup wild herds which is much less invasive.	Comment noted. Over the 40 years of managing wild horses the BLM has found that the use of helicopters to gather wild horses is one of the most efficient, safest, and least stressful to the wild horses. By working with individuals like Temple Grandin and Velma Johnston the BLM has refined its helicopter gather methods to reduce stress to the wild horses, improve efficiency and safety.
ALTERNATIVE METHODS			
36.	Individuals	One of the larger problems is what to do with these animals once rounded up. They need to be euthanized / sent to slaughter houses so they can be properly re-purposed. These are not pets that anyone wants and we have to stop listening to the folks who think this is cruel, but still eat cows. The bottom line is the United States needs to have slaughter houses for horses due to the huge population of these animals, both wild and domestic. The majority of us do not want to pay taxes to have these horses fed and sheltered until they can die naturally on someone else's property. Private businesses should do that on their own	This comment is outside the scope of this document.

No.	Commenter	Comment	BLM Response
		money. Spend the tax dollars on trucking them to Canada or Mexico to slaughter if that's the only method to get them off the range.	
37.	Individual	Minimum feasible management means letting natural selection do its job. Mountain lions, wolves, bears, and coyotes should be allowed to carry out their role of population-control agents. Predators will cull the weak, and a thriving natural ecological balance will ensue. Conservation Researcher Dr. Corey Bradshaw emphasizes "... just how important predators are for healthy ecosystems. Long story short – if your predators are not doing well, chances are the rest of the ecosystem is performing poorly."	Refer to section 2.2.3 No Action Alternative- No Gather, Wild Horse Numbers Controlled by Natural Means. Wildlife is managed under the Utah Division of Wildlife Resources and not the BLM. However, over the past 21 years an average of 6 cougars per year have been taken in the Southwest Desert wildlife unit (3,338,921 acres), of which the Bible Spring Complex (222,006 acres) makes up only 7%. The BLM does not have any known recorded evidence, sign, or sightings of the cougars within the Bible Spring Complex taking of a wild horse or impacting the wild horse population. Wildlife is monitored through The Utah Division of Wildlife Resources and not the BLM. The annual cougar reports can be found at: http://wildlife.utah.gov/dwr/hunting/319-cougars.html Information on other wildlife species can be found at the Utah Division of Wildlife Resources at: http://wildlife.utah.gov/dwr
38.	Individual	Promote on-the-range management not removals--thus precluding expensive helicopter or bait-trapping removals. Utilize volunteers and interns to assist in the careful documentation of these herds to determine actual population count, births, and mortality on the range.	Refer to section 2.2.3 No Action Alternative- No Gather, Removal or use of Fertility Control, 4.4 Alternative 3 – No Action. This comment is essentially the No Action Alternative address throughout the EA. This comment suggest the use of volunteers to gather data on the wild horses within the Complex, Some of the activities can't be performed by volunteers or outside groups due to the required training and liability issues. However, the

No.	Commenter	Comment	BLM Response
			CCFO BLM invites and encourages volunteers and groups to work with the BLM to gather such data. No volunteers or groups have formally offered such help on the Bible Spring Complex.
39.	Individual	Something that could be done nationwide is to have a 501c3 manage the herds in each state. For Example, Protect Mustangs in California, The Cloud Foundation in Colorado, etc. The 501c3's could take out grazing permits for our Federally-protected wild Mustangs and the BLM could reimburse the 501c3's for the grazing fees. This would take the BLM out of the wild horse management business, which needs to be done, since we only have 1% of our WH&B left on the range at this time and you're seeking public comment. It should not be necessary to seek public comment when all we have left if 1% on the range.	This comment is outside the scope of this document.
40.	The Cloud Foundation	Between now and next spring use volunteers and interns to monitor bands and identify their daily migration and travel patterns. Installation of water facilities this summer may enhance developing a more effective way to track band movements. Construct traps in locations identified for water or bait trapping.	This comment is outside the scope of this document. This comment suggests the use of volunteers to gather data on the wild horses within the Complex and to set up water and bait traps. Some of the activities can't be performed by volunteers or outside groups due to the required training and liability issues. However, the CCFO BLM invites and encourages volunteers and groups to work with the BLM to gather such data. No volunteers or groups have formally offered such help on the Bible Spring Complex. The installation of water facilities is outside the scope of this document. However, the CCFO BLM in the past and present has worked with multiple organizations, volunteers, and groups to develop, maintain, improve, and install

No.	Commenter	Comment	BLM Response
			water projects throughout the field office. Many have been within the Bible Spring Complex.
41.	Iron County Commission	4.2.1 2nd pp No mention of maintenance of existing vegetation treatment areas. This should be a primary focus to keep adequate forage to support all types of AUMs (horses, livestock, and wildlife)	This comment is outside the scope of this document.
42.	Individual	Creatures like wild horses have many ways of limiting themselves. They compete with others for forage, they are preyed upon by large cats. They are attacked and killed by disease. Do they really need us to make life harder for them by shrinking their populations?	Refer to section 2.2.3 No Action Alternative- No Gather, Wild Horse Numbers Controlled by Natural Means. See response to comment 37.
COST OF GATHER			
43.	Individuals	Fiscally irresponsible. Recently a BLM official publicly stated that each horse removed from the range costs taxpayers $43,000 over the life of the horse. Given this, and BLM's low adoption rates, BLM Utah is making a $30 million decision to remove horses from this area. This is unfathomable in light of available, cost-effective alternatives, including using PZP fertility control to manage the herds on the range and reducing private livestock grazing. As you likely know, private livestock grazing subsidies cost taxpayers hundreds of millions annually.	Analyzing socio-economics of livestock grazing is outside the scope of this document. Refer to checklist in Appendix A. The BLM has brought forward what we believe to be the most viable options for managing the HMAs in the Complex, and the most responsible way to ensure the welfare of the wild horses and protection of the habitat. The Wild Free Roaming Horses and Burros Act (WFRHBA) does not authorize a cost-based decision-making process if excess horses are present. "Proper range management dictates removal of horses before the herd size causes damage to the range land (118 IBLA 75)." With regard to public opposition of wild horse gathers, comments received from the public are used as a means to improve management and ensure that issues have been identified and addressed. It is not a means to tally votes on the most popular form of
44.	Individuals	Fails to provide an economic analysis of the BLM's costly decision to remove nearly 700 wild horses from this area vs. the more cost-effective options of reducing livestock grazing and managing herds on the range with fertility control.	
45.	Individual	The EA fails to provide economic analysis of the BLM's costly decision of removal versus the decision to reduce livestock grazing and return these lands back to their original purpose of protected habitats for wild horses and burros.	

No.	Commenter	Comment	BLM Response
46.	American Wild Horse Preservation Campaign (AWHPC).	Fiscally irresponsible. Recently Joan Guilfoyle, the BLM's wild horse and burro division chief, publicly stated that each horse removed from the range costs taxpayers $46,000 over the life of the horse. Given this, and BLM's low adoption rates, BLM Utah is making a $30 million decision to remove horses from this area. This is unfathomable in light of available, cost-effective alternatives, including using PZP fertility control to manage the herds on the range and reducing private livestock grazing, which costs taxpayers hundreds of millions annually due to the below-market, taxpayer-subsidized grazing rates that ranchers currently pay.	management. BLM has a responsibility per the WFRHBA to remove excess wild horses, ensuring the health of wild horses and the rangeland.
47.	The Cloud Foundation	Each horse removed from the range costs taxpayers $43,000 over the life of the horse. Given this cost, the fact that BLM wild horse holding facilities are at capacity, and the fact that private livestock grazing costs US taxpayers in excess of $123 million annually, it would seem that on the range management of wild horses is the only environmentally and fiscally responsible path for the BLM to pursue.	
48.	American Wild Horse Preservation Campaign (AWHPC).	The EA fails to analyze the economic impacts of the proposed action, including disclosure of all costs associated with the capture operation itself, as well as the costs for short- and long-term holding and adoption preparation for the horses removed from the range. A comparison of costs for the Proposed Action and the alternative actions suggested by the public must be presented. As stated above, the BLM Wild Horse and Burro Division Chief recently stated that each horse removed from the range and not adopted costs taxpayers $46,000 over the life of the horse. Given the current low adoption rates and backlog of adoptable horses in holding, the Proposed Action could cost taxpayers up to $30 million. By comparison, an	

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		alternative that involves leaving horses on the range, reducing livestock grazing (which costs taxpayers money in its own right) and managing horses on the range with PZP fertility control would be far more cost-effective than the proposed action.	
49.	Individual	Good people use less expensive means of herd management, TNR (trap, neuter/fertility shots, release) this saving the taxpayers money.	
TIMING OF GATHER			
50.	Individuals	The July roundup will occur just after foaling season, meaning that very young foals – along with elderly, and physically compromised horses surviving on limited, drought-reduced water resources – will be subjected to the terror, trauma and physical exertion of a helicopter stampede conducted in summer desert heat. Upon capture, the tightly knit family bands will be torn apart; the animals will be robbed of their freedom and their families – the two things that are most important to a wild horse.	The Environmental Consequences portion of Section 4.0 describes the potential impacts of the Proposed Action in detail. Please also refer to section 4.2.6 which analyzes impacts to wild horses including individual wild horses. The EA includes mitigation measures that would be used to ensure that potential impacts are minimized or avoided completely. Appendices 5 and 6 also details Standard Operating Procedures developed over the past 35 years to ensure the well-being of wild horses during gathers and maintain human safety. BLM staff is on site at the gathers continuously, monitoring weather conditions and health and wellbeing of wild horses. Adjustments to gather operations are made as necessary to ensure animal health and safety. At this time, specific temperature and distance parameters have not been included in the gather contract, but left to the discretion of the BLM COR and APHIS Veterinarian recommendations to adapt gather operations to site specific conditions and animal needs. In most cases, wild horses are in the peak of fitness as compared to domestic counterparts, and are adapted to life on the range in harsh conditions. As part of their lives, they regularly run over steep terrain and in summer conditions.
51.	Respect4Horses Organization	July is the absolute worst month in the hot desert to perform helicopter stampedes on the newborn foals in extreme temperatures. We predict a disastrous number of wild horse deaths if you proceed.	
52.	Individual	The very real physiological consequences of heat stress and probable rhabdomyolysis to susceptible animals from your current "gathering" methods is guaranteed if you do not heed the warnings. Nothing humane about stampeding horses over miles of rough territory in 100 + temperatures.	
53.	Individual	Scheduling a gather in July is inhumane and unconscionable! The foals are still young, the area is drought-compromised and helicopters are traumatic.	
54.	Individual	The Environmental Assessment fails to consider the impact on all the wild horses in the gather, from young to old, and the trauma caused by such panic in times of	

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		drought and summer heat.	They might travel 10-15 miles per day or more. Gather operations are adjusted on an hourly or daily basis if necessary based on animal health and weather conditions. In over 35 years of gathering wild horses, the BLM has routinely gathered wild horses in the summer months with few complications experienced, particularly if the animal health is not already compromised by poor body condition or emergency conditions brought on by an overpopulation of wild horses in relation to available resources. Wild horses are moved during gather operations by herding and are not stampeded. The WFRHBA mandates the gather and removal of excess wild horses and specifically authorizes the use of helicopters in Section 9 of the Act. —In administering this Act, the Secretary may use or contract for the use of helicopters or, for the purpose of transporting captured animals, motor vehicles. Such use shall be undertaken only after a public hearing and under the direct supervision of the Secretary or of a duly authorized official or employee of the Department" [emphasis added]. The Public Rangelands Improvement Act (PRIA) of 1978 (Pub. L. 95-514, Sec. 4, Oct. 25, 1978, 92 Stat. 1805.) also addresses this issue with the direction to "continue the policy of protecting wild free-roaming horses and burros from capture, branding, harassment, or death, while at the same time facilitating the removal and disposal of excess wild free-roaming horses and burros which pose a threat to themselves and their habitat and to other rangeland valuesl [emphasis added]. Recently various professionals of the veterinary and equine community have observed gathers and holding facilities,

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			and followed up with reports of their findings and recommendations to BLM. For the most part, the team members found that wild horse and burro gathers are necessary, and conducted humanely. Many of the recommendations have already been implemented by BLM and the gather contractors. These reports can be viewed at these locations: Office of Inspector General (OIG)report on the WHB program: http://www.doioig.gov/images/stories/reports/pdf/BLM%20Wild%20Horse%20and%20Burro%20Program%20Public.pdf American Horse Protection Association Independent Report: http://www.blm.gov/wo/st/en/info/newsroom/2010/december/NR_12_03_2010A.html American Association of Equine Practitioners Report: http://www.aaep.org/images/files/AAEP%20Report%20on%20the%20BLM%20Wild%20Horse%20&%20Burro%20Program%20Final.pdf
55.	Iron County Commission	2.2.1 Design Features 2nd bullet Trap placement should not be of concern to sage grouse, as long as it is not on a lek. What should be of concern is the timing of the gather (early spring and summer) for leking and nesting activities. The 4 mile within a lek requirement may be changed by the upcoming GSGEIS. Also need to make language flexible enough to allow for change based on upcoming EIS requirements.	This design feature was deleted from the proposed action and the following paragraph was added to section 4.2.5 Wildlife: *Greater sage-grouse and/or its habitat could be impacted temporarily and short term through disturbance and/or displacement. After gather activities have ceased, grouse would be expected to return to the area. Removal of wild horses would benefit sage-grouse in the short-term through improved access to water sources and in the long-term through improved habitat conditions, both at water sources/riparian areas and in upland habitat containing sagebrush.*

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NUMBERS OF HORSES GATHERED			
56.	Individuals	The target removal numbers are based on wildly inflated population estimates that are not scientifically based. If the BLM proceeds to round up 600-700 horses from this area, it will do so at significant risk of leaving few, if any, horses behind.	An error was found in Table 2. The estimated population, gather and removal numbers were corrected in the table. The proposed wild horse gather is needed to remove excess wild horses in order to achieve a thriving natural ecological balance between wild horse populations, livestock, wildlife (elk), rangeland vegetation, and riparian resources, and protect the range from further degradation by wild horses. Genetic samples from the wild horses gathered will be collected and evaluated to determine if changes to the Bible Spring Complex wild horse management are needed.
57.	Individuals	According to the best estimates of the horse population, this removal will essentially decimate the existing herd, as it will leave only a small breeding stock.	
58.	Individual	First and foremost, correct the biologically-impossible wild-horse population-figures.	
59.	Individual	The EA states: "Since the passage of the WFRHBA, management knowledge regarding horse population levels has increased. For example, wild horses are capable of increasing numbers 15-20% annually (NAS 2013), resulting in the doubling of wild horse populations about every 3 years." This EA statement is not validated – it is a supposition based on speculation – not fact. I have a specific and strong objection to this erroneous and non-verified BLM statement regarding wild horse herd population increase. Just because BLM has said it over and over does not make it scientifically valid. Contrary to the above EA statement, the NAS actually stated, "The recent National Academy of Science (NAS) report on the Wild Horse and Burro Program determined that the Bureau of Land Management (BLM) has no evidence of excess wild horses and burros; because the BLM has failed to use scientifically sound methods to estimate the populations" (NAS, 2013). Where is the BLM's scientific data research that proves the EA statement?	Using Science to Improve the BLM Wild Horse and Burro Program A Way Forward produced by the National Academies of Sciences in Chapter 2, Estimating Population Size and Growth Rates on page 56 of Conclusions, Population Growth Rates it states: "On the basis of the published literature and the additional management data reviewed by the committee, the committee concludes that it is likely that most free-ranging horse populations on public rangelands in the western United States are growing at an annual rate of 15-20 percent".
60.	Individual	Gathers and removals have been conducted within or on private lands adjacent to the	See Response to Comment 55-57.

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		different HMAs in 1982, 1983, 1984, 1985, 1988, 1989, 1991, 1994, 1995, 1998, 2000, 2001, 2002, 2006, 2007, 2008, 2009, 2010, 2012, and 2013 to attempt to keep the horse population within the AML. Only the 2006 and 2009 gathers were done on all four of the HMAs at once as a complex. The gathers in 2010, 2012 and 2013 were small private land gathers. [Emphasis added.] Per the Completed Gathers data, posted on the National Webpage, BLM-Cedar City removed the following numbers of wild horses from the Bible Spring Complex: 2009 -- 374 2010 -- 112 -- This many horses do not constitute a "small private land gather." 2011 -- none 2012 -- 9 2013 -- Said to have been conducted, but no report found. The federal regulations at 43 CFR 4720.1 require that a determination of excess mustangs be based on current information. The subject EA is predicated on aerial survey flights made in 2012 -- two years ago. I acknowledge that it is administratively convenient to assume a constant birth rate, to then extrapolate two years' foal crops (one of which is yet unborn), and tack on another 20-percent for those wild horses assumed to be "unobserved." However, such creative computational leaps do not constitute an acceptable methodology. Therefore, the EA is both invalid and noncompliant. The 2012 aerial count was performed in a helicopter, whose noise and vibrations cause horses to flee. Thus, as the chopper flew from grid-to-grid, the same horses were likely being counted again and again. The 2012 census was most likely inflated	See Section 3.2.6 Wild Horses and Appendix 8 for how the estimated population was calculated. The 2010 Four Mile Gather was located in an Idaho HMA. Private land gathers may be reported as simply outside HA gathers and not specific to what HMA was adjacent to the private lands. Likewise sometimes an HMA is listed as a removal when the removal was from private lands outside the HMA but adjacent to it. We use the most current population inventory to base our estimated population. Over the past three years the BLM has implemented the use of the Mark Resight and Simultaneous Double Count Methods to improve population inventories. These methods will be used for future population inventories within the Bible Spring Complex. However, using these methods has shown that direct counts are consistent in under count of populations.

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		due to the limitations of the method used. It is nearly impossible to accurately count mustangs by means of a flyover. hard to tell horses apart and to know for sure that they haven't been counted already. Due to wild horses' roving nature -- they are known to roam up to 50 miles a day -- if the inventory was taken over a number of days, as was the case, many instances of counting the same animals is probable. BLM reports that the wild horses in these HMAs move freely back and forth across invisible boundaries and open spaces. Therefore, it is likely that horses were double-counted. BLM needs an accurate method of taking inventory. The current approach results in the false impression of an excess population. Rather than add 20-percent "unobserved" imaginary horses, BLM needs to subtract 20 percent to adjust for double-counted horses. An inflated census leads to an unnecessary roundup and unfair removals that will cost the taxpayers dearly when all related and ongoing expenses are considered. BLM needs to find a technological answer to counting and tracking horses with accuracy.	
61.	Individual	After BLM's last aerial wild horse population survey 2 years ago, only 261 adult horses were counted for the entire Bible Springs Complex with 57 foals/yearlings. How did BLM come up with a population of nearly 700 horses in 2014 in two years? Before any roundups are done, there needs to be a scientific count of horses to show that there are in fact that many horses and this information is to be made public.	
62.	Individual	Your EA is an inadequate piece of information that once one wallowed through the the government speak and double talk never produced tangible	

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		evidence that justified the removal of upwards of 700 head of wild horses. Where is the justification when the document did not address one piece of information that proposed reduction in commercial livestock use on these allotments? What are the actual number of wild horses in this area? I do not accept the anecdotal nonsense of the Iron County Commissioner, David Miller. Not one shred of evidence has been produced that the wild horses exceed the so-called AML.	
63.	Western Rangelands Conservation Association	With a population growth rate of 20-25% annually, this small gather of 200 head of horses will not keep pace with current population increase in horse numbers. It is a move in the correct direction but simply not enough.	Refer to section 2.2.1 Refer to section 2.2.1 Alternative 1 – Proposed Action – Gather and Remove Excess Wild Horses from the Bible Spring Complex and Implement Fertility Control. The purpose of the proposed Bible Springs Complex Gather, Removal and Fertility Treatment Plan is to achieve a thriving natural ecological balance, achieve and maintain wild horse AML, collect information on herd characteristics, determine herd health, maintain sustainable rangelands, and maintain a healthy wild horse population within the Bible Springs Complex which includes the Bible Spring, Four Mile, Tilly Creek and Blawn Wash HMAs. The proposed action is not limited to just 200 head.
64.	Individual	Increase of Appropriate Management Levels of wild horses to insure genetically viable herds.	Refer to section 2.2.1 Alternative 1 – Proposed Action – Gather and Remove Excess Wild Horses from the Bible Spring Complex and Implement Fertility Control. This section includes data collection and monitoring of the wild horses in the Bible Spring Complex. Refer to section 3.2.6 Wild Horses. There is not information to suggest that the
65.	The Cloud Foundation	We recommend increasing AML's to genetically viable numbers. The current goal of 80 horses, the low AML for Bible Springs Complex is not genetically viable and will not insure the sustainability of the herd.	

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			proposed gather would result in dangerously dwindling numbers of wild horses. The BLM has been managing and gathering wild horses in the Bible Spring Complex area since 1975, with growth rates that average 20%. The levels of genetic variation within the Complex were near the average for wild horse populations.
LENGTH OF GATHER PERIOD			
66.	State of Utah Office of the Governor, Public Lands Policy Coordination Office	Unfortunately, while the EA contemplates the gather and removal of 607-697 wild horses in the summer of 2014, the EA also states that "BLM would conduct gathers approximately two to four times over a six to ten year period, to remove excess wild horses until the Bible Springs Complex wild horse population is at the lower AML." Gathers of the 697 wild horses extended over a 10 year period to bring the HMAs within AML is inadequate to meet the requirements of the WFRHBA and the existing RMP. Gathers to bring the wild horses within AML should be conducted immediately, with maintenance gathers conducted as needed.	Refer to 2.2.1 Alternative 1 – Proposed Action – Gather and Remove Excess Wild Horses from the Bible Spring Complex and Implement Fertility Control in the Final EA. The proposed action was edited to clarify that the proposed action does not limit the number of wild horse gather, removed and released to just what is shown in Table 2 of the preliminary EA. Regular population inventories would be conducted at a minimum of every 3-4 years to calculate the estimated population that would then be used to determine the number of horses captured, removed and treated with fertility control each gather or year.
67.	State of Utah Office of the Governor, Public Lands Policy Coordination Office	The proposed action is further clouded by information from the Utah State Office of the BLM. This guidance implies that BLM will gather a hundred or so wild horses this summer. However, these gathers and removals are not mentioned or analyzed in the EA as part of the overall program, leading to a lack of clarity of the actual proposal analyzed. For many reasons, the confusion caused by the implication that the BLM is considering the required gathers over a 10 year period must be corrected. Primarily, a long-term plan, such as 10 years, does not achieve compliance with the AML. In addition, such a plan is not one designed to succeed	See Response to Comment 9, 56 -58, and 63. Refer to Section 3.2.6 Wild Horses and Appendix 8 for how the estimated population was calculated.

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		at the intended goal due to the increase in population that would occur between successive gathers. Failing to remove the excess horses immediately could result in BLM having to remove more than triple the number of horses as indicated in the chart prepared by Iron County. While the numbers BLM aims to gather and remove are not discussed in the EA, the chart is illustrative of the dangers and astronomical costs if BLM fails to remove all excess wild horses from the HMA immediately. Accordingly, the state requests the EA define when each gather will occur then estimate how many horses, based on those gathers and population growth, will need to be removed to achieve the lower AML.	
68.	Iron County Commission	2.2.1 Alt 1 1st pp Our major issue with the EA is comment #4. (below) Gathers of the 697 wild horses extended over a 10 year period to bring the HMA's within in AML is unacceptable. Gathers to bring the wild horses within AML should be conducted immediately, and maintenance gathers should be conducted as needed as horse numbers escalate. Only 2014 numbers are used in the analyses which leads one to believe that only 697 horses need to be removed, however, we now know that the BLM only plans to remove 200 in 2014 (not indicated or analyzed in the EA). The EA does not take into account this reduced gather, and how many more horses will be produced between gathers. The following table estimates how the impacts of only removing 697 horses over 10 years. The BLM will have to remove more than triple the number of horses off the range that this EA anticipates and expend unanticipated	

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		resources. The EA needs to define when each gather will occur then estimate how many horses, based on those gathers and population growth, will need to be removed over the 10 year period to achieve the lower AML. The proposed management strategies in the EA are not in concert with the WFRGB Act and will destroy the stressed range. The excess wild horses should be removed in 2014 and maintenance gathers to keep them within AML be implemented over the course of the EA. Below is a table that estimates impacts of 697 removal over 10 years period.	
69.	State of Utah Office of the Governor, Public Lands Policy Coordination Office	In the Bible Springs Complex, rangeland conditions are experiencing long-term damage because fragile semi-desert rangelands of the West Desert are subject to wild horses numbers in excess of the AML. In response, the BLM is violating its multiple-use mandate by reducing or eliminating livestock from allotments in the Bible Springs Complex, while wild horse numbers have continued to grow. These reductions of AUMs and forage by reason of failure to comply with the WFRHBA are beyond the control of the livestock permittees, and are a direct result of BLM's failure to carry out its mandate under WFRHBA. Instead, the ongoing drought should trigger emergency removals of wild horses in the complex. As such, the state requests the EA be clarified to reflect BLM's obligation to act immediately under these emergency circumstances to bring the wild horses within AML, rather than removing a smaller number of horses in a piecemeal fashion.	The CCFO BLM doesn't classify the current situation as an emergency as defined by BLM H-4700-1 Wild Horse and Burros Management Handbook section 4.7.2 Emergencies defined as: *Emergencies generally are unexpected events that threaten the health and welfare of a WH&B population and/or their habitat. Examples of emergencies include fire, insect infestation, disease, or other events of a catastrophic and unanticipated nature. Immediate action is normally required.* However, the current situation could change.
WILD HORSE NUMBERS VS LIVESTOCK NUMBERS			
70.	American Wild Horse Preservation Campaign (AWHPC).	The final EA must specifically quantify range impacts from wild horses and livestock, explain how BLM delineates between the two when taking into consideration current impacts and the impacts of historic livestock grazing in the	Refer to sections 1.3, 1.4, 1.5, 3.2, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.2.5, 4.2.1, 4.2.2, 4.2.3, 4.2.4, and 4.2.5. The BLM is not proposing to remove wild horses simply because the population is

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		area. The final EA must also include specific information about the differences between wild horse grazing patterns and livestock grazing patterns and how those differences imply differences in impacts to the range.	over AML. Refer to Section 1.3. Through monitoring and review of other relevant factors, we have determined that excess wild horses are present and need to be removed not only to prevent degradation of the range, but to curtail existing impacts by wild horses and ensure wild horse health and welfare, as well as improvement and health of the habitat. The BLM utilizes well established scientific methods in the field of range monitoring, inventory and carrying capacity allocations, following approved methods outlined in official technical references and BLM handbooks and manuals. The CCFO has extensive vegetative trend, utilization, precipitation, actual use, riparian, and rangeland health studies which are contained in the Complex's HMAs and allotment monitoring files (4120 and 4710 files). Only the most current pertinent information has been summarized within this EA to show that excess wild horses occur within and outside, but adjacent to the Complex. Rangeland Health Assessments were completed on 16 grazing allotments within the gather area from 2007 through 2011 as indicated by the Monitoring Report for the Bible Spring Complex. This report showed that causal factors for not meeting standards included, but are not limited to, Pinyon Pine/Juniper (PJ) encroachment, drought and grazing by livestock, wildlife and wild horses. These studies can be found within the allotment files and summaries of these studies are in the Monitoring Report for the Bible Spring Complex. The methodology of each study was completed using technical reference 1734-6. If it was determined that livestock
71.	Individuals	Fails to provide monitoring data to justify the removal of horses instead of livestock. The EA does not disclose how the BLM discerns between wild horse impacts and livestock impacts, particularly given the vastly larger number of livestock on this public lands area, and the fact that 15 of 16 livestock grazing allotments within the Complex are non-compliant with one or more rangeland health standards.	
72.	American Wild Horse Preservation Campaign (AWHPC).	The EA fails to provide monitoring data to justify the removal of horses. The EA does not disclose how the BLM discerns between wild horse impacts and livestock impacts, particularly given the vastly larger number of livestock on this public lands area, and the fact that 15 of 16 livestock grazing allotments within the Complex are non-compliant with one or more rangeland health standards. It remains unclear how BLM can attribute range damage to wild horses given the gross disparity of resource allocation within the Complex (17,347 Animal Unit Months [AUMs] for the 16 livestock grazing allotments that are wholly or partially within the HMAs vs. a maximum of 2,040 AUMs for wild horses, EA page 25).	
73.	Individual	The Environmental Assessment fails to provide monitoring data to justify the removal of the wild horses and burros instead of the privately owned livestock.	
74.	Individual	This EA is inadequate because it: Fails to provide monitoring data to justify the removal of horses instead of livestock. The EA does not disclose how the BLM discerns between wild horse impacts and livestock impacts, particularly given the	

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		vastly larger number of livestock on this public lands area, and the fact that 15 of 16 livestock grazing allotments within the Complex are non-compliant with one or more rangeland health standards.	were a causal factor toward the non-attainment of the Standards and Guidelines, changes to livestock grazing were made through the grazing permit renewal process. In the riparian section it states, "Damage to wetland and riparian areas often increases during drought years when wild horses may trample and dig in these areas in search of water. Because many of the springs within the Bible Springs Complex are non-functional due to drought conditions, the riparian vegetation is already stressed". While this referred to the riparian areas in the Bible Spring Complex in general, there are riparian areas that do not receive use by livestock and those show negative impact by wild horse and wildlife. Some monitoring is limited by personnel and budget. Both GPS and Satellite methods to track wild horses would be cost prohibitive if the technology existed and could be used on wild horses, but BLM is continually looking for partnerships with universities and other organizations to complete such work. The purpose of the EA is to document the potential impacts associated with the Proposed Action and Alternatives, not to reproduce hundreds of pages of data and reports.
75.	Individuals	The BLM allows just 80-130 federally-protected wild horses in this 33 SQUARE MILE area, while authorizing the annual equivalent of more than 2,300 privately-owned cattle and sheep to graze the same area.	This comment is outside the scope of this document.
76.	Individual	"Annual authorized livestock use may be adjusted due to a number of factors, including rangeland health or drought. Managing wild horses at the AML through gather and removals with or without fertility control would help with long-term	See response to comment # 70, Section 2.3 of the EA, Alternatives Considered but Eliminated from Further Analysis, explains why fertility control without removal and removal of livestock

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		sustainability of authorized livestock use within the HMAs at the permitted levels. Managing wild horses within AML would reduce the likelihood of adjustments to current active livestock permits attributable to overuse of resources by wild horses. This action would have no direct impact on current livestock permits in terms of active AUMs, season of use and/or terms and conditions." "Long-term sustainability" of private livestock is not goal of the Bureau of Land Management and private livestock are not "authorized" on wild horse herd areas or any public land – they are "permitted". Use by "permitted" livestock must be adjusted due to a number of factors, including rangeland health or drought conditions. Managing by reduction of private livestock would help with both short and long-term sustainability of "authorized" wild horse use within their Herd Areas and reduction of private livestock would greatly contribute with short and long-term health of the public lands. This simple but factual reality is the answer to any overuse of the public lands and is keeping with the law. In addition, reduction of private livestock would decrease the likelihood of any capture and removal of legally designated wild horses attributable to overuse of resources and degradation of resources by private livestock.	are not considered in detail in the EA. The majority (85%) of the HMA is dense Pinyon-Juniper woodland that produces virtually no forage and as a result is considered unsuitable for grazing by any large ungulate. Approximately 10% of the Complex has good forage production capability, with another 5% with low forage production capability. The Bible Spring Complex has large areas that are very limited to livestock due to steep terrain and thick Pinyon-Juniper woodlands. Most livestock and wild horse conflicts occur near waters and on treated and seeded areas. Conflicts also occur when wild horses range outside of the Complex due to the high population of wild horses in the Complex and the limited water. The cost of livestock use on public lands is outside the scope of the document. In section 3.2.2 and 3.2.6 explain within the Bible Spring Complex livestock are permitted approximately 7,229 livestock AUMs and 2, 820 wild horse AUMs. The average annual actual use by livestock has been consistently less than the permitted AUMs throughout the Complex. Neither the WFRHBA nor FLMPA require the equal allocation of wild horses and livestock on public lands. It is not a matter of choosing to manage wild horses and burros rather than domestic livestock or native wildlife. By law, BLM is required to manage wild horses in a thriving natural ecological balance and multiple use relationship on the public lands and to remove excess wild horses immediately upon a determination that excess wild horses exist. Excess wild horses are being
77.	Individuals	Fails to consider reasonable alternatives to the proposed action, including reduction of livestock grazing and managing wild horses on the range with proven PZP fertility control.	
78.	Respect4Horses Organization	We also request that you divide forage allocations in a more proportionate and fair manner as if you were dividing a pizza between your kids without treating the wild	

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		horses as the stepchild. The law which describes wild horses and burros shall be managed principally but not exclusively in the areas where they existed in 1971. Principally is hardly interpreted as allowing only 80-130 wild horses versus the equivalent of 2300 cattle in AUM's in the same management area.	removed as required by the WFRHBA in order to maintain healthy herds of wild horses on public lands, not for the benefit of livestock. Removal of livestock would not be in conformance with the existing Land Use Plan and is contrary to the BLM's multiple-use mission as outlined in the 1976 Federal Land Management and Policy Act (FLPMA) and PRIA, and would be inconsistent with the WFRHBA, which directs the Secretary to immediately remove excess wild horses. Additionally this would only be effective for the very short term as the horse population would continue to increase. Eventually the Complex and adjacent lands would no longer be capable of supporting the horse populations. Livestock adjustments have been made through other actions and documents. The purpose of the EA is not to adjust livestock use. There is no requirement of the WFRHBA or the regulations to reduce or eliminate livestock as a means to restore TNEB. Administration of Livestock grazing on public lands fall under 43 CFR Subpart D, Group 4100. Livestock grazing on public lands is also provided for in the Taylor Grazing act of 1934.
79.	Individuals	Remove or reduce livestock on the HMAs and allow the wild horses to remain on the HMAs.	
80.	Individual	Decrease of livestock grazing within the Herd Management Area	
81.	American Wild Horse Preservation Campaign (AWHPC).	In the EA, the BLM claims that horses must be removed to achieve, maintain or restore a TNEB and prevent degradation of rangeland resources. However, no threat to the range, riparian areas or TNEB is greater than the extensive livestock grazing authorized by BLM in these federally-designated wild horse areas. Indeed, according to the DEA Appendix V there are 16 livestock grazing allotments that lie partially or wholly within these HMAs for which the BLM allocates forage in the amount of more than 17,347 AUMS. This is the annual equivalent more than 1,000 sheep and 1,200 cattle. By contrast the agency allows just 80-170 wild horses to live in the Complex. Despite this gross imbalance in forage allocation, the BLM remains committed to removing wild horses, yet sheep and cattle grazing continue in the area, despite extreme drought conditions. 1. Range Impacts of Horses and Livestock Differ In addition to differences in density of livestock vs. wild horses present in the Bible Springs Complex – there are significant differences between the impacts of horses and cattle on the range, a factor the EA fails to consider when upholding	

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		the BLM's excess declaration.	
82.	American Wild Horse Preservation Campaign (AWHPC).	Reduce Livestock Grazing Instead of Removing Horses The EA dismisses from consideration an alternative that includes reduction in livestock grazing as a reasonable alternative to the Proposed Action, despite the significant impacts of the Proposed Action, including the addition of as many as 697 wild horses to a holding system that is already overburdened by the warehousing of nearly 50,000 wild horses at taxpayer expense. It is unreasonable for the BLM to continue to allocate to livestock thousands of AUMs in the these HMAs while enforcing the unreasonably low AMLs for wild horses, particularly when the "prevailing public preference" – as demonstrated by the hundreds of thousands of public comments the BLM has received over the past and the 31,000 public comments received on this	

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		EA alone – is for a more equitable distribution of range resources and a reduction in livestock grazing as an alternative to the removal of wild horses.	
83.	American Wild Horse Preservation Campaign (AWHPC).	The BLM allows just 80-130 federally-protected wild horses in this 33 SQUARE MILE area, while authorizing the annual equivalent of more than 2,300 privately-owned cattle and sheep to graze allotments that encompass the HMAs in the Bible Springs Complex. The Bible Springs Complex is a clear example of the gross inequity in resource distribution on the small amount of land that has been designated as wild horse and burro habitat. In Utah, for example, wild horses graze on just 2.1 million acres of BLM land while livestock grazing is authorized on 22 million acres.	
84.	The Cloud Foundation	We recommend reduction of livestock grazing within the HMAs.	
85.	Individual	All of the 15 allotments in Bible Springs have Livestock Grazing Privileges. To simply ignore all the livestock numbers on these lands and focus solely on the Wild Horse numbers, as detrimental, is not adhering to this mandate of "principal." BLM lauded the NAS Report for its investments in "Science- based management approaches" and promised to build on its findings and recommendations. By ignoring cattle numbers is, to consider the Livestock " principal." The reverse intent of WFRHBA, which was passed to protect the Wild Horses and Burros, first and foremost.	
86.	Individual	BLM is authorized to REMOVE Livestock to "provide habitat for Wild Horse or Burros under CFR 47.10.5 in cases of Emergency such as Drought. Livestock numbers cannot be arbitrarily left out of the equation.	
87.	Individual	I want the AML's and HMA's divided fairly among cattle and equines. I want the SAFE Act passed.	

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88.	Individual	I believe that the "cattleman" are taking advantage of the BLM land. Raising cows is almost out of business due to Beef being at outrageously high prices. Most people don't want to eat beef due to theses prices. The wild horses how ever can use it to remain healthy wild animals for generations to come. Wouldn't it be so sad if in 30 years the only thing left of wild mustangs is a bone or two. Your great grandchildren will never know what a mustang looks like. And the whole county can blame the BLM for that.	
89.	Individual	We the people, 80% of those polled, do not want the wild horse herd sizes reduced on public land. We do not want the privately owned livestock on public land at the cost of the wild horses, burros and other wildlife. If the ranches can not get along with the wild life and leave them alone than the only option is to get the privately owned livestock on privately owned land and off public land. The majority of the U.S. citizens when informed of the cost become outraged. 1st the ranchers get subsidized low rates on grazing fees, not the going private rate. 2nd the ranchers are not reducing herd sizes in times of drought and the cattle and sheep are over grazing and ruining the land. 3rd the cost of roundup and daily care for the wild horse, 4th the harm caused during roundups and the slaughter of the horses that don't make it to the dry lot BLM pens that have no shelter. The taxpayer is going in debt daily with BLM managing the land by allowing ranchers to graze livestock at subsidized rates and we are paying premium rates to care for the wild horses. Get the privately owned livestock off or at least decrease the herd sizes and decrease the allotted acreage for privately owned and let the wild horses and burros run free and free of charge to	

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		the taxpayer.	
90.	Individual (Craig Downer)	After reading that the Appropriate Management Level for the composite wild horse population, aka herd, has a range of 80 horses (lower end) to 170 horses (upper end), I am immediately struck by the great emptiness in terms of present wild horses in this vast area. Dividing 222,929 by 80 yields 2,787 acres per individual horse, while dividing 222,929 by 170 yields 1,311 acres per individual horse. Both of these figures expose the preposterous treatment that the wild horses are receiving in the Bible Spring Complex and that goes hand-in-hand with the exaggerated forage and resource allocations that are given to the ranchers and their livestock. Section 2 c of the Wild Free-Roaming Horses and Burros Act (WFHBA) defines a wild horse/burro legal area as "the amount of land necessary to sustain an existing herd or herds of wild free-roaming horses and burros … and which is devoted principally but not necessarily exclusively to their welfare in keeping with the multiple use concept for the public lands." The resounding point I would like to make is that your provision for the wild horses is grossly unfair and actually illegal, as it disobeys the core intent of the unanimously passed WFHBA of 1971.	
91.	Individual	I feel that the horses are scapegoats whenever the ranchers need to be pacified. To me, it seems like this most recent action is due to the Bundy confrontation followed by the comments from David Miller. Actually the cattle and sheep do more to turn the area into a "dustbowl" than the horses. I believe that if there isn't enough vegetation, the cattle and sheep should be reduced. I read about the independent study regarding the herds (paid for by the BLM), and that actually culling the herds makes the population grow faster to rebound. I do	

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		believe that as nature has a way of balancing the animal population with resources. True the horses do not have many predators as we have systematically attempted to do away with them as well. If ranchers had their way, they would do away with the wolves as well. I do believe that public option would side with the mustangs rather than the ranchers. For so few, their concerns seem to be considered heavily.	
92.	Individual	BLM intends to leave only 170 wild horses on 153,000 HMA acres while 2,900 cows and 1700 sheep will chew away forage that will degrade and desertify these thousands of acres. It is unacceptable to use public lands to benefit only ranchers at the expense of our lands and wildlife.	
93.	Individual	The AUM fees should be comparable to privately owned land based on terrain and climate conditions and not the pittance they pay today. Nor do I believe the U.S. Taxpayer should subsidize these ranchers through federal land use management. The ranchers use of public land should come with the consequences if they break any federal laws. Due process applies to all citizens of this country and they are not above the law. These individuals that support the removal of wild horses and burros have more than their ranching interests at stake and further investigation has revealed more sinister agendas.	
94.	Individual	This huge number to be removed would decimate the gene pool left. Reduce the number of cattle and sheep from OUR land, not the creatures who are supposed to be on PUBLIC lands!	
95.	Individuals	After reading that the Appropriate Management Level for the composite wild horse population , aka herd, has a range of 80 horses (lower end, and 170 horses (upper end). I am shocked by the great emptiness in terms of present wild horses in	

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		this vast area. However, by dividing 222,929 acres by 170 yields 1,311 acres per individual horsed. Both of these figures expose the preposterous treatment that the wild ;horses are receiving in the Bible Spring Complex and that goes hand in hand with the exaggerated forage and resource allocations that are given to the ranchers and their livestock.	
96.	Individual	I ask that you implement policy immediately that reduces the number of cattle and sheep on our lands, and reallocate land that was originally give to the horses and burros - back to the horse and burros.	
97.	Individual (Cloud Foundation??)	Decrease livestock grazing within the Herd Management Area	
98.	Individual (Cloud Foundation??)	Increase Appropriate Management Levels of wild horses to insure genetically viable herds.	
99.	Individual	Livestock grazing is apparently way out of proportion to land usage, as per the graph, and needs to be reduced appropriately to show a more equitable use of the range by wild horses	
100	Individual	When determining animal-unit-month (AUM) use, BLM counts a cow and her calf as one unit. Likewise, a wild mare and her foal should also count as one unit.	
101	Individual	Please redo this, exercise your right to reduce livestock, and apply your right to secure adequate water as Implied Federal Water Rights that come with the WFHBA .as well as securing all other viable components for a viable, wild, free-roaming wild horse population.	
102	Individual	Recognizing that the wild horse population in the Bible Springs Complex is out of compliance with the AML, and recognizing the area continues to be impacted by drought, the proposed gather is prudent and provides recognition by the agency that	Refer to sections 3.2.1, 3.2.2, 3.2.3, 3.2.4 and 3.2.6. Theses section address affected environment which includes vegetation conditions, rangeland health conditions, livestock, soil conditions, riparian

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		there is a need to address the detrimental impacts on the forage rights of livestock ranchers.	conditions and wild horses. Refer to sections 4.2.1, 4.2.2, 4.2.3, 4.2.4 and 4.3.6 for impacts of the reduction of wild horse population to AML. Livestock adjustments are outside the scope of this document. Livestock adjustments have been made through other actions and documents. The purpose of the EA is not to adjust livestock use. There is no requirement in the WFRHBA or the regulations to reduce or eliminate livestock as a means to restore TNEB. The WFRHBA (43 CFR 4710.5) does allow for closures to livestock to provide habitat for wild horses, but this is normally done only for temporary periods. Administration of livestock grazing on public lands fall under 43 CFR Subpart D, Group 4100. Livestock grazing on public lands is also provided for in the Taylor Grazing Act of 1934. Livestock Grazing is in conformance with the existing land use plan and BLM's multiple-use mission as outlined in the 1976 Federal Land Management and Policy Act (FLPMA) and PRIA, and is consistent with the WFRHBA.
103	Utah Farm Bureau Federation	When uses compete particularly during drought, the agencies must make difficult management decisions based on best management practices and the law. When wild horses and burros compete with legally permitted livestock for limited forage, the balance cannot come through continued reductions in livestock grazing Animal Unit Months (AUMs). Wild horses and burros are especially hard on forage resources and rangelands as well as water sources. Overstocking leads to deterioration of vegetation, soils and watersheds.	
104	Utah Farm Bureau Federation	During meetings with local ranching families, cattle and sheep producers expressed concerns that because of drought and growing wild horse numbers they have been asked to "voluntarily" reduce AUMs. Federal agencies must recognize in their decisions and actions these are generations old ranching families who have been the economic foundation of Iron and Beaver Counties for decades. The forage allocated to them in these established grazing districts has been deemed chiefly valuable for "livestock" grazing under the Taylor Grazing Act. The forage is being illegally taken by wild horses that are beyond AML levels. In addition, these horses are moving onto management areas excluded by BLM for horses as well as private rangelands and competing for privately owned livestock water rights.	
105	Individual	I have reduced the number of cattle that I run in the Bucket Ranch allotment to relieve pressure on stressed plants in times of drought. Also for over the past 20 years I have not filled that permit to its full stocking rate due to the lack of forage. This lack of forage comes about from the overgrazing of horses.	
106	Individual	My family is a grazing permit holder and	

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		private land owner within the Bible Springs Complex. We must abide by the numbers we have rights to. We have 850+ acres of private land that should have no horses on it. Our grazing permit has 5 allotments. The management plan calls for resting 1 allotment each year on a 5 year rotation. The problem is, that pasture never gets rested. Wild horses are there and more move in to feed, so when we try to go back in there, the grass is worse off than before we rested it. 4 of our 5 allotments are seriously compromised by wild horses - Swamps area, teton and iron mine wash, Jockey Wash and Prouts, and the Mcknight well and Miller Meadows. All four of these have significant horse numbers above the AML. Wild horses eat anywhere from 40%-90% of these allotments. The old Jockey reseed and our state school section are the two places we have the most feed because we can keep the horses at a minimum. Even these two pastures have had horses in them the past 4 years. We have in excess of 150 wild horses just on our allotment. We graze 100 head of cows even though we have permits for 190. There is no grass because of the wild horses. In the not so distant future, if left unchecked, we won't be able to graze any cows and the wild horses will starve themselves to death.	
107	Utah Farm Bureau Federation	Utah law (State Land Use Management Plans – UCA 63-38d-401): Requires where AUMs are reduced by land management agencies due to rangeland health concerns, wildlife populations are to be reduced as well – including wild horses and burros. Those AUMs placed in suspended use should be restored to livestock when	

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		grazing conditions improve, and not converted to wildlife use – or wild horses and burros.	
108	Western Rangelands Conservation Association	We have reduced livestock numbers and AUMs prior to this EA in most of the Bible Springs complex.	
109	Utah Farm Bureau Federation	The proposed gather underscores the importance that all multiple users, including wild horses and burros, of the public lands are held to the same standards as sheep and cattle grazing permittees.	
110	Western Rangelands Conservation Association	This is not about cattle and sheep versus horses. This is about horses destroying range conditions that will take years to again reach a thriving ecological balance. "Wild horses are contributing to the failure to meet the standards and objectives."(p28) of range conditions. "High populations of wild horses can reduce the available forage for not only the year the grasses are grazed, but also for years to come. Horses will graze the most desirable forage plants first before grazing on other species. Wild horses are capable of cropping forage much more closely than wild or domestic ruminants, causing a loss of the most desirable forage species and reducing plant diversity." (p26)	
111	Individual	The livestock permittees have been asked to take a voluntary cut in their herds to make room for the wild horses? This is ridiculous!!! We are the only ones that are ever asked to take the cut, while the horse herds continue to grow and are already over populated, even according to the BLM's own herd management plans.	
112	Iron County Commission	Removal of Livestock… 1st PP Temporary reductions of livestock to offset excessive wild horse numbers should be considered a takings and the permittee	

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		should be justily compensated for their loss because: - the AUMs are owned by the permittee, - the wild horses were permitted to increase without adequate management provisions, as required by WFRHBA, and the IBLA (Animal Protection Institute, 118 IBLA 63, 75; 1991), - the BLM failed to remove excess wild horses off the range as required by the WFRHBA, - such temporary reductions are beyond the control of the permittee and mandated by the BLM.	
IMPACTS OF GATHER ON WILD HORSES			
113	Individuals	Fails to adequately analyze the impacts of the proposed action on the wild horses, including elderly horses, very young horses, and animals operating on low water resources due to the summer season and drought.	Refer to section 2.2.1,4.2.6, Appendix 5 and 6. See response to comments 50-55. These sections have design features and standard operating procedures that have been developed over 40 years of wild horse management. Working with individuals like Temple Grandin and Velma Johnston the BLM has refined its gather methods to reduce stress to the wild horses, improve efficiency and safety. BLM staff is on site at the gathers continuously, monitoring weather conditions and health and wellbeing of wild horses. Adjustments to gather operations are made as necessary to ensure animal health and safety. At this time, specific temperature and distance parameters have not been included in the gather contract, but left to the discretion of the BLM authorized officer, and APHIS or contract veterinarian recommendations to adapt gather operations to site specific conditions and animal needs. In most cases, wild horses are in the peak of fitness as compared to domestic counterparts, and
114	Individual	Gather is scheduled for the time of the year when foals are born, and will disrupt the natural yearly patterns even further.	
115	Individual	This EA is inadequate because it: Fails to adequately analyze the impacts of the proposed action on the wild horses, including elderly horses, very young horses, and animals operating on low water resources due to the summer season and drought	
116	American Wild Horse Preservation Campaign (AWHPC).	Impacts of roundup and large-scale removal of horses on the health, herd structure and natural behaviors of horses left behind, particularly when compared to alternative actions that would allow wild horses to remain on the range.	
117	American Wild Horse Preservation Campaign (AWHPC).	Impacts of helicopter drive on horses in compromised condition. Hundreds of wild horses in the Bible Springs Complex -- including elderly horses, very young horses, and animals operating on low water resources due to the summer season and	

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		drought – will be subjected to a strenuous helicopter stampede over miles of rugged terrain in extreme summer temperatures.	are adapted to life on the range in harsh conditions. As part of their lives, they regularly run over steep terrain and in
118	American Wild Horse Preservation Campaign (AWHPC).	The July roundup will occur just after foaling season, meaning that tiny foals – along with elderly, and inform horses and animals surviving on low water resources – will be subjected to the terror, trauma and physical exertion of a helicopter stampede conducted in summer desert heat. Upon capture, the tightly knit family bands will be torn apart; the animals will be robbed of their freedom and their families – the two things that are most important to a wild horse.	summer conditions. They might travel 10-15 miles per day or more. Gather operations are adjusted on an hourly or daily basis if necessary based on animal health and weather conditions. In over 35 years of gathering wild horses, the BLM has routinely gathered wild horses in the summer months with few complications experienced, particularly if the animal health is not already compromised by poor body condition or emergency conditions brought on by an overpopulation of wild horses in relation to available resources. The WFRHBA mandates the gather and removal of excess wild horses and specifically authorizes the use of helicopter in Section 9 of the Act. —*In administering this Act, the Secretary may use or contract for the use of helicopters or, for the purpose of transporting captured animals, motor vehicles. Such use shall be undertaken only after a public hearing and under the direct supervision of the Secretary or of a duly authorized official or employee of the Department"* [emphasis added]. The Public Rangelands Improvement Act (PRIA) of 1978 (Pub. L. 95-514, Sec. 4, Oct. 25, 1978, 92 Stat. 1805.) also addresses this issue with the direction to "*continue the policy of protecting wild free-roaming horses and burros from capture, branding, harassment, or death, while at the same time facilitating the removal and disposal of excess wild free-roaming horses and burros which pose a threat to themselves and their habitat and to other rangeland values*" [emphasis added]. Over the 40 years of managing wild horses

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			the BLM have found that the use of helicopters to gather wild horses is one of the most efficient, safe, and least stressful methods to gather wild horses.
119	American Wild Horse Preservation Campaign (AWHPC).	Impacts of prolonged and often lifetime holding on the animals – captured mustangs are wild animals forced to live their lives in captivity, spending several years in overcrowded pens in feedlot like conditions in short-term holding, then sent to long-term holding facilities where they are unable to engage in natural behaviors or live in natural social/family groups, or worse, being sold or adopted into the slaughter pipeline. The shortage of long-term holding facilities could mean that horses removed from the Bible Springs Complex will be forced to spend additional time – and perhaps a lifetime – in short-term holding pens, yet the impacts on the horses of this reality are not analyzed.	Outside the scope of this document. The reference made to "overcrowded pens" is unsubstantiated. Short-terms holding facilities provide a minimum of 400 square feet for each horse and if the horse is held for a longer period of time 700 square feet for each horse is provided. On Long-term Holding Pastures (LTP), wild horses are maintained in grassland pastures large enough to allow free-roaming behavior and with the forage, water, and shelter necessary to sustain them in good condition. As of June 2014, about 32,965 wild horses that are in excess of the current adoption or sale demand (because of age or other factors such as economic recession) are currently located on private land pastures in Oklahoma, Kansas, and South Dakota. Establishment of LTPs was subject to a separate NEPA and decision-making process. Located in mid or tall grass prairie regions of the United States, these LTPs are highly productive grasslands compared to the more arid western rangelands. These pastures comprise about 256,000 acres (an average of about 10-11 acres per animal). The LTP and short term facility provide the care that wild horses must receive to ensure they remain healthy and well-cared for. Although the animals are placed in LTP, they remain available for adoption or sale to qualified individuals; and foals born to pregnant mares in LTP are gathered and weaned when they reach about 8-12 months of age and are also made available for adoption.

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USE OF FERTILITY CONTROL			
120	Individuals	Fails to consider reasonable alternatives to the proposed action, including reduction of livestock grazing and managing wild horses on the range with proven PZP fertility control.	See responses to comments 70-112. Refer to sections 2.2.1, 3.2.6 and 4.2.6. The proposed action includes the use of fertility control using the currently approved vaccines and methods and allows for methods that are approved to be used in the future. Fertility control would be used in the Bible Spring, Four Mile, and Tilly Creek HMAs to reduce the annual population growth. The primary use of fertility control would be to maintain the population within AML once achieved. It could be used previous to achieving AML if gather success, holding capacity limitations, population growth rates, other national gather priorities or other circumstances prevent achieving AML during a gather. Refer to section 1.2 Background, 1.6.1 Resources of Concern, 2.3 Alternatives Considered but Eliminated from Further Analysis, Fertility Control Treatment Only Including Using Bait/Water Trapping To Dart Mares with PZP Remotely (No Removal); Gather and Release Excess Wild Horses Every Two Years and Apply Two-Year PZP to Horses for Release. The population of wild horses on the Bible Spring Complex is over the AML. The water resources and forage within the HMA cannot support the current number of wild horses. The use of PZP would slow the growth rate slightly, reducing the number of horses that need to be removed from the HMA over time, but would not address the current over population. The research referred to at the Assateague Island National Seashore was done under much different circumstances and habitat
121	Wild Horse Observers Association	Equally important, there is no reason to use helicopter roundups because PZP is effective and feasible, humane, and has a positive effect on birth rates from immune contraception and from the fact that unlike helicopter or other round ups, it will not cause compensatory reproduction.	
122	Wild Horse Observers Association	Excerpt of NAS Report "In light of the extensive research that has been conducted with liquid PZP, the likelihood that PZP-22 or SpayVac will produce new or unexpected effects, other than an extended duration of action, is small, and this should reduce the scope of research that would be needed. Furthermore, given the decades of research on the earlier liquid formulation of PZP and its successful application in numerous free-ranging horse herds, liquid PZP can be used in many herd areas now. It might be applied not only in herds that are amenable to darting but during gathers for horses that are turned back onto the range. Even without a booster in the months just after a gather, any later inoculation will serve as a booster and initiate a period of infertility (J.W. Turner, University of Toledo, personal communication, August 2012). Thus, liquid PZP could serve as an interim fertility-control method until one of the other longer-acting methods is available."	
123	Wild Horse Observers	There is no reason to wait until the BLM feels they have reached "AML". The	

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	Association	utilization of liquid PZP will reduce the population without round-ups and should be used proactively. It is our experience that once herds are down to their "AML" the BLM then says that PZP can't be used due to genetic viability. One excuse after another. The use of PZP has been effective at Assateague National Park and there have been no round ups or adoptions in over 20 years while the population has been managed and also decreased. "• Only authorized personnel will be allowed on site during the removal operation." These are public lands, these horses belong to the public, and the BLM reports to the public. The public should be able to attend. • Only authorized personnel will be allowed on site during the removal operation." These are public lands, these horses belong to the public, and the BLM reports to the public. The public should be able to attend. "the Blawn Wash HMA where all horses gathered would be removed:" This is where much of the available forage is and zeroing out this property because a fence is expensive is not justified versus the intrinsic value of the horses and also due to the cost of the round ups and holding pens. This action is unjustifiable.	that exist within the Bible Spring Complex. The method of identifying and darting specific mares is not reasonable given the acreage of the Complex area, approachability and access to animals, and the number of animals. Individuals and bands cannot be pre-identified due to many factors listed above. Remote darting has been shown to be ineffective on wild horse herds in Utah. A study by HSUS on the Cedar Mountain HMA in Utah has shown that after two years of trying to administer PZP through remote darting, not one horse has been darted. The wild horses in Utah (excluding the Onaqui HMA horses) are not used to the presence of people and are very wary. It is extremely difficult to get within 50 yards of the wild horses in the Bible Spring Complex in order to dart them. However, this method would be included as fertility control and may be used in the future.
124	Individual	why is the BLM not implementing ON RANGE management with HUMANE fertility control such as PZP? The BLM has had access to PZP for decades and has repeatedly dismissed implementing humane on-range fertility control. Your office has habitually fallen short with regard to PZP - PZP is SAFE and reversible - and it WORKS. PZP is also the cost effective and fiscally responsible option. We do not need to have any more horses removed from the range, we need our horses managed on the range and protected.	

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		And we do not need our horses mutilated by conducting ovariectomies on our wild mares.	
125	Individual	You have seen the scientific data showing that reversible birth control darts are available, affordable and effective at managing herd sizes. You do not need to geld the stallions. Please, let's return to a more natural system. I urge you to work with the horse advocacy groups who can provide know-how, free labor, and help you shift from seeing the wild horses as a problem, and begin to see them as the national treasure that they are.	
126	Individual	Implement fertility control program now to achieve on the range management of wild horses. Starting in spring, 2015, apply PZP, the safe, effective, well-vetted, remotely delivered, reversible one-year vaccine. Booster shots can be delivered annually thereafter during months when most effective - not late summer and fall. Use of volunteer advocates and interns to monitor and accurately document the herd to insure success of fertility control program.	
127	Individual	I do support PZP to help control the populations, I do not support long term storage.	
128	Individual	Normal control of wild animal populations is done humanely and cost effectively through hunting. I don't believe that is an option with horses as they have demonstrated themselves to be highly social and intelligent creatures. Roundups are expensive and inefficient at distributing the population to good homes as shown by the adoption rates, and again are painfully disruptive to the social structure of the remaining horse population. That leaves fertility control. I'm no expert at the cost or effectiveness of this method, but I see no other option. If horses have truly depleted the range to the point the	

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		ranchers are claiming, then there should be some method to apply medication to the water, supplementary food sources/bait in my mind. No doubt I can be wrong about the cost or effectiveness of these methods, but this appears to the the best theoretical approach to the problem. For the millions we are spending in roundups and horse housing costs (neither of which are appreciated by the horse), it would appear on the surface that some of these funds could be applied to the R&D of these techniques through the UofU, USU, SUU, etc.	
129	The Cloud Foundation	We recommend on the range management of wild horse populations using the safe, effective, well-vetted, remotely delivered, reversible one-year vaccine, PZP (Porcine Zona Pellucida) for mares, to begin in the early spring of 2015, as the only fiscally responsible and humanitarian proposal for management of wild horses in the Bible Springs Complex HMA.	
130	Individual	Implement fertility control program now to achieve on the range management of wild horses. Starting in spring, 2015, apply PZP, the safe, effective, well-vetted, remotely delivered, reversible one-year vaccine. Booster shots can be delivered annually thereafter during months when most effective - not late summer and fall.	
131	Individual	Use of volunteer advocates and interns to monitor and accurately document the herd to insure success of fertility control program.	
132	Individual	Utilize a trained volunteer corps to assist in implementing a fertility control program, administering native PZP, beginning with boosters in the spring and then annual doses (in the correct time-late winter and early spring) to control herd growth. This has been done successfully in other herds with volunteers who work with the BLM--i.e. Pryor Wild Horse Herd in Wyoming/Montana, as well as McCullough	

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		Peaks in Wyoming, and Little Book Cliffs & Sand Wash Basin in Colorado.	
133	The Cloud Foundation	We support bait trapping instead of helicopter drive trapping. To be effective PZP must be applied in the early spring which disqualifies the use of helicopters – PZP must be applied during the same time as foaling, when helicopters cannot be used. Bait trapping does require field time for personnel to study behavior patterns to determine multiple bait sites and to identify appropriate mares for fertility vaccine application. But in the long run, it presents the least costly and most effective alternative. BLM staffing can be supplemented by the use of advocate volunteers and interns.	
134	The Cloud Foundation	1. Utilize adaptive management, identifying and adjusting the numbers and ages of horses that receive the drug year-by-year. Adaptive management allows the flexibility – to adjust which mares receive the drug based on what is happening based on reproduction and mortality activity. It allows observation of results to determine which mares will receive PZP. For example, if there is significant winter mortality or active mountain lion predation the application of PZP would be adjusted accordingly. 2. We recommend boostering every female in 2016, with the exception of those in the categories below. One year of infertility treatment will not result in zero foals being born on the Bible Springs Complex. The target goal would be for mortality equaling reproduction over time. 3. Put a low priority on older mares who are no longer foaling – prioritize younger mares in their prime foaling years.	
135	Wild Horse Observers Association	Research with PZP immunocontraception began on Assateague Island National Seashore (NPS) in 1988 and continued through 1993. The results demonstrated	

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		that the vaccine was safe, effective (95%), didn't affect pregnancies in progress or the health of foals, didn't affect behavior or social organization, its contraceptive effects were reversible and that it could be delivered remotely, without handling horses. Based on these results the NAtional Seashore (ASIS) began actual management of the entire herd in 1994, when the population was 175. Twenty years later the population is at 100, the NPS goal, and no horses have been removed. Other effects includes significantly better body condition and health, and significantly longer lives, and the horses retain their evolutionary driven social organization and behavior. From this point on, the goal is to maintain the herd at this number.	
136	Individuals	I think that one solution to the problem would be to castrate most of the studs and spay a lot of the mares. The humane society encourages this in dogs and cats. Why not do it on these horses?	
137	American Wild Horse Preservation Campaign (AWHPC).	Here the proposed action entails removing up to 697 wild horses and using no fertility control. This will not only add to the fiscal crisis caused by the stockpiling of 50,000 horses in holding facilities, but will also fuel high reproductive rates on the range, further contributing to the BLM's wild horse management crisis.	
138	American Wild Horse Preservation Campaign (AWHPC).	As the table on page 9 of the EA illustrates, the BLM does not plan to use fertility control during the 2014 capture operation. This is in direct contradiction to the NAS findings that "Tools already exist for BLM to address many challenges." The primary tool identified by the NAS as available immediately is the PZP vaccine. The NAS concluded that "addressing the problem immediately with a long-term view is probably a more affordable option than continuing to remove horses to long-term holding facilities."	

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		Further, the agency proposes to use fertility control only after attaining AML, a goal that will remain elusive to the BLM unless it begins to utilize fertility control now, instead of kicking the can down the road while populations continue to reproduce at high rates on the range.	
139	American Wild Horse Preservation Campaign (AWHPC).	An alternative to gather horses every two years and apply the two-year PZP-22 fertility control vaccine was dismissed from consideration on the premise of two faulty assertions – that the vaccine is of questionable efficacy and that wild horses captured repeatedly will become more and more difficult to trap. However, the results of the PZP-22 trial conducted in the Cedar Mountains HMA by the Humane Society of the United States (HSUS) do not support either of these contentions. Based on the annual report provided by the HSUS to the BLM, the population growth rate in Cedar Mountain has been reduced to 4 percent, and efforts to vaccinate a significant number of mares (72%) have been successful. The success of gathering horses for fertility control vaccination could be enhanced if the BLM were to adjust its capture methods to maintain the integrity of social bands, reducing the trauma and social chaos of current CTR practices.	
140	Individual	I am also opposed to your opting for the "quick drug" solution for controlling wild horse numbers, and continue to present for your consideration the Reserve Design approach to wild horse protection, preservation, and conservation.	Comment noted. Refer to section 2.2.1 Fertility control can be used to reduce the annual population growth, which would reduce the number of wild horses that would need to be removed in the future to achieve or maintain AML. It is sometimes used previous to achieving AML if gather success, holding capacity limitations, population growth rates, other national gather priorities or other circumstances prevent achieving AML during a gather.
141	Individual	Last year I called the BLM in Cedar City and asked what they were planning to do about the problem. A lady there informed me they were removing horses but they were going to inoculate them with a temporary sterility drug and put them back. Why would you put horses back onto a	

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		struggling range knowing you were way over population objectives? This is a ridiculous waste of money. You claim not to have money to remove them but you can waste millions on frivolous attempts to put a Band-Aid on the problem.	This may reduce future cost when compared to just releasing the horses without using fertility control or choosing the No Action Alternative. Fertility control has the greatest beneficial impact where: 1. Annual herd growth rates are typically greater than 5%. 2. Post-gather herd size is estimated to be greater than 50 animals. 3. Treatment of at least 50% of all breeding-age mares within the herd is possible using either application in conjunction with gathers or remote delivery (darting). A maximum of 90% of all mares should be treated and our goal should be to achieve as close to this percentage as possible in order to maximize treatment effects. If one or more of the conditions above are not met, the beneficial impacts would be reduced. However, the use of PZP may still be used to reduce the population growth within an HMA.
142	Individuals	We are very opposed to gathering these horses and giving the mares a sterilization shot and turning them back out. These shots only last a year and then the mares fatter and breed back more quickly.	
143	Iron County Commission	2.2.1 Fertility Control Iron County agrees that fertility control should be used "…within AML once achieved." Treated horses should not be released back onto the range until AML goals are achieved to avoid recapture, or make capture of other horses more difficult.	
SOCIAL IMPACTS			
144	Individuals	Fails to analyze the social impacts of the proposed action at a time when the vast majority of Americans support protecting wild horses on our public lands and oppose horse slaughter, while a small minority wants our public lands used for livestock grazing.	Horse slaughter is outside the scope of this document. See response to comments 70- 101 addressing livestock grazing vs wild horse use of public lands. Refer to checklist in Appendix A. The BLM has brought forward what we believe to be the most viable options for managing this Complex, and the most responsible way to ensure the welfare of the wild horses and protection of the habitat. The Wild Free Roaming Horses and Burros Act does not authorize a cost-
145	Individual	The EA fails to consider the social impact of these proposed gathers and allotments to the original intent in the establishment of these PUBLIC Lands.	
146	American Wild Horse Preservation Campaign (AWHPC).	Social impacts not analyzed NEPA requires federal agencies to consider environmental effects that include, among others, impacts on social, cultural, and	

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		economic resources, as well as natural resources. Thus BLM must consider both legal and social factors and impacts, in making land use decisions, such as setting and maintenance of AML and grazing allocations. The NAS report highlighted the importance of public opinion as well as the BLM's failure to offer a collaborative policy making process in which the public can meaningfully participate.	based decision-making process if excess horses are present. —Proper range management dictates removal of horses before the herd size causes damage to the range land (118 IBLA 75). With regard to public opposition or support of wild horse gathers, comments received from the public are used as a means to improve management and ensure that issues have been identified and addressed. It is not a means to tally votes on the most popular form of management. BLM has a responsibility per the WFRHBA to remove excess wild horses, ensuring the health of wild horses and of the rangeland.
147	Individual	My family spends a significant amount of time, money and other resources working to improve the water and range. As mentioned in your statement, wild horses trample in and overgraze in riparian areas. They counteract our efforts to make range improvements. We haul water for significant portions of the summer. Many times, the water comes from Minersville. With gas prices and our time, we are spending thousands of dollars watering the excess wild horses. I have pictures to prove it. In my opinion, we should be compensated for this service to the wildlife.	Refer to section 1.3, Purpose and Need for the Proposed Action. Compensation for hauling water or water use by wild horses or wildlife is outside the scope of this document.
PUBLIC SCOPING			
148	Individual	On April 10, 2014 BLM Utah held a phone conference with a handful of representatives from the wild horse advocacy. Several documents were promised to the individuals that attended this conference to provide appropriate ability for participation by those individuals. To date, after repeated phone calls and emails, the information has not been received. Until such time as that information is provided in the manner in which it was agreed upon appropriate participation of all stake holders is severely	The CCFO was not aware of any specific phone calls and documents referred to in this comment prior to the Preliminary EA being made available for public review. It is CCFO's understanding that the phone calls, emails, documents and information were about the general wild horse and burro management in Utah and weren't specific to the Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan. Refer to sections 1.5 Identification of

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		lacking in the proposed EA. The adequacy of meeting this CFR is absent in this document.	Issues, 5.3 Summary of Public Participation The Preliminary Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan Environmental Assessment (EA) UT-C010-2014-0035-EA was made available to the general public on April 30, 2014. Approximately 38,000 individuals responded to this document. Their comments were reviewed and considered. The Final EA contains new issues, information, and some corrections that were provided by those comments. Refer to Response 144 - 146
149	Respect4Horses Organization	We urgently request a meeting in which we will present a comprehensive proposal for the humane and scientific management of the bible springs HMA with the goal to balance societal, agricultural and environmental needs for the area as well as reach a sustainable yet viable number through which a terrible media nightmare may be prevented at the same time.	Request for an advisory committee is outside the scope of this document. Currently there is a Wild Horse and Burro Advisory Board established as directed by The Wild Free-Roaming Horses and Burros Act of 1971 (Public Law 92-195) *Sec. 7. The Secretary of the Interior and the Secretary of Agriculture are authorized and directed to appoint a joint advisory board of not more than nine members to advise them on any matter relating to wild free-roaming horses and burros and their management and protection. They shall select as advisers persons who are not employees of the Federal or State Governments and whom they deem to have special knowledge about protection of horses and burros, management of wildlife, animal husbandry, or natural resources management. Members of this board shall not receive reimbursement except for travel and other expenditures necessary in connection with their services.* This advisory meets regularly and advises the BLM on its management of wild horses
150	Individual	BLM-Cedar City needs to establish an advisory committee of mustang-advocates and work with us to formulate policy -- such as complying with the legal mandate to dedicate your HMAs for the principal use of the wild horses. I call upon BLM to ... • collaborate, • consult, • cooperate, and • coordinate ... with us. Wild-horse advocates across the nation look forward to consensus-based decisions and to the development of best management practices concerning wild horses. As the recent National Academies of Sciences report said: "... management	

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		should engage interested and affected parties and also be responsive to public attitudes and preferences. BLM should engage with the public in ways that allow public input to influence agency decisions."	and burros. Members of the public may participate in the management of public lands and resources by stating concerns with and suggested changes to the proposed action during public comment periods. Such a process has been used for this EA. Specific concerns with this proposed action and alternatives were requested during the public comment period, and are being addressed in this appendix. See response to comments 148 and 152.
151	Individual	I want the wild horse advocate groups involved in the management of the herds.	
152	Iron County Commission	Although Iron County has been in communication during this process, this does not constitute coordination as is required by FLMPA and NEPA. Iron County expects the BLM to coordinate the final proposed decision before it is made public. This requires the deciding official to meet with the Iron County Board of Commissioners and discuss and coordinate the decision before it is signed. This is important meet consistency as is required by FLMPA, and to insure local plans and ordinances are taken into consideration in the final decision.	The Preliminary Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan Environmental Assessment (EA) UT-C010-2014-0035-EA was made available to the general public on April 30, 2014. Approximately 38,000 individuals responded to this document. This included comments from the State of Utah and 4 different county commissions. Their comments were reviewed and considered. The Final EA contains new issues, information, and some corrections that were provided by those comments. Coordination and consistency requirements identified in Section 202 of FLPMA and expounded upon in regulations found at 43 CFR 1610.3 apply only to the development and revision of land use plans, such as the Cedar City RMP. Because this project is not a FLPMA 202 land use planning action, these specific requirements do not apply. BLM also has statutory responsibilities under NEPA and its implementing regulations to request the participation of eligible agencies and governments as cooperating agencies (CAs) in the NEPA process (40 CFR 1501.6). However, the requirement to invite eligible governments to become a
153	Iron County Commission	Although Iron County has been in communication with your office to develop short-term plans to help alleviate some of the wild horse impacts on private lands, we do not view this as meeting the coordination requirements as specified in FLMPA or NEPA. We expect the BLM to meet with us prior to a final decision, to insure consistency with the county plans and ordinances.	

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			CA applies only to Environmental Impact Statements. Cooperating agency requirements do not apply to activities prepared through an environmental assessment. While the BLM is not required to invite governments to become a CA in an EA process, the Council on Environmental Quality (CEQ) and the Department of Interior (DOI) have affirmed that the CA relationship may be used for preparation of EAs. If Iron County would like to participate as a cooperating agency in in this EA process, the BLM would evaluate the County's request. If it is determined that Iron County is eligible to be CA on this project the BLM would be required to enter into a Memorandum of Understanding (MOU) with the County that outlines appropriate roles and responsibilities. DOI policy states that MOUs must be used in the case of non-Federal agencies (43 CFR 46.225(d)). While there are many roles for CAs in the NEPA process, CAs input is most valuable early in the NEPA process. CAs have limited role in development of decision documents. Preparation and signing of decision documents is an action reserved to the BLM.
DATA USED			
154	Individual	This document fails to consider currently available information to adequately assess this portion of the CFR. This document notes historical decisions that pre-date currently available scientific record (The National Academy of Sciences, NAS, report being one document. Court orders to inhumane treatment being another). We will provide further clarification of this point as we comment to additional material contained in this draft FONSI).	Refer to comments 70 -74. The adjustment of the AMLs within the Complex was addressed in Bible Springs, Blawn Wash, Four Mile and Tilly Creek Wild Horse Appropriate Management Level (AML) Assessment EA-UT-040-04-47 that was completed in April of 2005. The Using Science to Improve the BLM Wild Horse and Burro Program A Way Forward published by the National Research Council of the Nation Academies
155	Individual	Section 1.2 (Background)	

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		A failure to use an appropriate interpretation of the NAS report becomes evident in this section. The NAS report can not be applied only to one portion of wild horse management (removals) and not another (setting of AML). If wild horse population are under counted then they were undercounted in setting of AML. Simply utilizing a flaw that was set forth in an antiquated and inaccurate land use plan is irresponsible. Appropriate amendments must be made before any wild horse removal EA is valid.	is being used by BLM to develop new procedures and policies in the management of wild horses and burros. Some of the recommendation made by this report have been implemented (ex. population inventory methods) while others are being reviewed or developed within the laws, regulations, policies, budgets and other limits that were not considered by the report. However, there is no requirement for BLM to follow or implement any or all of the recommendation made in that report.
156	Individual	Section 1.5 (Alternatives) Again this section uses antiquated, pre-NAS report, decision records as a claim of "compliance" with CFR's. The decision records noted do not reflect current "best practices" of scientific rigorous method. Simply listing the CFR's does not mean that the EA is in compliance.	The BLM utilizes well established scientific methods in the field of range monitoring, inventory and carrying capacity allocations, following approved methods outlined in official technical references and BLM handbooks and manuals.
157	Individual	Alternative 1: Proposed Action – Gather and Removal Excess Wild Horses within the Bible Spring Complex and Implement Fertility Control. As this alternative is the actual action BLM will approve in the ROD we will limit comments to this alternative. In essence what is proposed will result in a "10 year" plan that results in multiple removals that will be governed by the subsequent ROD. This section again utilizes an inaccurate definition of AML yet notes the NAS report citing that current populations are undercounted. AML's were set in this area more than a decade ago when counting methods were even less accurate when than they are today. AML is then basically a flawed basis in determining excess. Every alternative proposed over the course of this "ten year plan," that fails to take into account this major premise, is thereby invalid.	The CCFO has extensive vegetative trend, utilization, precipitation, actual use, riparian, and rangeland health studies which are contained in the Complex's HMAs and allotment monitoring files (4120 and 4710 files). Only the most current pertinent information has been summarized within this EA to show that excess wild horses occur within and outside, but adjacent to the Complex.

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		Any factor that is utilized in creating a removal plan that will exist for ten years without further analysis must include the notation that AML is flawed, and as further evaluation is made, AML will be adjusted accordingly.	
158	Individual	AUM distribution is based on flawed calculations that fail to utilize simple tools such as slope grids. AUM distribution is a valid component of determining "excess wild horses," and if flawed, invalidates that determination.	
159	Individual	The section that rules out "Upper Limit of AML" notes "A post-gather population size at the upper level of the AML range would result in the AML being exceeded the next foaling season." This would only be a valid statement if AML were based on accurate data. Since AML is not the product of an accurate equation the justification to discount removals to upper limit of AML are invalid. It would be highly prudent to utilize the flawed "upper limit" AML as a temporary figure to mitigate any damages to the historic value, public interest, etc noted in the CFR's until AML is actually a scientifically rigorous determination.	
160	Individual	EA section 1.2 notes: Section 3 (b) (2) of the Wild Free-Roaming Horses and Burros Act (PL 92-195) as amended states that "Where the Secretary determines . . .that an overpopulation exists on a given area of the public lands and that action is necessary to remove excess animals, he shall immediately remove excess animals from the range so as to achieve appropriate management levels. The requirement for the authorized officer to remove excess animals immediately is also included in 43 CFR (Code of Federal Regulations) 4720.1. However this fails to note the Department	

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		of Interior Manual on Management practices, specifically the section entitled "Integrity of Scientific and scholarly activities." In decision making processes the Secretary must use scientific method that is "robust, of the highest quality and the result of as rigorous scientific and scholarly processes as can be achieved." It is almost an obscenity to need to point out that a basic algebraic equation that has a variable applied to one side of an equation must be applied to another. IF an under counting was done during population surveys using the "better science" of today than an even more grotesque distortion was present setting Appropriate Management Levels (AML). The Secretary can not rely on previously set inaccurate AML to justify any removals if the DOI manual is followed in this instance. Only when AML reflects appropriate population counts can the Secretary adequately determine any "excess." (In other words the NAS study can not be used piecemeal to justify removals but must also be used in setting AML).	
161	American Wild Horse Preservation Campaign (AWHPC).	The Proposed Action is predicated on lowering the population to a pre-established AML. However, as stated above, the NAS independent scientific panel identified a total lack of scientific basis in the way that BLM sets AMLs, determines forage allocations and makes monitoring decisions upon which excess determinations and removals are based. The findings of this scientific review, make clear that the BLM lacks a legal and scientific basis for determining excess horse numbers in the Bible Springs Complex and for proceeding with this removal plan.	
162	American Wild Horse Preservation Campaign (AWHPC).	The proposed action hinges on the purported need to reduce the wild horse population in the Bible Springs Complex to the established "Appropriate" Management Level or AML, and the BLM's "excess	

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		determination," which is based solely on the estimated population that is over AML. However, the independent scientific panel identified a total lack of scientific basis in the way that BLM sets AMLs, determines forage allocations and makes monitoring decisions upon which excess determinations and removals are based. In fact, the NAS concluded that BLM's determinations of excess are "uninformed by science." The findings of this scientific review, incorporated here by reference and included at Attachments 1 and 2, make clear that significant scientific controversy surrounding the BLM's AML and excess determinations warrant the conduct of an EIS.	
163	Respect4Horses Organization	Respect4Horses Organization is therefore asking for proof of the existence of the number of wild horses that you claim are there before proceeding with a roundup. After the roundup there needs to be a minimum number of 150-250 wild horses left on the range that can be realistically and accurately accounted for in order to prevent destruction of the genetic viability, which is permanent and unrecoverable.	
164	Individual	Section 2 also notes the SOP's in Appendix 5. The SOPs have been proven inadequate in multiple court orders in the federal courts of the state of Nevada. Utilizing this standard of operation is irresponsible given this significant fact. Utilizing these legal precedents must be a factor in analyzing the SOPs at any removal operation for the analysis to be complete. We have attached a form outlining additional material to be considered in formulating SOPs based in the most comprehensive data base to date of BLM practices of the last four years. The attachment can be accessed at this	See responses to comments 154 -157 and 50 -54. The SOPs in Appendix 5 are in compliance with current BLM laws, regulations and policies.

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		link:http://wildhorseeducation.files.wordpress.com/2014/03/action_wip_humanel.pdf	
165	Respect4Horses Organization	Your agency states a number of wild horses that are present but offer no proof or scientific evidence that they are actually there. The problem with that is that this is insufficient information to make an informed decision on how many head of wild horses should be rounded up. You will not know how many wild horses will be left after the roundup simply by guessing at a number, and most likely there will only be lone bachelors left that are harder to spot by the helicopter.	See response to comments 56-59. See Appendix 8, Population Inventory. It summarizes the most current inventory of wild horses within the Bible Springs Complex. Additional data from game cameras, staff reports, public reports, and use of water resources also confirm that the population estimates are accurate enough to determine that excess wild horses exist.
166	American Wild Horse Preservation Campaign (AWHPC).	The current population estimate for the Bible Springs Complex of 777 wild horses as of the summer of 2014 represents a 69% increase over the BLM's 2013 population estimate of 459 wild horses for the four HMAs in this complex. The bogus census figures corrected in the Final EA and the removal targets in the Proposed Action must be modified accordingly.	
167	American Wild Horse Preservation Campaign (AWHPC).	Here the proposed action is predicated on population estimates, which, as explained below in Section III, are grossly inflated and rely upon unsubstantiated and unscientific population growth estimates and "correction factors," such as an arbitrary inflation of the population estimate by 20-30 percent, based on the NAS finding that the BLM could be underestimating wild horse population numbers. The BLM has undertaken a contract with the U.S. Geological Survey to improve the scientific basis for its census counts, however the population estimates for the Bible Springs Complex rely on old data and outdated/unscientific population estimating methods. There is substantial controversy surrounding the BLM's population estimates for wild horses in the Bible Springs Complex, which requires an	

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		EIS. In addition, the impacts of these estimates – which as stated above could result a decimation of the wild herds if the full number of targeted horses is removed from the complex - have not been evaluated in the EA.	
168	American Wild Horse Preservation Campaign (AWHPC).	Dangerous. The target removal numbers are based on wildly inflated population estimates that are not scientifically based. If the BLM proceeds to roundup 600-700 horses from this area, it will do so at significant risk of leaving few, if any, horses behind. While this appears to be the goal of ranchers in the area, it is a blatant violation of federal law.	
169	Individual	BLM-Cedar City needs to conduct a 100-percent evaluation of every one of its herds' genetic health per DNA samples tested by the Equine Genetics Lab. Per those results, and per guidance from Dr. Gus Cothran, and per consultation with wild-horse-and-burro advocates, BLM must then develop best management practices to restore and maintain gene-pool diversity via robust population-levels. An AML is valid only if it provides for a optimal population -- one that can easily self-sustain its genetic viability and bounce back from random catastrophic events.	See Section 3.2.6, Wild Horses, pg. 32 of the Preliminary EA.
170	Individual	Please describe what measures would be implemented by BLM to recover and/or maintain genetic viability so as to ensure that Healthy Equine Herds remain on these HMAs?	This comment is outside the scope of this document. However, all of the sections listed below address monitoring the genetic drift of the wild horses within the Complex. See sections 2.2.1 Alternative 1 – Proposed Action – Gather and Remove Excess Wild Horses within the Bible Spring Complex and Implement Fertility Control; 3.2.6 Wild Horses; 4.4.6 Wild Horses; Appendix 5. Standard Operating Procedures for Conducting Wild Horse Gathers.
171	Individual	Wild horses must receive the majority of the grazing slots -- the animal unit months (AUMs) -- within their HMAs. Moreover,	See responses to comments 70 -74. There have been no legal or scientific

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		both legal and scientific indicators point to the need for a massive increase in herd populations.	indicators provided to the CCFO BLM that indicate a need to increase herd populations.
172	Individual	There is no time like the present Bible Springs Complex situation to produce factual numbers and quiet the flames of controversy being lit by Bundy and Commissioner Miller. To rely on inflated hyperbole of Wild Horse numbers provided by Iron County Commissioner David Miller, which are in direct alliance with Cliven Bundy's agenda, is absurd. Numbers "where the Secretary determines" can NOT be an arbitrary determination. But must be based on real science, as recommended in the NAS Report. BLM has plans to introduce "Generation Leap Forward" an On-line Data and Mapping Program. Until this is available and utilized, no herd numbers should be relied on.	See responses to comments 56-59 and 154 -163.
COMPLIANCE WITH POLICY			
173	State of Utah Office of the Governor, Public Lands Policy Coordination Office	The EA indicates BLM has hauled water on the HMAs "several times during the past ten years…" The WFRHBA states "The Secretary shall manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands." BLM's practice of hauling water contravenes WFRHBA in attempting to artificially control range conditions instead of maintaining a "natural ecological balance" with respect to wild horses.	The CCFO BLM has provided water in accordance with the current laws, regulations, and policies. In H-4700-1 Wild Horses and Burros Management Handbook, Section 4.1.4 - Minimum Feasible Level of Management, Part 2, allows for providing water when water unexpectedly becomes unavailable. This could be from pipeline or trough malfunction or a reliable water source unexpectedly drying up.
174	Iron County Commission	3.2.2 Livestock 2nd pp The WFRHBA does not allow for hauling water to horses, as the act calls for "The Secretary shall manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands. " Hauling water is not maintaining an "natural ecological balance"	*2. It is not consistent with management at the minimal level to provide supplemental feed or rely on water developments that require frequent maintenance. It may, however, be appropriate to provide water in temporary emergency situations.* This is when water is provided for not only wild horses, but livestock and wildlife.

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175	Individual	By regulation, the BLM recognizes three types of management areas for wild horses – herd management areas ("HMAs"), herd areas, ("HAs"), and Wild Horse Territories ("WHT"). An HMA is an area "established for the maintenance of wild horse and burro herds." 43 C.F.R. § 4710.3-1. An HA is any "geographic area identified as having been used by a [wild horse or burro] herd as its habitat in 1971" when the WH&BA was enacted. Regardless if the BLM previously decided to allow administration of a portion of the Blawn Wash Herd Area to the State of Utah School and Institutional Trust Lands Administration (SITLA), the 1971 unanimously passed Congressional Wild Horse and Burro Act gave the principal usage of that land to the Wild Horses and Burros. By law, wild horses must be allowed to remain and use the resources on their legal land. This is still federal land designated to the protection of the wild horses and burros and the land belongs to the American people, regardless of any "agreements" regarding "control" that BLM made with SITLA – the 1971 Congressional wild Horse and Burro Act prevails. It is the law.	This comment is outside the scope of this document. See responses to comments 154-163.
176	Individual	This EA is inadequate because it: Has omitted and must include the alternative of reestablishing the original Blawn Wash legal wild horse area acreage (now used for private/corporate financial gain by privately owned domestic livestock ranchers and others) as per the law: Wild horses and burros are to be treated as "components of the public lands". 16 U.S.C. § 1333(a) The law is clear that "wild free-roaming horses and burros shall be protected from capture, branding, harassment, or death" and entitled to roam free on public 4 lands where they were living at the time the Act was passed in 1971." It is the law of	

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		the United States of America and any policy or regulation or memorandum of understanding or environmental assessment or Record of Decision or Finding of No Significance that BLM or other governmental agency writes or proposes or agrees to or takes action on that does not come under the umbrella of the law is therefore illegal.	
177	Individual	It is wrong to remove the entire herd of Wild Horses on our Public Land. This law is supposed to protect Wild Horses & Burros and for the BLM to allow these beautiful and intelligent Wildlife to thrive and live Wild & Free! BLM is supposed to value Wild horses and allow them to survive for future generations, to allow them to graze, and to create an ecological balance to SURVIVE! BLM should not Zero Out the Entire Family Bands/Herds to an unsustainable Zero Tolerance! The Federal Government owns 260,000,000 million acres of Public Land throughout the United States. There is plenty of land to share with Cattle & Sheep Ranchers. This Law signed by former President Richard Nixon, signed the "1971 Free Roaming Act for Wild Horses & Burros" to coexist and to allow BLM to protect these Majestic Icons of America's Wild Horses! They represent the history of America's past and how we as a Nation; want our Wild Horses to Remain Wild today and for future generations. Please do not eradicate these American Icons to near Exctinction.	See responses to comments 70 – 112.
178	Individual	If 70 % of the forage is in SITLA, it should not have been zeroed out. 43CFR 4710.4, Management of Wild Horses shall be at a "minimal level" in Herd Management Plans, While maintaining "Free -roaming" behavior. This "minimal level" is directed at minimal management. If there was 70% of forage from which horses were restricted, this is	This comment is outside the scope of this document. See response to comments 154 – 163.

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		hardly minimal management.	
179	Individual	A Public Hearing shall be held in Utah before July 1, 2014 and in subsequent years to determine the use of helicopters and motorized vehicles. No Round-ups should occur prior to these subsequent Hearings and Resolutions gained from them. Any Humane Handling decisions can not be formed without the Input garnered in these scheduled Hearings.	Refer to sections 1.5 and 5.0.
180	Utah Farm Bureau Federation	The Utah Farm Bureau believes under the Wild Horse and Burro Act, Public Rangelands Improvement Act and Utah Statute 63-38d-401 it is the legal obligation of the Bureau of Land Management to immediately remove all horses that are in excess of the AML.	Comment noted.
181	Iron County Commission	1.6.1 Rangeland Health/Veg When do ongoing drought conditions trigger extreme conditions that require the BLM to act immediately? This year should be the extreme conditions that trigger emergency removal in this complex, not just a small portion.	See response to Comment 69.
182	Iron County Commission	Iron County strongly recommends the BLM change their internal policies that prohibit slaughter of wild horses, and come in concert with the QFRHBA which mandates removal of excess horses to avoid the range conditions that exist in the county. Anything short of this is postponing the inevitable, and by so doing, destroying the range for decades to come.	This comment is outside the scope of this document. This would have to be changed by Congress.
183	Iron County Commission	1.3 Purpose and Need 2nd PP Temporary reductions of livestock to off-set excessive wild horse numbers should be considered a takings and the permittee should be justily compensated for their loss because: - the AUMs are owned by the permittee, - the wild horses were permitted to increase	This comment is outside the scope of this document. However as a point of clarification. Livestock grazing permits are not property; however, they do provide revocable privileges to harvest forage from the public lands. Refer to the following Code of Federal

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		without adequate management provisions, as required by WFRHBA, and the IBLA (Animal Protection Institute, 118 IBLA 63, 75; 1991), - the BLM failed to remove excess wild horses off the range as required by the WFRHBA, - such temporary reductions are beyond the control of the permittee and mandated by the BLM.	Regulations (CFR) 43 CFR §4130.2 Grazing Permits or Leases (c) Grazing permits or leases convey no right, title, or interest held by the United States in any lands or resources. 43 CFR §4100.0-5 Definitions Grazing preference or preference means a superior or priority position against others for the purpose of receiving a grazing permit or lease. This priority is attached to base property owned or controlled by the permittee or lessee. Changing social values and competition for land use have required that public land management decisions achieve greater balance among sometimes conflicting resource uses. These decisions can result in reductions to livestock grazing to protect other equally legitimate resource uses and resource protections. These decisions can have a negative effect on the economics of specific livestock operators, depending on the type of decision. However, public land management decisions do not always lead to negative economic effects to livestock operators. Decisions leading to improved range conditions can also have a positive and stabilizing effect on ranch operations.
184	American Wild Horse Preservation Campaign (AWHPC).	A prerequisite to removal under the Wild Horse Act is that BLM first determine that an overpopulation exists and that the wild free-roaming horses and burros slated for removal are 'excess animals.'" The BLM Wild Horse and Burro Handbook states in section 4.3: "Before issuing a decision to gather and remove animals, the authorized officer shall first determine whether excess WH&B are present and require immediate removal. In making this determination, the authorized	See response to comments 56 – 74 and 165 -168.

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		officer shall analyze grazing utilization and distribution, trend in range ecological condition, actual use, climate (weather) data, current population inventory, wild horses and burros located outside the HMA in areas not designated for their long-term maintenance and other factors such as the results of land health assessments which demonstrate removal is needed to restore or maintain the range in a TNEB. The term "excess animals" is defined as those animals which must be removed from an area in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area (16 USC §1332(f)(2)	
COMPLIANCE WITH NEPA			
185	American Wild Horse Preservation Campaign (AWHPC).	One of the purposes of an EA is to determine if there are significant environmental impacts that would require preparation of an EIS. Under NEPA determining whether or not an action is "highly controversial" refers to the level of scientific controversy not public controversy. The BLM NEPA Handbook, section 7.3 states: "Controversy in this context means disagreement about the nature of the effects, not expressions of opposition to the proposed action or preference among alternatives… Substantial dispute within the scientific community about the effects of a proposed action would indicate that the effects are likely to be highly controversial." Based on the nearly two year review of the BLM wild horse and burro program by the prestigious National Academy of Sciences, and the findings and recommendations of its report, "Using Science to Improve the BLM Wild Horse and Burro Program: A Way Forward," there can be no question that the proposed action and its effects are likely to be highly controversial and that, on this basis alone, an EIS is required.	Comment noted. Refer to the final decision document. The proposal is not precedent setting or the first of its kind. Nor are effects of gathering wild horses highly uncertain or involve unique or unknown risks. There have been hundreds of like actions that have occur since the passage of the 1971 Wild Free-Roaming Horses and Burros Act that have been evaluated in environmental assessments and none were found to require an EIS. Nothing in the report referred to the scientific community being in dispute about the proposed action or is it controversial in the scientific community.

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186	Individual	40 CFR 1508.27 (4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.	This comment references one of ten items that "should be considered in evaluating intensity" and in itself does not constitute significance or define what type of NEPA document should be prepared.
187	Individual	Under the consideration for removal of livestock this notation is made "The elimination of livestock grazing in an area would require an amendment to the Pinyon MFP. Such changes to livestock grazing cannot be made through a wild horse gather decision." However the lack of action in amending those plans prior to the decision on a wild horse removal could invalidate the process of removing wild horses.	This is outside the scope of this document. Refer to responses to comments 75 -101. A new resource management plan is currently being drafted. It should be available for public comment this summer (2014).
188	State of Utah Office of the Governor, Public Lands Policy Coordination Office	The EA does not appear to discuss the proposed action in a clear and unambiguous manner. The stated purpose of the required BLM action is to bring the number of animals on the range into compliance with the AML. This requires immediate action, followed by sufficient maintenance actions to keep the number of animals in compliance. The state believes the BLM must therefore proceed with sufficient gathers in 2014 to achieve compliance, followed by actions each and every year thereafter to maintain compliance. Language within the EA, unfortunately, may be interpreted to show that BLM is contemplating another course of action. For example, as discussed below, some of the tables within the EA imply that BLM is considering bringing the herd numbers down to the required AML over a lengthy period of time, followed by maintenance. To the extent the EA misstates the proposal to achieve compliance, the EA must be clarified.	The EA's proposed action was edited for clarification. Due to the numerous things that can affect the number of wild horses that can be gathered each year the specific number of horses gathered and removed each year would need to be adjusted each year based on the most current population inventories and the estimated population. The Final EA's proposed action states: *Table 2 shows the number of wild horses that would have to be gathered and removed to reach the lower and upper AML in the summer of 2014. Based on past gather success in the Bible Spring Complex area only 60-70% of the population can be gathered in a single year, thus requiring multiple gathers over more than a one year period in order to achieve AML. The gather, removal and fertility treatment numbers would vary each year over the 10 year period to accomplish the objective of achieving and maintaining the wild horse population to within AML. Other administrative factors (budget, adoptions, holding space, etc.) and gather success could also impact the numbers gathered, removed or treated during each operation over the 10 year period.*

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			The CCFO hopes this clarifies the proposed action. Section 1.3 Purpose and Need for the Proposed Action states: *The purpose of the proposed Bible Springs Complex Gather, Removal and Fertility Treatment Plan is to achieve a thriving natural ecological balance, achieve and maintain wild horse AML, collect information on herd characteristics, determine herd health, maintain sustainable rangelands, and maintain a healthy wild horse population within the Bible Springs Complex which includes the Bible Spring, Four Mile, Tilly Creek and Blawn Wash HMA.* The proposed action is an alternative that achieves this purpose.
189	State of Utah Office of the Governor, Public Lands Policy Coordination Office	The EA mentions the presence of greater sage-grouse, and discusses management actions in response. The state is implementing its Conservation Plan for Greater Sage-grouse, which contains best management practices for actions designed to minimize or eliminate adverse effects on the bird. To that end, the state requests that the EA be amended to reflect this fact, and to utilize the terms, conditions and stipulations contained therein. The state supports the EA's requirement that BLM coordinate with the Utah Division of Wildlife Resources as these issues arise.	These best management practices are being considered in the Utah Greater Sage-Grouse Draft Land Use Plan Amendment and Environmental Impact Statement. When a decision has been issued for this document, the authorized practices will go into effect. Interim guidance is being followed until the completion of the EIS.
190	State of Utah Office of the Governor, Public Lands Policy Coordination Office	As the Blawn Wash HMA consists of a large area owned by SITLA along with privately owned land, this HMA should be removed from the system in order to be subject to the same management as other non-wild horse areas (in that wild horses must be removed immediately as horses move in). The EA is not clear regarding proposed actions on private/SITLA lands in	The designation of the Blawn Wash HMA to HA status is outside the scope of this document. This is being considered in the new resource management plan for the Cedar City Field Office. The EIS related to this effort should be available for comment this summer (2014). The proposed action is clear that the

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		Blawn Wash for the summer of 2014 - although immediate removal of wild horses as horses move in is required; it is analytically different than meeting proposed numbers where wild horses are to be retained.	objective is to achieve AML on the Blawn Wash HMA, which is 0 for that HMA.
191	Individual	The BLM has also violated its obligations under the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321-4370f, by failing to adequately analyze the environmental consequences of its decision on the individual wild horses or the herds as a whole; failing to consider reasonable alternatives such as reducing the amount of livestock permitted on these lands.	Refer to sections 2.2.1, 3.2.6, 4.2.6, 4.4.6 and 4.7. These sections address the impacts to wild horses due to the proposed action. Refer to responses to comments 70 – 100 regarding an alternative to reduce livestock instead of the current wild horse population.
192	Individual	Although the EA does list some previous wild horse captures in Utah, it does not supply the public with the highly relevant facts about wild horses captured and removed from the Bible complex. This information is relevant to the proposed capture and must be provided to the public in order for BLM to pass the requirement that a "hard look" has been accomplished before the EA is signed or activated. I refer here mainly to the nine wild horses that have been captured within the past two years off of Bible Springs HMA and the thirty-five other wild horses captured and removed from Utah but with the location not given to the public – except as "Outside HA: Utah". Why was this recent and highly relevant data not supplied to the public and apparently swept under the rug and done behind the public's back?	Gathers were outside the HMAs on private lands. See 3.2.6 of Preliminary EA first paragraph and Table 6. When reported in WHBPS, the horses are sometimes reported as being from the HMA that they strayed from or simply outside of any HMA. Horses reported as outside an HMA could be from anywhere in the state. For these small private land removals, all NEPA and public notifications were made in accordance with the laws, regulations and policies.
193	Respect4Horses Organization	We request that you perform an EIS instead of an EA since you cannot claim that there will be no impact at all, an EA is simply not sufficient in this case.	Comment noted. Refer to the final decision document. The proposal is not precedent setting or the first of its kind. Nor are effects of gathering horses highly uncertain or involve unique or unknown risks.

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			NEPA does not require that there be no impacts in order for an EA to be an adequate analysis.
194	Individual	The BLM has counted over a thousand feral horses in Iron County yet your previous EIS for this area set AML's for horses in Iron County at 300. Why do you feel it necessary for a new EA to uphold the regulations that have already been put in place by previous environmental assessments and Congressional Regulation?	A new EA is not required for an action which has already been approved when no new changes in the proposed action or impacts are anticipated. However, if there are any changes in a proposed action or anticipated impacts, a new EA should be completed. Since the multi-year drought has exacerbated issues and potential impacts from the proposed action and alternatives, a new EA has been generated.
GENERAL			
195	Individual	Section 1.6 (Identification of Issues) This section notes the Iron County Commission correspondence yet fails to identify the issues at hand in their entire. The issues with Iron County began with threats against wild horses that were associated in support of a potentially violent protest in Clark County Nevada. They were further aggravated by repeated statements in the media from Iron County that the BLM failed to respond to appropriately. The creation FONSI appears to again aggravate the situation.	This is outside the scope of this document.
196	Individual	Approximately 15,000 to 16,000 acres still remain of Blawn Wash HA -- acres that were not transferred from BLM in the Utah West Desert Land Exchange. Those acres need to be reactivated for wild-horse habitat. That will jump-start the process of reversing Blawn Wash back to HMA-status and righting the wrongful give-away of land that, by law, is dedicated to wild horses. Because BLM-Cedar City declares that it manages the area of a "complex," this process of Blawn Wash returning to HMA-status will be simple. BLM-Cedar City should negotiate with the Utah School and Institutional Trust Lands Administration (SITLA) to swap the land	This comment is outside the scope of this document. See response to Comment 190.

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		transferred from the original Blawn Wash HMA for other comparable BLM-administered land not located in an HA or HMA. I note that SITLA's Website boasts of owning "enough land to equal the state of Connecticut in size." Connecticut spans 5,543 square miles, or 3,547,520 acres. Thus, the 19,000 or so acres at issue constitute just one-half of one percent of SITLA's holdings. Surely BLM-Cedar City can identify suitable substitute land for this purpose. Then, Blawn Wash must be restored to its original size, configuration, and status as an HMA. The original AML of 65 must be reinstated as a first step.	
197	Individual	BLM-Cedar City should amend the Resource Management Plan to increase the AML range per IUCN guidelines and per MVP. Doing so will result in a stocking rate of 45 to 89 acres per horse, which compares favorably with the 150 acres per cow+calf pair -- which means 75 acres per cow or calf -- that BLM allows on federal lands [annualized figures].	
198	Individual	BLM-Cedar City needs to investigate how the boundary lines of the Bible Complex HMAs and HA were first set and promptly correct any errors and omissions. The boundaries must conform to their proper configuration and must provide corridors for the horses' seasonal migrations.	
199	Individual	Precisely-planned, time-controlled-grazing per the Holistic Management model needs to be implemented by Cedar City Field Office. By adopting Holistic Management, the permit-holders can maximize profits by partnering with BLM staff to design grazing schedules that protect the range all the time, not just when there's a drought. Holistic Management will empower BLM to fulfill its mandate to protect and conserve America's wild horses and burros.	
200	Individual	Rain and snow catchment devices, commonly referred to as "guzzlers," should be strategically installed throughout the	This comment is outside the scope of this document.

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		district, especially in the HMAs. Guzzlers capture, conserve, and release water, much like cisterns. Such systems are long-lived and require little maintenance, especially if constructed of cement. Their covers reduce evaporation -- a beneficial feature that provides an advantage over open reservoirs. Guzzlers also reduce the need to haul water into wilderness areas, should the drought continue.	
201	Individual	If BLM is going to punish wild horses that innocently wander outside HMA boundaries, then the Agency must proactively install fences to keep them inside. Permit-holders may be somewhat inconvenienced, but they will be happy to be free of free-roaming wild horses trespassing on their property. Friction will thus be reduced. BLM should remove fences that were erected by the permit-holders. Tearing down those interior fences will help restore the free-roaming conditions that wild horses and burros are supposed to enjoy in the HMAs. Fence-free ranges would provide them access to water, forage, connectivity corridors, and seasonal migratory routes -- all of which are frequently blocked by inappropriate subdivision of the public lands by private interests. Wildlife would benefit by the opening up of the range as well. If riparian areas need to be exclosed, then alternative water sources must be provided right away.	This comment is outside the scope of this document.
202	Individual	Utah's current elk-population is estimated at 81,000. That number is reportedly 1,000 over the management-objective. The elk are thriving and their population is exploding in the presence of supposedly excess wild horses. But elk are thought to compete with livestock. So, even though there is no provision in the state-plan for reducing elk in consideration of cattle, the State is authorizing a 183-percent increase	This comment is outside the scope of this document.

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		in cow-elk-tags -- from 150 last year to 425 this year in the hunting units around Cedar City.. • http://moderator.droughtreporter.unl.edu/RSSfeed/ImpactView/30432 • http://www.sltrib.com/sltrib/news/57944641-78/wildlife-elk-utah-board.html.csp Utah Wildlife officials have also joined the chorus of their "livestock grower friends" (that's how they expressed it) in singing the wild-horse-overpopulation blues. Further, it did not escape notice that a Wildlife Board member complained about wolf-numbers being "far out of hand." Evidently, the Board does not believe in the value of apex predators to the ecosystem but rather wants to reduce biodiversity for the profit of meat-producers and the trophies of sport-hunters. I urge BLM to reject this misguided, retrogressive philosophy.	
203	Individual	53.8 Million acres originally given to the horses and burros in 1971 - DOI has reduced that by 22.2 million acres, and left them with 31.6 million acres (I am basing these on figures from 2011).	This comment is outside the scope of this document.
204	Individual	I also know that there is a real strong effort to protect the native desert tortoise species, and it is my opinion that both could work to protect each other. Protecting the wild mustangs and their environment would also provide protection for the desert tortoise and that same wild environment.	There is no desert tortoise habitat or desert tortoises in the Bible Spring Complex area.
205	Individual	Where is the information that shows all fencing within and around the HMAs and explanation of how such fencing impacts Wild Horse seasonal migration. Where are the detailed maps and photo documentation?	This comment is outside the scope of this document. However, BLM does have an extensive, though not all inclusive, data set on the range improvements within the Bible Spring Complex that will be used during

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			gather operations to identify location of fences.
206	Individual	Remove any/all cattle guards or retrofit with "Wild Horse Annie" safety features, so as to allow WH&B to cross them without danger.	This comment is outside the scope of this document.
207	Individual	In legitimate instances of straying, BLM-Cedar City should first encourage the outsiders to return to their proper place, then address those factors that caused the animals to leave home. Do fences need repair? Do gates need to be checked frequently and closed? Would palatable plantings draw the wild horses to the areas BLM-Cedar City want them to use? What about siting mineral licks inside the HMAs? Have guzzlers been installed to provide water sources within the boundaries? BLM-Cedar City should specify preventive measures in this regard as part of its management approach. Return outsiders to the HMAs. Fence the HMAs' perimeters -- after expanding them to correct all boundary-line discrepancies, migration routes, and any herd-area land previously taken away.	This comment is outside the scope of this document. However, many of the actions suggested in this comment are implemented within the CCFO to attempt to maintain wild horses within the HMAs.
208	Individual	Protect predators. They are an essential part of a Thriving Ecological Balance and play a crucial role in helping to maintain this balance. These are, after all, Public Lands and Wildlife areas. That is what we must respect and protect. Please provide the public with information regarding activities related to the hunting and/or killing of predators on the HMAs or surrounding areas	This comment is outside the scope of this document.
209	Individual	BLM admits that none of the AMLs contain a viable population of horses. The horses move inter-changeabley between HMAs. In future planning Bible Springs Complex should be managed as one. This needs to be implemented immediately to insure forage and WATER access and,	This comment is outside the scope of this document. However, A new resource management plan is currently being drafted that does have alternatives that address this comment. It should be available for public

No.	Commenter	Comment	BLM Response
		genetic viability.	comment this summer (2014).
210	Individual	If the gathers have to continue I want a humane policy in place.	Comment noted. See section 2.2.1 and Appendix 5.
211	Western Rangelands Conservation Association	Range improvements were implemented and completed with the help of many permittee and livestock operators. These projects "were completed to improve wildlife habitat, reduce fuels that increase fire accordance or behavior, and emergency stabilization after wild fires" (p26) and also for betterment of range conditions in general and primarily for livestock use.	Comment noted.
212	Iron County Commission	1.2 1st Sentence Need to remove the Blawn Wash from the system, and treat it as other non-wild horse areas - removing wild horses immediately as horses move in.	This is subject to the existing land use plan. A new resource management plan is currently being drafted. It should be available for public comment this summer (2014).
213	Iron County Commission	2.2.1 Design Features… 3rd bullet If a desirable capture site is found and has no roads to it, Iron County proposes news roads be constructed to access the site. Why limit capturing efforts at good sites that simplifies gathers.	The development of new roads would require additional engineering, clearances, coordination, permits and possibly NEPA documentation. This additional work could delay the gather operations. The Bible Spring Complex has a diverse coverage of roads that allows for multiple trap locations and within short distances of travel for wild horses. New roads are not required to accomplish the objectives of alternatives 1 or 2.
214	Iron County Commission	3.2.4 Wetland Riparian Need to identify number and location of water rights owned by the BLM in the complex, and the number of privately owned water rights that wild horses are dependent on.	This comment is outside the scope of this document.
215	Iron County Commission	3.2.6 1st PP The primary focus of removing horses off private lands is not to keep horses within HML, but to reduce damage the horses are doing to private holdings, regardless of if	The final EA reads: *Gathers and removals have been conducted within the different HMAs in 1982, 1983, 1984, 1985, 1988, 1989, 1991, 1994, 1995, 1998, 2000, 2001, 2002, 2006, 2007, 2008, 2009, 2010, 2012, and 2013 to*

No.	Commenter	Comment	BLM Response
		the wild horses are within HML.	*attempt to keep the horse population within the AML or to remove wild horses from private lands adjacent to the HMAs.*
216	Individual	Issues of public observation are vaguely noted and an arbitrary discretion exists. We urge you to formulate an adequate media protocol that ensures access to observe and document operations and conditions of wild horses is provided. This proposed plan includes no such document and is inadequate.	This comment is outside the scope of this document. There are current BLM policies that address this issue and will be followed if gather, removal and fertility operations occur.