



U.S. Department of the Interior
Bureau of Land Management

Fifteenmile Herd Management Area Plan Update and Wild Horse Gather **Environmental Assessment** November 2018

BLM Wyoming – Worland Field Office

DOI-BLM-WY-R010-2018-0036-EA

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Environmental Assessment
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Introduction

Identifying Information

Project Name: Fifteenmile Herd Management Area Plan Update and Wild Horse Gather

NEPA Number: DOI-BLM-WY-R010-2018-0036-EA

Type of Project: Wild Horse Herd Management Area Gather and Plan Update

General Location of Proposed Action: Northwestern Bighorn Basin area

Name and Location of Preparing Office:

Worland Field Office
101 S. 23rd St.
Worland, WY 82401

Applicant Name: BLM Worland Field Office

Background Information

This Environmental Assessment (EA) has been prepared to analyze and disclose the environmental consequences of updating the Fifteenmile Wild Horse Herd Management Area Plan (HMAP) (BLM 1985). The analysis includes maintaining vegetative resource objectives for wildlife, livestock and wild horse populations, maintaining range improvements, monitoring populations, and periodically removing excess wild horses from the Fifteenmile Wild Horse Herd Management Area (HMA), as proposed by the Bureau of Land Management (BLM) Worland Field Office (WFO). The Fifteenmile HMAP would establish short and long term management and monitoring objectives for the wild horse herd and their habitat. These objectives would guide management of the Fifteenmile HMA wild horses. The Fifteenmile HMA is located approximately 35 miles north-west of Worland, Wyoming, within portions of Washakie, Big Horn, and Park Counties. The HMA is approximately 81,119 acres in size, with land status as shown in Table 1 and Figure 1.

Table 1 – Project Area Fifteenmile HMA Land Status		
Ownership	Acres	Percent of HMA
Public	70,534	87%
Wyoming State	4,283	5%
Private	6,302	8%
Totals	81,119	100%

The original Fifteenmile HMAP was completed in 1985. The HMAP established the current boundary of the HMA, and outlined basic objectives for management of the HMA. The current AML established for the Fifteenmile HMA is 70-160 mature horses, not counting foals. Since the HMA was established, the average estimated wild horse population has been 209 wild horses.

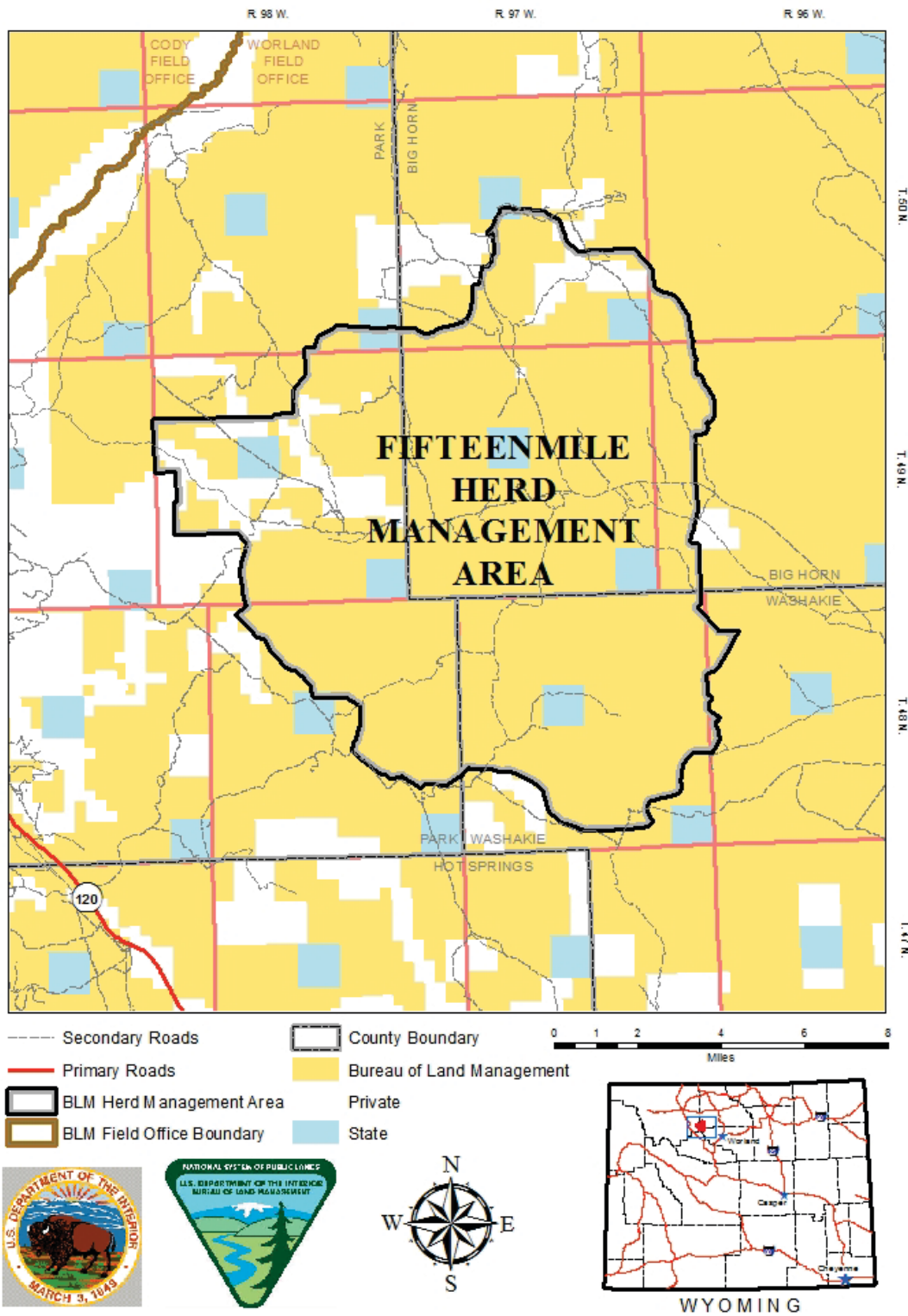
The wording of the AML as 70-160 mature horses has led to confusion over total wild horse numbers present in the HMA. A wild horse foal is considered to be 1 year of age on January 1 of the year following its birth. Since aerial inventory flights are generally conducted in January, previous year’s foals are considered to be adults.

The most recent aerial inventory of the Fifteenmile HMA was completed in January, 2016. This inventory was conducted with the simultaneous double count method, as recommended by the United States Geological Survey (USGS). The wild horse numbers and locations were recorded with the use of a Global Positioning System and compiled on maps. The direct count numbers were adjusted by the USGS using the simultaneous

double count method, for an estimated population of 284 wild horses. Another aerial inventory is tentatively planned for January 2019. The estimated wild horse population in the HMA since the inventory in January 2016 is shown below in Table 2.

Table 2 – Projected Population 2018						
HMA	Low AML	High AML	Population Estimate			
			2017	2018	2019	2020
			337			
Fifteenmile HMA	70	160		404	485	582

Figure 1 – FIFTEENMILE HMA



Purpose and Need

The purpose and need for the Proposed Action is to establish short and long term management and monitoring objectives for the wild horse herd and their habitat, in the form of an updated HMAP. These objectives would guide management of the Fifteenmile HMA and the wild horses in the future. The Proposed Action would evaluate the current AML, and remove excess wild horses from within the Fifteenmile HMA. The removal of excess wild horses is needed because habitat conditions in the HMA, particularly water availability, will soon be insufficient to support the growing wild horse population. In addition, increasing numbers of wild horses are moving outside of the HMA boundary into areas not designated for their use. Any wild horses located outside the HMA would be removed, and not returned to the HMA. Included would be an adjustment of the sex ratio of the wild horses returned to the HMA to favor males, thereby slowing population growth.

This action is needed in order to achieve and maintain a population size within an established AML, define short and long term management and monitoring objectives for the wild horse herd and their habitat, protect rangeland resources from deterioration associated with an overpopulation of wild horses, and maintain a thriving natural ecological balance and multiple use relationship on public lands in the HMA consistent with the provisions of Section 3(b)(2) of the Wild Free-Roaming Horse and Burro Act (WFRHBA).

Decision to be Made

Based on the analysis presented in the EA, the authorized officer will select an alternative that meets the purpose and need for the action. The authorized officer will determine whether to implement all, part, or none of the selected alternatives, as described to manage wild horses within the HMA. The authorized officer’s decision may adjust AML, select goals and objectives for management of wild horses within the Fifteenmile HMA, select gather methods, timeframes of actions, and numbers of horses gathered and released depending on the alternative or parts of any alternative chosen. The decision would not adjust livestock grazing use.

Conformance with Existing Land Use Plan

The proposed update to the Fifteenmile HMAP, and the gather and removal of excess wild horses from the Fifteenmile HMA is in conformance with the Worland RMP Record of Decision approved on September 15, 2015. Worland RMP decisions that pertain to wild horse management are as follows:

Table 3 – Worland RMP Decisions	
Wild Horse Management Goals and Objectives	
Goal BR:11 – Manage and maintain healthy wild horses and herds inside HMAs in a thriving natural ecological balance within the productive capacity of their habitat while preserving multiple use relationships.	
Objectives-	
BR:11.1 Adjust and maintain wild horse numbers and HMAs to comply with federal policies.	
BR:11.2 Maintain or enhance herd viability and genetic integrity.	
BR:11.3 Provide opportunities for wild horse interpretation, scientific research, and viewing.	
BR:11.4 Manage wild horses to comply with local planning documents to the greatest extent practicable.	
Record Number	Management Action
4139	The size of the Fifteenmile HMA will remain at 70,527 acres of BLM-administered land, out of the original 261,868 acres of BLM-administered land within the Fifteenmile HA.

4140	<p>The Sand Draw HA is 15,302 acres (total acres in planning area, including BLM-administered, BOR, state, and private lands).</p> <p>The Zimmerman Springs HA is 12,277 acres (total acres in planning area, including BLM-administered, BOR, state, and private lands).</p> <p>The Alkali Spring Creek HA is 5,183 acres (total acres in planning area, including BLM-administered, BOR, state, and private lands).</p> <p>These HAs will not be managed for wild horses.</p>
4141	Manage the Fifteenmile HMA for an initial appropriate management level of 70 to 160 wild horses, not counting foals, in an attempt to maintain a population of 100 adult wild horses adjusted as necessary based upon monitoring.
4142	Base future adjustments to the appropriate management level on monitoring information and multiple use considerations through development of and/or revisions to HMA Plans. Update HMA plans to include Greater Sage-Grouse objectives.
4143	Manage BLM-administered land within the Fifteenmile HMA to maintain or enhance conformance with the <i>Wyoming Standards for Healthy Rangelands</i> .
4144	Employ selective removal criteria, in accordance with current national policies, during periodic gathers to increase desired genetic characteristics and avoid genetic depression.
4145	Consider the use of natural and artificial population control measures as needed to maintain the wild horse populations within the established appropriate management level ranges.
4146	Conduct all activities in compliance with relevant court orders and agreements as applicable to the management situation.
4147	Do not actively promote the Fifteenmile HMA to the public and retain the current remote natural characteristics.
4148	Apply seasonal restrictions from February 1 to July 31 to prevent foal abandonment or jeopardy of wild horse health and welfare, as appropriate, to surface-disturbing and disruptive activities in the Fifteenmile HMA.
4149	Avoid and discourage organized special recreation permits using domestic horses in the Fifteenmile HMA.
4150	Avoid wild horse gathers 6-weeks before or 6-weeks after peak foaling season. To the extent possible, conduct wild horse gathers in the fall, after peak foaling has occurred and when temperatures are lower to reduce stress on the animals.

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

Conformance with Rangeland Health Standards and Guidelines

The Proposed Action and other action alternatives are in conformance with the BLM Wyoming “Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management” (BLM 1997). The selected alternative will assist in maintaining the health of the public lands within the Fifteenmile HMA.

Relationship to Statutes, Regulations, or Other Plans

Public lands are managed under the FLPMA, which provides that the public lands are to be managed in accordance with land use plans and under principles of multiple use and sustained yield to protect the quality of

scenic, ecological, environmental, and archeological values; to preserve and protect public lands in their natural condition; to provide feed and habitat for wildlife and livestock; and to provide for outdoor recreation (43 U.S.C. 1701(a)(8).1732(a)). FLPMA also stresses harmonious and coordinated management of the resources without permanent impairment of the environment (43 U.S.C. 1701(c)).

The Proposed Action and action alternatives are in conformance with the WFRHBA 16 U.S.C. 1333(b)(2) and 1334, and its implementing regulations found at Title 43 of the Code of Federal Regulations (CFR) 4700, including:

- 43 CFR 4700.0-6 (a): *Wild horses shall be managed as self-sustaining populations of healthy animals and in balance with other uses and the productive capacity of their habitat.*
- 43 CFR 4700.0-6 (c): *Management activities affecting wild horses and burros shall be undertaken with the goal of 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 4710.4: *Management of wild horses shall be at the minimum level necessary to attain the objectives identified in approved land use 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 exist, the authorized officer shall remove the animals immediately.*
- 43 CFR 4720.2-1: Upon written request from the private landowner to any representative of the Bureau of Land Management, the authorized officer shall remove stray wild horses and burros from private lands as soon as practicable. The private landowner may also submit the written request to a Federal marshal, who shall notify the authorized officer. The request shall indicate the numbers of wild horses or burros, the date(s) the animals were on the land, legal description of the private land, and any special conditions that should be considered in the gathering plan.
- 43 CFR 4720.2-2: If the authorized officer determines that proper management requires the removal of wild horses and burros from areas that include private lands, the authorized officer shall obtain the written consent of the private owner before entering such lands. Flying aircraft over lands does not constitute entry.

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.

No federal, state, or local law or requirement imposed for the protection of the environment will be threatened or violated under the Proposed Action or any action alternatives described in detail in this EA.

Identification of Issues and Scoping

Internal scoping by an interdisciplinary team identified resource issues for detailed analysis.

On April 3, 2018, the BLM issued a scoping statement seeking public comments on the proposal to update the HMAP and to gather excess wild horses. A total of 29 comment letters/emails were received from individuals, organizations, and agencies following the issuance of the scoping letter for the Fifteenmile HMA addressing the action proposed. All comment letters were reviewed and considered which resulted in approximately 28 unique

substantive comments (see Appendix I, Summary of Scoping Comments). All of the substantive comments were considered in the development of the EA.

Through both public and internal scoping the following issues were identified for analysis and will be discussed in this document:

Wild Horse and Burro

- How would the gather and removal of wild horses from the Fifteenmile HMA affect the wild horses removed?
- How would the Proposed Action and Alternatives affect the wild horse population remaining within the Fifteenmile HMA?

Range Administration

- How would the Proposed Action and Alternatives affect permitted livestock grazing within the Fifteenmile HMA?

Vegetation (including Noxious Weeds/Invasive Species)

- How would the Proposed Action and Alternatives affect vegetation resources within the Fifteenmile HMA?
- How would the Proposed Action and Alternatives affect invasive species within the Fifteenmile HMA?

Riparian

- How would the Proposed Action and Alternatives affect riparian resources within the Fifteenmile?

Wildlife, Migratory Birds, and Threatened, Endangered, BLM Sensitive Species (Animals)

- What impact would the helicopter herding and gathering of wild horses have on wildlife, particularly near gathering or trap locations?
- What impact would the removal of excess wild horses above the AML for this HMA have on the wildlife?

Heritage Resources

- How would surface disturbance associated with a gather affect cultural resources eligible or unevaluated for the NRHP?
- How would surface disturbance associated with a gather affect significant paleontology localities?

Proposed Action and Alternatives

This section of the EA describes the Proposed Action and action alternatives, including any that were considered but eliminated from detailed analysis. Three alternatives are considered in detail:

- No Action Alternative – Under this alternative BLM would continue existing management of the Fifteenmile HMA under the current HMAP. No wild horses would be removed under this Alternative.
- Proposed Action – Under the Proposed Action, the BLM would update the Fifteenmile HMAP, and establish the AML as 100-230 wild horses. Re-stating the AML in total horse numbers would eliminate the confusion of mature horses and foals versus total horses. This Alternative would also involve an adjustment of the sex ratio of horses in the HMA to slow population growth, as well as a gather and removal of excess wild horses to the low AML. Future gathers would be conducted when the wild horse population exceeds the high AML.
- Alternative 1 – Under Alternative 1, the BLM would update the Fifteenmile HMAP, and maintain the AML as 70-160 mature wild horses. This Alternative would also involve an adjustment of the sex ratio of horses in the HMA to slow population growth, as well as a gather and removal of excess wild horses to the low AML. Future gathers would be conducted when the wild horse population exceeds the high AML.

The action alternatives were developed to meet the BLM purpose and need. The No Action Alternative does not meet the purpose and need. It also does not comply with the WFRHBA, FLPMA, or the Worland RMP, because it would not result in wild horses being managed in a thriving natural ecological balance and multiple use relationship. It is included as a basis for comparison with the action alternatives.

Actions Common to the Proposed Action and Alternative 1

The following actions are common to the Proposed Action and Alternative 1:

- All capture and handling activities would be conducted in accordance with the Standard Operating Procedures (SOPs) described in Appendix II (SOPs). Multiple capture sites (traps) may be used to capture wild horses within and outside of the Fifteenmile HMA. Whenever possible, capture sites would be located in previously disturbed areas. Capture techniques would include the helicopter-drive trapping method and/or helicopter assisted roping from horseback. Bait or water trapping may also be utilized on a limited basis, as needed.
- An Animal and Plant Health Inspection Service (APHIS) veterinarian would be on-site, as needed, to examine animals and make recommendations to the BLM for care and treatment of wild horses in accordance with Washington Office Instruction Memorandum (WO IM) No. 2015-070, *Animal Health, Maintenance, Evaluation and Response* (BLM 2015a). On-site inspection by an APHIS veterinarian is required for any animals to be transported across State borders without testing for Equine Infectious Anemia (EIA) prior to transport. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy (WO IM 2015-070). Conditions requiring humane euthanasia occur infrequently and are described in more detail in WO IM 2015-070.
- Selection of animals for removal and/or release would also be guided by WO IM No. 2010-135, *Gather Policy, Selective Removal Criteria, and Management Considerations for Reducing Population Growth Rates* (BLM 2010a).
- Policy and procedures for safe and transparent visitation by the public and media at wild horse gather operations would be in accordance with WO IM No. 2013-058, *Wild Horse and Burro Gathers: Public and Media Management* (BLM 2013a).

- The BLM is committed to the humane treatment and care of wild horses and burros through all phases of its program. The gathering of wild horses would be in accordance with WO IM No. 2015-151, *Comprehensive Animal Welfare Program for Wild Horse and Burro Gathers* (BLM 2015b).
- Advance planning for observation of gather operations can minimize the potential for unanticipated situations to occur and ensure the safety of the animals, staff, and contractor personnel, as well as the public/media. In response to this, an Incident Command System will be followed during the gather operations as guided by WO IM No. 2013-060, *Wild Horse and Burro Gathers: Management of Incident Command System* (BLM 2013c).
- All wild horses located outside of the established boundary of the Fifteenmile HMA would be removed, if possible.
- Excess wild horses would be shipped to BLM holding facilities, or Off-Range Corrals (ORCs), in Rock Springs, Wyoming, and/or any other BLM holding facility within an 8 hour transport distance of the HMA. At the holding facilities the wild horses would be prepared (freeze-marked, vaccinated and dewormed) for adoption or sale (with limitations) to qualified individuals. Wild horses that do not meet adoption age or temperament criteria may be shipped to Off-Range Pastures (ORPs).

Descriptions of Alternatives Considered In Detail

No Action Alternative – Continue Existing Management, No Fifteenmile HMAP Update, No Gather or Removal of Excess Wild Horses

Under the No Action Alternative, an update to the Fifteenmile HMAP would not be approved. Management of the wild horses and their habitat would continue to be guided by the current Fifteenmile HMAP, as approved in 1985. The HMA would still be managed for an AML of 70-160 mature horses. This Alternative does not analyze the impacts of gathering and removing excess wild horses at this time. No gather or removal of excess wild horses from the HMA and surrounding areas would occur. Wild horse populations would continue to exceed AML, and would continue to increase by approximately 20-25% annually. Existing management, including monitoring, would continue under the current HMAP.

Proposed Action – Update the Fifteenmile HMAP, Establish AML as 100-230 Wild Horses, Gather Excess Wild Horses to Low AML

The Proposed Action would update the current management of the HMA by adjusting population, habitat, and monitoring objectives, as well as an adjustment of the AML. Under this strategy, an update to the Fifteenmile HMAP would be approved, and wild horses and their habitat would be managed over the life of the plan as follows:

- The HMA would be managed for a wild horse population of approximately 100-230 wild horses.
- An aerial inventory of the Fifteenmile HMA would be conducted every 3 years to determine the wild horse population size.
- Excess animals would be removed to the low-range of the AML upon a determination that excess animals are present, expected to be every 5-6 years.
- Every attempt would be made to gather all of the wild horses within and surrounding the HMA.
- Horses that display good conformation and a variety of colors would be selected first to be placed back in the HMA, to increase herd quality and adoptability.
- During future gathers, the sex ratio of the population would be adjusted in favor of males as compared to females (60 male / 40 female sex ratio).

- Wild horses within the HMA would be sampled for genetic diversity. If genetic diversity declines, a few mares from another Wyoming HMA would be introduced to the HMA.
- Fertility controls or other population growth suppression methods may be used as directed through the most recent direction of the National Wild Horse and Burro Program. The use of any fertility controls or population growth suppression methods would use the most current best management practices and humane procedures available for the implementation of the controls.
- The existing water development projects within the Fifteenmile HMA would be maintained as needed to ensure that water availability is adequate to disperse wild horse use. The development of new water projects would be considered as needed. Additional NEPA compliance would be completed for any new projects.

The AML would be evaluated, as needed, based upon the collection of monitoring data such as actual use, forage utilization, use pattern mapping, range condition, trend, and precipitation.

Management Objective(s)	Monitoring Objective(s)	Implementation Objective(s)
A. Control Population Numbers Manage wild horse populations within the established AML range to protect the range from deterioration associated with overpopulation.	Conduct population inventories a minimum of once every 3 years. Conduct additional inventories as funding and time allow. Determine wild horse herd size.	Schedule gathers to remove excess wild horses when the total wild horse population exceeds the Upper AML for the HMA (about every 5-6 years), when animals routinely reside on lands outside the Fifteenmile HMA boundary (i.e. use is more than seasonal drift), or whenever animal health/condition is at risk. Attempt to gather all of the wild horses within and surrounding the HMA. Make every effort to conduct gathers in the fall, to minimize stress on the animals.
B. Additional Population Control Measures Objective 1: Adjust the sex ratio of the breeding population slightly in favor of males. Objective 2: Consider other population control methods as needed.	Document the number of stallions/mares released following each gather. Monitor annual population growth rate.	Manage a population of 100-230 animals within the HMA. Within the population, achieve a sex ratio of 60 males to 40 females immediately following gathers. New fertility control vaccines and/or population growth suppression methods may be used within the HMA as directed through the most recent direction of the National Wild Horse and Burro Program. The use of any new fertility controls and/or population growth suppression methods would use the most current best management practices and humane procedures available for the implementation of the new controls.
C. Age Distribution Assure all age classes are represented post-gather.	Monitor post-gather results.	Attempt to gather all wild horses in the HMA during gathers. Manage wild horses to achieve the following relative age distribution following gathers:

		<p>20% Young Age Class (Ages 0-4)</p> <p>50% Middle Age Class (Age 5-10)</p> <p>30% Old Age Class (Age 11+)</p>
<p>D. Assure Genetic Diversity</p> <p>Maintain genetic diversity within the herd (avoid inbreeding depression) as evidenced by no additional loss (>10%) of genetic diversity (Ho) over the next twenty years.</p>	<p>Collect hair samples every other gather to detect any changes from the baseline genetic diversity (Ho=0.431 in 2000).</p>	<p>If genetic diversity declines more than 10% from the baseline, 3-4 mares from another Wyoming HMA displaying similar or desired characteristics, such as animal size and conformation, of the horses within the Fifteenmile HMA will be released to improve the genetic diversity in the HMA.</p>
<p>E. Additional Selective Removal Criteria</p> <p>Maintain or improve animal conformation.</p>	<p>Maintain photos of wild horses released back into the HMA and/or introduced to the HMA.</p>	<p>In selecting animals for return to the range post-gather, animal size and conformation will have priority over color.</p>
<p>F. Sustain Healthy Populations of Wild Horses</p> <p>Manage wild horses to achieve an average body condition class score of 3+.</p>	<p>Visually observe wild horse body condition (Henneke Condition Class Method) throughout the year.</p> <p>Record average body condition and document during periodic gather and population inventory operations.</p>	<p>Maintain existing water developments to assist in limiting the distance horses trail to and from water sources.</p> <p>Conduct emergency removals when needed if animal body condition is less than Henneke Condition Class Score 3 due to drought, wildfire or other unplanned/unforeseen event.</p>
<p>G. Assure Rangeland Health</p> <p>Objective 1. Assess rangeland health approximately every 10 years on BLM administered lands.</p> <p>Objective 2. Limit utilization by all herbivores to 50% of the current year's above ground primary production for key species.</p>	<p>Locate additional key monitoring areas within the HMA as needed.</p> <p>Assess rangeland health using procedures outlined in Technical Reference 1734-6 and/or the most recent rangeland health technical reference adopted by the local district office.</p> <p>Measure forage utilization at key areas, with use pattern mapping annually.</p>	<p>A Rangeland Health Assessment was completed for the HMA in 2018. Analyze rangeland health through the collection of vegetative trend, precipitation, forage utilization and use pattern mapping every 10 years.</p> <p>Establish additional site-specific resource management objectives for key areas, as needed.</p> <p>Based on above, re-adjust AML or identify management actions to address/resolve rangeland health issues, as needed/appropriate. Re-adjustments in AML will be based on vegetation monitoring, herd monitoring and water availability as the limiting factors.</p>
<p>H. Assure Riparian Area Health</p> <p>Maintain / Improve riparian condition throughout the HMA.</p>	<p>Re-evaluate riparian functionality every ten years using the Proper Functioning Condition (PFC) method on the one riparian segment of</p>	<p>Maintain existing water sources or develop new water sources as needed to lessen wild horse use of the riparian area.</p>

	Fifteenmile Creek within the HMA.	
<p>I. Disperse Wild Horse Use</p> <p>Objective 1: Disperse wild horse use throughout the Fifteenmile HMA so that no parts of the HMA receive greater than light to moderate grazing use, except occasionally in drought years.</p> <p>Objective 2: Ensure adequate water is available throughout the hot summer months to disperse wild horse use.</p>	<p>Measure utilization at key areas, with use pattern mapping annually.</p> <p>Monitor water sources continuously through the summer months to ensure adequate water availability and to determine if/when supplemental water hauling will be needed.</p> <p>Monitor utilization to determine whether construction of new water developments is needed.</p> <p>Monitor movements of wild horses to determine use patterns, seasonal migrations and range of travel.</p>	<p>Maintain or re-construct existing water developments to assist in limiting the distance horses trail to and from water sources.</p> <p>Construct new water developments as needed to disperse wild horse use into under-utilized parts of the HMA. Construction of new projects would require completion of a site-specific environmental analysis.</p> <p>Haul water during times of drought to provide water in areas with adequate forage.</p> <p>Control the spread of invasive or noxious species within the HMA to maintain or increase desirable forage production.</p> <p>Use population inventories, on-the-ground observations, or other tracking methods, in conjunction with use pattern mapping, to monitor movements of wild horses within the HMA, and identify preferred use areas.</p> <p>Do not allow fencing within the HMA boundary that would restrict wild horse movements.</p>
<p>J. Maintain Greater Sage-Grouse Habitat</p> <p>Ensure that the quality of Greater Sage-Grouse PHMA habitat within the Fifteenmile HMA is maintained.</p>	<p>Measure forage utilization annually to ensure that residual forage levels are adequate for sage-grouse nesting, brood-rearing, and wintering.</p>	<p>Analyze rangeland health through the collection of vegetative trend, precipitation, forage utilization and use pattern mapping every 10 years.</p> <p>Follow Greater Sage-Grouse Best Management Practices as specified in the Worland RMP during maintenance or construction of range improvement projects.</p>
<p>K. Partnerships</p> <p>Involve stakeholders, organizations, other agencies, universities, adjacent land owners, and the public in achieving the objectives of the HMAP.</p>	<p>Keep an interested public list for the Fifteenmile HMA. Send notices, links, e-mails and/or hard copies of all wild horse management documents to those on this list.</p>	<p>Develop agreements to accomplish specific projects, monitoring, and tasks within the Fifteenmile HMA, as needed.</p> <p>Involve these groups in updates and modification of the HMAP.</p>

Under the Proposed Action, the number of excess wild horses gathered and removed to reduce the wild horse population to low AML (100 horses) would depend on the current wild horse population at the time of the gather.

Alternative 1 – Update Fifteenmile HMAP, Maintain AML as 70-160 Mature Wild Horses, Gather Excess Wild Horses to Low AML

Alternative 1 would update the current management of the HMA by adjusting population, habitat, and monitoring objectives. Under this alternative, the update to the Fifteenmile HMAP as identified in Table 4 above would be approved, and wild horses and their habitat would be managed over the life of the plan, with no adjustment to the existing AML of 70-160 mature wild horses.

Under Alternative 1, the number of excess wild horses gathered and removed to reduce the wild horse population to low AML (70 mature horses) would depend on the current wild horse population at the time of the gather.

Alternatives Considered but Eliminated from Detailed Analysis

Gather to 70 Horses and Implement Fertility Control

Under this alternative, the wild horse population would be reduced to the current low AML of 70 mature horses, and a fertility control program would be implemented. While this alternative would reduce population growth the first year following the gather, re-treatment in subsequent years would be necessary. Field darting to administer fertility control is not an option in the Fifteenmile HMA, due to the remoteness of the HMA, poor access, and inability to get close to the horses. This alternative was also eliminated from further analysis because of concerns for the future genetic health of the herd. Population modeling has indicated that reducing the wild horse population to this level and implementing a fertility control program could result in the minimum population level falling dangerously close to or below the level that would be needed to maintain a genetically healthy wild horse population.

No Horse Removal, Fertility Control Only

An alternative considered but not carried forward for detailed analysis was the use of fertility control methods only, with no wild horse removal. In order to maintain zero growth in the existing population it would be necessary to capture most wild horses every year for the administration of fertility control to target mares. This is not operationally feasible. Field darting to administer fertility control is not an option in the Fifteenmile HMA, due to the remoteness of the HMA, poor access, and inability to get close to the horses. This alternative also does not meet the purpose and need to maintain the AML, as the existing population of wild horses within the HMA is currently above the established AML and excess wild horses need to be removed in compliance with applicable regulations described in Section 1.3.

Gathering to High AML

Gathering wild horses to achieve a post-gather population size at the upper level of the AML would result in AML being exceeded by the next foaling season. This would be problematic for several reasons. The upper levels of the AML established for an HMA represent the maximum population for which a thriving natural ecological balance can be maintained. The lower level represents the number of animals that should remain in the HMAs following a wild horse gather in order to allow for a periodic gather cycle of approximately every four years and to prevent the population from exceeding the established AML between gathers. The need to gather below the upper range of AML has been recognized by the IBLA, which has held that:

“...the term AML within the context of the statute to mean[s] that “optimum number” of wild horses which results in a thriving natural ecological balance and avoids a deterioration of the range (Animal Protection Institute of America v. Nevada BLM. 1989b)....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 damage. Removal of horses before range conditions deteriorate ensures that horses enjoy adequate forage and an

ecological balance is maintained" (Animal Protection Institute of America et al. v. Rock Springs District BLM 1991).

Additionally, gathering to the upper range of AML would result in the need to follow up with another gather within one year, resulting in increased stress to wild horses. For these reasons, this alternative did not receive further consideration in this document.

Use of Bait and/or Water Trapping

An alternative considered but eliminated from detailed analysis was the 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. 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 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 HMA 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.

Other Alternative Capture Techniques

This alternative includes capture methods other than helicopters to gather excess wild horses. The BLM identified chemical immobilization, net gunning, and wrangler/horseback drive trapping as potential methods for gathering wild horses. The information below will demonstrate that these methods are infeasible in meeting the purpose and need for this area.

Chemical immobilization would not be feasible due to the size of the HMA and the number of horses that need to be gathered. Furthermore, chemical immobilization is a very specialized technique and is strictly regulated. The BLM does not currently have the capacity to implement this method at the scale required by this project.

Net gunning techniques would also be infeasible due to the size of the HMA and the number of horses that need to be gathered. Net gunning techniques normally used to capture big game also rely on helicopters in close situations. Net gunning heavier animals like horses may be more dangerous to the horse compared to net gunning pronghorn and mule deer. Elk & moose are net gunned, but wild horses are heavier at 900-1,000 pounds making net gunning more difficult. Net gunning also requires a capture crew to be on board of the helicopter posing additional risk to more people and to the wild horse in the event of a mishap. This alternative poses high risk to human health and safety therefore it is not under consideration as an alternative.

Use of wranglers on horseback drive-trapping to remove excess wild horses can be fairly effective on a small scale; however, due to the number of excess wild horses to be removed and the large geographic area of the HMA this technique would be infeasible. Horseback drive-trapping is also very labor intensive and can be very hazardous to the domestic horses and wranglers during gather operations. For these reasons, the identified capture method alternatives were eliminated from further consideration and are not analyzed in detail for the action alternatives.

Control of Wild Horse Numbers by Natural Means

This alternative would use natural means, such as natural predation and weather, to control the wild horse population. This alternative was eliminated from further consideration because it would violate the WFRHBA which requires the BLM to protect the range from deterioration associated with an overpopulation of wild horses by removing excess wild horses from the range. It is also substantially similar to the No Action alternative.

The primary “Natural Means” would be population correction based on the population reaching carrying capacity. Due to the absence of natural predators for wild horses this would be limited only by vegetation and water. Furthermore, wild horses are a long-lived species with documented foal survival rates exceeding 95%.

This alternative would allow for a steady increase in the wild horse populations which would continue to exceed the carrying capacity of the range and would cause increasing damage to the rangelands until severe range degradation or natural conditions that occur periodically – such as blizzards or extreme drought – cause a catastrophic mortality of wild horses in the HMA. Additionally, wild horses would leave the HMA in search of forage, water, and space.

For these reasons this alternative would have a severe negative impact on other multiple uses (especially wildlife and livestock) and would not correspond with the multiple use mission established by FLPMA.

Use of Surgical or Chemical Sterilization to Reduce Population Growth

Gelding a select number of stallions returned to the Fifteenmile HMA would not affect the future growth rate of the herd. Permanent sterilization of a select number of mares returned to the HMA would cause the breeding population to fall below the level needed to maintain a genetically viable wild horse herd within the HMA. The effectiveness and impacts of these techniques are well understood in controlled settings, but they have not been extensively researched under field conditions. Furthermore, this alternative would not respond to the purpose and need to remove excess wild horses.

Affected Environment and Environmental Effects

This chapter characterizes the resources and uses that have the potential to be affected by the proposed action, followed by a comparative analysis of the direct, indirect and cumulative impacts of the alternatives. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative impacts result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions.

Introduction

General Setting and Geographic Scope of the project area

Elevation in the HMA ranges from 4,600 feet along Fifteenmile Creek, to 6,100 feet on Tatman Mountain. Summers are extremely hot, often exceeding 100 degrees Fahrenheit, and winters can range from mild to bitterly cold, with temperatures as low as -30 to -40 degrees Fahrenheit. Annual precipitation ranges from 7 to 10 inches per year. About half of the precipitation falls during the growing season from April through June, with the remainder coming in high intensity summer thunderstorms and winter snowfall.

Much of the precipitation from summer thunderstorms runs off in numerous drainages. Some of this water is captured in reservoirs or pits. These reservoirs or pits, as well as two solar-powered water wells maintained by the WFO, are the only sources of water for wild horses, livestock, and wildlife within the HMA. During drought periods, the reservoirs and pits frequently hold very little or no water. Even in normal precipitation years, the reservoirs and pits frequently dry up in late summer. During these periods, the two solar-powered water wells are the only sources of water.

Rangeland Health Assessment

A Rangeland Health Assessment has been completed for the rangelands within the Fifteenmile HMA (BLM 2018). The determination regarding the vegetation, soils, and riparian health is summarized below:

Within the Fifteenmile HMA, 68,849 public land acres, or 97 percent of the public land acres within the HMA, are meeting Standard 3 for Healthy Rangelands. The 3 percent of the acres not meeting Standard 3 were areas identified as introduced seeding or contour furrow projects and not due to livestock, wild horse or wildlife over use. The monitoring data shows that the indicators (vegetative cover, plant composition, diversity and vigor, bare ground, litter, production, and erosion indicators) are appropriate for the ecological sites present. The vegetative trend data collected since 1983 shows that trend is generally static to upward on the sites monitored. While invasive annual bromes can be found scattered throughout some plant communities, and have clearly increased in some areas, they do not dominate the ecological sites, and do not alter the overall plant community states present. The vegetative community is stable, intact, resistant to change, and provides for soil and watershed stability. The small riparian segment of Fifteenmile Creek is considered to be functioning.

All indications are that the soils throughout the Fifteenmile HMA are stable and capable of supporting healthy plant communities. Water is being retained on the landscape and runoff is being minimalized. The soil structure, vegetation, and litter cover are adequate to protect the soil from rain drop impact and the erosive forces of overland flow.

Resources Not Analyzed

Resources and features not present or not effected by the proposed action or alternatives, and not discussed in this EA, include: Environmental Justice, Prime or Unique Farmlands, Flood Plains, Native American Religious Concerns, riparian areas, Class I visual management areas, Class I Airsheds, Wild and Scenic Rivers, Wetlands, Wilderness Values or Inventoried Lands with Wilderness Characteristics, Land Use / Access, Air Quality, Geology & Mineral Resources, Soils, Threatened and Endangered Plants, BLM Special Status Plant Species, Recreation

and Visual Resource Management, Water Resources, Socioeconomic, Hazardous or Solid Wastes, Public Health & Safety, Fuels, and Forests.

Resources Carried Forward for Analysis

Heritage Resources

Issue(s) Identified

- How would surface disturbance associated with a gather affect cultural resources eligible or unevaluated for the NRHP?
- How would surface disturbance associated with a gather affect significant paleontology localities?

Affected Environment

Cultural Resources

The area of potential effect (APE) was defined for the current undertaking as the BLM managed public land acres within the Fifteenmile HMA. To evaluate potential effects to historic properties (cultural resources eligible or unevaluated for the National Register of Historic Places) a literature review was completed of the HMA. Consultation occurred with the State Historic Preservation Office (SHPO) under the Wyoming State Protocol between the BLM and SHPO (State Protocol). In addition, a class III cultural resources inventory was previously completed of the primary trap site (BLM cultural project #1600021y).

Results of the file search indicate there are 67 known cultural resource sites within the Fifteenmile HMA. Of those sites 7 are eligible for the National Register of Historic Places (NRHP), 29 are unevaluated, and the remaining sites are not eligible. Typical for the region, the site types identified include prehistoric open camps (including stone circles) and lithic scatters, historic debris, historic cabins, and cairns. No cultural resource sites are located within the primary trap site.

Paleontological Resources

Surface formations within the Fifteenmile HMA include the Willwood Formation, Tatman Formation, and Quaternary deposits. Both the Willwood and Tatman Formations have a PFYC rating of 5, meaning they have very high sensitivity for paleontological resources. The late Paleocene and early Eocene Willwood and Tatman Formations are scientifically important due to their abundant, diverse, and well-preserved fossils found in temporally continuous strata that have been used to study a wide variety of depositional environments and ancient climatic conditions. Typical fossils found within these formations include mammals, reptiles, and plant fossils. Paleontological resources are determined to be significant when they are scientifically important because it is rare, of high quality and well-preserved, provides new information, or has educational value (IM2009-011).

The area of potential effect (APE) was defined to include the Fifteenmile HMA. Within the APE, 101 fossil localities have been identified. No significant localities are located within the primary trap site.

Direct and Indirect Effects

No Action Alternative

Cultural Resources

Under the No Action Alternative, the development of the proposed action would not occur. There is a direct relationship between the rangeland health and potential effects to cultural resources (BLM 2006). Provided the rangeland health does not deteriorate, no resulting effects on cultural resources would be expected to occur beyond the current situation.

Paleontological Resources

Under the No Action Alternative, the development of the proposed action would not occur. No resulting effects on cultural resources would be expected to occur beyond the current situation.

Proposed Action and Alternative 1

Cultural Resources

Impacts occur to historic properties when a proposed project would directly or indirectly alter any of the qualities of that property that qualify it for inclusion in the NRHP. Potential impacts from the proposed action include physical destruction of or damage to all or part of a property (direct impact) or introduction of visual or atmospheric elements that diminish the integrity of a property's significant features (indirect impact).

Thirty-six historic properties were identified within the project's direct APE. None of which are located within the primary trap site. Use of the trap site for a gather would have no effect on known historic properties. Locations of potential satellite trap sites are unknown and would be determined based on terrain and location of the herd before a gather. Any satellite trap sites would be evaluated for impacts to cultural resources prior to use. As with the No Action alternative, the Proposed Action will have no effect on known historic properties. For the protection of unknown cultural resources the standard cultural stipulations apply and are included in the conditions of approval. The standard cultural stipulations include measures for mitigating adverse effects discovered during surface disturbing activities.

Paleontological Resources

Surface disturbance would occur within and around the primary trap sites as a result of approving the proposed action. Significant fossil localities are known within the Fifteenmile HMA but none are located within the primary trap site. Surface disturbance resulting from the proposed action will have no effect on significant fossil localities located on the surface. Standard paleontology stipulations apply to mitigate any potential affects to unknown localities. As with the No Action alternative, the Proposed Action will have no effect on known significant paleontological localities.

Cumulative Impacts

Since there would be no direct or indirect effects on known historic properties or significant paleontological localities, there can be no cumulative effects.

Native Vegetation, Noxious Weeds/Invasive Species

Issue(s) Identified

- How would the Proposed Action and Alternatives affect vegetation resources within the Fifteenmile HMA?
- Would the the Proposed Action and Alternatives increase invasive species presence within the Fifteenmile HMA?

Affected Environment

Native Vegetation

Vegetative communities within the Fifteenmile HMA are highly variable. The following plant communities can be found throughout the HMA:

Saltbush / Bluegrass Plant Community
Saltbush / Bunchgrasses Plant Community
Perennial Grass / Mixed Shrub Plant Community
Rhizomatous Wheatgrass / Needle-and-Thread / Sod Formers / Big Sagebrush Plant Community
Rhizomatous Wheatgrass / Perennial Grasses / Sod Formers / Big Sagebrush Plant Community

Saltbush / Squirreltail Plant Community
 Perennial Grass / Big Sagebrush Plant Community
 Bluebunch Wheatgrass / Rhizomatous Wheatgrass / Needle-and-Thread / Big Sagebrush Plant Community

Forage for wild horses and domestic livestock is largely provided by bluebunch wheatgrass (*Pseudoroegneria spicata*), western wheatgrass (*Pascopyrum smithii*), needle-and-thread (*Hesperostipa comata*), Indian ricegrass (*Achnatherum hymenoides*), bottlebrush squirreltail (*Elymus elymoides*), and Sandberg bluegrass (*Poa secunda*). Shrubs found within the HMA include Wyoming big sagebrush (*Artemisia tridentata*), greasewood (*Sarcobatus vermiculatus*), green rabbitbrush (*Chrysothamnus viscidiflorus*), rubber rabbitbrush (*Ericameria nauseosa*), and Gardner’s saltbush (*Atriplex gardneri*). Fifteenmile Creek is a cottonwood-lined ephemeral stream that flows through the center of the HMA, in response to snowmelt or precipitation events. It has one small segment that is considered a riparian area, due to some natural seeps in the bottom of the channel.

The mosaic of plant communities and topographic features that are found throughout the HMA supports a wide variety of wildlife species that use the various habitats for resting, courtship, foraging, travel, food and water, thermal protection, escape cover and reproduction.

Noxious Weeds/Invasive Species

Noxious weeds and other invasive species can be found scattered throughout the HMA mostly in disturbed areas, along roads, near water sources, and to lesser amounts among the native plant communities. There are known populations of Russian Olive, Salt Cedar, Russian Knapweed, Whitetop, and Canada Thistle within the HMA. Treatments of these invasive species occur mostly through Agreements with the County Weed & Pest Districts utilizing Integrated Pest Management Techniques.

Table 5 –Noxious Weeds/Invasive Species found within the HMA		
Common Name	Scientific Name	Acres
Canada Thistle	<i>Cirsium arvense</i>	3.7
Salt Cedar	<i>Tamarix ramosissima</i>	233.5
Russian Olive	<i>Elaeagnus angustifolia</i>	4.1
Russian Knapweed	<i>Acroptilon repens</i>	10.8
Whitetop	<i>Cadaria draba</i>	43.5

Direct and Indirect Effects

No Action Alternative

Native Vegetation

Under the No Action Alternative no gather operations impacts would occur. This alternative would allow wild horse populations to continue to increase within the HMA and nearby areas as no population management would take place. Populations of wild horses might eventually stabilize at very high numbers at their food-limited ecological carrying capacity. At these levels, range conditions would deteriorate.

Currently, Rangeland Health Standards are being met on 68,489 acres of public land in the HMA. Rangeland health on these acres of public land would not be maintained under this alternative. Without removal of excess wild horses, increased wild horse use over the entire HMA would adversely impact native vegetation, especially around water sources. As native plant health deteriorates and plants are lost, soil erosion would increase. The shallow desert topsoil cannot tolerate much loss without losing productivity and thus the ability to be

revegetated with native plants. Invasive non-native plant species would increase and invade new areas following increased soil disturbance and reduced native plant vigor and abundance. This would lead to both a shift in plant composition towards weedy species and an irreplaceable topsoil and productivity loss from erosion. There would also be increased impacts to areas outside the HMA as horses move out in search of better forage. Watershed health throughout the area would decline, resulting in increased sediment and salinity delivery into local and regional drainages. These impacts would be cumulative over time.

Noxious Weeds/Invasive Species

Under the No Action alternative no gather operations would occur. This alternative will not increase the size of current weed populations or introduce new weed populations.

Proposed Action and Alternative 1

Native Vegetation

Physical surface disturbance would occur at the wild horse trap sites due to the erection of the traps, trampling by horses, and vehicle traffic. Surface disturbance occurs within the paddocks of the trap due to the milling about by the horses; however, the total impacted area would be less than one quarter acre per trap site. When the horses are herded some vegetation would be disturbed. Vehicles would damage some vegetation, but staying on existing roads and trails would minimize the impact to the watershed. As documented after past gathers, the vegetation in these areas would recover quickly.

Under these alternatives, current rangeland health would be maintained on 68,489 acres of public land within the HMA. The removal of excess wild horses from the HMA, and maintaining the wild horse population at AML in the future, would ensure that vegetation composition, cover, and vigor would be maintained or improve, especially near water sources. Potential for competition for forage and water between wild horses, wildlife and livestock, and surface disturbing activity around water sources would be reduced. Quantity of forage would be maintained or increase.

Noxious Weeds/Invasive Species

Noxious weeds are invasive species that may become established on open rangelands, particularly on disturbed sites, such as wild horse trap sites. The trap sites would be monitored for the presence of noxious weeds, and treatment methods for any new noxious weed infestations located would be evaluated on a site specific basis.

Cumulative Impacts

The vegetation within the HMA has been utilized by wild horses and domestic livestock since the project area was first settled, and would be expected to continue in the future. Implementation of the Proposed Action or Alternative 1 would contribute to isolated areas of vegetation disturbance through the gather activities. In the long term, however, the achievement of AML in conjunction with proper grazing management and other foreseeable actions such as recreation, mineral exploration and reclamation, vegetation harvesting and weed treatments, would contribute to improved vegetative resources.

Implementation of the No Action Alternative would result in expansion in area and severity of degradation of vegetation by wild horses due to increasing population pressures. In the long term, this would cause more palatable native vegetation to be replaced by more opportunistic native and/or nonnative species. These species, such as cheatgrass, and/or noxious weeds, tend to both expand in disturbed soil areas and be less palatable. When combined with past, present, and reasonably foreseeable future actions the potential for significant cumulative impacts to native vegetation is expected to be higher under the No Action Alternative due to increased wild horse populations.

Range Administration

Issue(s) Identified

- How would the Proposed Action and Alternatives affect permitted livestock grazing within the Fifteenmile HMA?

Affected Environment

Currently 3,370 AUMS of forage for domestic livestock, and 2,300 AUMs of forage for wild horses are allocated within the HMA. This forage allocation was established in the Grass Creek RMP (1998). The forage allocation for wild horses is based upon an upper population level of 192 adult horses, plus 38 foals, assuming a 20 percent reproductive rate, for an upper population level of 230 total wild horses. The AML for wild horses has never been adjusted to match this forage allocation.

There are five unfenced livestock grazing allotments located within the Fifteenmile HMA:

LU Allotment No. 00604 (part)

Badger Gulch Allotment No. 00652

Allen Basin Allotment No. 00669

Pitchfork Allotment No. 00676

Hunt Oil 15 Mile Allotment No. 00862

A total of 3,370 AUMs of livestock grazing are currently permitted on these grazing allotments. This livestock grazing is permitted as sheep grazing from November to March. Nearly all of the livestock grazing has been in voluntary non-use for several years, since the livestock permittees do not currently have sheep. Actual livestock grazing use within the HMA has averaged less than 1 percent of permitted use since 1984. The permitted livestock grazing use could be applied for at any time by the permittees.

Direct and Indirect Effects

No Action Alternative

Under this alternative, increasing horse populations would first displace livestock in the HMA, and then over time in adjacent areas surrounding the HMA. Displacement would be slow and indirect. As competition for forage and water increased, it would become less economically favorable to utilize the areas with domestic livestock. Authorized livestock grazing would be reduced or eliminated. This would have a negative economic impact on livestock producers. Operation and maintenance of existing water sources and other range improvements by livestock operators would not occur in the absence of livestock use. Rangeland health conditions in and around the HMA would deteriorate significantly. These impacts would be cumulative over time.

Proposed Action and Alternative 1

Implementation of the HMAP under these alternatives would have the potential to directly impact livestock grazing within the HMA. Maintenance of water developments and other range improvement projects within the HMA would benefit grazing livestock as well as wild horses.

Maintaining the wild horse population within the upper range of the AML, 230 horses under the Proposed Action, or 160 mature horses under Alternative 1, would ensure that rangeland health is maintained. The forage that is allocated for grazing livestock would remain available for livestock utilization. No adjustments in permitted livestock use, season of use, or terms and conditions of use would occur as a result of the Proposed Action or Alternative 1.

Livestock located near gather activities may be temporarily disturbed or displaced by the helicopter and increased vehicle traffic. This impact would be minor and short-term. Temporary stress which could occur in conjunction with gathering operations would be minimized or avoided by careful attention to timing and location of gather activities and close communication with the owners of the domestic livestock.

Cumulative Impacts

No cumulative impacts to Range Administration are expected.

Riparian

Issue(s) Identified

- How would the Proposed Action and Alternatives affect riparian resources within the Fifteenmile?

Affected Environment

There are approximately 0.75 miles of intermittent streams and 21 acres of riparian habitat. Many of these areas support limited riparian habitat and water flows. These riparian areas and their associated plant species occur throughout the HMA near seeps and short sections of intermittent drainages. The pools found in the creek channel serve as a watering source for mule deer, elk, and wild horses. The amount of wild horse use varies seasonally and from year to year based upon how much water is available in the stockwater reservoirs within the HMA. The last Land Health Assessment found that Standard 2 for riparian was achieving with the main segments evaluated for PFC were classed as Functioning at Risk, as the channel banks are vulnerable to drought and peak flow events. Available data shows that wild horse use at their current numbers over the AML for the majority of these areas have moderate to heavy use. Continuing to maintain the water wells and reservoirs in functional condition would provide wildlife and wild horses alternative water sources.

Direct and Indirect Effects

No Action Alternative

Wild horse populations would continue to grow. Increased wild horse use throughout the HMA would begin to adversely impact riparian resources and their associated surface waters. Over the longer-term, as native plant health deteriorates and plants are lost, soil erosion would increase. With the No Action alternative, would not make progress towards achieving and maintaining a thriving natural ecological balance since riparian resources would begin to deteriorate.

Proposed Action and Alternative 1

Managing the wild horse populations within the established AML over the next 10 years would be expected to allow recovery of damaged riparian habitats. The amount of trampling/trailing would be reduced. Utilization of the available forage within the riparian areas would also be reduced to within allowable levels. Over the longer-term, continued management of wild horses within the established AML would be expected to result in healthier, more vigorous vegetative communities. Hoof action on the soil around seeps and stream banks would be lessened which should lead to increased stream bank stability and decreased erosion. Improved vegetation around riparian areas would dissipate stream energy associated with high flows, and filter sediment that would result in some associated improvements in water quality. The Proposed Action would make progress towards achieving and maintaining proper functioning condition at riparian areas. There would also be reduced competition among wildlife and wild horses for the available water.

Cumulative Impacts

No cumulative impacts to Riparian are expected.

Fish/Wildlife (Including Threatened, Endangered, Candidate and BLM Sensitive Species)

Issue(s) Identified

- What impact would the helicopter herding and gathering of wild horses have on wildlife, particularly near gathering or trap locations?
- What impact would the removal of excess wild horses above the AML for this HMA have on the wildlife?

Affected Environment

Wildlife

The Fifteenmile HMA provides habitat for a variety of wildlife species, including 46,701 acres of crucial winter and winter/yearlong habitat for mule deer and pronghorn antelope, as well as periodic elk use of occurring over the past 5 to 10 years. The crucial mule deer winter habitat (23,142 acres) is located primarily along the main channel of Fifteenmile Creek and the upper elevation areas around Tatman Mountain and Squaw Teats (see Wildlife Map Figure 2).

The upland sagebrush habitats (approximately 20,000 acres), primarily north of Fifteenmile Creek, provide crucial antelope winter range, as well as some seasonal habitats for avian sagebrush obligates. The primary plant communities or habitat types within the HMA that provide for wildlife forage and cover needs are the upland sagebrush/bunchgrass communities, saline uplands (54,808 acres), and floodplain shrub stands (3,166 acres). The preferred sagebrush communities are typically >10% canopy cover sagebrush with a healthy understory composition of herbaceous and forb species. These shrub communities are particularly important to wintering mule deer, antelope, and wintering and nesting sage-grouse, as well as other sagebrush obligate passerines like the sage thrasher, sage sparrow, and Brewer's sparrow. Wintering big game and sage-grouse depend on the sagebrush plants for forage and the avian sagebrush obligates depend on both the sagebrush and standing herbaceous residue for nesting cover. The saline upland sites typically have less sagebrush canopy than the sagebrush/bunchgrass communities have, and have salt tolerant shrubs, grasses and forbs. These sites can be important foraging areas for mule deer and pronghorn, particularly in the spring and summer when diets shift from shrubs to grasses and forbs. These areas also contain white-tailed prairie dog colonies, and the colonies themselves provide habitat for other sensitive species like the burrowing owl and mountain plover, as well as foraging habitat for the ferruginous hawk. The floodplain shrub stands provide mule deer both valuable cover and forage. Rubber rabbitbrush, silver sagebrush, greasewood and Wyoming big sagebrush, as well as some cottonwood regeneration provide browse species, particularly in the fall and winter. These large shrubs provide cover and security in these bottoms, which are particularly important during breeding season when mule deer are most vulnerable. The variety of structure provided in the cottonwood communities of these bottoms is also valuable foraging and nesting habitat for numerous passerines, woodpeckers, and some raptor species.

Elk primarily forage on herbaceous species and could occur within any of the habitat types already mentioned. Potential forage competition between these elk and wild horses or livestock is not anticipated, because the Wyoming Game and Fish is presently doing what they can to reduce and remove this elk herd from the HMA with a very long general hunting season. Their primary reason is potential brucellosis expansion eastward across the basin into the Bighorn Mountains, and secondarily because of crop damage on private farm fields along the Greybull river to the north of the HMA. The numbers of these elk vary widely with low numbers, 30, or less within the HMA during the summer and hunting season, which runs from mid-August to late December, and larger numbers up to 100 or more animals in late winter and early spring.

Special Status Species

There are no known threatened or endangered wildlife species in this HMA. However, the sage-grouse, a Candidate species, and the mountain plover, white-tailed prairie dog, burrowing owl, ferruginous hawk, sage

thrasher, sage and Brewer's sparrow are all classified as Wyoming BLM sensitive species. The sagebrush/bunchgrass communities mentioned above, in addition to providing big game winter range, provide winter, breeding, nesting and early brood rearing habitat for sage-grouse as well as breeding, nesting and foraging habitat for sagebrush obligate passerine species like the sage thrasher, sage and Brewer's sparrow.

There are approximately 30,437 acres of Greater Sage-grouse habitat mapped as Priority Habitat Management Area (PHMA) within the HMA (see Wildlife Map). Sagebrush communities both within and outside of PHMA are likely providing some level of sage-grouse seasonal habitats as well as nesting and foraging habitat for the other sagebrush obligate passerines. There are two occupied sage-grouse leks within the HMA, the Horseshoe Bedground and Sand Springs Leks, as well as 5 other leks within 2 miles from the HMA boundary. Female sage-grouse from all 5 leks are likely using suitable sagebrush habitats within the HMA for nesting habitat. In an analysis of sage-grouse studies conducted in 7 areas in Wyoming since the mid-1990s, (Holloran and Anderson 2005) found that 45% of nests were located within 2 miles (3 km) of the lek where the hen was bred, and 64% of the nests were within 3 miles (5 km) of the lek. These same sagebrush habitats are also likely providing breeding, nesting and foraging habitat for sagebrush obligate species like the sage thrasher, sage sparrow, and Brewer's sparrow.

The HMA also provides suitable habitat for white-tail prairie dog colonies, mountain plover and burrowing owls.

Direct and Indirect Effects

No Action Alternative

Wildlife

Unmanaged populations of wild horses, because of the lack of any significant predation or BLM control over population growth, might eventually stabilize at high numbers near their forage-limited ecological carrying capacity. At these horse numbers grazing use levels will continue to increase to the point where plant species composition, structural diversity and vigor will decline. This deteriorated range condition will provide inadequate levels of forage and cover, and competition for water sources and forage resources would increase between wild horses, livestock and wildlife. Inter specific competition over time could affect pronghorn, mule deer and elk, especially in crucial winter ranges as herbaceous forage, residue and litter amounts decrease along with soil water storage and retention, the overall production of grasses, forbs and shrubs will deteriorate. Eventually big game species may be displaced over time and population levels and overall health of the herds would diminish.

Special Status Species

Because no gather operations would occur under this alternative, there would be no gather related impacts to Special Status Species. However, because excess wild horses would still be present within this HMA and populations would continue to grow at approximately 20% per year, this alternative would eventually result in increasing negative impacts to Special Status Species like avian sagebrush obligates.

Under this alternative wild horse numbers and grazing use levels will continue to increase to the point where plant species composition, structural diversity and vigor will decline. This deteriorated range condition will provide inadequate levels of forage and cover, specifically residual grasses required for nest concealment for sage grouse and other avian sagebrush obligate species like the sage thrasher, sage and Brewer's sparrows, potentially resulting in increased nest predation and subsequent declines in nesting success. These deficiencies in cover will also eventually result in noncompliance with stated desired conditions for cover within the Greater Sage-Grouse Seasonal Habitat Objectives Table 2.7 of the 2015 Worland Field Office RMP.

Proposed Action

Wildlife

The removal of excess wild horses above the AML for this HMA would mitigate the potential over-utilization of forage and reduction in vegetative ground cover. Under this alternative maintaining wild horse populations within the newly established 100-230 AML would maintain or enhance plant species composition, structural diversity, and vigor, which are all valuable habitat components that wildlife, particularly in sagebrush habitats important to wintering big game and avian sagebrush obligates. It would reduce the potential for competition for forage between wild horses, wildlife and livestock. Additionally, this alternative will help maintain or enhance watershed condition by enhancing soil moisture retention through increasing vegetative cover, residue and litter.

Because wild horse gather or trap sites will not be located near raptor nests or in important wildlife habitats like sagebrush communities important to wintering big game or nesting avian sagebrush obligates, no impacts to these important habitats are anticipated from this Proposed Action.

Species like mule deer and antelope, within approximately 0.5 miles or less from wild horse capture locations would likely displace to neighboring secure habitats during the gather operations. This short-term displacement impact is a result of human presence and helicopter/vehicles noise associated with the wild horse capture activities. This disturbance will likely cause wildlife to seek out more secure habitats away from the gather or trap locations. However, these big game species should return to the area within a few days once capture activities have stopped. Capture activities would not cause abandonment of preferred habitats, and there would be no long-term adverse effect to these species.

Special Status Species

The fall/early winter timing of this proposed wild horse gather would avoid critical nesting, foraging and brood rearing periods for avian sagebrush obligates like sage grouse, sage thrasher and sage and Brewer's sparrow. In addition, no capture or trap locations within PHMA or GHMA suitable sage grouse or sagebrush habitats are proposed. These avian sagebrush obligate species would benefit from the reduction of wild horses down to AML because the reduced grazing pressure would improve rangeland conditions and enhance available forage and cover important to these species. No measurable impacts would occur to the sage grouse or the other avian sagebrush obligate species from this proposed alternative.

Alternative 1

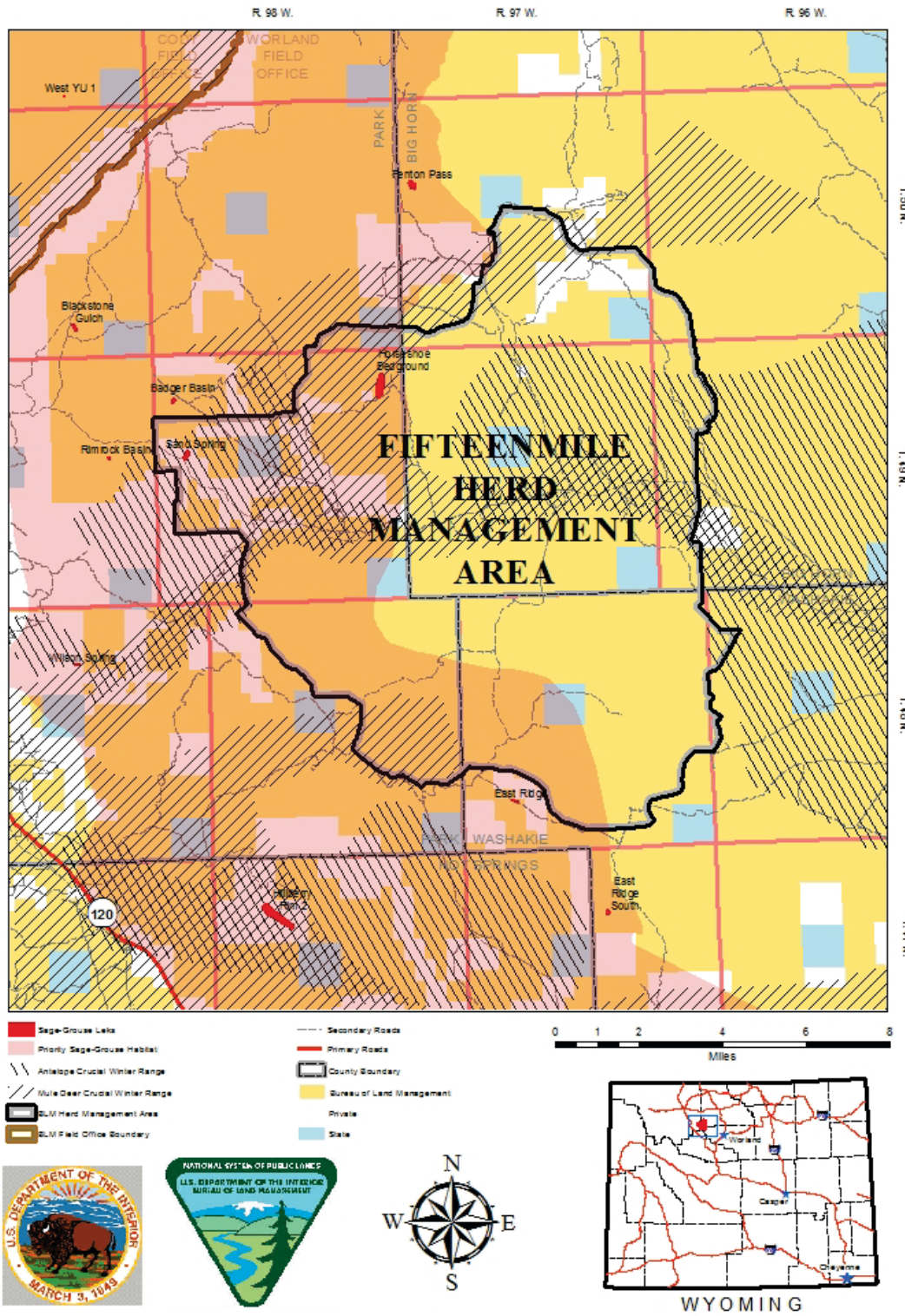
Wildlife and Special Status Species

Under Alternative 1 the anticipated impacts to wildlife and special status species would be negligible from those described above under the Proposed Action. While this alternative will allow for a maximum of 70 fewer horses than the Proposed Action, the average number of horses per alternative, indicated through population modeling, will only be a difference of 35 horses, with 128 for this alternative and 163 for the Proposed Action. Differences in grazing utilization between the Proposed Action and this alternative will likely be unmeasurable.

Cumulative Impacts

No cumulative impacts to wildlife are identified in addition to what has been described above for the Proposed Action, Alternative 1 or No Action.

Figure 2 – Wildlife Map



Wild Horse Populations

Issue(s) Identified

- How would the gather and removal of wild horses from the Fifteenmile HMA affect the horses removed?
- How would the Proposed Action and Alternatives affect the wild horse population remaining within the Fifteenmile HMA?

Affected Environment

The Fifteenmile HMA was established in 1985. Table 5 indicates the approximate wild horse population in the HMA each year since 1985:

Year	Number of Horses	Year	Number of Horses	Year	Number of Horses
1985	78	1997	189	2009	392
1986	93	1998	220	2010	111
1987	112	1999	250	2011	122
1988	134	2000	297	2012	151
1989	194	2001	142	2013	195
1990	232	2002	172	2014	239
1991	279	2003	202	2015	284
1992	175	2004	230	2016	337
1993	203	2005	164	2017	404
1994	239	2006	205	2018	485
1995	121	2007	256		
1996	167	2008	320		
Average Wild Horse Population Per Year – 217 Horses					

Table 5 represents formal wild horse population inventory data, as well as ground-based observations and estimates in years that a formal population inventory was not conducted. The table reflects the total number of wild horses, not just adult horses. Population inventories are usually conducted in January, when previous year's foals are considered adults. Previous gathers and removals of excess wild horses were conducted in 1991, 1994, 2000, 2004, and 2009, resulting in lower population numbers the following years.

The current Fifteenmile HMAP (BLM 1985) set the Appropriate Management Level (AML) for wild horses as follows:

"The area will be managed for an average of 100 head of adult animals with a 5 year fluctuation starting at 70-80 head and moving to 150-160 head of adult animals. Stringent control of these numbers by implementing a five year gathering plan will help improve the overall habitat."

The approved Worland RMP (BLM 2015) states the AML would be managed as follows:

"Manage the Fifteenmile HMA for an initial appropriate management level of 70 to 160 wild horses, not counting foals, in an attempt to maintain a population of 100 adult wild horses adjusted as necessary based upon monitoring."

"Base future adjustments to the appropriate management level on monitoring information and multiple use considerations through development of and/or revisions to HMA Plans. Update HMA plans to include Greater Sage-Grouse objectives."

Genetic testing was completed on the wild horses in the Fifteenmile HMA following gathers in 1991 and 2000. Genetic samples were analyzed by Dr. E. Gus Cothran, Department of Veterinary Science, Texas A&M University. His conclusions and recommendations regarding genetic diversity in the Fifteenmile herd are summarized as follows:

“Genetic variability of the Fifteenmile herd is very high, among the highest levels seen in horse populations. The high variation is probably due to a mixed origin of the herd and possibly continued gene flow. The genetic similarity and RML (Restricted Maximum Likelihood) cluster analysis support the mixed nature of this herd.”

“No action is needed at this time. As long as the population size is kept at around 100 individuals, genetic variation should not decay to detrimental levels for several generations.”

“Much of the genetic diversity of this herd is in rare variants that could be lost quickly if population size is maintained at extremely low levels.” (Cothran 2001)

Since the HMA was established, the wild horse population has ranged from 78 wild horses to the current estimated population of 485 wild horses, with an average population size of 217 wild horses per year. The wild horses are considered to be healthy and in good physical condition. No issues with wild horse health or welfare have been identified.

Direct and Indirect Effects

Population modeling was completed for the three alternatives to analyze possible differences that could occur to the wild horse populations between alternatives. This modeling effort was completed using the WinEquus program developed by Dr. Steven Jenkins at the University of Nevada at Reno. This model was designed to assist the BLM in evaluating possible impacts on wild horse populations as a result of management actions. The modeling may not necessarily reflect actual on-the-ground results, but rather provides a means to demonstrate anticipated differences in populations based on different management actions. One objective of the modeling effort was to identify if any of the alternatives would “crash” the population or cause extremely low population numbers or growth rates.

Modeling demonstrated that minimum population levels and growth rates were found to be within reasonable levels and adverse impacts to the population are not anticipated. When comparing the differences between the three alternatives, the No Action Alternative would result in the greatest population number with an average population of 1,497 wild horses in the Fifteenmile HMA. According to the modeling, Alternative 1 would result in the lowest average population of 128 wild horses in the Fifteenmile HMA, while the Proposed Action would result in an average population of 163 wild horses in the Fifteenmile HMA. Graphic and tabular results and discussion are displayed in detail in Appendix III (Wild Horse Population Modeling).

Proposed Action and Alternative 1

Under the Proposed Action and Alternative 1, excess wild horses would be periodically gathered and removed from the Fifteenmile HMA when the wild horse population exceeds the high AML. During the gather and removal process, wild horses would be directly impacted as discussed below.

During Removal

The BLM has been conducting wild horse gathers since the mid-1970s. During this time, methods and procedures have been identified and refined to minimize stress and effects to wild horses during gather operations. The SOPs in Appendix II would be implemented to ensure a safe and humane gather occurs and would minimize potential stress and injury to wild horses.

In wild horse gathers that utilize helicopters and motorized vehicles, gather-related mortality averages only about one percent (1%), which is considered very low when handling wild animals. Approximately six-tenths of one percent (0.6%) of the captured animals could potentially require humane euthanasia due to pre-existing conditions and in accordance with BLM policy (GAO 2008). These data confirm that the use of helicopters and motorized vehicles has proven to be a safe, humane, effective, and practical means for the gather and removal of excess wild horses (and burros) from the public lands.

As a further measure, it is BLM policy to only use helicopters to assist in the removal of wild horses from July 1 through February 28. The use of helicopters to assist in the capture of wild horses is prohibited during the six weeks before and the six weeks that follow peak foaling. The peak of foaling falls within about a two-week period during mid-April to mid-May for most wild horse herds. Therefore, the use of helicopters to capture wild horses is prohibited during March 1-June 30, unless an emergency situation exists.

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

Other injuries may occur after a wild horse has been captured and is either within the trap site corral, the temporary holding corral, during transport between facilities, or during sorting and handling. Occasionally, wild horses may sustain a spinal injury or a fractured limb but based on prior gather statistics, serious injuries requiring humane euthanasia occur in less than 1 horse per every 100 captured. Similar injuries could be sustained if wild horses were captured through bait and/or water trapping, as the animals still need to be sorted, aged, transported, and otherwise handled following their capture. These injuries result from kicks and bites, or from collisions with corral panels or gates.

To minimize the potential for injuries from fighting, the animals are transported from the trap site to the temporary (or short-term) holding facility where they are sorted as quickly and safely as possible, then moved into large holding pens where they are provided with hay and water. On many gathers, no wild horses are injured or die. On some gathers, due to the temperament of the horses, they are not as calm and injuries are more frequent. Overall, direct gather-related mortality averages less than 1% (extrapolated from 2009 gather data).

Indirect individual effects are those which occur to individual wild horses after the initial event. These may include miscarriages in mares, increased social displacement, and conflict in stallions. These effects, like direct individual effects, are known to occur intermittently during wild horse gather operations. An example of an indirect individual impact would be the brief 1-2 minute skirmish between older stallions which ends when one stallion retreats. Injuries typically involve a bite or kick with bruises which do not break the skin. Like direct individual effects, the frequency of these effects varies with the population and the individual.

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

additional care. Despite these efforts, some orphan foals may die or be humanely euthanized as an act of mercy if the prognosis for survival is very poor.

Through the capture and sorting process, wild horses are examined for health, injury and other defects using the humane care and treatment methods as described in WO IM No. 2015-151, Comprehensive Animal Welfare Program for Wild Horse and Burro Gathers (BLM 2015b). Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy. The policy described in WO IM No. 2015-070, Animal Health, Maintenance, Evaluation and Response (BLM 2015a) is used as a guide to determine if animals meet the criteria and should be euthanized (Appendix II, SOPs). Animals that are euthanized for non-gather related reasons include those with old injuries (broken or deformed limbs) that cause lameness or prevent the animal from being able to maintain an acceptable body condition (greater than or equal to body condition score of 3); old animals that have serious dental abnormalities or severely worn teeth and are not expected to maintain an acceptable body condition, and wild horses that have serious physical defects such as club feet, severe limb deformities, or sway back. Some of these conditions have a causal genetic component and the animals should not be returned to the range to avoid amplifying the incidence of the problem in the population.

Wild horses not captured may be temporarily disturbed and moved into another area during the gather operation. With the exception of changes to herd demographics from removals, direct population effects would be temporary in nature with most, if not all, effects disappearing within hours to several days of release. No observable effects associated with these impacts would be expected within one month of release, except for a heightened awareness of human presence.

After Removal

Transport, Off-range Corrals, and Adoption Preparation

All gathered wild horses would be removed and transported to BLM holding facilities where they would be inspected by facility staff (and if needed by a contract veterinarian) to observe health conditions and ensure that the animals are being humanely cared for. Wild horses removed from the range would be transported to the receiving off-range corrals (ORC, formerly 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 can 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. Transportation of recently captured wild horses is limited to a maximum of 12 hours.

Upon arrival, recently captured wild horses are off-loaded by compartment and placed in holding pens where they are provided good quality hay and water. Most wild horses begin to eat and drink immediately and adjust rapidly to their new situation. At the off-range corral, a veterinarian provides 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 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.

After recently captured wild horses have transitioned to their new environment, they are prepared for adoption, sale, or transport to long-term grassland pastures. Preparation involves freeze marking the animals with a unique identification number, vaccination against common diseases, castration, and de-worming. At ORC facilities, a minimum of 700 square feet of space is provided per animal.

Adoption

Adoption applicants are required to have at least a 400 square foot corral with panels that are at least six feet tall. Applicants are required to provide adequate shelter, feed, and water. The BLM retains title to the horse for

one year and inspects the horse and facilities during this period. After one year, the applicant may take title to the horse, at which point the horse becomes the property of the applicant. Adoptions are conducted in accordance with 43 CFR Subpart 4750.

Sale with Limitations

Buyers must fill out an application and be pre-approved before they may buy a wild horse. A sale-eligible wild horse is any animal that is more than 10 years old or has been offered unsuccessfully for adoption at least three times. The application also specifies that buyers cannot sell the horse to anyone who would sell the animals to a commercial processing plant. Sales of wild horses are conducted in accordance with the 1971 WFRHBA and congressional limitations.

Off-Range Pastures

When shipping wild horses for adoption, sale or off-range pastures (ORPs), the animals may be transported for up to a maximum of 24 hours. Immediately prior to transportation, and after every 24 hours of transportation, animals are off-loaded and provided a minimum of 8 hours on the-ground rest. During the rest period, each animal is provided access to unlimited amounts of clean water and two pounds of good quality hay per 100 pounds of body weight with adequate space to allow all animals to eat at one time. Mares and sterilized stallions (geldings) are segregated into separate pastures except at one facility where geldings and mares coexist. Although the animals are placed in ORP, they remain available for adoption or sale to qualified individuals; and foals born to pregnant mares in ORP are gathered and weaned when they reach about 8-12 months of age and are also made available for adoption. The ORP contracts specify the care that wild horses must receive to ensure they remain healthy and well-cared for. Handling by humans is minimized to the extent possible although regular on-the-ground observation by the ORP contractor and periodic counts of the wild horses to ascertain their well-being and safety are conducted by BLM personnel and/or veterinarians.

Euthanasia or Sale without Limitations

Under the WFRHBA, healthy excess wild horses can be euthanized or sold without limitation if there is no adoption demand for the animals. However, while euthanasia and sale without limitation are allowed under the statute, for several decades Congress has prohibited the use of appropriated funds for this purpose. If Congress were to lift the current appropriations restrictions, then it is possible that excess horses removed from the HMA over the next 10 years could potentially be euthanized or sold without limitation consistent with the provisions of the WFRHBA.

Any old, sick or lame horses unable to maintain an acceptable body condition (greater than or equal to a Henneke BCS of 3) or with serious physical defects would be humanely euthanized either before gather activities begin or during the gather operations as well as within off-range holding facilities. Decisions to humanely euthanize animals in field situations would be made in conformance with BLM policy (WO IM 2015-070 or most current edition). Conditions requiring humane euthanasia occur infrequently and are described in more detail in WO IM 2015-070.

No Action

Under this alternative, wild horses in the Fifteenmile HMA would not experience the stress associated with gathering, removal or adoption. The current population of wild horses would continue to increase, and exceed the carrying capacity of the range. According to population modeling, the population size could approach 1,500 wild horses within the next 10 years, which is well above the carrying capacity of the Fifteenmile HMA. Though it may require several years for the population to reach catastrophic levels, by exceeding the upper limit of the management range, this alternative poses the greatest risk to the long-term health and viability of the Fifteenmile HMA wild horse population.

The population of wild horses would compete for the available water and forage resources. During drought periods, and in late summers, only two sources of water are available to wild horses. The areas closest to water would experience severe utilization and degradation of the rangeland resources. Over the course of time, the animals condition would deteriorate as a result of declining forage availability and the increasing distance traveled between forage and water sources. The mares and foals would be affected most severely. The continued increase in population would eventually lead to catastrophic losses to the herd, which would be a function of the available forage and water and the degradation of the habitat. Significant loss of wild horses in the Fifteenmile HMA due to starvation and disease would have obvious consequences to the long-term sustainability of the herd. Many wild horses would eventually be expected to move outside the HMA boundary in search of forage and water, potentially resulting in increasing damage to public, private, and State lands. A thriving natural ecological balance would not exist within or surrounding the HMA.

Proposed Action

Under the Proposed Action, a population of 100 to 230 wild horses would be maintained within the Fifteenmile HMA. Forage has previously been allocated for a total population of 230 wild horses within the HMA. As long as the wild horse population is maintained at this level, forage and water availability would be adequate to sustain a healthy wild horse population along with currently permitted domestic livestock grazing, as well as forage for wildlife. Population modeling has indicated that the average wild horse population that would exist in the HMA under this alternative would be 163 wild horses, which is lower than the average population that has existed since the HMA was established, which is 217 wild horses. Maintaining a minimum population of 100 wild horses in the HMA would ensure that adequate genetic diversity in the population is maintained. Wild horses remaining on the range would have adequate forage, water, and space, and would exist in a thriving natural ecological balance and multiple-use relationship, in accordance with the WFRHBA.

Managing wild horse populations in balance with the available habitat and other multiple uses would lessen the potential for individual animals or the herd to be affected by drought, and would avoid or minimize the need for emergency gathers, which would reduce stress to the animals and increase the success of the herd over the long term.

During the gather, every attempt would be made to gather all of the horses within and around the HMA. Past gathers in the HMA have been successful in gathering approximately 95 percent of the horses. The post gather wild horse population in the HMA would be approximately 100 horses, with an age class and sex ratio (60 males / 40 females) as specified in the Proposed HMAP. All wild horses gathered outside the HMA boundary would be removed. Direct impacts associated with this alternative include potential changes to herd demographics, decreased band size, increased competition for mares, slightly reduced population growth and an increase in the size and number of bachelor bands. While increased fighting among stallions competing for mares could result in injuries to stallions, no increase in injuries has been documented in the HMA with previous sex ratio adjustments. The reduced female sex ratio within the herd should not have a significant impact on the social structure of the herd. As new foals are born, the sex ratio would gradually revert to normal. Under this alternative, the wild horse population would be expected to exceed the upper AML approximately six years after the proposed gather, at which time another gather would be conducted.

Alternative 1

The impacts of Alternative 1 on the wild horses would essentially be the same as under the Proposed Action. However, the post gather wild horse population would be 70 mature wild horses, instead of 100 wild horses. Population modeling has indicated that the average wild horse population that would exist in the HMA under this alternative would be 128 wild horses, which is lower than the average population that has existed since the HMA was established, which is 217 wild horses. However, the minimum wild horse population that could be expected under this alternative would be 51 to 92 wild horses, which is below the minimum population of 100

wild horses recommended to maintain adequate genetic diversity in the population. If genetic diversity declined to unacceptable levels under this alternative, additional wild horses from another Wyoming HMA would need to be introduced to the population.

Mitigation

To ensure that adequate genetic diversity is maintained in the wild horse herd, under the Proposed Action and Alternative 1, DNA samples would be taken from a minimum of 25 wild horses returned to the Fifteenmile HMA every other gather. WO IM No. 2009-062, Wild Horse and Burro Genetic Baseline Sampling (BLM 2009) provides program guidance and policy for the collection of genetic information for wild horse and burro populations. DNA sampling and analysis would be done so that genotypic changes and overall genetic health of the wild horses can be monitored and management practices can be adapted based on the results of this genetic monitoring.

The HMA would continue to be monitored post-gather. Data would be collected which would assist the BLM in determining whether the existing AML is appropriate or needs future adjustment (either increase or decrease). Data collected would include observations of animal health and condition, climate (precipitation), utilization, distribution, population inventory, range condition and trend, among other items.

Mitigation and monitoring are incorporated into the Proposed Action through standard operating procedures and policies, which have been developed over time. These SOPs (Appendix II), along with BLM Instruction Memoranda 2010-135 (BLM 2010a), 2013-059 (BLM 2013b), 2015-070 (BLM 2015a), and 2015-151 (BLM 2015b), represent the "best methods" for reducing impacts associated with gathering, handling, transporting, and collecting herd data.

Based on the analysis of impacts above and consideration of all design features, wild horse gather best management practices, standard operating procedures presented as part of the Proposed Action and Alternative 1, no additional mitigation measures are proposed or required.

Cumulative Impacts

Numerous gathers of wild horses have occurred throughout the HMA in the past. The most recent gather of wild horses was in October of 2009. Genetic testing has been completed in the HMA; the results indicate that the existing wild horse population has variability levels high enough that no action to increase diversity is needed at this point. Depending upon the population size the herd may need some monitoring but there should be few or no problems for at least ten years.

Past activities which may continue to affect wild horses within the HMAs include recreational uses, livestock grazing, and energy development. These activities can impact wild horses by reducing the quantity and quality of vegetation resources, as well as water quality and quantity. Past repeated gathers in the same areas or conducted too close together can affect wild horse behavior making them harder to capture. Past and current mineral, oil and gas activities and other similar projects could have impacts to wild horses due to increased disturbance and removal of vegetation.

All other foreseeable activities would likely result in negligible impacts to wild horses in the long term; this is because the areas of disturbance would be small compared to the overall size of the HMA. An overall lower population and density of wild horses across the landscape would allow for maintenance of healthy rangelands. Moreover, by managing wild horse population within the AML range, the expected improvement in rangeland health would be expected to lead to improved body condition, healthier foals, and ensure herd sustainability through drought years.

Other ungulates would benefit from these improved resources without competition with wild horses for forage, water, cover and space. Continued monitoring and data collection would be needed to assess whether healthy

and self-sustaining wild horse herds are being maintained in the HMA over the long term. Monitoring of the project area would continue for wild horses as well as vegetation and water resources, to assess compliance with the standards for rangeland health.

Under the No Action Alternative, there would be no long-term cumulative benefits to wild horses. Future generations of wild horses would experience range deterioration. At the current rate of annual population growth, the projected wild horse population would exceed 1,500 animals within 10 years. Left unchecked, irreparable damage to the habitat could result in the need to permanently remove all wild horses from the HMA.

CONSULTATION AND COORDINATION

Tribes, Individuals, Organizations, or Agencies Consulted

Tribes, individuals, organizations, and agencies were included in the scoping process. The letter soliciting scoping comments for the proposed HMAP Update and Gather in the Fifteenmile HMA was mailed April 3, 2018

Table 8 -- Tribes, individuals, organizations, and agencies were included in the scoping process.			
Agencies	Organizations	Livestock Operators	Individuals
Big Horn County Commissioners	American Wild Horse Preservation Campaign	3F LLC	Kathleen R. Gregg
Bureau of Land Management	Animal Welfare Institute	4M Cattle Company LLC	Bonnie Kohlerite
Park County Commissioners	Cody Conservation District	7K Ranch	Cindy MacDonald
U.S. Representative Liz Cheeny	Friends of Animals	Anderson Ranch Co. Inc.	Jean Ortiz
U.S. Senator John Barrasso	Guardians of the Range	Bruce & Bradley Bilyeu	Peter Scripps
U.S. Senator Michael B. Enzi	Hot Springs County Conservation District	Phillip and Katharine Boreen	Jocelyn Sporer
Washakie County Commissioners	Meeteetse Conservation District	Bill Cauffman	
Wyoming Department of Agriculture	Meeteetse Multiple Use Council	Steve & Mike Coble	
Wyoming Game and Fish Department	Pryor Mountain Wild Mustang Center	Gooseberry Creek Ranch LLC	
Wyoming Office of State Lands	Return to Freedom	Steve & Travis Griemsman	
Wyoming State Grazing Board	Schiffhardin LLP	Hoodoo Land Holdings LLC	
Wyoming State Historic Preservation Office	South Big Horn Conservation District	J Bar H Ranch Inc.	
	Washakie County Conservation District	Isaac A. Jones Inc.	
	Western Watersheds Project	LU Ranch	
		Mark Lyman	
		McKim Cattle Co. LLC	
		Lyle Neves	
		Open Lock Ranch Inc.	
		PAR Ranch	
		Craig Pruett & Sheri Thomson	
		Red Wall Ranch	
		Rolly and Roalene LLC	
		Rusatt Ranch Inc.	
		Don Schlaf	
		Ondrea Shepperson	
		Alex Wheatcroft	

		Carl Yorgason	
		ZE Ranch	

List of Preparers

The following Worland Field Office personnel reviewed or have been contacted with regard to this EA.

Table 9 – List of Preparers	
Name	Title
Marit Bovee	Archaeologist
Tim Stephens	Wildlife Biologist
Hannah Fortney	Recreation/Visual Specialist
Hannah Fortney	Travel & Transportation Specialist
Cam Henrichsen	Rangeland Management / Wild Horse Specialist
Karen Hepp	Rangeland Management Specialist (T&E/Sensitive Plants)
Monica Geopferd	Civil Engineer
Brad Trauntvein	Soil Scientist/Natural Resource Specialist
Jeff Coyle	Hydrologist
Joe Scyphers	Geologist
Connie Craft	Realty Specialist
Eve Warren	Fuels/Natural Resource Specialist
Jim Gates	Forester
Alison Howard	Petroleum Engineer
Darci Stafford	Fluid Minerals/Natural Resource Specialist
Holly Elliott	Planning & Environmental Coordinator

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Appendix 1

Summary of Scoping and Public Comments

No.	Scoping Comment	BLM Response
1	Two commenters suggested that no removal of wild horses should occur, and that the population should be controlled with PZP only.	This alternative does not meet the purpose and need to maintain the AML, as the existing population of wild horses within the HMA is currently above the established AML and excess wild horses need to be removed immediately in compliance with applicable regulations described in Relationship to Statutes, Regulations, Plans, or Other Environmental Analyses. This alternative was considered in Alternatives Considered but Eliminated from Detailed Analysis.
2	Seven commenters stated that they supported the gather and removal of excess wild horses from the Fifteenmile HMA.	Gather and removal of excess wild horses is a component of the Proposed Action and Alternative 1.
3	Two commenters suggested that excess wild horses that are removed and deemed unadoptable should be euthanized.	At this time it is the BLM's policy to place all gathered wild horses up for adoption, and then relocate any that are not successfully adopted to off range pastures. See the section Wild Horses for more information.
4	Three commenters suggested that the wild horse population estimates provided for the Fifteenmile HMA were wrong, and that the HMA is not overpopulated.	Direction for conducting wild horse population estimates is provided in WO IM No. 2010-057, <i>Wild Horse & Burro Population Inventory and Estimation</i> (BLM 2010b). Wild horse population inventories in the Fifteenmile HMA are conducted using the simultaneous double-count method, developed for the BLM by the USGS. This method uses four observers to independently observe and record data on groups of individual horses. Sighting data are then compared using statistical modeling to estimate sighting rates for the observers.
5	Three commenters suggested that only adoptable wild horses should be removed from the HMA.	Selection of animals for removal and/or release would be guided by WO IM No. 2010-135, <i>Gather Policy, Selective Removal Criteria, and Management Considerations for Reducing Population Growth Rates</i> (BLM 2010a).
6	Three commenters stated that no wild horses should be slaughtered.	Please see Comment and Response #3.
7	Five commenters stated that they were opposed to using helicopters to gather wild horses, and suggested that the BLM utilize other capture methods, such as bait and water trapping. One commenter stated that they supported helicopter gathering.	It is BLM policy to use helicopters to assist in the removal of wild horses from July 1 through February 28. The use of helicopters to assist in the capture of wild horses is prohibited during the six weeks before and the six weeks that follow peak foaling. The SOPs in Appendix II would be implemented to ensure a safe and humane gather occurs and would minimize potential stress and injury to wild horses. See Alternatives Considered but Eliminated from Detailed Analysis for an analysis of alternative capture techniques.
8	Eight commenters stated that they were opposed to any removal of wild horses.	Removal of excess wild horses is required to comply with the Worland RMP (BLM 2015), and the laws and regulations cited in Relationship to Statutes, Regulations, Plans, or Other Environmental Analyses.

9	One commenter stated that they were opposed to any euthanasia of wild horses.	Please see Comment and Response #3.
10	Five commenters stated that the AML for the Fifteenmile AML is too low, and should be raised.	Raising the AML for the Fifteenmile HMA is a component of the Proposed Action.
11	Two commenters stated that wild horses should be left to natural population controls, and that the BLM should stop controlling natural predators.	Control of wild horse populations by natural means is considered in Alternatives Considered but Eliminated from Detailed Analysis. Predator control is not conducted by the BLM, and is outside the scope of this analysis.
12	One commenter suggested that this Environmental Assessment should only cover the current proposed gather, and that future proposed gathers should require additional NEPA analysis.	Any future proposed wild horse gathers would be subject to NEPA analysis, or a Determination of NEPA Adequacy (DNA).
13	One commenter stated that the BLM must analyze the impacts of helicopter gathering on wild horses.	Please refer to the section Wild Horses.
14	One commenter stated that the BLM must analyze the impacts of captivity on gathered and removed wild horses.	Please refer to the section Wild Horses.
15	Four commenters suggested that the BLM reduce or eliminate authorized livestock grazing in the Fifteenmile HMA.	Permitted livestock grazing in the Fifteenmile HMA was reduced following completion of the Grass Creek RMP (BLM 1998). Current permitted livestock grazing in the HMA is authorized under the Worland RMP (BLM 2015), and is discussed in the section Range Administration. Additional changes to permitted livestock grazing is outside the scope of this analysis.
16	Two commenters supported the proposed update to the Fifteenmile HMAP.	An update to the Fifteenmile HMAP is a component of the Proposed Action and Alternative 1.
17	Two commenters suggested that the AML should reflect total wild horse numbers, not just adult horses.	The AML for the Fifteenmile HMA would reflect total wild horses under the Proposed Action.
18	One commenter supported adjusting the sex ratio of the wild horses in the HMA, while one commenter was opposed to any sex ratio adjustment.	An adjustment of the sex ratio of wild horses in the Fifteenmile HMA to 60 males/40 females is a component of the Proposed Action and Alternative 1. Previous sex ratio adjustments have not resulted in any observed adverse effects to wild horses in the HMA, and have been successful in slowing the growth rate of the herd.
19	Eight commenters suggested that PZP should be used to slow the population growth rate of the wild horse herd.	Alternatives using PZP for population growth suppression were considered in Alternatives Considered but Eliminated from Detailed Analysis.
20	One commenter suggested that the BLM should reduce the number of wild horses in short and long-term holding facilities.	The placement of excess wild horses in off-range corrals or off-range pastures is outside the scope of this analysis.
21	One commenter suggested that the BLM should chemically treat the invasive	While crested wheatgrass and Russian wildrye are non-native introduced species, and not desirable for healthy rangelands,

	wheatgrasses and Russian wildrye in the HMA so as to keep more horses in the HMA.	they are not considered invasive, and provide a significant amount of forage for wild horses.
22	Two commenters suggested that the BLM should maintain the range improvements (water developments and fences) in the HMA, to keep the wild horses within the HMA boundary.	Continued maintenance of range improvements is addressed in the proposed update to the Fifteenmile HMAP, which is a component of the Proposed Action and Alternative 1.
23	Five commenters expressed concerns with the timing of any proposed gather of wild horses. One commenter preferred that any gathers be conducted in September or October, and one commenter requested that any gathers be conducted after November 15, so as not to disrupt deer and antelope hunting seasons. Three commenters stated opposition to any gathers during foaling season.	The Worland RMP (BLM 2015) prohibits surface-disturbing and disruptive activities, including gathers, during the peak foaling period (February 1 to July 31). BLM policy prevents the use of helicopters to assist in the removal of wild horses from March 1 to June 30. Previous gathers in the Fifteenmile HMA have generally been conducted in the fall, to avoid hot weather and minimize stress on the animals. BLM may not be able to avoid gathering wild horses during the big game hunting seasons. However, gather operations would only impact a relatively small area at any given time, for a relatively short duration.
24	One commenter suggested that the BLM start sterilizing wild horses.	Large-scale sterilization of wild horses is still undergoing research analysis and will not be analyzed as an option in this EA. The proposed lower AML for the Fifteenmile HMA is the minimum wild horse number that the BLM feels is needed to maintain a genetically diverse and healthy breeding population. Sterilizing some of these horses would likely cause the breeding population to fall below the level needed to maintain adequate genetic diversity.
25	One commenter requested that BLM screen wild horses for diseases common to livestock and wildlife species.	Wild horses that are removed from the HMA are inspected by a veterinarian at the off-range corral, where they are vaccinated for common diseases. Please refer to the section Wild Horses regarding care of wild horses after removal. Wild horses that are returned to the HMA are typically not vaccinated.
26	One commenter requested that the BLM return zeroed out Wild Horse Herd Areas to HMA status.	The management status of Wild Horse Herd Areas in the WFO was previously decided at the land use planning level in the Worland RMP (BLM 2015), and is beyond the scope of this analysis.
27	One commenter suggested that the BLM retain records of wild horses returned to the HMA after the gather for future reference.	The Proposed HMAP Update (Table 4) contains a monitoring objective for maintaining photos of wild horses returned to the HMA.
28	One commenter stated that if the BLM has to gather the wild horses, please don't hurt them.	During wild horse gathers, every effort is made to ensure the health and safety of the wild horses, in accordance with the Standard Operating Procedures For Wild Horse Gathers (Appendix 2).

Appendix II -- Standard Operating Procedures for Wild Horse Gathers

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

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

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

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

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

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

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

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

1. All gather sites and holding facilities locations must be approved by the Contracting Officer's Representative (COR) and/or the Project Inspector (PI) prior to construction. The Contractor may also be required to change or move gather locations as determined by the COR/PI. All gather sites and holding facilities not located on public land must have prior written approval of the landowner.
2. The rate of movement and distance the animals travel shall not exceed limitations set by the COR who would consider terrain, physical barriers, access limitations, weather, extreme temperature (high and low), condition of the animals, urgency of the operation (animals facing drought, starvation, fire rehabilitation, etc.) and other factors. In consultation with the contractor the distance the animals travel would account for the different factors listed above and concerns with each HMA.
3. All gather sites, wings, and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:

- a. Gather sites 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 high for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All gather sites and holding facilities shall be oval or round in design.
 - b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered with plywood or metal without holes.
 - c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for burros, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet above ground level for burros and 1 foot to 6 feet for horses. The location of the government furnished portable fly chute to restrain, age, or provide additional care for the animals shall be placed in the runway in a manner as instructed by or in concurrence with the COR/PI.
 - d. All crowding pens including the gates leading to the runways shall be covered with a material which prevents the animals from seeing out (plywood, burlap, plastic snow fence, etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses.
 - e. All pens and runways used for the movement and handling of animals shall be connected with hinged self-locking gates.
4. No modification of existing fences would be made without authorization from the COR/PI. The Contractor shall be responsible for restoration of any fence modification which he has made.
 5. When dust conditions occur within or adjacent to the gather site or holding facility, the Contractor shall be required to wet down the ground with water.
 6. Alternate pens, within the holding facility shall be furnished by the Contractor to separate mares or jennies with small foals, sick and injured animals, estrays, or other animals the COR determines need to be housed in a separate pen from the other animals. Animals shall be sorted as to age, number, size, temperament, sex, and condition when in the holding facility so as to minimize, to the extent possible, injury due to fighting and trampling. Under normal conditions, the government would require that animals be restrained for the purpose of determining an animal's age, sex, or other necessary procedures. In these instances, a portable restraining chute may be necessary and would be provided by the government. Alternate pens shall be furnished by the Contractor to hold animals if the specific gathering requires that animals be released back into the gather area(s). In areas requiring one or more satellite gather site, and where a centralized holding facility is utilized, the contractor may be required to provide additional holding pens to segregate animals transported from remote locations so they may be returned to their traditional ranges. Either segregation or temporary marking and later segregation would be at the discretion of the COR.
 7. The Contractor shall provide animals held in the gather sites and/or holding facilities with a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day. Animals held for 10 hours or more in the gather site or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day. The contractor would supply certified weed free hay if required by State, County, and Federal regulation.
 8. An animal that is held at a temporary holding facility through the night is defined as a horse/burro feed day. An animal that is held for only a portion of a day and is shipped or released does not constitute a feed day.

9. It is the responsibility of the Contractor to provide security to prevent loss, injury or death of gathered animals until delivery to final destination.
10. The Contractor shall restrain sick or injured animals if treatment is necessary. The COR/PI would determine if animals must be euthanized and provide for the destruction of such animals. The Contractor may be required to humanely euthanize animals in the field and to dispose of the carcasses as directed by the COR/PI.
11. Animals shall be transported to their final destination from temporary holding facilities as quickly as possible after gather unless prior approval is granted by the COR for unusual circumstances. Animals to be released back into the HMA following gather operations may be held up to 21 days or as directed by the COR. Animals shall not be held in gather sites and/or temporary holding facilities on days when there is no work being conducted except as specified by the COR. The Contractor shall schedule shipments of animals to arrive at final destination between 7:00 a.m. and 4:00 p.m. No shipments shall be scheduled to arrive at final destination on Sunday and Federal holidays; unless prior approval has been obtained by the COR. Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours in any 24 hour period. Animals that are to be released back into the gather area may need to be transported back to the original gather site. This determination would be at the discretion of the COR or Field Office Wild Horse & Burro Specialist.

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

1. Gather attempts may be accomplished by utilizing bait (feed, water, mineral licks) to lure animals into a temporary gather site. If this gather method is selected, the following applies:
 - Finger gates shall not be constructed of materials such as "T" posts, sharpened willows, etc., that may be injurious to animals.
 - All trigger and/or trip gate devices must be approved by the COR/PI prior to gather of animals.
 - Gather sites shall be checked a minimum of once every 10 hours.
 - Gather attempts may be accomplished by utilizing a helicopter to drive animals into a temporary gather site. If the contractor selects this method the following applies:
 - A minimum of two saddle-horses shall be immediately available at the gather site to accomplish roping if necessary. Roping shall be done as determined by the COR/PI. Under no circumstances shall animals be tied down for more than one-half hour.
 - The contractor shall assure that foals shall not be left behind, and orphaned.
 - Gather attempts may be accomplished by utilizing a helicopter to drive animals to ropers. If the contractor, with the approval of the COR/PI, selects this method the following applies:
 - Under no circumstances shall animals be tied down for more than one hour.
 - The contractor shall assure that foals shall not be left behind, or orphaned.
 - The rate of movement and distance the animals travel shall not exceed limitations set by the COR/PI who would consider terrain, physical barriers, weather, condition of the animals and other factors.

C. Use of Motorized Equipment

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

2. All motorized equipment, tractor-trailers, and stock trailers shall be in good repair, of adequate rated capacity, and operated so as to ensure that gathered animals are transported without undue risk or injury.
3. Only tractor-trailers or stock trailers with a covered top shall be allowed for transporting animals from gather site(s) to temporary holding facilities, and from temporary holding facilities to final destination(s). Sides or stock racks of all trailers used for transporting animals shall be a minimum height of 6 feet 6 inches from the floor. Single deck tractor-trailers 40 feet or longer shall have at least two (2) partition gates providing at least three (3) compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing at least two (2) compartments within the trailer to separate the animals. Compartments in all tractor-trailers shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have a minimum 5-foot-wide swinging gate. The use of double deck tractor-trailers is unacceptable and shall not be allowed.
4. All tractor-trailers used to transport animals to final destination(s) shall be equipped with at least one (1) door at the rear end of the trailer which is capable of sliding either horizontally or vertically. The rear door(s) of tractor-trailers and stock trailers must be capable of opening the full width of the trailer. Panels facing the inside of all trailers must be free of sharp edges or holes that could cause injury to the animals. The material facing the inside of all trailers must be strong enough so that the animals cannot push their hooves through the side. Final approval of tractor-trailers and stock trailers used to transport animals shall be held by the COR/PI.
5. Floors of tractor-trailers, stock trailers and loading chutes shall be covered and maintained with wood shavings to prevent the animals from slipping as much as possible during transport.
6. Animals to be loaded and transported in any trailer shall be as directed by the COR/PI and may include limitations on numbers according to age, size, sex, temperament and animal condition. The following minimum square feet per animal shall be allowed in all trailers:
 - 11 square feet per adult horse (1.4 linear foot in an 8 foot wide trailer);
 - 8 square feet per adult burro (1.0 linear foot in an 8 foot wide trailer);
 - 6 square feet per horse foal (0.75 linear feet in an 8-foot-wide trailer);
 - 4 square feet per burro foal (0.5 linear feet in an 8-foot-wide trailer).
7. The COR/PI shall consider the condition and size of the animals, weather conditions, distance to be transported, or other factors when planning for the movement of gathered animals. The COR/PI shall provide for any brand and/or inspection services required for the gathered animals.
8. If the COR/PI determines that dust conditions are such that the animals could be endangered during transportation, the Contractor would be instructed to adjust speed.

D. Safety and Communications

1. The Contractor shall have the means to communicate with the COR/PI and all contractor personnel engaged in the gather of wild horses utilizing a VHF/FM Transceiver or VHF/FM portable Two-Way radio. If communications are ineffective the government would take steps necessary to protect the welfare of the animals.
2. The proper operation, service and maintenance of all contractor furnished property is the responsibility of the Contractor. The BLM reserves the right to remove from service any contractor personnel or contractor furnished equipment which, in the opinion of the contracting officer or COR/PI violate contract rules, are unsafe or otherwise unsatisfactory. In this event, the Contractor would be notified in writing to furnish replacement personnel or equipment

within 48 hours of notification. All such replacements must be approved in advance of operation by the Contracting Officer or his/her representative.

3. The Contractor shall obtain the necessary FCC licenses for the radio system.
4. All accidents occurring during the performance of any task order shall be immediately reported to the COR/PI.
5. Should the contractor choose to utilize a helicopter the following would apply:
 - a. The Contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the Contractor shall comply with the Contractor's Federal Aviation Certificates, applicable regulations of the State in which the gather is located.
 - b. Fueling operations shall not take place within 1,000 feet of animals.

E. Site Clearances

1. No Personnel working at gather sites may excavate, remove, damage, or otherwise alter or deface or attempt to excavate, remove, damage or otherwise alter or deface any archaeological resource located on public lands or Indian lands.
2. Prior to setting up a gather site or temporary holding facility, the BLM would conduct all necessary clearances (archaeological, T&E, etc.). All proposed site(s) must be inspected by a government archaeologist and wildlife biologist. Once clearance has been obtained, the gather site or temporary holding facility may be set up. Said clearance shall be arranged for by the COR, PI, or other BLM employees.
3. Gather sites and temporary holding facilities would not be constructed on wetlands or riparian zones.

F. Animal Characteristics and Behavior

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

G. Public Participation

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

H. Responsibility and Lines of Communication

- Worland Field Office – Contracting Officer's Representative/Project Inspector: Patricia Hatle
- Alternate – Contracting Officer's Representative/Project Inspector:
- Wyoming State Office – Contracting Officer's Representative/Project Inspector: N/A

The Contracting Officer's Representatives (CORs) and the project inspectors (PIs) have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. The Worland Assistant Field Manager for Renewable Resources and the Worland Field Manager will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, District Office, State Office, National Program Office, and BLM Holding Facility offices. All employees involved in the gathering operations would keep the best interests of the animals at the forefront at all times.

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

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

The contract specifications require humane treatment and care of the animals during removal operations. These specifications are designed to minimize the risk of injury and death during and after gather of the animals. The specifications would be vigorously enforced.

Should the Contractor show negligence and/or not perform according to contract stipulations, he would be issued written instructions, stop work orders, or defaulted.

Appendix III --Wild Horse Population Modeling

Population Model Overview

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

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

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

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

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

Population Modeling – Fifteenmile HMA

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

Objectives of Population Modeling

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

- Do any of the alternatives "crash" the population?
- What 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 supplied with the WinEquus population model for the Garfield Range in Nevada (garsurv.sin & garfoal.fin). This data was collected on Garfield Flat from 1993 to 1999 by M. Ashley and S. Jenkins.

Survival probabilities and foaling rates utilized in the population model for the four alternatives analyzed are displayed in the following table:

Survival Probabilities and Foaling Rates			
Age Class	Survival Probabilities		Foaling Rates
	Females	Males	
Foals	0.919	0.877	0
1	0.996	0.950	0
2	0.994	0.949	0.52
3	0.993	0.947	0.67
4	0.990	0.945	0.76
5	0.988	0.942	0.89
6	0.985	0.939	0.76
7	0.981	0.936	0.90
8	0.976	0.931	0.88
9	0.971	0.926	0.91
10-14	0.947	0.903	0.81
15-19	0.870	0.830	0.82
20+	0.591	0.564	0.75

As illustrated in the above table, survival probabilities peak at age 1, and then decline slightly as the wild horses age. Foaling rates peak at around age 7, and then decline gradually as the wild horses age.

The following is the sex ratio at birth utilized in the population modeling for the alternatives, as collected on the Garfield Range in Nevada:

Sex ratio at Birth:

58% Males

42% Females

Under the Proposed Action and Alternative 1, all of the wild horses in and around the Fifteenmile HMA would be gathered, and a known number of horses with a specific age and sex distribution would be turned back into the HMA.

The following table illustrates the proposed approximate age and sex structure that was utilized in the population model for the Proposed Action:

Proposed Action Initial Age and Sex Distribution			
Age Class	Sex		
	Female	Male	Total
Foals			
1			
2	2	3	5
3	3	4	7
4	3	5	8
5	3	4	7
6	3	4	7
7	3	5	8
8	3	5	8
9	4	6	10
10-14	8	12	20
15-19	8	12	20
20+			
Total	40	60	100

The following table illustrates the proposed approximate age and sex structure that was utilized in the population model for Alternative 1:

Alternative 1 Initial Age and Sex Distribution			
Age Class	Sex		
	Female	Male	Total
Foals			
1			
2	1	2	3
3	2	3	5
4	2	4	6
5	2	3	5
6	2	3	5
7	2	3	5
8	2	3	5
9	3	4	7
10-14	6	8	14
15-19	6	9	15
20+			
Total	28	42	70

Under the No Action Alternative, no wild horses would be removed from the Fifteenmile HMA. The initial age and sex distribution for this alternative was calculated using the WinEquus program based upon a stable population of 480 horses, which is the number of horses expected to be in the HMA in the fall of 2018:

No Action Initial Age and Sex Distribution			
Age Class	Sex		
	Female	Male	Total
Foals	44	61	105
1	34	44	78
2	28	35	63
3	23	27	50
4	19	21	40
5	15	17	32
6	12	13	25
7	10	10	20
8	8	8	16
9	7	6	13
10-14	14	12	26
15-19	5	4	9
20+	2	1	3
Total	221	259	480

The following table displays the removal parameters utilized in the population model for the Proposed Action and Alternative 1:

Removal Criteria (Proposed Action, Alternative 1)		
Age	Percentages for Removals	
	Females	Males
Foal	100%	100%
1	100%	100%
2	90%	80%
3	90%	80%

4	90%	80%
5	90%	80%
6	80%	70%
7	70%	70%
8	80%	70%
9	70%	60%
10-14	60%	50%
15-19	0%	0%
20+	0%	0%

Population Modeling Criteria

The following summarizes the population modeling criteria that are common to the Alternatives:

- Starting Year: 2018
- Initial gather year: 2018
- Gather interval: minimum interval of five years
- Gather for fertility treatment regardless of population size: N/A
- Continue to gather after reduction to treat females: N/A
- Sex ratio at birth: 42% female, 58% male
- Percent of the population that can be gathered: 90%
- Simulations were run for ten years with 100 trials each

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

Population Modeling Parameters

Population Modeling Parameters			
Modeling Parameter	Proposed Action – Remove to 100 Horses	Alternative 1 – Remove to 70 Mature Horses	No Action
Management by removal only	Yes	Yes	N/A
Threshold population size for gathers	230	160	N/A
Target population size following gathers	100	70	N/A
Foals included in AML	Yes	No	N/A

Population Modeling Results - Fifteenmile HMA

Population Modeling Results

Following is a description of the population modeling results for the three alternatives analyzed for the Fifteenmile HMA. The actual output tables and graphs from the WinEquus program are located at the end of this appendix.

Population size in ten years

Out of 100 trials in each simulation, the model tabulated minimum, average, and maximum population sizes. The model was run from 2018 to 2028 to determine what the potential effects would be on population size for each alternative. These numbers are useful to make relative comparisons of the different alternatives, and potential outcomes under different management options. The data displayed within the tables is broken down into different levels. The lowest trial, highest trial, and several in between are displayed for each simulation completed. According to the creator of the modeling program, this output is probably the most important representation of the results of the program in terms of assessing the effects of proposed management, because it shows not only expected average results but also extreme results that might be possible.

Population Sizes in 11 years - Minimum			
Alternative	Proposed Action	Alternative 1	No Action
Lowest Trial	71	51	435
10th Percentile	97	70	488
25th Percentile	102	73	500
Median Trial	106	76	516
75th Percentile	111	80	546
90th Percentile	115	83	572
Highest Trial	124	92	644

This table shows that in eleven years and 100 trials for each alternative, the lowest number of 0-20+ year old horses ever obtained was 51 under Alternative 1. Half of the trials were greater than the median and half were less than the median. Additional interpretation may be made by comparing the various percentile points. For example, for the Proposed Action (selective removal to 100 horses), only 10% of the trials resulted in fewer than 97 wild horses as the minimum population, and 10% of the trials resulted in a minimum population larger than 115 wild horses. In other words, 80% of the time, one could expect a minimum population between these two values for the Proposed Action, given the assumptions about survival probabilities, foaling rates, initial age-sex distribution, and management options made for this simulation.

Alternative 1 (selective removal to 70 mature horses) reflect the lowest minimum population size of all the alternatives. The No Action Alternative reflects the highest minimum population level of all of the trials.

None of the results obtained for any of the alternatives indicate that a crash of the population is likely to occur if the alternative were implemented. However, the lowest minimum population sizes obtained, under Alternative 1, are all below the suggested population level of 100 horses desired to maintain important genetic variability. Under the Proposed Action, only 10% of the time would the population be expected to fall below 100 horses.

Population Sizes in 11 years - Average			
Alternative	Proposed Action	Alternative 1	No Action
Lowest Trial	139	95	941

10th Percentile	149	118	1184
25th Percentile	155	123	1315
Median Trial	163	128	1497
75th Percentile	171	133	1622
90th Percentile	178	137	1751
Highest Trial	189	149	1977

This table displays the average population sizes obtained for the 100 trials ran for each alternative. The average population size across eleven years ranged from a low of 128 wild horses under Alternative 1, to a high of 1497 wild horses under the No Action Alternative. The average population size indicated for both the Proposed Action and Alternative 1 is well below the long-term average of 209 wild horses in the Fifteenmile HMA.

Population Sizes in 11 years - Maximum			
Alternative	Proposed Action	Alternative 1	No Action
Lowest Trial	231	154	1632
10th Percentile	238	198	2230
25th Percentile	246	208	2744
Median Trial	257	218	3119
75th Percentile	266	230	3516
90th Percentile	277	240	3893
Highest Trial	293	273	4390

This table displays the largest populations that could be expected out of 100 trials for each alternative. The highest population size that could be expected during in 11 years would be 273 horses under Alternative 1, and 293 horses under the Proposed Action. Under the No Action Alternative, the population could be as high as 4390 horses.

Average Growth Rates in ten years

Average growth rates were obtained by running the model for 100 trials from 2018 to 2028 for each alternative. The following table displays the results obtained from the model:

Average Growth Rate in 10 Years			
Alternative	Proposed Action	Alternative 1	No Action
Lowest Trial	8.8%	6.4%	12.9%
10th Percentile	11.9%	11.4%	16.2%
25th Percentile	13.4%	13.6%	17.8%
Median Trial	14.8%	15.4%	19.5%
75th Percentile	16.6%	17.0%	20.9%
90th Percentile	19.1%	18.8%	21.9%
Highest Trial	21.7%	20.8%	23.1%

Both the Proposed Action and Alternative 1 reflect the lowest overall median growth rates, which are very similar. Both of these alternatives reflect a significantly lower growth rate than the No Action Alternative, which would not include a sex ratio adjustment in favor of more male horses. The lowest trial growth rates do not appear to be a direct result of the management options, but appear to reflect the random nature of the model and the ability to show extremes in possible outcomes. The range of growth rates is a reasonable representation of what could be expected to occur in a wild horse population.

Totals in eleven years – Gathered and Removed

The same type of tabular data was obtained from the population model (100 trials) for the numbers of wild horses gathered and removed under each alternative, over a ten year period. Under both the Proposed Action and Alternative 1, the population model indicates that another gather of excess wild horses would need to occur in 2024, assuming that the currently proposed gather in 2018 takes place, or 6 years after the currently proposed gather. Under the No Action Alternative, no wild horses would be gathered or removed from the HMA.

Totals in 11 Years -- Gathered			
<u>Alternative</u>	<u>Proposed Action</u>	<u>Alternative 1</u>	<u>No Action</u>
Lowest Trial	150	0	0
10th Percentile	164	145	0
25th Percentile	172	155	0
Median Trial	189	166	0
75th Percentile	208	181	0
90th Percentile	360	189	0
Highest Trial	426	231	0

Totals in 11 Years -- Removed			
<u>Alternative</u>	<u>Proposed Action</u>	<u>Alternative 1</u>	<u>No Action</u>
Lowest Trial	120	0	0
10th Percentile	128	113	0
25th Percentile	138	124	0
Median Trial	152	136	0
75th Percentile	169	146	0
90th Percentile	280	157	0
Highest Trial	341	189	0

The number of horses gathered and removed is lightly higher under the Proposed Action than under Alternative 1. The model indicates that under the Proposed Action, an average of 16 additional horses would be removed over the next 11 years than under Alternative 1. Under the No Action Alternative, no wild horses would be gathered or removed.

Population Modeling Summary – Fifteenmile HMA

To summarize the results obtained by simulating the range of alternatives for the proposed Fifteenmile HMAP update and wild horse gather, the original questions can be addressed.

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

None of the alternatives indicate that a “crash” is likely to occur to the population. Minimum population levels and growth rates are all within reasonable levels, and adverse impacts to the population are not likely.

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

As expected, the lowest average population size would occur under Alternative 1, which would gather the population down to 70 mature horses, instead of 100 total horses under the Proposed Action.

Also, as expected, the No Action Alternative results in the highest average population size, since no wild horses would be gathered.

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

The minimum population level that could be expected under Alternative 1 would likely be below the recommend level for maintaining good genetic variability in the wild horse herd. However, within 1 year following a gather, the wild horse population would be expected to be back to around 100 horses.

WinEquus Population Modeling Outputs

Proposed Action

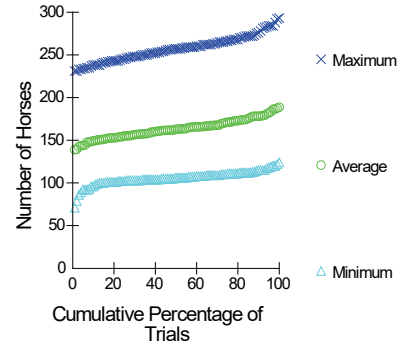
Population Size

Population Sizes in 11 Years*

	Minimum	Average	Maximum
Lowest Trial	71	139	231
10th Percentile	97	149	238
25th Percentile	102	155	246
Median Trial	106	163	257
75th Percentile	111	171	266
90th Percentile	115	178	277
Highest Trial	124	189	293

* 0 to 20+ year-old horses

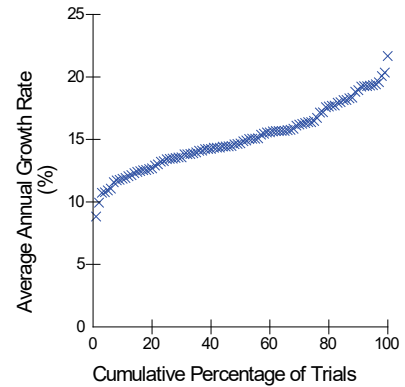
0 to 20+ year-old horses



Growth Rate

Average Growth Rate in 10 Years

Lowest Trial	8.8
10th Percentile	11.9
25th Percentile	13.4
Median Trial	14.8
75th Percentile	16.6
90th Percentile	19.1
Highest Trial	21.7

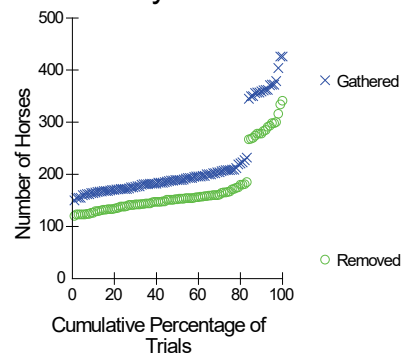


Horses Gathered and Removed

Totals in 11 Years*

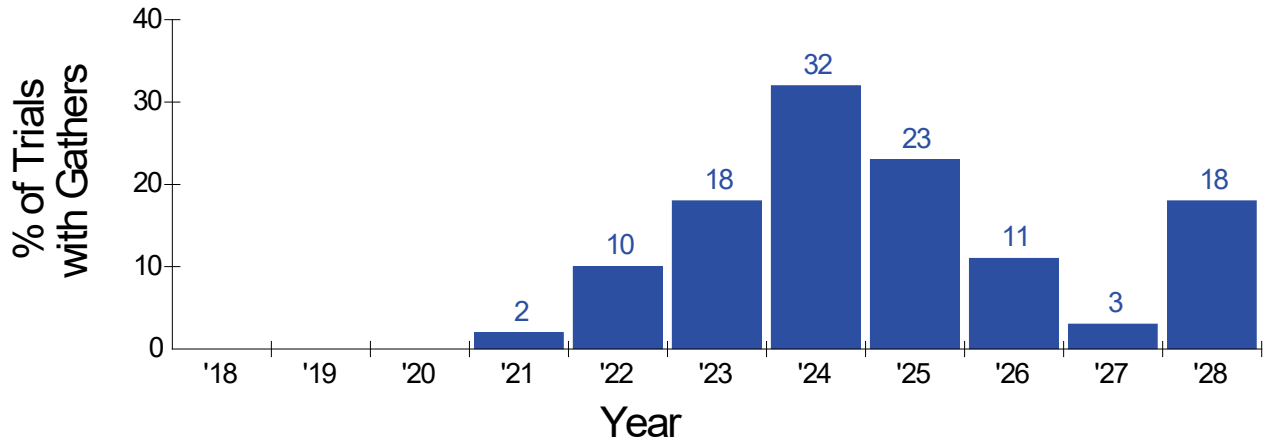
	Gathered	Removed
Lowest Trial	150	120
10th Percentile	164	128
25th Percentile	172	138
Median Trial	189	152
75th Percentile	208	169
90th Percentile	360	280
Highest Trial	426	341

0 to 20+ year-old horses

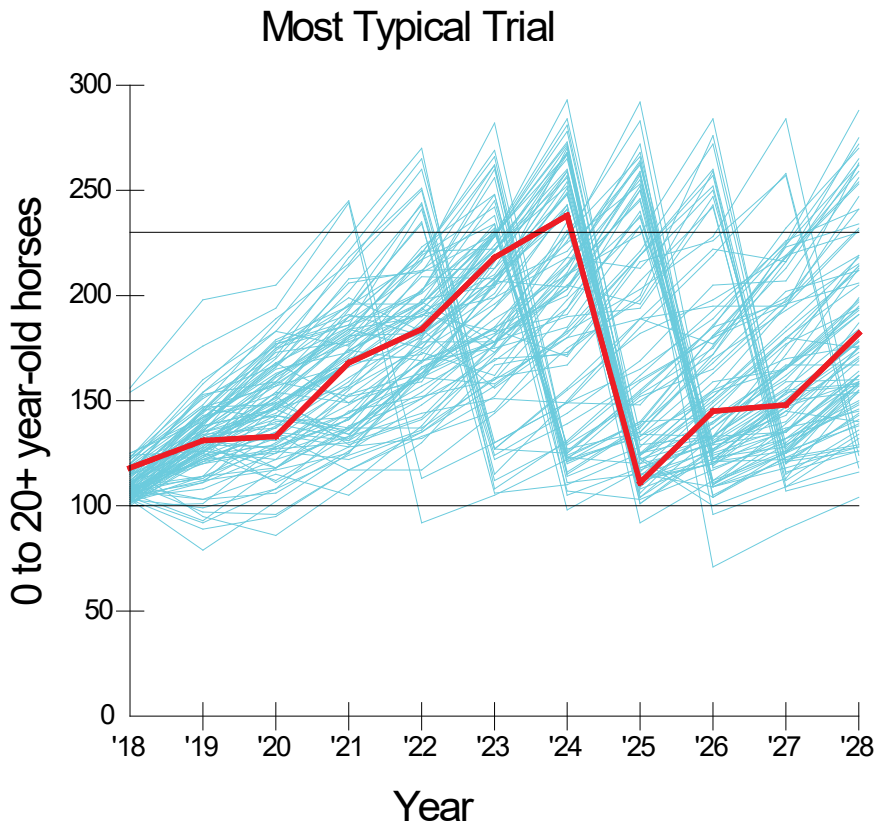


* 0 to 20+ year-old horses

Future Gather Years



Most Typical Trial

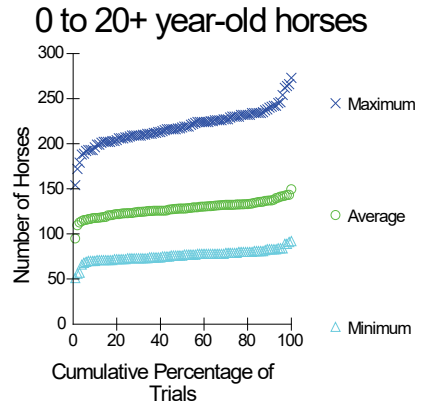


Alternative 1

Population Size

	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	51	95	154
10th Percentile	70	118	198
25th Percentile	73	123	208
Median Trial	76	128	218
75th Percentile	80	133	230
90th Percentile	83	137	240
Highest Trial	92	149	273

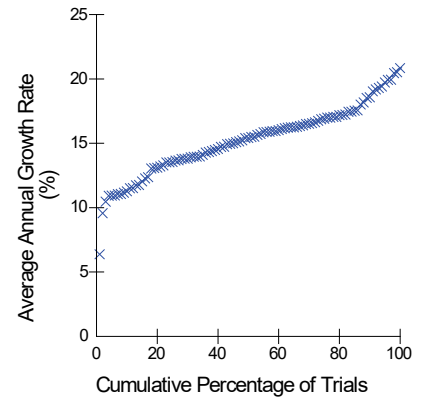
* 0 to 20+ year-old horses



Growth Rate

Average Growth Rate in 10 Years

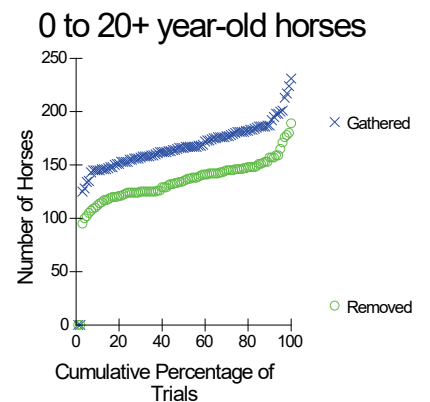
Lowest Trial	6.4
10th Percentile	11.4
25th Percentile	13.6
Median Trial	15.4
75th Percentile	17.0
90th Percentile	18.8
Highest Trial	20.8



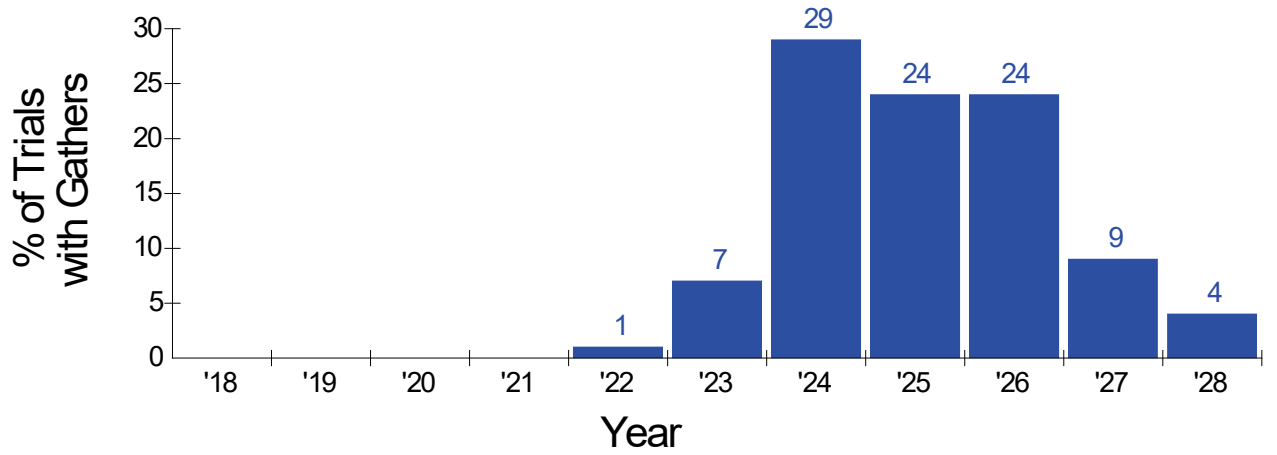
Horses Gathered and Removed

	Totals in 11 Years*	
	Gathered	Removed
Lowest Trial	0	0
10th Percentile	145	113
25th Percentile	155	124
Median Trial	166	136
75th Percentile	181	146
90th Percentile	189	157
Highest Trial	231	189

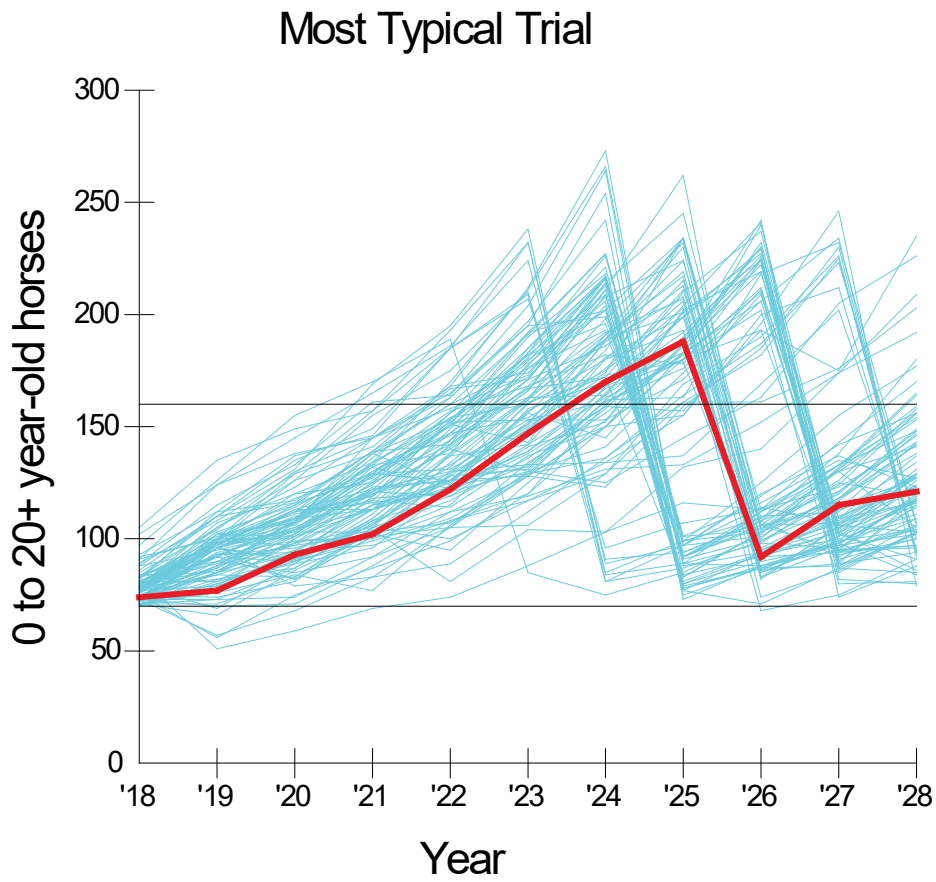
* 0 to 20+ year-old horses



Future Gather Years



Most Typical Trial



No Action

Population Size

	Population Sizes in 11 Years*		
	Minimum	Average	Maximum
Lowest Trial	435	941	1632
10th Percentile	488	1184	2230
25th Percentile	500	1315	2744
Median Trial	516	1497	3119
75th Percentile	546	1622	3516
90th Percentile	572	1751	3893
Highest Trial	644	1977	4390

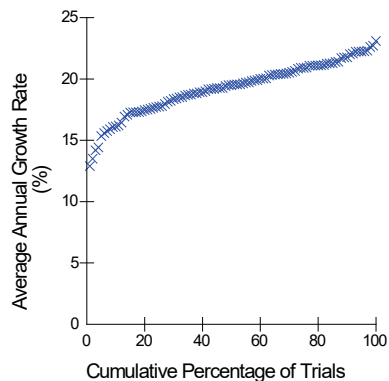
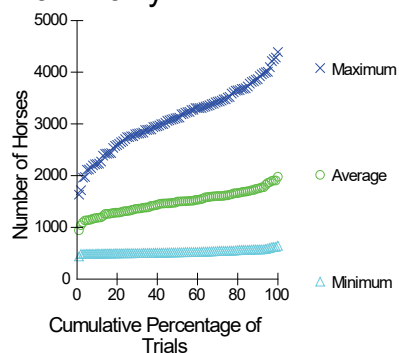
* 0 to 20+ year-old horses

Growth Rate

Average Growth Rate in 10 Years

Lowest Trial	12.9
10th Percentile	16.2
25th Percentile	17.8
Median Trial	19.5
75th Percentile	20.9
90th Percentile	21.9
Highest Trial	23.1

0 to 20+ year-old horses



Most Typical Trial

