

Report to Congress

Management Options for a Sustainable Wild Horse and Burro Program



Executive Summary

The Bureau of Land Management (BLM) is providing this report, in accordance with the Consolidated Appropriations Act of 2017 (Public Law 115-31), to improve the management of wild horses and burros on the Western public rangelands. Since receiving Federal protection in 1971, wild horse and burro populations on public lands have dramatically increased, far exceeding what is healthy for the land and the animals. The BLM is committed to finding solutions to achieve long-term sustainable populations on the range in a humane manner.

Today the BLM manages and protects our Nation's wild horses and burros on 26.9 million acres of public lands in the West. The goal of the Wild Horse and Burro Program is to ensure healthy wild horses and burros on thriving public rangelands. The 1971 Wild Free-Roaming Horses and Burros Act, as amended, contains a variety of tools for managing herd numbers. However, current congressional appropriation riders prohibit the BLM from using all the authorities available in the Act. Specifically, Congress blocks the sale of wild horses and burros without limitation and has limited the use of euthanasia.

The BLM retains the ability to gather the animals from the range, but then must care for them until they are adopted or sold. If the animals are not adopted or sold, the BLM is required to care for them for the remainder of their lives. The cost of holding and caring for these animals off-range has increased substantially in recent years and remains the largest component of the program's budget. In Fiscal Year 2017, for example, the BLM spent nearly 60 percent of its \$81.0 million budget on the care of animals removed from the range. That's nearly \$48,000 for one unadopted horse that remains in BLM's care over its lifetime. The cost of caring for the 46,000 unadopted and unsold animals currently in holding will top \$1.0 billion over their lifetimes.

In establishing the "Appropriate Management Level" (AML) for wild horses and burros on the public lands, the BLM uses scientific principles of rangeland management to determine the population of wild horses and burros that the habitat can sustain. The BLM seeks to protect the rangeland, soil, water, and vegetation resources in balance with other uses, including ranching, hunting, recreation, and wildlife habitat. The national AML for wild horses and burros is a total of 26,715 animals across 10 western states. At the end of 2017, the BLM determined these public lands were home to nearly 83,000 wild horses and burros, more than three times the national AML.

Wild horses and burros have no natural predators and herds can double in size every 4 years. As herd sizes increase, the forage and water resources from the land become depleted, resulting in starvation, dehydration, and death. In their search for food and water, the animals often move onto private land or along highways resulting in safety issues and habitat destruction for horses and humans alike. Public-land ranchers have cut back on grazing to accommodate increasing numbers of wild horses and burros.

The current overpopulation of wild horses and burros threatens the overall health of the western rangelands, degrading ecosystem functions and limiting the forage and water available for domestic and wildlife species, including game and nongame species. For example, overgrazing by wild horses and burros has reduced sagebrush and grass cover vital to Greater Sage-Grouse and has resulted in lower survival rates in those areas. Overpopulated herds have displaced native species including pronghorn, deer, elk, and bighorn sheep. Across the Great Basin, areas with wild horses have less plant cover, fewer native plants, and more unpalatable and invasive plant species, including cheatgrass, compared to areas without wild horses.

If wild horse and burro populations continue to expand, the impacts to animal and plant species will grow more severe across even larger swaths of the western public rangelands. The damaging environmental effects may soon become irreversible and large die-offs of wild horses/burros and multiple species of plants and other animals could begin. The groundwork for this unacceptable outcome has been developing for some time, and certain areas have already experienced damaging effects of overpopulation. As rangeland health has decreased, animals have died due to a lack of water and forage. The most inhumane and costly solution is to continue to take no decisive action.

This report details four options for addressing the reality of the situation and improving the management of wild horses and burros over the long term.

Option I: This option focuses on achieving national AML in 8 years, while reducing off-range holding costs dramatically over the first 4 years. In addition, during the first 4 years, the BLM would achieve AML in Herd Management Areas (HMAs) that overlap priority habitat for multiple species. This would require making use of all legal authorities contained in the Act (especially sale without limitation and euthanasia of unadopted or unsold animals), including use of contraceptives and limited sterilization techniques.

Under this option, the national AML of 26,715 wild horses and burros would be achieved in 2026.

Option II: This option focuses on achieving national AML in 10 years using contraceptive fertility control treatments such as Porcine Zona Pellucida (PZP) and minimal permanent sterilization of mares or stallions. Current operations to dart mares with a contraceptive in HMAs would continue, where this option is effective. Under this option, the off-range costs of caring for animals would significantly increase over current levels, because of increased reliance on off-range care. Due to the large numbers of animals being held in off-range facilities, the cost of this option could be greatly affected by changes in the cost of contracting for off-range pastures, as the BLM would need more facility space than is currently available. The costs reflected in this option depend upon identifying partners who are willing and able to provide low-cost, off-range housing for excess animals. In addition, as in Option III, the BLM or its partners would attempt to secure lower cost, pasture-based holding facilities in lieu of short-term corrals that resemble livestock feedlots and cost twice as much as pasture facilities.

Under this option, the national AML of 26,715 wild horses and burros would be achieved in 2028.

Option III: This option focuses on achieving national AML in 6 years using an aggressive removal operation in conjunction with sterilization of 3,000 mares and stallions gathered annually, and later returned to the range. Current operations to dart mares with a contraceptive in some HMAs would continue. Under this option, far fewer animals would be gathered and returned to the range than Option II, and all of those animals would be sterile upon reintroduction. Animals that are gathered and not sterilized would be moved to off-range facilities. As the off-range population increases, keeping control of holding costs will require continually acquiring additional low-cost contracted pasture space to alleviate the need to keep animals in expensive short-term corrals. The BLM would strive to keep corral populations to minimum levels necessary to supply the adoption pipeline.

Current research on long-term contraceptives would continue, with the possibility of greater use of contraceptives in the future should a longer-acting agent prove to be effective. It should be noted that the additional demand for long-term pastures could significantly increase program costs over current levels until AML is achieved, at which point costs would begin to decline.

Finally, under this option the BLM would institute a program to increase adoptions by providing a monetary incentive to the adopter of up to \$1,000. While this would increase costs in the initial years, it will quickly pay for itself by lowering off-range holding expenditures.

Under this option, the national AML of 26,715 wild horses and burros would be achieved in 2024.

Option IV: This option would achieve national AML in 2030 by using an aggressive effort to gather, sterilize, and return wild horses and burros to the range, while also developing the same adoption incentives described in Option III. The BLM would hire veterinarians to sterilize and return approximately 18,000 animals per year in each of the first 5 years and 8,000 in year 6. Under this option, off-range populations would begin to decrease almost immediately through natural mortality and continued efforts for private care placement. In addition, the total number of animals removed each year would be less than the annual adoption/sale levels, keeping down costs in the out years. In fact, program costs would be reduced to less than current levels in the seventh year. By the tenth year, off-range populations would begin to decline even faster through natural mortality in BLM's contracted off-range pastures, as almost all animals held in those pastures would reach normal lifespan limits.

Fertility control treatments would focus on permanent sterilization through FY24 when more than 80 percent of the animals on the range would be permanently sterilized. Sterilizing this number of animals for 6 years would take high levels of coordination in all areas of the BLM, including updating our environmental analysis, contracting for services, and training personnel. There is a distinct risk that the BLM might need to hold and care for the animals gathered in the initial year for longer than planned to achieve these totals, which would increase costs in the first year above stated levels. At the same time, if this were to occur, the BLM would continue all efforts to increase adoptions to not only reduce holding costs, but also reduce the need to sterilize animals and return them to the range. However, once the environmental analysis is complete and the service contracts are in place, the BLM could effectively implement the plan. Current research on long-term contraceptives would continue, with the possibility of reducing the need for permanent sterilization and increasing the use of contraceptives in the future should a longer-acting agent prove to be effective.

Finally, under this option, the BLM would institute a program to increase adoptions by providing a monetary incentive to the adopter of up to \$1,000. If the incentive proves to increase adoptions beyond the planned 5,000, the BLM could decrease the use of permanent sterilization and increase removals to match adoption/sale totals. While this incentive would increase costs in the initial years, it will quickly pay for itself by lowering off-range holding expenditures.

Under this option, the national AML of 26,715 wild horses and burros would be achieved in 2030.

Regardless of which option is chosen, the BLM will need the help of all stakeholders – Congress, livestock operators, state and local governments, and public interest organizations – to solve the wild horse and burro overpopulation challenge. The BLM is open to working with partners on common sense solutions and will continue to pursue collaboration where possible.

Background

The BLM's mission is to sustain the health, diversity, and productivity of America's public lands for the multiple use and enjoyment of present and future generations. To implement this mission, the BLM must ensure the health of America's public lands for the species and multiple uses depending on them, including the Nation's wild horses and burros. As directed by Congress under the Wild Free-Roaming Horses and Burros Act of 1971, as amended (Act), the BLM protects and manages the wild horses and burros that roam 26.9 million acres of Western public rangelands. For more information about the history of the BLM's wild horse and burro program and a full, amended text of the Act, refer to: <https://www.blm.gov/programs/wild-horse-and-burro/about-the-program/program-history>.

The Act requires the BLM to "manage wild free-roaming horses and burros in a manner that is designed to achieve and maintain a thriving natural ecological balance on the public lands," and if the BLM determines that an overpopulation exists and action is necessary to remove excess animals, to "immediately remove [them] from the range so as to achieve appropriate management levels." The Act defines excess animals as "wild free-roaming horses or burros (1) which have been removed from an area by the Secretary pursuant to law or, (2) which must be removed from an area in order to preserve and maintain a thriving natural ecological balance and multiple-use relationship in that area." After excess animals are removed from the range, the Act authorizes disposal through adoption, sale, and euthanasia. For more than a decade, Congress has used appropriation riders to block both the unrestricted sale and euthanasia of wild horses and burros.

When Congress first passed the Act in 1971, it found that wild horses and burros warranted legal protection. Now, 46 years after that law was enacted, wild horses and burros are experiencing population levels that are unsustainable for the animals and the range.



A wild horse mare and foal in very poor condition because of lack of forage just outside Las Vegas, Nevada in August 2015. *Photo by BLM.*



An enclosure shows the negative impacts of wild horse over-grazing of rangeland resources. *Photo by BLM.*

America's Wild Horse and Burro Challenge

Herd Management Areas (HMAs) are areas where wild horse and burro herds were known to exist at time of enactment of the Act and that have been designated for wild horse and burro management through BLM's land use planning process. For each HMA, the BLM has determined the appropriate management level (AML) by applying principles of rangeland management and wildlife biology through a National Environmental Policy Act (NEPA) review process. These reviews are the process by which the BLM establishes the number of horses and burros that can exist in an HMA, while also protecting rangeland, soil, water, and vegetation resources in balance with other multiple uses.

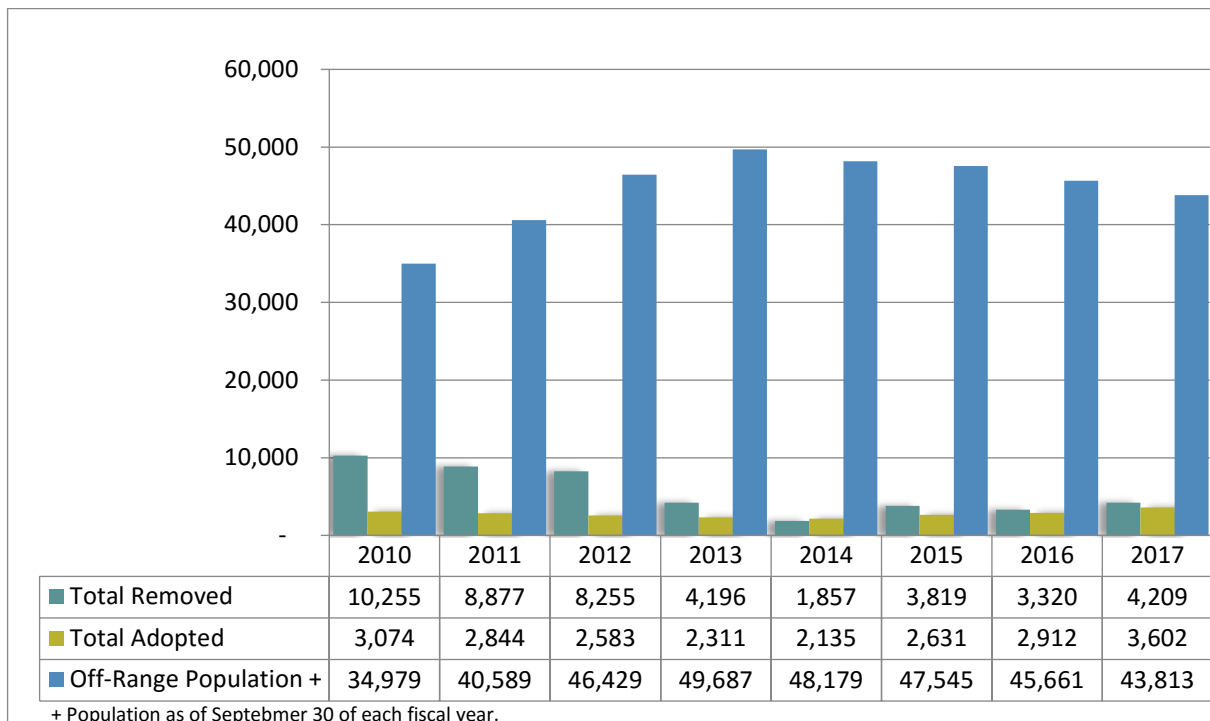
Current populations of wild horses and burros far exceed the established AML in most HMAs. The national AML for wild horses and burros is 26,715 animals in 10 western states. As of the end of 2017, however, public lands were home to approximately 73,000 adult wild horses and burros, plus an estimated 13,000 foals, for a total of 86,000 animals.



Wild horses crossing the road in Antelope Valley HMA in NV. Photo by BLM.

Based on existing research, wild horse herds increase 15 to 20 percent annually and can double in size in just 4 or 5 years. The herds have no natural predators. Current methods of fertility control have shown limited success, and even then only in smaller herds that are already at or near AML. Further compounding the challenge, the number of adoptions have not kept pace with the number of horses that the BLM has needed to remove from the range (refer to Chart 1).

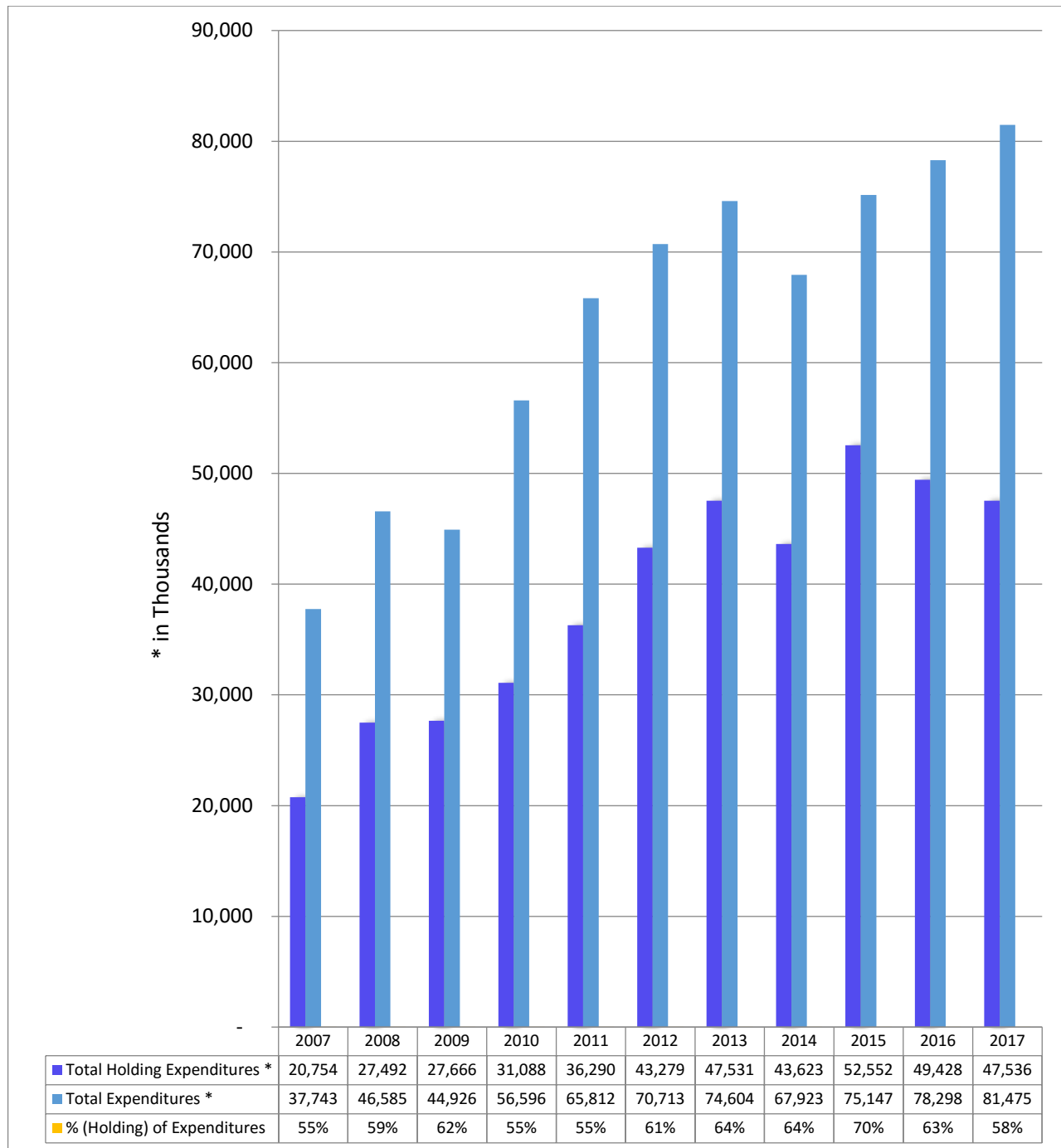
Chart 1 - Wild Horses and Burros Removed/Adopted and Off-Range Population (FY10-FY17)



Off-range, the BLM is currently caring for about 46,000 unadopted and unsold animals, including about 11,000 in 27 BLM corrals (facilities with a capacity for holding and caring for nearly 23,000 animals until adopted, sold, or transported to off-range pastures) and about 35,000 in 30 contracted private pastures (primarily in Iowa, Kansas, Nebraska, and Oklahoma with a capacity of almost 38,000). These are the more productive pastures of the Midwest, and animals there tend to live longer compared to wild horses on the range.

The total cost of operating off-range holding facilities is nearly \$48 million annually, accounting for nearly 60 percent of the BLM’s Fiscal Year (FY) 2017 budget for the wild horse and burro program (refer to Chart 2). This cost, relative to the overall program budget, results in less funding to gather and remove excess horses and burros, causing the on-range population of wild horses and burros to continue to grow.

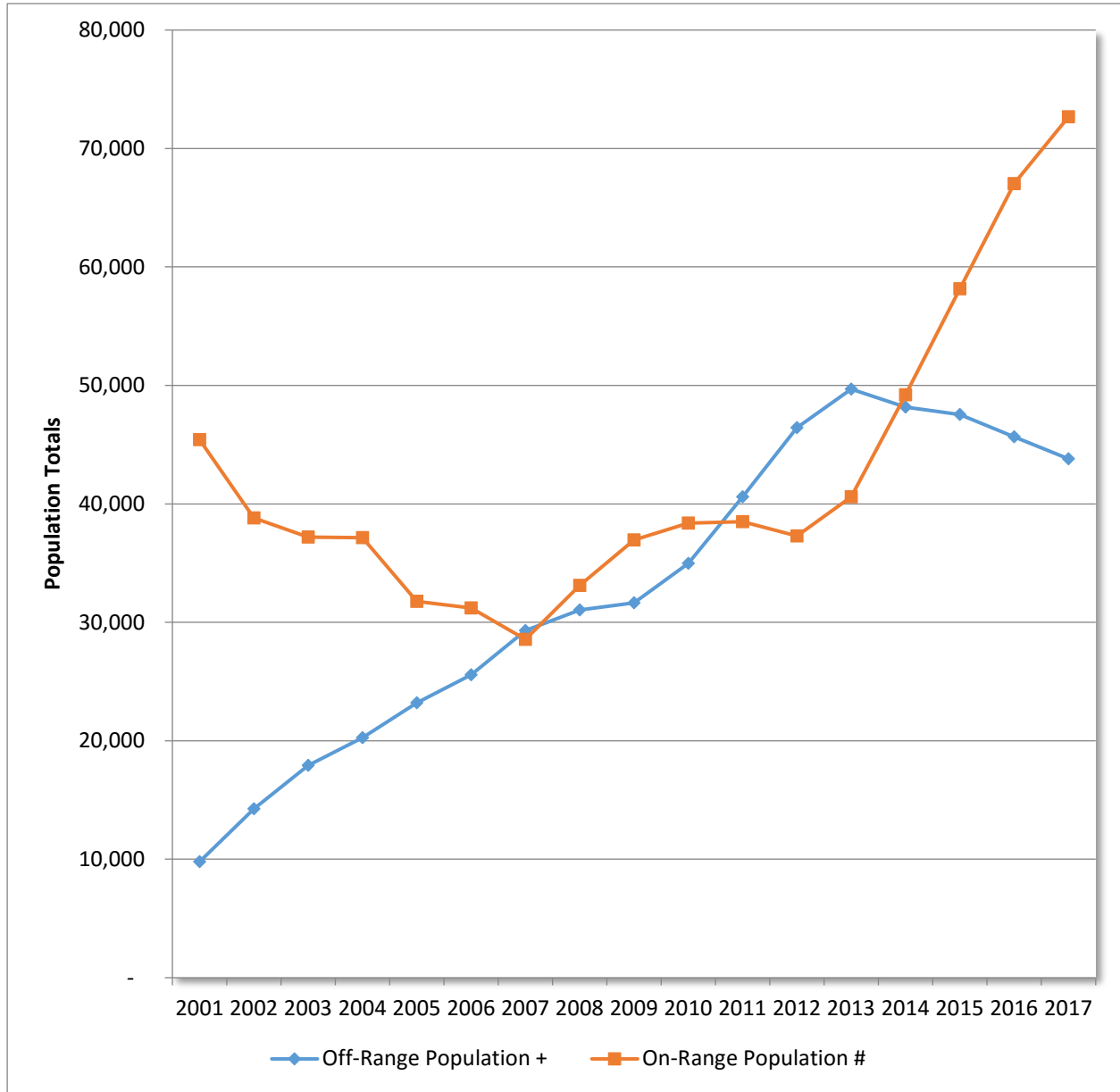
Chart 2 - Holding Costs Compared to BLM’s Total Expenditures for the Wild Horse and Burro Program (FY07-FY17).



From 2013 through 2016, the on-range population nearly doubled (refer to Chart 3). This trend is

expected to continue unless removals are increased. As currently managed, by the summer of 2019 there will likely be well over 100,000 wild horses on BLM-managed land, with up to 20,000 more the year after.

Chart 3 - Wild Horse and Burro Populations On/Off Range (FY01-FY17)



Overpopulated herds are already having a negative impact on the health of the range and on the health of the wild horses and burros themselves.

Western rangelands have limited forage production capability—soils are often shallow and moisture is limited. The current overpopulation of wild horses and burros on the arid rangelands of the West threaten the health of the western rangelands and the quality and quantity of forage and water available for domestic and wildlife species, including game and nongame species, as well as federal and state threatened, endangered, and sensitive species.



Wild horses in poor condition at a degraded spring in Nevada's Seaman HMA, July 2013. *Photo by BLM,*



Two thin wild horses in the Goshute Herd Management Area, September 2016. *Photo by BLM.*

Impacts to a variety of species will grow more severe across even larger swaths of the western public rangelands if populations continue to expand. America is nearing the time when the devastating effects of wild horse and burro overpopulation become irreversible and large die-offs of wild horses/burros and multiple species of plants and other animals could begin. The groundwork for this unacceptable outcome has been developing for some time, and certain areas have already experienced damaging effects of overpopulation. As rangeland health has decreased, animals have died due to a lack of water and forage.



The Maverick-Medicine HMA in Nevada has very limited water and was 474 percent over the AML as of March 1, 2017. The BLM conducted an emergency gather to remove 60 horses in 2016 to rescue the horses and relieve demand on Cherry Spring. Pictured is a group of horses at Cherry Spring in August 2017 waiting for water to come to the trough. *Photo by BLM.*

Impacts to Greater Sage-Grouse and Native Ungulates

A 2017 USDA report stated that wild horse presence can have broad effects on ecosystem function in the sagebrush biome.¹ Another scientific study determined that wild horses and burros are a present and widespread threat in 10 of 29 Greater Sage-Grouse populations in the western portion of the bird's range.² In the Great Basin, areas with wild horses had less shrub cover, plant cover, species richness, native plant cover, and overall plant biomass, and more unpalatable and invasive plant species, including cheatgrass, compared to areas without horses.^{3,4} Grazing by wild horses can have severe impacts on water source quality, aquatic ecosystems, and riparian communities that may be important for Greater Sage-Grouse. Greater Sage-Grouse survival rates are lower in areas of reduced sagebrush, grass, and for cover, so wild horse overgrazing can influence conservation and restoration efforts for that species. At water sources, wild horses displace native ungulates including pronghorn antelope, deer, and elk.⁵

Public Involvement

The BLM has a long history of involving the public in the management of wild horses and burros. In preparing this report, the BLM considered the public opinions (see Appendix 3, Public Opinion) already expressed in the previous strategic planning efforts, NEPA documents, editorials, legal actions, letters, and other materials and forums generated over many years of interacting with the public, interest groups, and state and local governments. It is important to note that the public will continue to be involved in the BLM's management of wild horses and burros on a regular basis as site-specific actions, such as gathers and fertility control, are planned and implemented.

The National Wild Horse and Burro Advisory Board

The BLM's National Wild Horse and Burro Advisory Board consists of representatives from multiple interest groups and the public. Board members represent various interests: wild horse and burro advocacy groups, wild horse and burro research institutions, veterinarians, natural resource organizations, humane advocacy groups, wildlife associations, and livestock organizations, plus the general public with a special knowledge of equine behavior. The Board meets periodically to discuss program challenges and make recommendations for the BLM to consider.

At a meeting in September 2016, the Board recommended that the BLM offer for sale without limitation all suitable animals in long- and short-term holding which are deemed unadoptable. Those animals that remain unsold would then be destroyed in the most humane manner possible. In addition, at the most recent meeting in October 2017, the Board offered the following recommendations for future wild horse and burro management. The Board recommended that the BLM:

¹ Chambers, J.C. et al. 2017. Science framework for conservation and restoration of the sagebrush biome. Part 1. Science basis and applications. USDA General Technical Report RMRS-GTR-360.

² USFWS. 2013. Greater Sage-Grouse conservation objectives: final report. U.S. Fish and Wildlife Service, Denver, Colorado. February 2013.

³ Beever, E.A. and C.L. Aldridge. 2011. Influences of free-roaming equids on sagebrush ecosystems, with focus on Greater Sage-Grouse. *Studies in Avian Biology* 38:273-290.

⁴ Davies, K.W. et al. 2014. Effects of free-roaming horses on semi-arid rangeland ecosystems: an example from the sagebrush steppe. *Ecosphere* 5:1-14.

⁵ Hall, L.K. et al. 2016. Influence of exotic horses on the use of water by communities of native wildlife in a semi-arid environment. *Journal of Arid Environments* 127:100-105.

1. Phase out long-term holding over the next 3 years and apply that budget to on-range management and adoptions.
2. Create funding mechanisms to maximize adoptions and or sales, especially through successful programs, and to include international adoptions and/or sales.
3. Increase funding for reversible fertility control by \$3 million in FY 2019.
4. Immediately (within the next 3 years) address overpopulation by removing animals from the range to achieve AML in accordance with the Act.
5. Use the help and assistance of all state and local agencies, organizations, and individuals in achieving AML.
6. Maintain AML by using fertility control to slow population growth at levels where removals equal the adoption demand.
7. Adjust AML where appropriate.

The 2017 National Wild Horse and Burro Summit

The State of Utah, Utah State University, the Berryman Institute, and the Wild Sheep Foundation co-hosted a summit in Salt Lake City, Utah on August 22-24, 2017. The goal of the summit was “full implementation of the 1971 Wild Horse and Burro Management Act (Act).” Participation included representatives of state, local, and tribal governments, academia, public land users, conservation groups, wildlife interest groups, and Federal agencies.

The workshop included a tour to view on-the-ground management issues and sessions on wild horse and burro policy, legal matters, science, and best management practices. Participants shared their preferences regarding the future management of BLM’s wild horse and burro program. Options 1 and 2 within this document are generally consistent with the preferences of the majority of the participants. Those preferences are shown in Attachment 1.

Consultation with Outside Groups

The Humane Society of the United States, the American Society for the Prevention of Cruelty to Animals, Return to Freedom, and the American Mustang Foundation, all advocate for a management approach founded on the following principles:

- Conduct removals to quickly achieve AML and initially focus on those areas of most immediate concern due to potential conflicts with native wildlife, rangeland degradation, and human-horse conflict;
- After AML achievement, implement aggressive fertility control and continue wherever feasible to prevent the need for future large scale removals;
- Horses removed from the range must be relocated into large cost-effective pasture holding facilities, and where possible, public-private partnerships with landowners and non-profits must be pursued; and
- Promote adoptions with better marketing and support from partner organizations to increase adoptions and reduce captive populations and costs.

Other Considerations

Population Growth Suppression: While fertility control methods will decrease the number of new horses and burros born each year, the only way to immediately and significantly reduce the on-range population is to gather and remove excess horses and burros. At the same time, the BLM believes that fertility control vaccines and sterilization are important tools to help maintain AML once it has been achieved.

Given the scope and scale of the current overpopulation, significantly reducing the population growth rate of wild horses and burros through application of currently available fertility control vaccines would not be logistically feasible as there are 35,000 to 40,000 mares on the range that would need to be gathered, mostly using helicopters, and treated every year. However, the BLM recognizes that permanent sterilization techniques would be a more effective long-term solution to controlling population growth than currently available vaccines. Under all options, the BLM will utilize permanent sterilization techniques to take advantages of this fact. Darting is effective as a means to administer fertility control vaccines, but only in limited situations in certain smaller HMAs where the wild horse population is at or near the AML and the horses can be approached within about 40 yards on a regular schedule.

In a breeding population, the majority of the adult males and females in the population participate in breeding and add to herd growth. A single stallion (male) usually breeds about 6 to 8 mares (females) a year in his own harem but has the capability of siring 50 or more foals in a year if he has access to the mares. An adult mare can produce a foal every year if she is healthy and in good condition. Typically, about 70 percent of the mares in a herd have a foal each year. When breeding age mares are replaced by sterilized animals—whether they are geldings (castrated males) or spayed females—the overall size of the herd can remain the same while the portion of the herd that is actively breeding and contributing to population growth is reduced. Fewer breeding females in the herd means fewer foals and slower population growth, however just replacing breeding stallions with geldings will not have an appreciable effect on population growth. In this scenario, with a “non-reproducing component,” the herd can still be a thriving, reproducing herd. However, the advantage is the reproducing component of the herd is smaller and the non-reproducing animals in the herd simply live out their lives on the range as free-roaming animals that do not participate in population growth.

No single population growth suppression tool is universally appropriate for all HMAs. As AML is achieved in various HMAs, a variety of fertility control methods will need to be used. Research continues into creating longer-lasting vaccines and developing new methods of contraception. The BLM will deploy fertility control methods that are more effective if their development is successful and application is cost-effective, which could significantly decrease the need for gathers over time.

Limits on Gather Operations: Due to the size of many HMAs, the distribution of animals on the HMAs, the logistics of gather operations, the availability of contractors, and the operational capability to manage animals in BLM’s off-range corrals, there is a limit to the number of animals that can be gathered and removed in any single year. The BLM estimates the maximum number of horses and burros that could be gathered and removed is about 20,000 animals annually. For the longer-term (year 10), the BLM estimates that fewer than 4,000 animals would be gathered and removed annually under any of the options outlined in this report. The BLM is looking at ways to increase capacity for both gather operations and managing those animals in off-range facilities.

Adoption Incentive Program: To increase the number of animals placed into private care, one of the options presented in this report assumes that an incentive program will be developed to offer private care providers \$1,000 at the point of adoption, with proper controls. This will allow adopters to help defray expenses for care and training of adopted animals, and will increase the chances that the animals remain in private care for the rest of their lives. This investment would save money for the taxpayer and the BLM program in the first year of implementation alone. For instance, if that same adopted animal were instead held in a short-term holding facility, it would have cost the United States \$1,000 after only 200 days in captivity. Over a period of 25 years, holding that same animal in an off-range corral would have cost the taxpayers nearly \$46,000.

Intergovernmental and International Transfer of Animals: Due to the increased interest from private, non-government organizations as well as countries outside the US, an international program will be developed to allow the use of wild horses and burros for various purposes. These include border patrol, humanitarian efforts, or economic development. In its 2017 appropriations, the BLM received the authority to transfer animals to Federal, state, and local government agencies. However, other than selling animals, no authority exists under the Wild Free-Roaming Horses and Burros Act to transfer wild horses and burros to private, non-government entities nor outside of the country.

Legal Authorities to Implement Options Presented in this Report

Each of the four options presented in this report would require new legal authorities, or benefit from clarified legal authorities. Included among those possible authorities are the following:

Sales without limitation and euthanasia. Given the scope of America's wild horse and burro challenge, the BLM has previously requested authority to implement the Act as amended (i.e., the ability to sell without limitation all excess wild horses and burros and euthanize horses for which an adoption demand does not exist). Returning authority to the BLM to sell wild horses and burros without limitation would help considerably, but this authority alone would not be sufficient.

Amendments to the Act. The following amendments to the Act would facilitate a more sustainable approach to the long-term management of wild horses and burros and help control costs over the long term. Amendments could consider one or more of the following, though not all of them are required to support the four options presented in this report.

1. Provide that animals that are sale-eligible, pursuant to the Wild Free-Roaming Horses and Burros Act, are no longer subject to the protections of the Act, and should be offered for sale as soon as is practicable.
2. Stipulate that areas identified for long-term management may be managed as non-reproducing herds, in whole or part, through the use of surgical and/or chemical sterilization methods.
3. Lower the sale-eligibility age from older than 10 years to older than 5 years.
4. Eliminate the provision that limits an adopter to acquire title to only 4 animals per year.
5. Reduce the time to title an adopted wild horse and burro from 1 year to 6 months.
6. Provide a) for transfer of wild horses and burros to nonprofit organizations or other countries for humanitarian purposes or to promote economic development outside the United States, and b) that such transfer causes animals to lose their status as wild horses and burros under the Act.
7. Enable the BLM to redirect receipts from sales towards gathering and removing excess wild horses and burros from the range instead of using those funds for the adoption program.

8. Provide permanent authority to transfer excess wild horses or burros that have been removed from the public lands to other Federal, state, and local government agencies for use as work animals.

Categorical Exclusions from Detailed Review Under NEPA. Currently when planning for gather and removal operations and other management activities, such as administering fertility control, the BLM must conduct a lengthy environmental analysis process to comply with NEPA, typically through an environmental assessment (EA). These analyses are completed for either individual HMA or groups of HMAs (Complex). Development of the individual analysis documents can take hundreds of hours of staff time as well as periods of public involvement. The BLM has been writing these EA documents for over 40 years and BLM's decision-makers routinely conclude that the proposed actions would not have a significant effect on the quality of the human environment (individually or cumulatively). NEPA regulations provide that categories of actions that individually or cumulatively do not have a significant effect on the human environment may be excluded from further environmental review through a "categorical exclusion." Thus, the BLM recommends that certain wild horse and burro management actions be categorically excluded from detailed NEPA analysis, specifically:

1. Removal of excess wild horses and burros utilizing helicopter, bait/water, and other trapping techniques for the achievement and maintenance of AML, to promote the health and safety of human populations, or to respond to emergencies and declining resource conditions (e.g., water and forage) caused by disease, drought, wildfire, and extreme weather events.
2. Application of population growth suppression techniques, including fertility control such as sterilization, vaccines and contraception, in wild horses and burros for the achievement and maintenance of AML.
3. Unrestricted sale of excess wild horses and burros for which an adoption demand does not exist.
4. Euthanasia of healthy excess wild horses and burros for which an adoption or sale demand does not exist.
5. Sterilization of wild horses and burros for the purpose of managing HMAs as non-reproducing in whole or part.

Options for Management of Wild Horses and Burros

Option I: Achieve AML in 8 Years, Using All the Authorities within the Act, while Substantially Decreasing Off-Range Holding Costs

Under this option, the BLM would achieve AML within priority HMAs (about 115 of the 177 HMAs, or about two-thirds of the total, including HMAs that overlap priority Greater Sage-Grouse habitat) by 2021, and within all HMAs by 2026, through an intensive gather and removal program for excess wild horses and burros to dramatically decrease on-range populations. In addition, any animals returned to the range during gather operations would be treated/boosted with some form of population growth suppression, focusing mainly on temporary fertility control vaccines or where appropriate, minimal amounts of permanent sterilization to help maintain AML. Off-range actions would focus on placing excess horses and burros into private care through adoptions and sales, including international sales to countries for agricultural, law enforcement, park management, and other uses. Animals not placed in private care would be sold without limitation or euthanized.

Factors for Success

1. Congress would remove prohibitions that preclude the BLM from fully implementing the Act as amended. This would allow the BLM to sell without limitation all excess wild horses and burros, and in the event an adoption or sale demand by qualified individuals does not exist, destroy excess wild horses and burros in the most humane and cost-efficient manner possible.
2. The BLM would acquire funding, including through private/public partnerships, to address the higher cost of gathering, removing, selling, and euthanizing substantially higher numbers of excess horses than currently planned.
3. The BLM would complete needed resource management planning and NEPA reviews to implement this option. Completion of NEPA reviews would be much more efficient and timely if Congress authorized the categorical exclusions recommended by the BLM.
4. The BLM would find enough trained veterinarians to perform the necessary number of permanent sterilization procedures.

Total Funding Requirements: Within FY 2019 the BLM could begin implementing this option to achieve AML in priority HMAs by FY 2021 and non-priority HMAs by FY 2026. Full implementation of this option will require both appropriated funds and public/private partnerships and resources.

From FY 2019 through FY 2021, the number of excess horses removed and the number of animals adopted, sold and euthanized would increase from FY 2018 levels. The BLM estimates a total funding need, including public/private partnerships and other sources, equivalent to about \$115 million per year for that time period. Total program costs would be reduced each year after that. In FY 2022, off-range pastures would be closed and costs would continue to decrease through FY 2026 when AML would be achieved. Once again, the BLM would look to reduce the need for appropriated funding through private-public partnerships and working with the BLM Foundation to create these opportunities.

Once AML is achieved, the annual budget for the wild horse and burro program would be about \$65 million per year (adjusted for inflation) due to the significant reductions in holding and removal costs. At that time, funding and public/private partnerships and resources would be used to manage the populations through fertility control and other appropriate means. In the event more efficient population control methods are developed and deployed, and less excess animals have to be removed, costs for managing the program in the out-years may be reduced further.

See Attachment 2, “Cost Estimates,” for more information on the FY 2017 data used to estimate these budget projections. These cost estimates are based on actual FY17 costs. For the purposes of this option, the costs for out-years are increased over time based on anticipated inflation.

Results of Implementing this Option: This option would allow the BLM to reach AML in 8 years with increasingly less annual appropriations. Range conditions would continue to improve over this time and animals will be less likely to move outside of the HMAs. This option would also allow the BLM to effectively monitor HMA condition as population decreases to help determine if AML adjustments are necessary.

Option II: Achieve AML in 10 Years Using Existing Authorities, By Substantially Increasing Program Funding

Under this option, the BLM would achieve AML within priority HMAs (about 115 of the 177 HMAs, or about two-thirds of the total, including HMAs that overlap priority Greater Sage-Grouse habitat) by 2021, and within all HMAs by 2028, through a gather and removal program for excess wild horses and burros to dramatically decrease on-range populations, while treating large numbers of animals with currently available fertility control vaccines starting in 2021. Aggressive (i.e. permanent sterilization) fertility control treatments would be used to maintain AML once achieved. Off-range actions would focus on placing excess horses and burros into private care through adoptions and sales, including international sales to countries for agricultural, law enforcement, park management, and other uses. However, even in best-case scenarios, off-range populations would increase significantly over 10 years, as adoption and sale would not be able to match removals. Animals not placed in private care would remain in BLM care until natural mortality. The BLM would focus on finding partners who are willing and able to provide low- to no-cost housing for excess animals.

Factors for Success

1. The BLM and its partners would acquire funding to address the increased cost of gathering, removing, and adopting substantially higher numbers of excess horses than currently planned.
2. The BLM and its partners would acquire funding and authority to transport animals that have already been sold to nonprofit organizations or other countries for humanitarian purposes or to promote economic development, and therefore are no longer considered to be wild horses and burros under the Act.
3. The BLM would be able to complete needed resource management planning and NEPA reviews to implement this option. Completion of NEPA reviews would be much more efficient and timely if Congress authorized the categorical exclusions recommended by the BLM.
4. The BLM would be able to find partner(s) who are willing and able to provide low-cost off-range housing and care for excess animals.

Total Funding Requirements: The BLM estimates a total funding need, including public/private partnerships and other sources equivalent to about \$116 million in FY 2019 and increasing to \$246 million in FY 2027. Total program costs slowly decrease from FY 2028 and beyond as the number of animals in off-range facilities would decrease over time due to natural mortality. Once again, the BLM would look to reduce the need for appropriated funding through private-public partnerships and working with the BLM Foundation to create these opportunities. In the event more efficient population control methods are developed and deployed, and less excess animals have to be removed, costs for managing the program in the out-years may be reduced.

See Attachment 2, “Cost Estimates,” for more information on the FY 2017 data used to estimate these budget projections. These estimates are based on actual FY17 costs. For the purposes of this option, the costs for out-years are increased over time based on anticipated inflation.

Results of Implementing this Option: This option allows the BLM to reach AML in 10 years while focusing off-range operations on private care placement and finding low-cost options for animal care through private pastures and local partnerships. The actual cost of implementing this option could vary widely. If organizations throughout the United States come forward with lower

than current or no-cost options for caring for thousands of animals, the overall cost could be drastically lower. However, if only a few or no organizations provide services in this way, the BLM could see increases for off-range holding facilities above those estimated in this analysis. This option does provide the opportunity for the BLM to find care for all animals removed from the range without the need to pursue the removal of Congressional prohibitions on the use of specific authorities available under the Act, as amended.

Option III: Achieve AML in 6 Years Using Existing Authorities and Creating an Adoption Incentive Program

Under this option, the BLM would achieve national AML within priority HMAs (about 115 of the 177 HMAs, or about two-thirds of the total, including HMAs that overlap priority Greater Sage-Grouse habitat) by 2021, and within all HMAs by 2024, through an intensive gather and removal program for excess wild horses and burros to dramatically decrease on-range populations. The BLM would use permanent sterilization throughout the 6 years to help control population growth and maintain AML once achieved.

Off-range actions would focus on placing excess horses and burros into private care through adoptions and sales, including international transfers to countries for agricultural, law enforcement, park management, and other uses. Animals not placed in private care would remain in BLM care until natural mortality. This option focuses on large removals and permanent sterilization over the first few years to get to AML in key areas while allowing time for fertility control treatment research to produce reliable options for long-lasting, easily administered vaccines. Ultimately, if the research is successful, this would reduce the need for removals and significantly reduce future funding needs.

In addition, an adoption incentive program would be established to increase adoptions to good homes, thereby reducing future funding needs. An incentive program of \$1,000 per animal, given at the point of adoption with appropriate controls, would allow adopters to defray part of the expenses for care and training of these animals. This investment would help ensure these animals remain in private care for the rest of their lives and would also result in considerable savings for the taxpayer. If that same adopted animal were held in a short-term facility, for example, it would cost the United States \$1,000 after only 200 days in captivity. Over a period of 25 years, holding that same animal in an off-range corral would cost the taxpayers nearly \$46,000.

Factors for Success

1. The BLM and its partners would acquire funding to address the cost of gathering, treating, and removing substantially higher numbers of excess horses and burros than currently planned.
2. The BLM would be able to complete needed resource management planning and NEPA reviews to implement this option. Completion of NEPA reviews would be much more efficient and timely if Congress authorized the categorical exclusions recommended by the BLM.
3. The BLM would be able to find enough trained veterinarians to perform the necessary number of permanent sterilization procedures.
4. The BLM could acquire significant acres of additional off-range pasture space through partners and contractors without inflationary pressures causing large increases above current cost levels.

Total Funding Requirements: Under this option, for the next 10 years, the number of excess horses removed and the number of animals adopted/sold would increase from FY 2018 levels. The BLM estimates a total funding need, including public/private partnerships and other sources equivalent to about \$133 million in FY 2019 and increasing to \$147 million in FY 2023, at which time costs would reduce to about \$72 million in FY 2028. Total program costs continue to decrease from FY 2029 and beyond, as the number of animals in off-range facilities would decrease over time due to natural mortality and removal operations would be minimized. Once again, the BLM would look to reduce the need for appropriated funding through private-public partnerships and working with the BLM Foundation to create these opportunities. In the event more efficient population control methods are developed/deployed and less excess animals have to be removed, costs for managing the program in the out-years may be reduced further.

See Attachment 2, “Cost Estimates,” for more information on the FY 2017 cost data used to estimate these budget projections. These cost estimates are based on actual FY17 costs. For the purposes of this option, the cost for out-years are increased over time based on anticipated inflation.

Results of Implementing this Option: This option allows the BLM to reach national AML in 6 years while focusing off-range operations on private care placement and finding low-cost options for animal care through private pastures and local partnerships. The actual costs of implementing this option could vary widely. If organizations throughout the United States come forward with lower than current or no-cost options for caring for thousands of animals, the overall costs could be drastically lower. However, if only a few or no organizations provide services in this way, the BLM could see increases for off-range holding facilities above those estimated in this analysis. This option provides the opportunity for the BLM to find care for all animals removed from the range with the current Congressional prohibitions on the use of specific authorities available under the Act, as amended.

Option IV: Achieve AML in 12 Years Using Existing Authorities, Creating an Adoption Incentive Program, and Increasing Permanent Sterilization

Under this option, the BLM would achieve national AML within all HMAs by 2030, through a program of intensive gathering, permanent sterilization, and return of sterilized animals to the range to decrease on-range populations through natural mortality over 12 years. The BLM would use permanent sterilization through the first 6 years to help control population growth, at which time over 80percent percent of the on-range population would be permanently sterilized.

Off-range actions would focus on placing excess horses and burros into private care through adoptions and sales, including international transfers to countries for agricultural, law enforcement, park management, and other uses. Annual removals would stay within the annual adoption/sale totals to allow for steady decreases in off-range populations. This option focuses on permanent sterilization over the first 6 years, although during this time fertility control treatment research would continue in hopes of producing reliable options for long-lasting, easily administered vaccines. Ultimately, if the contraceptive research is successful, this would reduce the need for permanent sterilization.

In addition, an incentive program would be established to increase adoptions to good homes, thereby reducing future funding needs. An incentive program of \$1,000 per animal, given at the

point of adoption with appropriate controls, would allow adopters to defray part of the expenses for care and training of these animals. This investment would help ensure these animals remain in private care for the rest of their lives and would also result in considerable savings for the taxpayer. If that same adopted animal were held in a short-term facility, for example, it would cost the United States \$1,000 after only 200 days in captivity. Over a period of 25 years, holding that same animal in an off-range corral would cost the taxpayers nearly \$46,000.

Factors for Success

1. The BLM would need to complete resource management planning and NEPA reviews to implement this option. Completion of NEPA reviews would be much more efficient and timely if Congress authorized the categorical exclusions recommended by the BLM.
2. The BLM would be able to find enough trained veterinarians and/or facilities to perform the necessary number of permanent sterilization procedures.

Total Funding Requirements: Under this option, for the next 10 years, the number of excess horses removed and the number of animals adopted/sold would increase from FY 2018 levels. The BLM estimates a total funding need, including public/private partnerships and other sources, of about \$135 million in FY 2019 and increasing to \$143 million in FY 2023, at which time costs would reduce to about \$104 million in FY 2024. Total program costs would then decrease to about \$80 million from FY 2025 to FY 2030, at which time, costs could significantly decrease as animals in pasture facilities reach natural lifespan limits and natural mortality levels begin to increase. In the event more efficient population control methods are developed and deployed, and less animals have to be permanently sterilized, costs for managing the program in the out-years may be reduced further.

See Attachment 2, “Cost Estimates,” for more information on the FY 2017 cost data used to estimate these budget projections. These cost estimates are based on actual FY17 costs. For the purposes of this option, the costs for out-years are increased over time based on anticipated inflation.

Results of Implementing this Option: This option allows the BLM to reach national AML in 12 years while focusing off-range operations on private care placement and finding low-cost options for animal care through private pastures and local partnerships. The actual costs of implementing this option could vary widely. This option provides the opportunity for the BLM to find care for all animals removed from the range with the current Congressional prohibitions on the use of specific authorities available under the Act. While on-range populations would not decrease as quickly as in other options, option IV focuses on population control through permanent sterilization and lets natural mortality on the range decrease population levels over time.

Conclusion

In each of the four options addressed above, the BLM will need the help of all stakeholders – Congress, livestock operators, state and local governments, and public interest organizations – to solve the wild horse and burro overpopulation challenge. The BLM looks forward to working with Congress and other interested parties on common sense solutions and will continue to pursue collaboration where possible. We request that Congress examine each of the options and advise on which of the tools it deems most suitable for addressing this urgent challenge.

Attachment 1 - National Wild Horse and Burro Summit - Preferences of Participants

The State of Utah, Utah State University, the Berryman Institute, and the Wild Sheep Foundation co-hosted a summit in Salt Lake City Utah on August 22-24, 2017. The goal of the summit was “full implementation of the 1971 Wild Horse and Burro Management Act (Act).” Participation was by invitation and included representatives of state, local and tribal governments, academia, public land users, conservation groups, wildlife interest groups, and federal agencies.

The workshop included a tour to view on-the-ground management issues and sessions on wild horse and burro policy, legal matters, science, and best management practices. Participants shared their preferences regarding the future management of BLM’s wild horse and burro program. Summit participants who voted in the session indicated their level of support for various suggestions to address horse and burro issues.

Highly-supported options:

- 99 percent Commercial use of horses of protein for pet food
- 96 percent Commercial use of horses of protein for zoo animals
- 96 percent of respondents favor changing the current status quo situation
- 96 percent Euthanizing unadoptable horses for population control
- 92 percent Allowing sale without restrictions
- 93 percent Reducing the age of “sale without restrictions” from 10+ years old to 5+ years old
- 92 percent Commercial use of horses of protein for human consumption

Well-supported options:

- 89 percent Permanent sterilization of mares by spaying
- 88 percent Allowing private organizations to acquire/adopt large numbers of horses
- 88 percent Adding additional contraceptives as management tools
- 87 percent Developing additional adoption opportunities outside the U.S.
- 85 percent Developing additional adoption opportunities within the U.S.
- 80 percent Creating coordination committees or working groups at appropriate local scales
- 76 percent Allowing individual states to manage horses within their boundaries without Federal restrictions

Options with mixed levels of support:

- Gathering excess horses off the range and moving them to private leased pastures (43 percent supported, 43 percent opposed)
- Increased use of the contraceptive PZP (63 percent supported, 31 percent opposed)
- Maintaining non-reproducing herds in areas where population could be supplemented by outside sterile horses (60 percent supported, 40 percent uncertain or opposed)
- Attempting rest-rotation grazing systems for horses on the range (40 percent supported, 60 percent uncertain or opposed)
- Reducing horse forage allocation limits for horses in HMAs, effectively reducing AML (68 percent supported, 28 percent unsure or opposed)
- Adding mules to horse herds to control herd growth via harem gathering (21 percent supported, 31 percent uncertain, 48 percent opposed)

Options with comparatively low support:

- 98 percent were “completely opposed” to allowing horses to self-regulate on the range; no actions taken
- 94 percent opposed to increasing the number (thus, total acreage) of HMAs
- 92 percent opposed to expanding the size of current HMAs
- 75 percent opposed to BLM hauling water to horses in the same location each year
- 82 percent opposed to reducing cattle AUMs in HMAs

As noted, this information reflects only the opinions of the National Wild Horse and Burro Summit participants who participated in the voting exercise conducted on August 24, 2017. Although those voting represented a diverse cross-section of stakeholders, this information cannot be extrapolated beyond this context.

Attachment 2 - FY 2017 Cost Estimates

Action	Cost per Unit	Comment
Removals	\$1,000 per head	Based on average cost of animal removed from the range and into a BLM-managed or contracted facility. Includes cost of shipment to the facility for processing (vaccines, Coggins test, gelding.)
Fertility Control	\$3,000 per treated mare	Average cost to treat one animal, includes costs to gather enough animals to treat a single mare with a fertility control vaccine.
Sale	\$1,931 per head	Average cost for all private care placements, including BLM adoptions and those facilitated by partners, like the Mustang Heritage Foundation, Trainer Incentive Program (TIP), sales etc.
Euthanasia	\$1,000	Cost of gather not included here. Includes humanely dispatching the excess animal and disposing of the carcass. Cost estimates for carcass disposal based on USDA's Animal and Plant Health Inspection Service Programmatic EIS.
BLM Adoption	\$1,931 per head	Average cost for all private care placements, including BLM adoptions and those facilitated by partners, like the Mustang Heritage Foundation, TIP, sales etc.
Holding in BLM corrals	\$5.05 per head per day	Includes cost of caring for the animal while in a BLM managed or contracted corral.
Off-range Pastures	\$1.98 per head per day	Includes cost of caring for the animal until natural death in a contracted pasture.
<p>* These cost estimates are based on actual FY17 costs and actions taken. For the purposes of this options paper, the costs for out-years are increased over time based on anticipated inflation.</p>		

Attachment 3 – Public Opinion



A public wild horse and burro advisory board meeting.

Photo by the BLM.

There are strong, determined advocacy groups and many thousands of interested members of the public throughout the United States, and internationally, that participate in the “conversation” regarding management of wild horses and burros. Those who speak out regarding the BLM’s wild horse and burro program are generally interested in the well-being of the horses and/or the health of the public lands. Conflict levels are often high and the program is controversial and politically sensitive.

Many of the management approaches suggested by the public would result in the type of changes that would require the BLM to amend existing Resource Management Plans, and complete appropriate NEPA analysis before they could be implemented. Changes to existing Federal laws may also be needed. The other management approaches, which are not fully included in any of the options, but were proposed by the public, include:

- *Expand public lands for use by wild horses and burros.* Another suggested management approach was to return unadopted wild horses to Herd Areas (HAs), or to expand the areas of the public lands designated for their use. Herd Areas are geographic areas of the public lands identified as habitat used by wild horses and burros in 1971, when they were first protected by the Wild Free-Roaming Horses and Burros Act. These areas were not designated, through the BLM’s land use planning process, for long-term management of wild horses and burros. Decisions to return unadopted horses to HAs would require the BLM to amend existing land use plans and complete appropriate NEPA analysis on a case-by-case basis, or on a national level. Designating lands for wild horse and burro use that are outside the 1971 HA boundaries would require changes to the Act.
- *Make wild horses and burros a principal land use.* Some suggested a management approach in which wild horses and burros, and wildlife, would be the principal use of the public lands, and other uses would be reduced or eliminated. These types of actions would require the BLM to amend existing land use plans in accordance with NEPA and applicable Federal regulations and could also require changes to Federal law. .

- *Use only fertility control.* Others suggested a management approach that would rely on the sole use of fertility control to manage wild horse and burro population size (i.e., no further gathers to remove excess animals). The current PZP-22 fertility control vaccine is not 100 percent effective and annual retreatments are necessary. 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. Under any option, the BLM will conduct research into the development of longer acting fertility control agents and other population growth suppression methods, and use a combination of methods to reduce annual population growth. The goal for this research will be to develop safe, humane, longer-lasting, and more effective methods for managing population size. At the same time, the BLM recognizes that fertility control vaccines, even with their limited effectiveness, are a crucial component of maintaining AML, especially in those HMAs where it can be applied through ground darting.
- *Let nature takes its course.* Allowing populations to regulate themselves through starvation, disease, or predators to control wild horse and burro population size was also suggested. The BLM requested that the National Research Council (NRC) review the Wild Horse and Burro Program to determine if there is credible scientific evidence that population “self-regulation,” and/or predation would be effective in controlling wild horse and burro population size before land and herd health is compromised. The NRC concluded that at the 2013 population levels, contraception or self-limitation strategies may not reduce horse and burro populations to target levels and that horses may first have to be removed. The NRC also stated that it is evident that the consequences of simply letting horse populations expand to the level of “self-limitation”—bringing suffering and death due to disease, dehydration, and starvation accompanied by degradation of the land—are unacceptable. The NRC cited previous research stating that wild horses and burros can kill plants through uprooting and trampling, create areas of low vegetation cover, and change plant species composition to favor less desirable or exotic species. At some point, reduced vegetation cover can lead to accelerated soil erosion and decreased vegetation productivity and rangeland health.
- *Stop using helicopters.* Another suggested management approach would suspend the use of helicopters to assist in the gather and removal of excess wild horses and burros. The Office of the Inspector General (Report No.: C-IS-BLM-0018-2010, December 2010) found that gathers to remove excess wild horses and burros were necessary and humane. Several reviews of data from gather operations indicate that gather-related mortality is typically limited to about one half of one percent (0.5 percent) or less, which is very low compared to most capture methods and capture operations for wild animals. A 2008 General Accounting Office Report (GAO-09-77, October 2008) found that .47 percent of 24,855 horses gathered and removed from 2005 to 2007 in six states accidentally died as a result of capture. Based on the results of these reviews, the BLM will continue to use helicopters to assist in the removal of excess wild horses and burros when it is determined through gather planning that it is the safest, most effective, and most humane manner of doing so.
- *Allocate more public lands for wild horses and burros.* Some commenters suggested the BLM manage wild horses and burros in the future by implementing a reserve design. Under this approach, wild horses and burros would be allocated large areas of the Western landscape.

Population size would be regulated through natural processes. This approach would require changes in existing Federal law.

- *Base management on herd social dynamics.* Some suggested that future management of wild horses and burros be based on family band structure and herd social dynamics. However, the makeup of individual bands is a dynamic and ever-changing aspect of herd social behavior. Research indicates that 9 to 30 percent of mares change bands (Rutberg, 1990; Singer et.al., from the 2002 United States Geological Survey Expert Panel Report). Band structure can be made up of a lead stallion and secondary stallion, as well as bachelor bands that contribute to breeding. Research further suggests that one-third of foals are sired by non-harem stallions (National Research Council, 1991, and Bowling and Touchberry from the 2002 USGS Expert Panel Report). Eagle et.al, 1993, discusses the instability of breeding males in a band. Based on the current literature, the usefulness of managing to maintain family bands is in question given the extent of changes that take place on a continual basis.