

ISSUES AND ANSWERS FOR MANAGING WILD HORSES AND BURROS

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requirements for the degree of Master of Arts in Public Management

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Abstract

Under the authority of the Wild Free-Roaming Horses and Burros Act of 1971, the Bureau of Land Management (BLM) is charged with the duty to protect and manage wild horses and burros and public land. As of March 1, 2016, more than 67,000 wild horses and burros are roaming western public rangelands—well over the Appropriate Management Level (AML) of 26,715 set by the BLM. While herds consistently double in size every four years, coupled with the dramatic decrease in adoptions, the current program is not on a sustainable path. With 46,000 horses and burros already in off-range corrals and pastures, the BLM will spend more than a billion dollars to care for and feed these animals over the remainder of their lives. The BLM must update its management practices for the health of the animals, the rangeland and the increasingly unsustainable cost to the American Taxpayer. The BLM can reach AML utilizing minimally invasive sterilization techniques coupled with establishing minimally reproducing herds on the range.

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To: Director Neil Kornze
From: Clay White
Date: 13 December 2016
Re: BLM Wild Horse and Burro Program

Action Forcing Event:

The Bureau of Land Management (BLM) recently announced that more than 67,000 wild horses and burros are roaming Western public rangelands – a 15 percent increase over the estimated 2015 population.

Statement of the Problem:

The 2016 number of horses on the range are now more than double the recommended amount under the BLM land use plans. The BLM's current recommended amount or Appropriate Management Level is 26,715. An estimated 67,000 horses on the range represents a number 2.5 times greater than the AML, causing concerns about the health of the animals and rangeland and the increasingly unsustainable cost to the American taxpayer.

Under the direction of The Wild Free-Roaming Horses and Burros Act of 1971, the BLM is authorized to remove animals that exceed the AML. First, the Secretary shall order old, sick or lame animals to be destroyed in the most humane manner possible. Second, the Secretary shall cause such number of additional excess animals to be humanely captured and removed for adoption. Lastly, the Secretary shall cause additional

excess animals for which adoption demand does not exist to be destroyed in the most humane and cost effective manner.

While the BLM is granted the authority to manage the levels, the FY2011 Interior appropriations law prohibited funds from being used to slaughter healthy animals.

Limiting the BLM's tools has led to a multi-layer problem. Currently, there are 46,000 horses already being cared for off-range. Off-range care of unadopted horses are projected to exceed \$1 Billion, resulting in necessary horse gathers exceeding available space and funding.

"Over the past seven years we have doubled the amount of funding used for managing our nation's wild horses and burros," said BLM Director Neil Kornze. "Despite this, major shifts in the adoption market and the absence of a long-term fertility control drug have driven population levels higher. A number of program reforms are underway, but assistance is needed from our local, state, and federal partners."¹

While herds of wild horses consistently double in size every four years, there has also been a dramatic decrease in adoptions in recent years. In the early 2000s, nearly 8,000 horses were being placed with private adopters each year. Due to a number of economic factors, that number is now down to roughly 2,500 animals each year, compounding an already difficult management situation.

The total lifetime cost of caring for an unadopted animal that is removed from the range is substantial. Costs for lifetime care in a corral approaches \$50,000 per horse. With 46,000 horses and burros already in off-range corrals and pastures, this means that without new opportunities for placing these animals with responsible owners, the BLM will spend more than one billion dollars to care for and feed these animals over the

¹ U.S. Department of the Interior, Bureau of Land Management: News Release. 11 May 2016

remainder of their lives. Given this vast financial commitment, the BLM is now severely limited in how many animals it can afford to remove from the range.

The table below shows the 2016 West-wide, on-range population on a state-by-state basis as of March 1, 2016. This year's 15 percent increase over the 2015 population compares to an 18 percent increase from 2014 to 2015. The BLM plans to remove 3,500 wild horses and burros from Western public rangelands in 2016.

Wild Horse and Burro On-Range Population as of March 1, 2016

<u>State</u>	<u>Horses</u>	<u>Burros</u>	<u>Total</u>	<u>Maximum AML</u>
AZ	318	5,317	5,635	1,676
CA	4,925	3,391	8,316	2,200
CO	1,530	0	1,530	812
ID	468	0	468	617
MT	160	0	160	120
NV	31,979	2,552	34,531	12,811
NM	171	0	171	83
OR	3,785	56	3,841	2,715
UT	5,440	400	5,840	1,956
WY	6,535	0	6,535	3,725
TOTAL	55,311	11,716	67,027	26,715

Table 1. Source: Bureau of Land Management

History

The wild horses and burros managed by the Bureau of Land Management (BLM) and by the Forest Service are descendants of domestic stock that were released or escaped onto the open range. The Spaniards were primarily responsible for the introduction of the horse and the burro to the Americas.² The horse, however, had its ancestral origins in North America, where millions of years ago a small mammal named *Eohippus* evolved into an animal very similar to today's horse, but the final evolution of the horse into *Equus caballus* (the modern horse) took place in Asia. About 10,000 years ago the horse vanished from North America.³

Columbus' second expedition brought back the horses to the New World and as exploration and settlement progressed northward in Mexico, the horse spread into the present day United States. Native American soon incorporated horses and burros into their culture spreading domesticated populations throughout the West. Feral populations were augmented by horses frightened off during Indian attacks on settlers; by worn-out saddle horses turned loose to fend for themselves; by escapes from prospectors, miners, ranchers, and travelers; and by natural increase.⁴

Wild horse numbers reached their peak in the early 1800s, with a population of approximately two million, with most of these animals in the southwest. As the United States grew westward and farms and cities appeared where once the wild horse grazed, the decline of wild horse populations was inevitable. By the 1950s their population was thought to be fewer than 20,000.

² National Research Council, Commission on Natural Resources, *Wild and Free-Roaming Horses and Burros: Current Knowledge and Recommended Research*, National Academy Press, (Washington, DC: 1980); p. 21.

³ Thomas, Heather S. 1979. *The Wild Horse Controversy*. Cranbury, NJ: A. S. Barnes and Co., Inc.

⁴ McKnight, Tom L. 1959. The Feral Horse in Anglo-America. *The Geographical Review*, 49 (4): 506–525.

With the shrinking population, public concern grew. During the 1950s in Nevada, Velma B. Johnston, later known as Wild Horse Annie, became aware of the ruthless and indiscriminate manner in which wild horses were being gathered from the rangelands. Wild Horse Annie led a grassroots campaign involving mostly school children. The exposure how wild horses were being treated outraged people and ultimately got the public fully engaged in the issue. Newspapers published articles about the exploitation of wild horses and burros and, as noted in a July 15, 1959, Associated Press article, "Seldom has an issue touched such a responsive chord."⁵

In January 1959, Nevada Rep. Walter Baring introduced a bill prohibiting the use of motorized vehicles to hunt wild horses and burros on all public lands. The House of Representatives unanimously passed the bill, which became known as the "Wild Horse Annie Act." The bill became Public Law 86-234 on Sept. 8, 1959, but it did not include Annie's recommendation that Congress initiate a program to protect, manage and control wild horses and burros. Public interest and concern continued to mount, and with it came the realization that federal protection and management was essential.

By 1971, the population of wild horses had not recovered. In response to further public outcry, members of both the Senate and the House introduced a bill in the 92nd Congress to provide for the necessary management, protection and control of wild horses and burros. The Senate unanimously passed the bill on June 19, 1971. After making some revisions and adding a few amendments, the House also passed the bill by unanimous vote. Then-President Richard M. Nixon signed the bill into law on December 15, 1971.

⁵ U.S. Department of the Interior, Bureau of Land Management: History of the Program. The Wild Horse Annie Act.

The new law (Public Law 92-195), was titled the Wild Free-Roaming Horses and Burros Act of 1971.⁶

The 1971 Act was later amended by the Federal Land Policy and Management Act (FLPMA) of 1976 and the Public Rangelands Improvement Act of 1978. Under the 1971 Act, the agencies conduct inventories of horse and burro populations on federal land to determine appropriate management levels (AML). They are authorized to remove animals exceeding the range's carrying capacity to restore a natural ecological balance and to protect the range from deterioration associated with an overpopulation of wild horses and burros. First, the agencies are to destroy old, sick or lame animals by the most humane means available. Second, they are to remove healthy animals for private adoption. BLM takes the lead in gathering animals and holding adoptions for both agencies. Third, if adoption demand is insufficient, the remaining healthy animals are to be destroyed; however, the agencies have not used this authority since 1982.⁷

Shortly after the implementation of the WH&B Act, problems with the management of wild horse and burro populations emerged. With protection afforded under the 1971 Act, wild horse and burro numbers rapidly increased. The rangelands deteriorated to the point that the animals were dying of starvation. To save the rangeland, the BLM began cutting back on the numbers of animals livestock operators were permitted to graze and, at the same time, the BLM started removing excess wild horses and burros. To dispose of the removed animals, the BLM came to rely on second alternative the WH&B Act provided: maintenance and adoption by private individuals. In

⁶ U.S. Department of the Interior, Bureau of Land Management Wild Horse and Burros, History of the Program

⁷ Congressional Research Service, Wild Horses and Burros: Issues and Proposals, Carol Hardy Vincent, 2011

1973, the first animals were adopted. Twenty-three excess horses removed from the Pryor Mountain Wild Horse Range along the Wyoming-Montana border were placed in adoption. The next year, the BLM began an adoption program in Oregon, followed by one in Nevada in 1975. Favorable public response in these states led the BLM to launch a nationwide adoption program in the spring of 1976 (*Our Public Lands* 1980, p. 9).

In June 1974, the U.S. Senate held a hearing before the Committee on Interior and Insular Affairs to review the adequacy of the implementation and the administration of the WH&B Act of 1971. In the hearings, amendments were suggested to facilitate roundups and transfer of removed animals to individuals and organizations. Consideration was also given to the feasibility and desirability of new ranges for horses as solutions to control growing horse populations and to protect competing species. These amendments were introduced in several bills during the period 1975-1976, but none of them became law.

In 1976, Public Law No. 94-579, known as the Federal Land Policy and Management Act, was enacted. This act directs the Secretary of Interior to manage the public lands under principles of multiple use and sustained yield and authorizes the Secretaries of the Interior and Agriculture to contract with private parties for the use of helicopters and motor vehicles to round up and transport wild horses. In response to concerns about increasing wild horse populations and the risk of over grazing rangelands, between 1976 and 1978 several bills were presented to the U.S. Congress to control wild horse populations and to take actions directed towards improving the conditions of the rangeland.

With the enactment of Public Law No. 95-514 (the Public Rangeland Improvement Act), in October 1978, the Secretaries of the Interior and Agriculture were directed to determine the appropriate management levels (AML) to “achieve and maintain a thriving natural ecological balance and avoid deterioration of the range.” They were authorized to remove excess wild horses and burros by first destroying old, sick and lame animals using the most humane methods possible; then humanely capturing and removing wild horses and burros for which an adoption demand existed for private maintenance and care; and then destroying any remaining excess wild horses and burros in the most humane and cost-efficient manner possible. This act mandates that no wild horse or burro or its remains may be sold or transferred for processing into a commercial product. Finally, it authorizes the Secretaries to grant title to wild horses and burros if the adopter has provided humane conditions, treatment and care for a period of one year.

By 1979, to adopt a wild horse or burro, applicants paid a health fee between \$10 and \$20 to cover vaccination and examination expenses plus a handling and transportation fee of between \$80 and \$140 if the animals were sent to a distribution center.⁸ In January 1982, a new policy fee was implemented, establishing a fee of \$200 per wild horse and a fee of \$75 per wild burro, plus transportation costs.⁹ In addition, a moratorium on the destruction of healthy excess animals was established, which was made official in 1988 when Congress expressly prohibited the use of appropriated funds to destroy healthy wild horses and burros. In March 4, 1983 the wild horse adoption fee was lowered to the current amount of \$125 per animal, the BLM’s explanation for this

⁸ U.S. Department of the Interior, Bureau of Land Management: *Managing the Nation’s Public Lands* 1980. p. 90

⁹ U.S. Department of the Interior, Bureau of Land Management: *Managing the Nation’s Public Lands* 1980. p. 70

was the decline in the number of animals demanded for adoption. In addition, a new provision was implemented, requiring the submission of a nonrefundable \$25 advance payment with the adoption application form to reduce costs and to limit applications to those who really intend to adopt a wild horse or burro.¹⁰

From 1973 to 1984 the majority of horses removed from the federal range were adopted. In May 1984, an emergency rule was implemented to reduce the number of healthy unadoptable animals removed from the range. It gave the BLM's Director the authority to adjust or waive the adoption fees for animals unadopted at the standard minimum fees of \$125 per wild horse and \$75 per wild burro, when the transaction involved a minimum of hundred animals.¹¹ Under this authority, the BLM placed about 20,000 wild horses with large-scale adopters. The program was terminated on September 1988, in response to widespread congressional and public criticism, because many of these horses were sold to slaughter houses, once the adopter received the certificate of title.¹²

To improve the adoptability of older animals (three to six years old) and to increase the chances of long-term adoption success, in 1987, an inmate-wild horse training program was initiated at the Canon City, Colorado prison. By 1991, the BLM had cooperative agreements to provide training to wild horses between five and nine

¹⁰ U.S. Department of the Interior, Bureau of Land Management: *Managing the Nation's Public Lands* 1980. p. 87

¹¹ U.S. Department of the Interior, Bureau of Land Management: *Managing the Nation's Public Lands* 1980. p. 22

¹² U. S. General Accounting Office. 1990. Rangeland Management: Improvements Needed in Federal Wild Horse Program. Washington, D.C.: GAO/RCED, 90-110.

years old with three State Departments of Corrections in California, Colorado, and Wyoming.¹³

Between 1979 and 1998 several hearings were held by different subcommittees in both the U.S. Senate and House of Representatives regarding the WH&B program. The objectives of these hearings were to review the administration and effectiveness of the Adopt-A-Horse program, to amend the WH&B Act to authorize public sale of unadoptable excess animals and to increase the penalties for illegal sale or processing of wild horses and burros into commercial products. In addition, there was discussion of methods to decrease the population of wild horses and burros, and to improve the management of the WH&B program.

Increases in wild horse populations during the 1990s and the effects of this overpopulation on watersheds and on the conditions of rangelands, resulted in a plan entitled "Restoration of Threatened Watersheds, Living Legends in Balance with the Land: A Strategy to Achieve Healthy Rangelands and Viable Herds" (henceforth referred as the "Fiscal Year 2001 Presidential Budget Initiative"), which was presented by the BLM to Congress in February 2000. This plan requested additional funding to meet removal targets to achieve nationwide AMLs by 2005. According to this plan a large number of animals would be removed in the early years (the proposed removal target for the first year was 12,855 animals) with a gradual decline over time to maintain the levels. In addition, the plan proposed a four year gather schedule for all HMAs, the elimination of age restrictions on removals, the expansion of training and gelding programs, and the promotion and marketing of animals and adoption events.

¹³ U.S. Department of the Interior, Bureau of Land Management: *Managing the Nation's Public Lands* 1980. p. 34

The most recent amendment to the WH&B Act was in December 2004 through Public Law No. 108-447, which allows the BLM to sell excess wild horses and burros without limitation if the animal is more than ten years of age or has been offered unsuccessfully for adoption at least three times. Congress placed no limitations or restrictions on who can purchase these animals and the BLM seeks offers through negotiated sales of groups of animals to organizations or individuals that can provide good homes for the animals. These animals are not sold at public auctions and the prices are determined on a case-by-case basis. Buyers can purchase any number of animals that are available for sale and they will become the buyer's private property upon purchase.

While Public Law No. 108-447 allows the BLM to sell excess wild horses and burros without limitation they have not used this authority to euthanize healthy animals since 1982, when the agency suspended this practice due to negative public reaction.

Following the negative public reaction, Congress specifically prohibited the BLM, in the annual Interior appropriations acts for FY1988-FY2004, from using its authority to destroy healthy animals.¹⁴ This language was omitted from the FY2005 appropriations act, which instead made changes to 1971 Act regarding wild horse and burro management on federal lands. The 108th Congress enacted additional tools for reducing populations by directing the BLM to sell without limitation the excess animals that are deemed too old or otherwise unable to be adopted. A second change removed the ban on the sale of wild horses and burros and their remains for processing into commercial products. The final change enacted by the 108th Congress removed criminal

¹⁴ P.L. 108-108, the Department of the Interior and Related Agencies Appropriations Act, 2004, provided that BLM "appropriations herein made shall not be available for the destruction of healthy, unadopted, wild horses and burros in the care of the Bureau or its contractors." (Title I, P.L. 108-108, 117 Stat. 1242.)

penalties for processing into commercial products the remains of a wild horse or burro, if it is sold under the new authority.

These changes proved to provide a cost-effective way of helping the BLM achieve the appropriate management levels (AMLs). However, these changes were opposed by many groups fearful that these changes facilitated healthy animals to be lead to slaughter. Congress again reacted; in the FY 2010 Interior Appropriations law reestablished the prohibition on using funds in the bill for the slaughter of healthy unadopted wild horses and burros under BLM management. Additionally, it expressly prohibited funds in the bill from being used for the sale of wild horses and burros that results in their slaughter for processing into commercial products. This prohibition has continued in each appropriations bill since.¹⁵

In the FY17 Interior Appropriations funding bill that passed the House on July 14, 2016, contained an amendment by Representative Chris Stewart that aims to address the over population of wild horses in the West. The provision allows the BLM to transfer any wild horses to any federal, state, or local government requesting a work animal. Additionally, it prohibits the horses from ever being slaughtered.

Background

As of March 1, 2016 more than 67,000 wild horses and burros are roaming Western public rangelands – a 15 percent increase over the estimated 2015 population.¹⁶ This number is more than double the BLM’s appropriate management level of 26,715,

¹⁵ P.L. 111-88

¹⁶ U.S. Department of the Interior, Bureau of Land Management New Release, 5 May 2016

causing concerns about the health of both animals and the fragile ecosystem of the desert rangelands.

With options limited, the BLM has doubled the amount of funding used for managing our nation's wild horses and burros over the past seven years. Despite this funding increase, numbers continue to rapidly grow beyond a point that is sustainable. Multiple factors are contributing to the rapid growth of wild horses and burros. 1. Herds consistently double in size every four years. 2. The BLM has experienced a dramatic decrease in adoptions in recent years. 3. The absence of a long-term fertility control drug has contributed to the desperately high numbers of animals.

In addition to the number of horses on the range, the BLM houses 46,000 wild horses and burros in off-range corrals and pastures. The total lifetime cost of caring for an unadopted animal that is removed from the range is substantial. Costs for lifetime care in a corral approaches \$50,000 per horse. That means with 46,000 horses and burros, the BLM will spend more than a billion dollars to care for and feed these animals over the remainder of their lives.¹⁷ Given the vast financial commitment, the BLM is limited in how many animals it can afford to remove from the range.

On October 17, 2016 the Office of Inspector General (OIG) conducted a review of to determine whether the BLM's cooperative agreements and contracts for wild horse and burro off-range holding facilities are cost effective and comply with applicable Federal laws and regulations.¹⁸ The OIG found that the BLM does not maximize the cost-effectiveness of its off-range holding facilities. Furthermore, the report also found that the

¹⁷ U.S. Department of the Interior, Bureau of Land Management New Release, 5 May 2016

¹⁸ Office of Inspector General, U.S. Department of the Interior, Memorandum, Mary L. Kendall, 17 October 2016

BLM has no strategic plan to manage wild horse and burro populations and that some of the BLM's actions do not comply with Federal laws and regulations.

In a similar OIG inspection report, the BLM recognized that populations and costs for holding facilities were continuing to increase and stated: “the current path is not sustainable for the animals, the environment, or the tax payer.” The budget to manage wild horse and burro population has increased substantially, from just \$15 million in FY1998 to nearly \$80 million in FY15.¹⁹ While the increase in dollar amount is alarming, the fact that 65 percent of the current budget is used for off-range holding costs seems to be the real issue (see Figure 1).

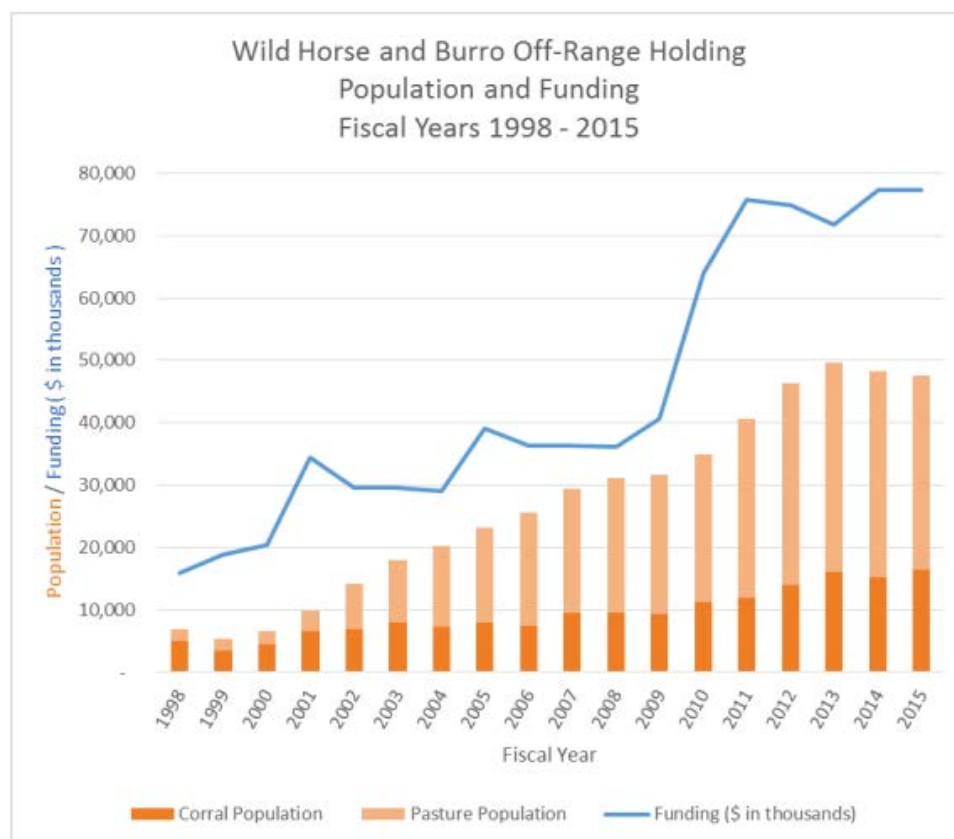


Figure 1. Source: Bureau of Land Management

¹⁹ Office of Inspector General, U.S. Department of the Interior, Report No:C-IS-BLM-0018-2010

The BLM does not have a strategic plan in place to manage the wild horse and burro populations. The consistent on-range population growth drives the constant need for additional off-range holding and increased spending. If no plan is in place to control the on-range population source, the off-range holding and financial need will continue in this unsustainable pattern.

In a May 11, 2016 response to a U.S. Senator's inquiry about the Wild Horse and Burro Program efforts to manage population growth and program costs, the BLM Director outlined attempted efforts, including transitioning horses from off-range short-term corrals to more cost effective long-term pasture facilities. The Director's response included proposed scenarios to meet AML in 3, 5, or 10 years if actions were implemented beginning in fiscal year 2017. The Director's response also stated that additional tools and resources were needed and expressed BLM's commitment to work with Congress to make the program sustainable.²⁰ No formal plan has been developed.

Policy Proposal

To address the overpopulation, the Secretary would instruct the Director of the Bureau of Land Management to implement the following corrective action: 1) Implement a long-term fertility control program in order to achieve the BLM's policy goal of 27,000 wild horses and burros on the range. 2) Establish non-reproducing herds in some areas on the range.

²⁰ United States Department of the Interior, Office of Inspector General: The Bureau of Land Management's Wild Horse and Burro Program is not maximizing efficiencies or complying with federal regulations. Report No.2016-WR-027

In an effort to develop a minimally invasive, low risk technique for contraception and population control in female wild horses and burros, I propose the Department of the Interior, through the BLM, implement a permanent sterilization technique through tubal ligation of the oviduct standing sedated females.

In a study by Oregon State University, it is hypothesized that a flexible endoscope inserted through a small incision in the vaginal vault will allow visualization of each oviduct in pregnant and non-pregnant mares. Use of a diode laser or cautery instrument will allow effective fulguration followed by bloodless sectioning of the oviduct. This procedure should allow successful sterilization of up to 100% of female wild horses and burros gathered in any particular location as a single event.²¹

For the hysteroscopic procedure, it is expected to endoscopically visualize each oviduct papilla in standing, sedated, non-pregnant mares. A diode laser will be used to seal the opening between the oviduct and each uterine horn, thus preventing subsequent fertilization. The university research suggests that the proposed procedures will be acceptable to the public because they do not involve major surgery, are expected to have minimal complications while approaching 100% effectiveness, and when applied, are expected to result in a static to decreasing population level.²² Additionally, tubal ligation is a technique commonly performed in humans. Fulfilling the objective of developing an acceptable sterilization technique will benefit the public by controlling the population levels of wild horses and burros. In the face of scarce feed, drought, or grazing pressures

²¹ United States Department of the Interior, Bureau of Land Management: Mare Sterilization Research. 2015-0055-EA

²² United States Department of the Interior, Bureau of Land Management: Mare Sterilization Research. 2015-0055-EA

by other herbivores, having some control of the number of wild horses will result in healthier animals and grazing lands.

Under the 1971 Wild Free Range Horse and Burro Act, the BLM is granted the authority to sterilizing wild horses. The Act specifically states that “The Secretary shall maintain a current inventory of wild free-roaming horses and burros ... The purpose of such inventory shall be to ... determine whether appropriate management levels should be achieved by the removal or destruction of excess animals, or other options (such as sterilization, or natural controls on population levels).”²³

The second portion of the proposal for managing population increases would be to establish non-reproducing or minimally reproducing herds in some areas on the range. Among the criteria that might be used to select a herd as non-reproducing are having no special or unique characteristics, having limited public water, and being in poor condition ecologically.²⁴ Under this option, captured horses would be sterilized before being released back on the range in order to stabilize populations.

According to Dean Bolstad, the Division Chief for the BLM’s Wild Horse and Burro Program, the BLM currently has the legislative authority to manage non-reproducing or minimally reproducing herds on the range. However, Mr. Boldstad believes that further legislative clarification would be helpful to pursue such actions.

Policy Analysis

Tubal ligation, as described for women, is a type of permanent birth control where the oviducts (also known as fallopian tubes or uterine tubes) are cut or blocked to

²³ Public Law 92-195. Sec. 3(b)

²⁴ Congressional Research Service, Wild Horses and Burros: Issues and Proposals, December 2011

permanently prevent pregnancy.²⁵ The principal difference between the proposed mare tubal ligation procedure in this EA and the typical human procedure is the placement of the incision for insertion of instruments. In the proposed mare surgery, the incision is in the vaginal wall while in women the incision (or two) is made through the navel. A flexible endoscope is inserted into the abdomen allowing the placement of a tool to cut the fallopian tubes. Some women choose to receive this procedure during a caesarian section, as the doctor can readily see the ovaries and oviducts; caesarian surgery requires a large incision in the abdomen, so is not analogous to the proposed surgery for mares.

The proposed tubal ligation surgery would be conducted on open mares as well as those in the three trimesters of gestation. The procedure is expected to be successfully accomplished on both pregnant mares, without pregnancy loss, and non-pregnant mares. Miscarriage is not expected because neither the ovaries nor the uterus should be affected by this minimally invasive procedure. Hormones should not be affected, as compared with the ovariectomy study, because the ovaries would not be removed or altered. Physical status of the pregnancy should not be affected because the uterus would not be entered or physically traumatized. There may be some effects of the stage of gestation on the ability to complete the surgery if it happens that the weight and locations of the gravid uterus distort the utero-ovarian relationship enough to prevent visualization of the oviduct with the flexible endoscope. This circumstance is not expected to be commonly encountered, because the ovary is relatively “fixed” in position. However, the NRC committee that reviewed the proposal was concerned about the visibility in late pregnancy because the ovaries may be pulled medially and anteriorly as

²⁵ Mayo Clinic. 2014. Tubal Ligation.
<http://www.mayoclinic.org/testsprocedures/tuballigation/basics/definition/prc-20020231?p=1>.
Accessed November 18, 2016.

the pregnant uterus moves over the pelvis and down to the floor of the abdomen.²⁶ The committee also had concerns over the collapse of the anterior vagina in pregnant mares preventing passage of the endoscope but recognized that conducting this study would answer whether or not their concerns are warranted.²⁷

As evidenced by the only known similar tubal ligation study on mares, oviduct obstruction with focal laser destruction is expected to be permanent and 100 percent effective.²⁸ The study by McCue was different than the proposed study in several ways: surgery was laparoscopic (through the flank); was unilateral tubal ligation (only blocked one oviduct); and was not conducted on pregnant mares. However, the study supports the hypothesis that tubal ligation causes the mare to be infertile, because none of the mares became pregnant when ovulations occurred from the ovary adjacent to the ligated oviduct. No long-term effects to the overall health of the mares are expected, other than sterility. Mares may be dull or obtunded, with the occasional mare having an elevated temperature for up to 24 hours after the procedure. The expectation is a return to normal physical behavior and function within 24 hours after the surgery. The NRC committee stated “tubal ligation and laser ablation would be safer - with less risk of hemorrhage and evisceration - and probably less painful.”²⁹

Pregnancy and the development of the foal are not expected to be affected since this is a new procedure the outcome is not completely known. It is important to identify long-term effects on mares that undergo surgery in the corral-based study. The treated

²⁶ National Research Council the National Academies. 2015. Proposal Review, Appendix B.

²⁷ National Research Council the National Academies. 2015. Proposal Review, Appendix B.

²⁸ McCue, P.M., D.A. Hendrickson, and M.B. Hess. 2000. Fertility of Mares After Unilateral Laparoscopic Tubal Ligation. *Veterinary Surgery* 29:543–545.

²⁹ McCue, P.M., D.A. Hendrickson, and M.B. Hess. 2000. Fertility of Mares After Unilateral Laparoscopic Tubal Ligation. *Veterinary Surgery* 29:543–545.

mares in the tubal ligation study would continue to have a normal estrous cycle as their ovaries would still be intact. However, they would be unable to become pregnant as the oviduct would have been cut, essentially blocking the passage of sperm needed to fertilize the egg. With the occurrence of a normal estrous cycle and the inability to become pregnant, it could be presumed the mare would receive repeated copulation through the breeding season.

As noted in the section addressing effects of the ovariectomy surgery, we do not anticipate that any of the surgeries would lead to bone density loss in wild horses. Moreover, in the tubal ligation surgery, the ovaries would remain functional.

Long-term survival rates in these mares are expected to be similar to, or higher, than a typical untreated mare because the physical demands of pregnancy and raising a foal would be eliminated.³⁰

Tubal ligation is expected to cost approximately \$150–\$250 for each mare. Since this is a new procedure, future logistics of such things as where the procedure is conducted, the facilities available, and travel distance for a veterinarian make this cost per horse a rough estimate.³¹

Tubal ligation comes at a much cheaper cost and seems to be less controversial than that of the ovariectomy. Ovariectomy via colpotomy is expected to cost approximately \$250–\$300 for each mare.³²

There are no known studies using this technique to permanently sterilize domestic mares, therefore the duration of the surgical procedure is not entirely known. It is

³⁰ United States Department of the Interior, Bureau of Land Management. Mare Sterilization Research. 2015. 0055-EA

³¹ Mare Sterilization Research, United States Department of the Interior, January 2016

³² United States Department of the Interior, Bureau of Land Management. Mare Sterilization Research. 2015. 0055-E

anticipated that the procedure would take approximately 15 to 30 minutes, allowing up to two to four horses being operated on per hour.³³

Once horses have been treated, the next step would be to recreate minimally reproducing herds. Consistent with the mandate outlined in the Wild Free-Roaming Horses and Burros Act of 1971, the BLM may apply temporary or permanent sterilization to decrease herd growth rates while maintained a herd's ability to sustain itself.

The proportion of the herd that can be gathered, treated and released influences achievement of a minimally reproducing herd. If population numbers fall below AML in minimally reproducing herds, the BLM can bring in wild horses from other HMAs having similar environments. New animals can be introduced near resident animals in areas with abundant water and forage to facilitate their adaption to a new area.

Political Analysis

The federal management of wild horses and burros has generated controversy and lawsuits for years. AML's tend to be a focal point of this controversy between the BLM and the public. One question surrounding AML's include which animal is given priority. Farmers and ranchers believe priority should be given to cattle. Other interest groups believe the horses should be given priority. While there are critics on both sides, the Secretary may designate specific ranges exclusively for wild horses and burros; in practice, most areas also have livestock. Currently, livestock may graze on approximately

³³ United States Department of the Interior, Bureau of Land Management. Mare Sterilization Research. 2015. 0055-EA. Page 21

155 million acres of BLM land and 85 million acres of FS land, while wild horses roam on 26.9 million BLM acres and 2 million FS acres.³⁴

Other controversial issues include; whether, and to what extent, to remove animals from the range; the disposal of healthy animals through the adoption and sales program; the extent of holding animals in facilities, particularly long-term facilities; the use of fertility control to slow the rate of production; and the costs of management and whether funding is at an appropriate level.

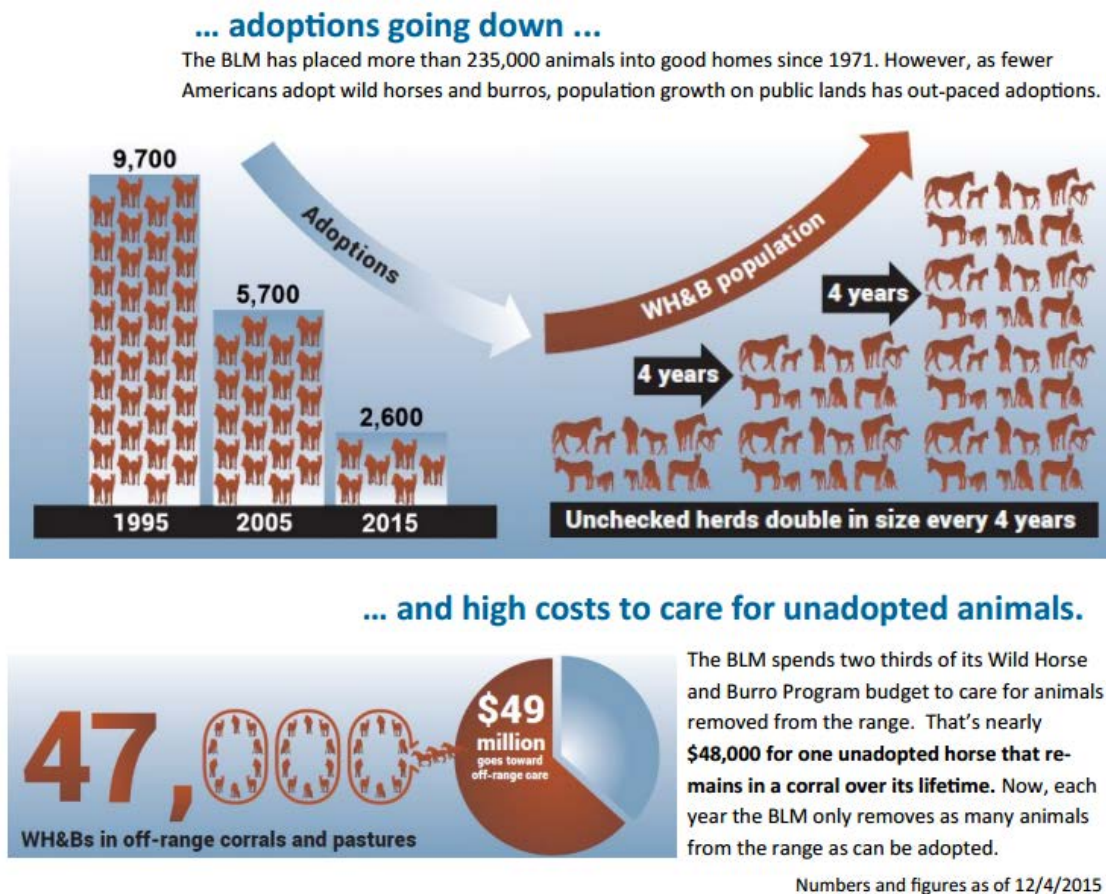


Figure 2. Source: Bureau of Land of Management, Wild Horse and Burro Program

³⁴ BLM Fact Sheet on Management of Livestock Grazing, October 2016

Perhaps the least controversial method for controlling the population is that of adoption of healthy horses. However, as Figure 2 shows, adoptions have been declining over the past several years due to factors including increased costs of care. While adoptions are a good tool to continue to use, they are not the answer.

With regards to removing wild horses and burros from the range, some animal rights and conservation groups believe they should roam freely without limitation. Others stand by the older 1990 GAO conclusion that removals have not demonstrably improved range conditions, in part because livestock consume more forage and cause more degradation to riparian areas.³⁵ By contrast, a 2010 report by the DOI Office of Inspector General concluded that wild horse and burro gathers are “necessary and justified” because BLM cannot sustain the growing number of animals.³⁶ Some wildlife, conservation, and livestock interests agree that reduction of horse herds protects range resources and balances wild horse and burro levels with wildlife and domestic livestock. Many livestock groups contend that wild horses and burros are more environmentally destructive than domestic stock because they graze year-round without limit, whereas the time, place, and quantity of cattle grazing is controlled. Where drought, fire, and other emergencies reduce forage, domestic livestock usually are removed first to protect forage for wild horses and burros, according to BLM. The debate on the extent of damage by wild horses and burros versus livestock continues because of value differences and lack of definitive data on range degradation.

³⁵ U.S. General Accounting Office (now Government Accountability Office), *Improvements Needed in Federal Wild Horse Program*, GAO/RCED-90-110 (Washington, DC: August, 1990). Hereafter "1990 GAO Report."

³⁶ Dept. of the Interior, Office of Inspector General, *Bureau of Land Management Wild Horse and Burro Program*, December 2010,

Understanding the controversy surrounding the AML is critical when analyzing the political landscape because that is the purpose of my proposal—returning the population of wild horses and burros to the maximum AML set by the BLM.

Determining AMLs and how to achieve AML are at the center of the controversy. AMLs are set through BLM's land use planning process. Under BLM guidance, they are established as a population range, wherein the lower limit is set to allow growth to the upper limit between gathers. BLM determines AMLs based on population censuses and range monitoring in tandem with removal efforts. Objectives include establishing or maintaining an ecological balance on the land and providing for land health. The determinations involve maintaining multiple use in the area. According to BLM, the agency takes into account natural resources, such as wildlife and vegetation, and land uses, such as grazing and recreation. Other considerations include the biological and social needs of the herds and the genetic diversity needed to maintain healthy wild horse and burro populations. BLM guidance establishes that a minimum of 50 breeding animals (with a total herd size of about 150-200 animals) is generally required to maintain genetic diversity. AMLs generally are reviewed every four to five years as part of horse gathers and removals, but may be revised as circumstances and conditions change.³⁷

Knowing that achieving AML is controversial, tactics to achieve AML are equally, if not more, controversial than the AML itself. Long story short: achieving the prescribed AML through the tactic of tubal ligation is not going to be easy. However, the BLM can resolve much of the controversy with education and transparency.

³⁷ U.S. Department of the Interior. Bureau of Land Management. Nevada Wild Horses and Burros. November 2015

Transparency and education alone are not capable of solving all controversy. Groups on both sides of the issue will continue to exist and exploit the problem for their benefit. Currently, the BLM is tied up in a lawsuit filed by a nonprofit group, Front Range Equine Rescue, in the U.S. District Court for the District of Columbia challenging the BLM's "shocking decision" to "perform dangerous and untested surgical sterilization on captive wild horses."³⁸ This lawsuit was filed shortly after the BLM announced in June 2016 that it would partner with Oregon State University to conduct research projects designed to study the safety and effectiveness of three fertility control methods on wild mares, including my proposal of tubal ligation.

The BLM had conducted an environmental assessment that authorized the research projects to move forward under an animal protocol approved by the university. Oregon State University planned to begin the studies this summer. But the BLM informed the Florida based horse advocacy group recently that it will be pushing back the start date for the experiments until mid-November—studies have yet to resume.

Despite this opposition, there is room to have the conversation on achieving AML using tubal ligation and employing education and transparency. Recently, the New York Times printed an article where Sue McDonnell, a member of the BLM's Wild Horse and Burro Advisory Board, toured the rangeland. After touring the rangeland, Ms. McDonnell had a change of heart. She said, "it was awful, a lot of the land is under severe stress. If we don't act now, there will be parts that will be lost forever. The horses will die, other wildlife will die, and that will be that."³⁹

³⁸ Front Range Equine Rescue v. Sally Jewell. United States District Court for the District of Columbia. Case 1:16-cv-01521

³⁹ Phillips, Dave. New York Times, Success Spoils a U.S. Program to Round Up Wild Horses. October 14, 2016.

With the prospects of spending a billion dollars to manage the wild horses in captivity, the BLM Advisory Board voted 8 to 1 in September to kill the horses in storage. After the vote, the BLM was flooded with outraged calls and emails. In response, the BLM issued a statement saying that it has no plans to kill or sell all of the 45,000 horses and burros in its custody that cannot be adopted. The BLM further reiterated its stance: “The BLM is committed to having healthy horses on healthy rangelands. We will continue to care for and seek good homes for animals that have been removed from the range. The BLM does not and will not euthanize healthy animals. The agency continues to seek new and better tools for managing the nation's quickly expanding population of wild horses. There are nearly 70,000 wild horses and burros on public lands in the West - - three times the recommended level -- and nearly 50,000 additional horses and burros that have been removed from the range and are available for adoption. The cost of caring for each animal that goes unadopted can be nearly \$50,000.”⁴⁰

It is clear that controversy exists and will not just go away. But as shown by Ms. McDonnell, minds can be enlightened and changed through education of the real plight these animals are in.

In addition to education it is also imperative that the BLM employ tactics to be more transparent when dealing with the public. The public should be able to understand the methods used and how they are implemented and should be able to access the data used to make decisions. Transparency will also encourage high quality in data acquisition and use. Data and methods used to inform decisions must be scientifically defensible. Resources are allocated to horses or burros in a context of contending uses for BLM

⁴⁰ U.S. Department of the Interior. Bureau of Land Management, History and Facts. From the Public.

lands, all of which have some standing in the agency's charge for multiple-use management.

The National Academies Press agrees that transparency will invite the change in direction needed and help make this proposal politically possible. "Greater public participation in BLM decision-making and data-gathering could increase public confidence in agency actions, and the committee recommends the analytic deliberative approach to engaging the public in management decisions and increasing trust through transparency. Social-science research may help to identify opportunities and improved processes for cooperation between BLM and the public."⁴¹

Recommendation

The BLM's management strategy up to this point has primary focused on removing animals off the range in an effort to reach appropriate management population level, offering these gathered animals up for adoption, and placing any unadopted horses in holding facilities. However, declining adoption rates over the last several years and feed and fuels costs, among other factors, have led to holding costs that are no longer affordable. The current path of the wild horse and burro program is not sustainable for the animals, the environment, or the taxpayer.

The BLM and the public agree, the status quo is not working with regards to the management of the wild horse and burro population. As Figure 3 depicts, too much is at stake to do nothing. As populations continue to rise, the very health of our nation's public

⁴¹ Committee to Review the Bureau of Land Management Wild Horse and Burro Management Program; Board on Agriculture and Natural Resources; Division on Earth and Life Studies; National Research Council

lands and animals depends on a bold, practical solution that can bridge the differing public opinions.



Figure 3. Source: Nevada BLM

Given the urgent matter, it is my recommendation that the BLM move forward with population control via tubal ligation and establish on re-producing herds on the range. This proposal will ensure that wild horse and burro populations can gradually drop to AML and ensure the long-term survival of both the animals and the fragile desert eco-system.

Wild horse population growth rates must be brought into balance with adoption demand to ensure that the herds on our western rangelands are kept at more sustainable levels. Only by reducing breeding populations of wild horses on western rangelands will this program come into balance. The Secretary could achieve sustainable populations on the range through far more aggressive use of fertility control than is currently practiced,

active management of sex ratios on the range, and the introduction of non-reproducing herds in some existing herd management areas. At the same time, the success of the plan depends on the placement of more animals into good homes by making BLM adoptions more flexible where appropriate.

Horse and burro management and control strategies cannot be based on biological or cost considerations alone; management should engage interested and affected parties and also be responsive to public attitudes and preferences. Three decades ago, the National Research Council reported that public opinion was the major reason that the Wild Horse and Burro Program existed and public opinion was a primary indicator of management success.⁴² The same holds true today. To complicate matters, the public holds disparate values related to free-ranging horses and burros. Some groups perceive free-ranging horses as highly valued animals native to North America, icons of the Western landscape, and deserving of more BLM resources; others see free-ranging horses and burros as invasive “feral” species in competition for rangelands and stressors of fragile ecosystems. Values are the lens through which the public understanding of scientific issues related to free-ranging horses and burros is focused, and management decisions should navigate these divergent public values.

Regardless of the diversity of public opinion on free-ranging horses and burros, there is broad consensus that the current management conditions for these animals are not sustainable and that the ever-increasing number of horses kept in long-term holding facilities should be mitigated.⁴³ BLM is faced with the problem of finding and

⁴² NRC (National Research Council). 1982. Wild and Free-Roaming Horses and Burros. Final Report. Washington, DC: National Academy Press.

⁴³ Office of Inspector General, U.S. Department of the Interior, Bureau of Land Management Wild Horse and Burro Program. Report No.: C-IS-BLM-0018-2010. Dec. 2010

implementing a cost-effective management strategy that is based not only on the best scientific evidence but also on reducing polarization and increasing public confidence in its decision-making.

The BLM can accomplish the proposal if the tools outlined are implemented. The incoming Administration would be wise to implement this proposal as a compromise solution to the problem. It has the potential to bridge political divides given was it was supported and funded by the current administration. The proposal is a middle ground solution that will return the wild horse and burro population to the recommend AML and the result will be healthier animals and a rangeland that can support these animals for future generations to enjoy.

Curriculum Vitae

Clay White is currently the Legislative Director for Congressman Jason Chaffetz where his portfolio includes military and federal lands issues. Prior to joining Mr. Chaffetz, he spent 3 years working on Capitol Hill for Congressman Chris Stewart. Clay graduated from Utah Valley University with a B.A. in Political Science and is currently pursuing a Master of Arts in Public Management at Johns Hopkins University.