U.S. GOVERNMENT ACCOUNTABILITY OFFICE
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Congressional Requesters

Animal Welfare: Information on the U.S. Horse Population

The U.S. horse population consists of domesticated horses in private care—such as race horses, show horses, and horses residing on farms—and free-roaming horses, including wild horses and burros on certain U.S. public lands and feral horses on tribal or other lands.[1] Federal and state agencies and nongovernmental stakeholders have raised concerns about the availability of options for managing horse populations, such as challenges in finding homes for adoption and limited capacity at rescue sites; the cost of caring for wild horses; and the effectiveness of efforts to limit population growth and the environmental impacts of free-roaming horses.[2] Stakeholders have also raised concerns about the welfare of horses sold for export to either Canada or Mexico, which permit commercial slaughter of horses for human consumption. In the United States, such slaughter has been effectively prohibited by language Congress included in annual appropriations acts for fiscal years 2006 to 2011 and beginning again in fiscal year 2014. Specifically, the annual appropriations acts have prohibited the use of federal funds to inspect horses that are to be slaughtered for human consumption.

The U.S. Department of Agriculture (USDA) and the Department of the Interior (Interior) are the federal agencies with primary responsibility for horse welfare issues. USDA compiles agricultural data, such as on livestock exports. USDA is also responsible for inspecting certain animals before they are slaughtered and processed into products for human consumption, as well as for overseeing the welfare of horses transported for slaughter. Interior's Bureau of Land Management (BLM)—with research assistance from the U.S. Geological Survey—and U.S. Forest Service (USFS) manage populations of wild horses on U.S. public lands in 10 western states.[3] BLM and USFS are required under the Wild Free-Roaming Horses and Burros Act of 1971 to set the appropriate management level for each of their 177 herd management areas and 53 wild horse and burro territories, respectively.[4] In areas where BLM or USFS finds that an

[1]We use the term 'wild horses' to mean wild free-roaming horses and burros under the Wild Free-Roaming Horses and Burros Act of 1971. Pub. L. No. 92-195, 85 Stat. 649 (1971) (codified as amended at 16 U.S.C. §§ 1331-1340). Wild horses, on certain public lands defined by the Act, are protected under the Act. Feral horses, generally addressed by state law, are unwanted and unclaimed free-roaming horses found on public lands not designated for wild horses, or on private or tribal lands. Feral horses are not protected under the Act.

[2]We use the term 'horses' to refer to all equines, including burros, mules, and asses.

[3]BLM and USFS both manage wild horses, but this report focuses on BLM management because BLM-managed wild horse populations account for the majority of the wild horses on public lands.

[4]This level is the numeric population range for a herd that the agency has determined can be maintained in healthy condition without adversely affecting the thriving natural ecological balance and while preserving the land for multiple uses, such as wildlife and livestock grazing. When establishing an appropriate management level, BLM and USFS also consider other federal acts pertaining to public lands.

overpopulation exists and that action is necessary to remove excess animals, BLM or USFS is required to achieve the appropriate management level by removing excess animals.[5]

We have previously reported on horse welfare issues for both domesticated and free-roaming horses. For example, in June 2011, we made a number of recommendations to USDA to protect horses sent to slaughter.[6] In response, USDA in 2011 amended its regulations governing the commercial transportation of horses for slaughter by persons regularly engaged in that activity within the United States. In October 2008, we found that, in determining wild horse populations, BLM frequently used a method that consistently undercounted them.[7] We also found that the number of horses BLM removed from the range was far greater than the number sold or adopted, resulting in the need for increased holding facilities.[8] We made a number of recommendations to BLM to manage the wild horse population, and BLM has taken steps to address them, such as issuing a new policy for counting horse populations.

You asked us to review issues related to horse welfare. This report provides information on the (1) size of the U.S. horse population, (2) available options for managing the U.S. horse population, and (3) types of impacts, if any, that free-roaming horses have on the environment. This report formally transmits the briefing slides we presented to your staff on June 19, 2017 (see enclosure 1), and provides additional details. We will report further on these and other related issues in a subsequent report on horse welfare.

To address our objectives, we reviewed and summarized agency, tribal, and nongovernmental stakeholder data and documentation on domesticated and free-roaming horse populations. We also interviewed officials from Interior agencies, such as BLM, Bureau of Indian Affairs, and U.S. Geological Survey; USDA agencies, such as USFS; a state (Texas); and a tribal government entity (the National Tribal Horse Coalition). We also interviewed representatives of three nongovernmental stakeholders—the American Horse Council, Humane Society of the United States, and American Society for the Prevention of Cruelty to Animals (ASPCA). We selected these agencies and stakeholders because they were knowledgeable about key federal, state, tribal, or nongovernmental programs and activities related to horse management, welfare, or environmental impacts. In addition, we selected these three nongovernmental stakeholders because, based on our research and interviews with federal agencies, they have conducted research on horse welfare issues. The statements and views expressed by the agencies and stakeholders we interviewed cannot be generalized to those we did not interview, but they provide illustrative examples.

To examine the size of the U.S. horse population, we conducted a literature search on key horse issues, including population estimates. We also reviewed and summarized data and documentation from USDA's National Agricultural Statistics Service and BLM on domesticated and wild horse population estimates; from the National Tribal Horse Coalition on feral horse

[5]The Wild Free-Roaming Horses and Burros Act of 1971 defines excess animals as wild free-roaming horses or burros (1) which have been removed from an area by the Secretary pursuant to applicable 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.

[6]GAO, *Horse Welfare: Action Needed to Address Unintended Consequences from Cessation of Domestic Slaughter*, GAO-11-228 (Washington, D.C.: June 22, 2011).

[7]GAO, *Bureau of Land Management: Effective Long-term Options Needed to Manage Unadoptable Wild Horses*, GAO-09-77 (Washington, D.C.: Oct. 9, 2008).

[8]GAO-09-77.

population estimates on certain tribal lands; and from the American Horse Council on its domesticated horse population estimate. We assessed the reliability of these data by reviewing related documentation; interviewing knowledgeable officials; and conducting electronic or manual data testing for missing data, outliers, and obvious errors. We found these data were sufficiently reliable for our purposes.

To examine the current options for managing the U.S. horse population, we conducted a literature search on key horse issues, including population management options, such as adoption. We also reviewed and summarized agency, tribal, and nongovernmental stakeholder data and documentation related to options for managing horse populations. Specifically, we obtained data from federal agencies on the number of horses managed under various options, including data from USDA's National Agricultural Statistics Service and BLM, and we obtained data from nongovernmental stakeholders, including survey data from ASPCA on the number of people with the capacity for and interest in adopting a horse. We assessed the reliability of these data by reviewing related documentation; interviewing knowledgeable officials; and conducting electronic or manual data testing for missing data, outliers, and obvious errors. We found these data were sufficiently reliable for our purposes. In addition, we examined selected state and federal laws and regulations related to horse welfare, as well as information on selected international requirements, including from Canada, the European Union, and Mexico.

To examine the types of impacts, if any, that free-roaming horses have on the environment, we reviewed and summarized research from agencies such as Interior's U.S. Geological Survey and U.S. Fish and Wildlife Service; the Bureau of Indian Affairs and tribal entities; and nongovernmental stakeholders, such as ASPCA.

We conducted this performance audit from April 2017 to July 2017 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

In summary, we found the following:

- **Horse population.** Federal agencies do not have a recent estimate of the total U.S. horse population. Available data suggest that the domesticated population may number from 5 million to 9 million, but there are limitations to these estimates. Data also suggest that the number of wild horses on public lands and in holding facilities has more than doubled in the past 16 years, to more than 110,000 in 2016, and that more than 90,000 feral horses reside on certain tribal lands.

- **Options for managing the horse population.** Horses may be relocated to new homes, euthanized or slaughtered, or prevented from breeding, with some differences in the options for managing domesticated, wild, and feral horses.

    - The capacity to find new homes through rescue organizations and adoption is uncertain due to limited information, according to stakeholders.

    - Domesticated and feral horses may be exported to Canada and Mexico for commercial slaughter. However, BLM has placed conditions on sales and adoptions of wild horses to prevent their slaughter.

- Federal agencies and stakeholders have programs to control population growth. These efforts are not currently affordable or practical to implement on a large scale for reducing annual population growth and maintaining most wild horse populations at sustainable levels, according to BLM officials.

- **Environmental impacts of horses**. Stakeholders identified various types of impacts that free-roaming horse populations have on the environment, particularly in western states. These impacts may include harming native vegetation, altering the landscape, and dispersing seeds. Federal agencies support research to better understand these impacts.

Agency Comments

We provided a draft of this report to the Departments of the Interior and Agriculture for review and comment. The Departments of the Interior and Agriculture provided technical comments that we incorporated as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from this date. At that time, we will send copies to the appropriate congressional committees, the Secretary of the Interior, the Secretary of Agriculture, and other interested parties. In addition, the report will be available at no charge on the GAO website at http://www.gao.gov.

If you or your staff members have any questions concerning this report, please contact me at (202) 512-3841 or morriss@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report were Joseph Cook (Assistant Director), Keya Cain, Joseph Capuano, Tara Congdon, David Dornisch, Christy Feehan, Cindy Gilbert, Patricia Moye, Cynthia Norris, Dan Royer, and Jack Wang.

Steve Morris
Director, Natural Resources and Environment Team

Enclosure

cc: Mr. Tom O'Brien
Ms. Pam Miller
Mr. Caleb Crosswhite
Ms. Patricia Straughn

List of Requesters

The Honorable K. Michael Conaway
Chairman
Committee on Agriculture
House of Representatives

The Honorable Robert B. Aderholt
Chairman
Subcommittee on Agriculture, Rural Development, Food and Drug Administration and Related Agencies
Committee on Appropriations
House of Representatives

The Honorable Mark Amodei
House of Representatives

The Honorable Rob Bishop
House of Representatives

The Honorable Tom Cole
House of Representatives

The Honorable Kevin Cramer
House of Representatives

The Honorable Rick Crawford
House of Representatives

The Honorable Bob Goodlatte
House of Representatives

The Honorable Sam Graves
House of Representatives

The Honorable Vicky Hartzler
House of Representatives

The Honorable Steve King
House of Representatives

The Honorable Frank D. Lucas
House of Representatives

The Honorable Markwayne Mullin
House of Representatives

The Honorable Dan Newhouse
House of Representatives

The Honorable Kristi Noem
House of Representatives

The Honorable David Rouzer
House of Representatives

The Honorable Pete Sessions
House of Representatives

The Honorable Adrian Smith
House of Representatives

The Honorable Jason Smith
House of Representatives

The Honorable Chris Stewart
House of Representatives

The Honorable Ted S. Yoho
House of Representatives

GAO

Animal Welfare: Information on the U.S. Horse Population

Enclosure

Briefing for House Agriculture Committee and House Appropriations Committee, Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Subcommittee

June 19, 2017

Contents

Introduction

The U.S. horse population consists of domesticated horses in private care—such as race horses, show horses, and horses residing on farms—and free-roaming horses, including wild horses on certain U.S. public lands and feral horses on tribal or other lands.[1]

Managing horse populations poses several challenges, including meeting the costs of care; finding new homes for horses that are no longer wanted; protecting horse welfare, including when they are in transit for commercial slaughter; controlling population growth; and addressing the potential impacts of free-roaming horses on the environment.

Throughout this briefing, we use the term 'horses' to refer to all equines, including burros, mules, and asses.

[1]For purposes of this briefing, we use the term wild horses to mean wild free-roaming horses and burros under the Wild Free-Roaming Horses and Burros Act of 1971 (Act). Pub. L. No. 92-195, 85 Stat. 649 (1971) (codified as amended at 16 U.S.C. §§ 1331-1340). Wild horses, on certain public lands defined by the Act, are protected under the Act. Feral horses, generally addressed by state law, are unwanted and unclaimed free-roaming horses found on public lands not designated for wild horses, or on private or tribal lands. Feral horses are not protected under the Act.

Objectives

Our objectives were to determine what is known about

1. the current size of the U.S. horse population;
2. the available options for managing the U.S. horse population; and
3. the types of impacts, if any, that free-roaming horses have on the environment.

Figure 1: Wild Horses on Public Lands

Source: Bureau of Land Management. | GAO-17-680R

Scope and Methodology

The scope of this review covers domesticated and free-roaming horses, including wild horses managed by the Department of the Interior's (Interior) Bureau of Land Management (BLM) on public lands and feral horses on tribal lands.[2] To address our objectives, we

- conducted a literature search on key horse issues, including population estimates and population management options, such as adoption;
- reviewed and summarized agency, tribal, and nongovernmental stakeholder data and documentation related to horse population estimates; options for managing horse populations; selected state, federal, and international laws and regulations related to horse welfare; and research on the types of impacts horses have on the environment;
- assessed the reliability of these data and found they were sufficiently reliable for our purposes;
- interviewed knowledgeable officials from federal agencies in Interior, such as BLM, Bureau of Indian Affairs (BIA), and U.S. Geological Survey (USGS); the U.S. Department of Agriculture (USDA), such as U.S. Forest Service (USFS); a state and a tribal government; and three nongovernmental stakeholders.

Interior and USDA provided technical comments on these slides that we incorporated as appropriate.

[2]For purposes of this briefing, we focused on BLM's wild horse populations because they account for the majority of the wild horses on public lands. There are also free-roaming horse populations managed by other entities, such as Interior's U.S. Fish and Wildlife Service and National Park Service, USDA's U.S. Forest Service, state agencies, and local entities.

Summary

- **Horse population.** Federal agencies do not have a recent estimate of the total U.S. horse population. Available data suggest that the domesticated population may number from 5 million to 9 million, but there are limitations to these estimates. Data also suggest that the number of wild horses on public lands and in holding facilities has more than doubled in the past 16 years, to more than 110,000 in 2016, and that more than 90,000 feral horses reside on certain tribal lands.
- **Options for managing the horse population.** Horses may be relocated to new homes, euthanized or slaughtered, or prevented from breeding, but options differ for managing domesticated, wild, and feral horses.
    - The capacity to find new homes through rescue organizations and adoption is uncertain.
    - Domesticated and feral horses may be exported to Canada and Mexico for commercial slaughter. BLM has placed conditions on sales and adoptions of wild horses to prevent their slaughter.
    - Federal agencies and stakeholders have programs to control population growth. These efforts are not currently cost-effective for maintaining most wild horse populations at sustainable levels, according to BLM officials.
- **Environmental impacts of horses**. Stakeholders have identified various types of impacts that free-roaming horse populations have on the environment, particularly in western states. These impacts may include harming native vegetation, altering the landscape, and dispersing seeds. Federal agencies support research to better understand these impacts.

USDA compiles agricultural data, such as on livestock exports. USDA is also responsible for inspecting certain animals before they are slaughtered and processed into products for human food, as well as overseeing the welfare of horses transported for slaughter.

BLM (with research assistance from USGS) and USFS manage populations of wild horses on U.S. public lands in 10 western states.

- The Wild Free-Roaming Horses and Burros Act of 1971 (Act) defines wild free-roaming horses and burros as all unbranded and unclaimed horses and burros on U.S. public lands, defined by the Act as any lands administered by BLM and USFS.
- BLM and USFS are required under the Act to set the appropriate management level for each of their 177 herd management areas and 53 wild horse and burro territories, respectively.[3] In areas where BLM or USFS find that an overpopulation exists and that action is necessary to remove excess animals, BLM or USFS is required to achieve the appropriate management level by removing excess animals.[4]

BIA works with tribal partners to manage free-roaming (feral) horses on tribal lands.

[3]This level is the numeric population range for a herd that the agency has determined can be maintained in healthy condition without adversely affecting the thriving natural ecological balance and while preserving the land for multiple uses, such as wildlife and livestock grazing. When establishing an appropriate management level, BLM and USFS also consider other federal acts pertaining to public lands.

[4]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 applicable 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.

From fiscal years 2006 to 2011 and beginning again in fiscal year 2014, Congress has included language in its annual appropriations acts prohibiting the use of federal funds to inspect horses that are to be slaughtered for human consumption.[5] Specifically, the annual appropriations act provides that no federal funds shall be used to pay the salaries and expenses of personnel to

(1) inspect horses prior to slaughter for human consumption under the Federal Meat Inspection Act;

(2) inspect horses in transit for slaughter under section 903 of the Federal Agriculture Improvement and Reform Act of 1996; or

(3) implement or enforce regulations governing a voluntary fee-for-service inspection program for horses prior to slaughter.[6]

As a result, domestic commercial slaughter is effectively prohibited, and horses sold for export to slaughter have generally been transported to either Canada or Mexico.[7]

[5]The prohibition on the use of federal funds for inspections was not included in the fiscal year 2012 and fiscal year 2013 appropriations acts, but the prohibition was reinstated in fiscal year 2014. No domestic horse slaughter facilities opened before the appropriations ban was reinstated.

[6]USDA created a voluntary fee-for-service inspection program in 2006, and Congress added a prohibition on using federal funds for the program to its appropriations acts beginning in fiscal year 2008.

[7]Certain states also have laws related to horse slaughter. For example, some states—including California, Illinois, and New Jersey—prohibit horse slaughter for human consumption, and some states—including California, Illinois, New Jersey, and Texas—also prohibit the sale of horse meat for human consumption.

We have previously reported on horse welfare issues for both domesticated and free-roaming horses. For example:

- In 2011, we reported that there are not comprehensive, national data on horse abandonments, abuse, and neglect since animal welfare is usually a local (i.e., county) responsibility.[8] Our report included a number of recommendations to USDA to protect horses sent to slaughter. In response, USDA in 2011 amended its regulations governing the commercial transportation of horses for slaughter by persons regularly engaged in that activity within the United States.
- In 2008, we reported that BLM frequently uses a method that consistently undercounts the number of wild horses and that the number of horses BLM removes from the range is far greater than the number sold or adopted, which has resulted in the need for increased holding facilities.[9] We made a number of recommendations to BLM to manage the wild horse population, and BLM has taken steps to address them, such as issuing a new policy for counting horse populations.

[8]GAO, *Horse Welfare: Action Needed to Address Unintended Consequences from Cessation of Domestic Slaughter*, GAO-11-228 (Washington, D.C.: June 22, 2011).

[9]GAO, *Bureau of Land Management: Effective Long-term Options Needed to Manage Unadoptable Wild Horses*, GAO-09-77 (Washington, D.C.: Oct. 9, 2008).

Federal agencies do not have a recent estimate of the total U.S. horse population but collect data on key segments of the population. Available data are limited in some instances but show that most horses in the United States are domesticated.

Table 1: Estimates of the U.S. Horse Population

Type of horse[a]	Population estimate	Estimate date	Planned update	Source
Domesticated[b]	9.2 million	2005	September 2017	American Horse Council Foundation
	5.3 million	1999	No update planned	USDA NASS
Wild horses	113,000[c]	2016	Annual data available	BLM
Feral horses	93,000[d]	2015 and 2017	Unknown	National Tribal Horse Coalition, tribes

Source: GAO analysis of American Horse Council Foundation, U.S. Department of Agriculture (USDA) National Agricultural Statistical Service (NASS), Bureau of Land Management (BLM), National Tribal Horse Coalition, and selected tribal data. | GAO-17-680R

[a]GAO uses the term 'horses' to refer to all equines, including burros, mules, and asses.
[b]GAO found two population estimates for domesticated horses—by the American Horse Council Foundation and USDA—that vary because of methodological differences in the surveys, such as differences in adjustments for missing data.
[c]The wild horse estimate includes horses managed by BLM, more than 45,000 of which are held in off-range corrals and pastures. Corrals are typically large pens or feedlot properties owned or leased by BLM where animals are fed harvested forage such as hay. By contrast, off-range pastures are lands leased by BLM where the animals primarily graze on native or improved vegetation adapted for livestock grazing.
[d]The feral horse estimate includes only horses on the lands of the eight members of the National Tribal Horse Coalition, such as the Navajo and Yakama. For tribes where a population range was reported, GAO generally used the lower end of the range. GAO did not find an estimate for the total feral population.

Objective 1
U.S. Horse Population

There are no federal data showing overall trends in the domesticated U.S. horse population. Available data suggest that the free-roaming U.S. horse population (both wild and feral) has increased.

- **Domesticated horses.** USDA does not have data showing overall trends in the domesticated horse population, but its data on a subset of the population—horses on farms[10]—suggest that this population decreased from 4.3 million in 2007 to 3.9 million in 2012.[11] USDA plans to publish an estimate of horses living on farms in 2019 using the 2017 Census of Agriculture.

- **Wild horses.** The total on-range and off-range population more than doubled from about 55,000 in 2000 to about 113,000 in 2016, according to BLM estimates.[12] Wild populations can grow at a rate of 15 percent to 20 percent per year and may double every 4 years, according to BLM and a 2013 National Academy of Sciences report.[13]

- **Feral horses.** National Tribal Horse Coalition and selected tribal data suggest that there are at least 93,000 feral horses on tribal lands. Confederated Tribes and Bands of the Yakama Nation data suggest that the feral horse population on Yakama lands in Washington State tripled from less than 3,000 in 2005 to almost 10,000 in 2015.

[10]A farm is defined as having agricultural sales, or the potential of sales, of at least $1,000. Horses residing outside of farms, such as on racetracks, were not counted in this survey.

[11]As noted previously, we use the term 'horses' to refer to all equines, including burros, mules, and asses.

[12]According to USGS documents, research on new techniques to improve the counting of free-roaming horse populations is ongoing.

[13]National Academies of Science, Using Science to Improve the BLM Wild Horse and Burro Program: A Way Forward (Washington, D.C.: 2013).

Options differ for managing domesticated, wild, and feral horses.

Table 2: Summary of Options for Managing U.S. Horse Populations

Type of horse[a]	Finding a new home	Ending a horse's life		Population control
		Euthanasia	Slaughter	
Domesticated	Adoption, retirement, retraining, rehabilitation, donation, sale, trade, lease, surrender of horses to rescue organizations[b]	At owner's discretion	Via export to Canada or Mexico	Sterilization at owner's discretion and through clinics
Wild	Sales and adoptions	Old, sick, or lame horses	Not permitted by BLM through conditions placed on sales and adoptions	Some horses permanently removed to off-range facilities Separation of male and female horses off-range, sterilization of male horses off-range, and fertility controls for some on-range
Feral	Sale, adoption by tribal members, or purchase by rescue organizations	Injured horses	Via export to Canada or Mexico	Sterilization in limited cases

Source: GAO summary of stakeholder information | GAO-17-680R

[a]GAO uses the term 'horses' to refer to all equines, including burros, mules, and asses.
[b]These include shelters and sanctuaries for domesticated and free-roaming horses.

Objective 2
Domesticated Horses – Finding a New Home

Information on horse rescue organizations, adoptions, and obstacles to finding new homes is limited. According to stakeholders, no national entity tracks or registers horse rescue organizations, and there is no federal agency that regulates them.[14]

- We identified estimates of the number and capacity of horse rescue organizations. For example, one estimate suggested that the maximum capacity of the 326 nonprofit horse rescue organizations identified in 2010 was 13,400 horses. Another stakeholder indicated there were more than 900 such organizations in the United States as of April 2017.

- A 2010 University of California-Davis study reported various obstacles to finding a new home for a horse—such as a horse's level of training, age, lameness, health, breed, and behavioral issues—and difficulty finding qualified owners with the financial means to care for a horse.[15]

- Based on two surveys conducted in 2015 and 2016, the American Society for the Prevention of Cruelty to Animals estimated that there were about 2 million people with a strong interest in adopting a horse and who believe they have the capacity to house and care for a newly adopted horse. The survey did not ask respondents how far into the future they might adopt a horse or evaluate the respondents' self-reported capacity to keep and care for a horse.

[14]Rescue organizations may receive horses for various reasons, including an owner's financial hardship or through seizures by law enforcement agencies for alleged neglect or abuse.

[15]This study found that rescue organizations spent $3,648 per year per horse on average (not adjusted for inflation). In contrast, the Unwanted Horse Coalition cited $1,825 as the cost of care and feeding of a horse per year for private horse owners, without veterinary or farrier care.

Objective 2
Domesticated Horses – Ending a Horse's Life (Euthanasia)

Owners of domesticated horses may end a horse's life through euthanasia, but these decisions must take into account certain factors. For example:

- **Humane methods.** Horse euthanasia is generally governed by state or local standards rather than at the federal level. The American Veterinary Medical Association endorses three methods of humane horse euthanasia, including injection of euthanasia chemicals.

- **Costs**. Owners may bear specific costs, such as the cost of a veterinarian to administer euthanasia chemicals and the cost of disposing of an animal carcass by removal by a rendering service or at a landfill or other location. The Humane Society of the United States estimated in 2009 that the cost of euthanasia and carcass disposal was, on average, less than $300 per horse. The Unwanted Horse Coalition estimated in 2009 that the average cost for euthanasia and disposal was $385 per horse. Other estimates we found for disposal range up to $2,000 per horse, depending on the method used.[16]

- **Legal limits.** According to stakeholders, some states and localities have requirements governing carcass disposal because of concerns over soil and water contamination, potentially limiting disposal options.

[16]These are the most recent estimates we found in our preliminary research.

The number of horses slaughtered in the United States peaked in 2006 at almost 105,000, according to USDA data. No horses have been slaughtered in the United States commercially for human consumption since 2008, when the appropriations prohibition was expanded to include fee-for-service inspections.

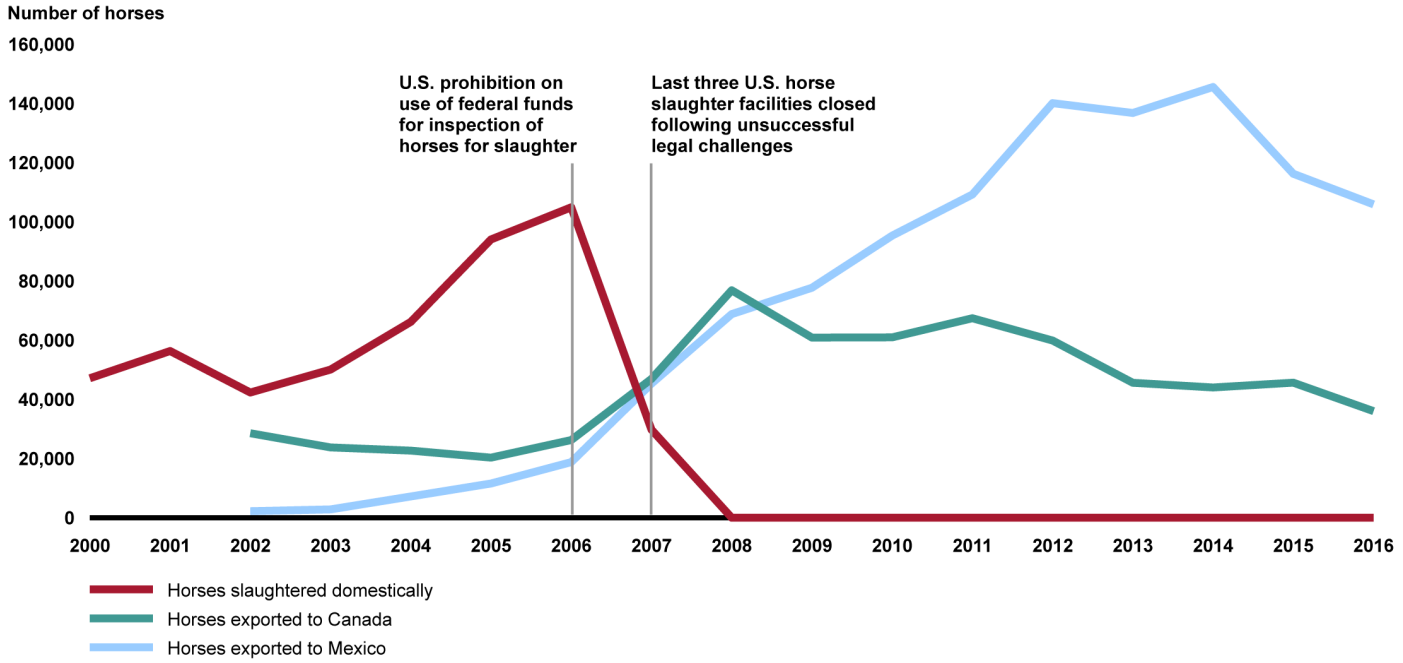
Certain foreign markets, such as the European Union (EU), import horse meat for human consumption from other countries where slaughter is permitted, such as Canada and Mexico. Exports of U.S. horses to Canada and Mexico increased significantly in the years following the appropriations prohibition but have recently begun to decline.[17]

- U.S. exports to Canada peaked in 2008 at almost 77,000 but declined to about 36,000 in 2016, according to U.S. Census Bureau data. Federal agencies do not collect data on exports to Canada for slaughter, but we previously found based on unofficial estimates that most exports to Canada and Mexico from 2006 to 2010 were for slaughter.[18]
- U.S. exports to Mexico peaked in 2014 at more than 145,000 horses but fell to about 106,000 in 2016, according to U.S. Census Bureau data. Most horses exported to Mexico from 2008 to 2016 were for slaughter, according to data from a USDA Agricultural Marketing Service official.

[17]As noted previously, beginning in fiscal year 2006, Congress has generally, except for fiscal years 2012 and 2013, included language in annual appropriations acts prohibiting the use of federal funds to inspect horses to be slaughtered for human consumption.

[18]GAO-11-228.

Figure 2: Number of Horses Slaughtered in the United States or Exported to Canada and Mexico, 2000-2016



Sources: GAO analysis of data from the Census Bureau and the National Agricultural Statistics Service. | GAO-17-680R

Note: GAO uses the term 'horses' to refer to all equines, including burros, mules, and asses. Most horses exported to Mexico from 2008 to 2016 were for slaughter, according to data from a USDA Agricultural Marketing Service official. Federal agencies do not collect data on exports to Canada for slaughter, but we previously found based on unofficial estimates that most exports to Canada and Mexico from 2006 to 2010 were for slaughter.

Objective 2
International Requirements on Horse Slaughter and Consumption

Horse exports and horse-meat products must adhere to certain international requirements. For example:

- Canada prohibits certain medications and substances from being given to horses intended for slaughter for human consumption. All Canadian-inspected horse facilities also must have complete medical and identification records for all horses presented for slaughter, whether domestic or imported, including a comprehensive record of the horses' medical treatment for at least the past 6 months.
- Canada and Mexico require a health certificate stating that, among other things, an accredited veterinarian inspected each horse within 30 days prior to exportation to those countries and did not find clinical signs of disease, according to USDA documents.
- The EU allows imports of horse meat products only from horses with a known medical treatment history and, according to EU and Canadian documents, as of March 2017 the EU requires horses slaughtered outside the EU to have a minimum 6-month residency in the country of slaughter. According to EU documents, in December 2014, the EU banned the import of horse meat from Mexico because it did not meet certain requirements for ensuring the safety of horse meat.

BLM plans call for gathering and removing excess horses about every 2 to 4 years for each herd management area. Old, sick, or lame horses are euthanized under the supervision of BLM personnel.[19] Other options BLM has used for the remaining horses gathered and removed from public rangelands are permanent removal, sales, and adoption.[20]

- **Permanent Removal.** BLM transfers excess horses to confined off-range corrals and pastures, where they receive care and feeding, including veterinary treatment.
    - BLM removed almost 135,000 excess horses from 2000 to 2016.
    - BLM held 45,661 excess horses off-range as of September 30, 2016—almost seven times as many as it held in 2000.
    - BLM expenditures on off-range corrals and pastures have grown from approximately $28 million in 2009 to almost $50 million in 2016 (not adjusted for inflation). On average, from 2009 to 2016, these expenditures accounted for more than 60 percent of BLM's budget for managing wild horses.

[19]BLM has generally restricted the use of euthanasia and unrestricted sale of excess horses due to agency directives and congressional appropriations requirements.

[20]In addition to the appropriations prohibitions discussed previously, the Consolidated Appropriations Act 2017 includes a provision allowing BLM to transfer excess wild horses to federal, state, and local government agencies for use as work animals, provided they are not destroyed, or sold to be destroyed, into commercial products or euthanized except upon the recommendation of a licensed veterinarian in cases of severe injury, illness, or advanced age. Pub. L. No. 115-31, § 116 (2017).

Objective 2
Wild Horses – Finding a New Home (Sales and Adoptions)

BLM sells or offers for adoption excess horses removed from public rangelands.

- **Limitations on sales and adoptions.** Federal law directs BLM to sell excess horses without limitation if they are more than 10 years old or have been offered unsuccessfully for adoption three times. However, in part due to annual appropriations prohibitions on the sale of wild horses that results in their destruction for processing into commercial products, BLM has generally attached conditions intended to prevent horses from being sent to slaughter, according to agency officials. For example, these conditions include not transferring official ownership of horses for 1 year after adoption, requiring purchasers and adopters to declare that they will not sell the horse for commercial slaughter, and limiting the number of horses that may be sold to an individual buyer without special approval.

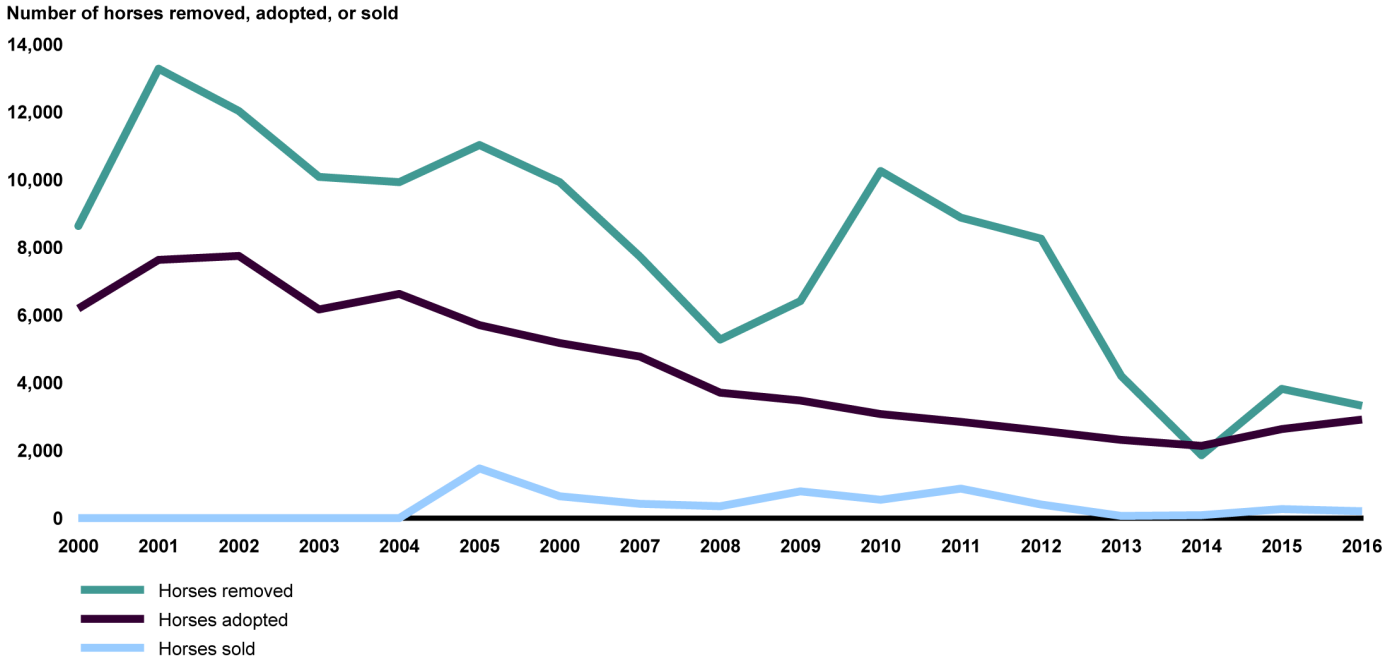
- **Steps to increase adoptions.** Adoptions are low compared with the number of horses that are offered for adoption, in part because of the costs of maintaining and training wild horses, according to BLM officials. BLM has taken steps to increase the number of adoptions, such as using social media to advertise events, shipping horses to the East Coast for adoption events, and working with interested and experienced individuals, nonprofit partners, and correctional facilities to train horses to improve their marketability. However, the agency's costs for these activities exceed its adoption revenue. BLM typically receives $125 per horse for adoptions, but it spent between $1,400 and $3,400 on average per adoption from 2009 to 2016 (not adjusted for inflation). Adoptions still result in an overall cost savings compared with the lifetime cost of caring for a horse in an off-range corral—almost $50,000, according to BLM.

Objective 2
Wild Horses – Demographic Trends

BLM horse removals, sales, and adoptions have not kept pace with the population growth of wild horses. As noted above, the wild horse population on BLM lands is estimated to have more than doubled from about 55,000 in 2000 to about 113,000 in 2016. Sales, adoptions, and removals of wild horses have generally declined over the past 7 years, but the number of wild horses maintained off-range—i.e., in corrals and pastures—has generally increased.

- BLM removed almost 135,000 horses from public rangeland from 2000 to 2016.
- BLM sold more than 6,000 horses from 2005 to 2016.
- BLM adopted out more than 75,000 horses from 2000 to 2016.

Figure 3: Number of Wild Horses Removed, Adopted, or Sold, 2000-2016



Source: GAO analysis of data from the Bureau of Land Management. | GAO-17-680R

Note: GAO uses the term 'horses' to refer to all equines, including burros, mules, and asses. BLM's removals have fluctuated based on budget and cost considerations, according to BLM documentation. BLM's sales program began in 2005.

The options available for managing feral horse populations on tribal lands are generally the same as those for domesticated horses. Certain tribes, such as the Yakama Nation and the Navajo Nation, conduct roundups to remove unwanted horses from tribal lands.

- **Adoption.** According to a BIA official, some tribes, such as the Yakama Nation, offer free-roaming horses for adoption first to tribal members and then to other tribes before releasing the horses back onto tribal lands. Other tribes, such as the Navajo Nation, do not offer horses for adoption.

- **Sale.** Tribal entities may sell the horses, including, in some cases, to buyers who intend to export the horses for foreign slaughter.

- **Challenges.** According to BIA and National Tribal Horse Coalition officials, tribes face financial challenges in removing unwanted horses, such as the costs of roundups, which almost always exceed the revenue generated from sales. Tribes may apply for funding to support removals through a BIA grant program to combat invasive species, but according to a BIA official, such grant proposals may be rejected because the partial removal of horses is not considered an effective long-term strategy for controlling free-roaming populations.

Objective 2
Horse Population Growth Control Measures

Stakeholders and federal agencies may use measures to control population growth for domesticated, wild, and feral horses. For example:

- The Unwanted Horse Coalition's Operation Gelding program subsidizes the cost of sterilizing domesticated horses to encourage responsible breeding. The American Society for the Prevention of Cruelty to Animals also provides financial support to organizations for sterilization.
- BLM sterilizes male horses in off-range pastures and corrals but has not yet used sterilization on public rangelands.
- BLM implements contraceptive vaccination on a limited number of wild horses on public rangeland. Current treatments are effective for about 1 year. Due to the costs, limited duration of effectiveness, and the difficulty of accessing most areas, administering the treatments on a large scale is not currently cost-effective for maintaining most wild horse populations at sustainable levels, according to agency officials. BLM-sponsored research on longer-lasting treatments is ongoing. Research on the effects of sterilization in wild herds and their behaviors is also ongoing, according to USGS officials.
- Representatives of the National Tribal Horse Coalition told us they work with Oregon State University to sterilize a limited number of feral horses each year as part of veterinary school training but that doing so on a large scale is cost-prohibitive.

Objective 3
Free-Roaming Horse Impacts on the Environment

Through scientific studies and observations, stakeholders identified several types of impacts, both positive and negative, that free-roaming (wild and feral) horses have on the environment, particularly in western states. Specifically, free-roaming horses may

- strip and uproot existing native vegetation, thus altering the landscape by encouraging the growth of annual rather than perennial plant species, and invasive non-native rather than native plants;
- compact soil, thus reducing soil quality;
- damage shade-bearing trees and shrubs near riverbanks, lakes, and wetlands, thus causing erosion and reducing water quality;
- disperse seeds, thus helping to reseed the landscape or spreading non-native species' seeds;
- prevent wildlife from accessing water sources, leading some wildlife to abandon certain areas; and
- break ice at watering holes, helping other animals survive during harsh winter months.

Objective 3
Free-Roaming Horse Impacts on the Environment

Free-roaming (wild and feral) horses may also have other impacts, according to stakeholders. For example, horses may

- damage plants that are important for tribal cultural, medicinal, and spiritual purposes;
- reduce the amount of vegetation available for other domesticated grazers, such as sheep and cattle, on certain tribal and public lands;
- trample protected bird species' nesting areas and damage water quality in lakes, rivers, and streams, thereby reducing the productivity of tribal fisheries and damaging habitat where threatened and endangered fish species spawn; and
- threaten public safety and cause traffic accidents when they wander onto public roadways.

Also, when available forage and water are insufficient to sustain free-roaming populations, horses may become weak, emaciated, and sick and die from hunger or dehydration. [21]

[21]According to BLM officials, domesticated horses that have been recently abandoned also face challenges, such as rejection by free-roaming horses, fighting and territoriality, and unfamiliarity with wild plants.

Federal agencies support research to better understand these impacts. For example:

- USGS and U.S. Fish and Wildlife Service studies have confirmed that free-roaming horses are linked to reductions in the amount of vegetation and increases in the relative abundance of invasive plant species, and additional research to better understand these impacts is ongoing.
- According to USGS officials and documentation, research that evaluates and separates cattle and wildlife impacts from wild horse impacts has not been conducted, and studies on horse grazing effects are needed.
- BLM and USFS monitor vegetation on public rangeland but do not assign causes to changes in or damage to vegetation. According to BLM documentation, BLM is implementing its Assessment, Identification, and Monitoring (AIM) strategy to track environmental conditions of BLM lands and establish a baseline for further analysis.

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