NATIONAL HORSE & BURRO RANGELAND MANAGEMENT COALITION
Advocating for commonsense, ecologically-sound approaches to managing horses and burros to promote healthy wildlife and rangelands for future generations

HORSES AND BURROS: OVERVIEW

Wild Horse and Burro Populations Estimated on BLM Lands

116,000 estimated in 2020

>64,000 estimated on the range today

58,000 in 2015

25,000 in 1971

Populations double every 4-5 years

Appropriate Management Level: 27,000

The majority of wild horses and burros on public land reside on Bureau of Land Management (BLM) lands.

There are **179 HMAs** on BLM land, amounting to **31.6 million acres.**

Herd Management Areas (HMA) are areas currently managed for wild horses and burros. HMAs are based on where viable populations of horses and burros roamed in 1971.

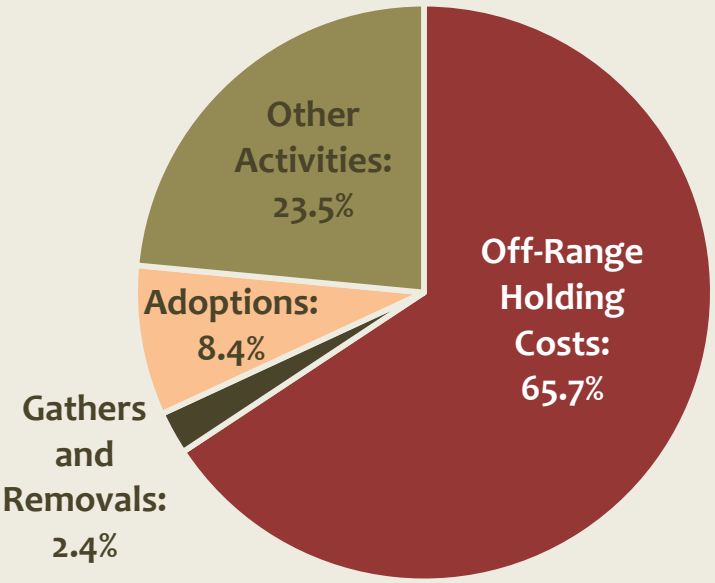
BLM scientists establish **Appropriate Management Levels (AML)** for HMAs to promote healthy conditions & thriving ecological balance.

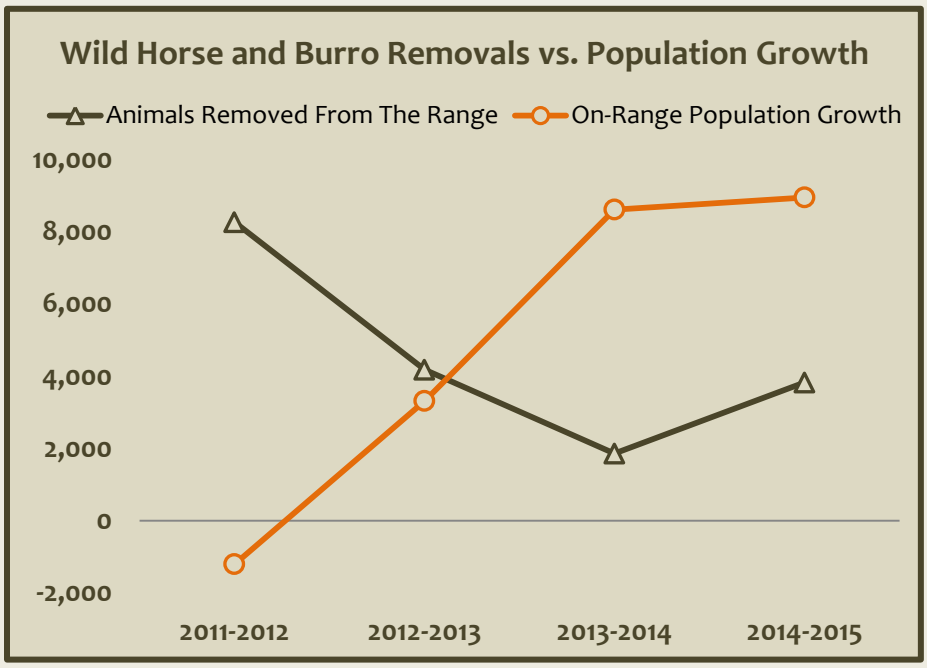
The **Wild Free-Roaming Horses and Burros Act of 1971** directs U.S. federal agencies to manage wild herds to "maintain a thriving natural ecological balance and multiple-use relationship.


(Credit: BLM Nevada)

Over-population of horses can lead to a depletion of food and water resources. (Ostermann-Kelm 2009)

BLM Wild Horse and Burro Program Expenditures in Fiscal Year 2015





In 2015, off-range holding costs totaled to nearly $50 million

BLM's off-range holding costs have been steadily rising, from 59% of the Horse and Burro budget in 2012 to 66% in 2015

Over the last 10 years, horse adoptions have declined by nearly 70%

There are a total of 47,478 wild horses and burros living in BLM off-range holding facilities as of Feb 2016.

- 65% in off-range pastures
- 34% in off-range corrals
- 1% in eco-sanctuaries

In fiscal year 2015, 2,898 horses and burros were placed into private care, while on-range population grew by more than 10,000.

- 2,631 adoptions
- 267 sales

Due to the high cost of caring for animals, BLM is now only removing as many animals from the range as can be adopted, leaving more excess horses on the rangelands

What about Fertility Control?

The current available fertility control vaccine *(procine zona pellucida)* is only effective for 22 months and must be hand-injected into a wild horse. A second formulation can be deployed via ground darting, but is only effective for one year. Alternative methods are being researched.

Since 2012, BLM has applied PZP to 1,045 horses.

United States Department of the Interior. Bureau of Land Management. Wild Horse and Burro Quick Facts. 2016. <http://www.blm.gov/wo/st/en/prog/whbprogram/history_and_facts/quick_facts.html> Accessed March 2016.
Osterman-Kelm, S., E.A. Atwill, E.S. Rubin, L.E. Hendrickson, and W.M. Boyce. 2009. Impacts of feral horses on a desert environment. BioMed Central Ecology 9(22)

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MANAGEMENT OPTIONS

Wild Horse and Burro Facts

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- There are currently >58,000 horses and burros on BLM ranges.
- Horse populations double every 4 years.
- There are >47,000 horses and burros in BLM off-range holding facilities.
- Taxpayers pay about $50 million per year to care for horses and burros in holding.

Increase Adoptions into Private Care

Pro - Fewer horses would be in holding & more horses could be removed from rangelands.

Con - There is a lack of public demand for horse and burro adoptions and high costs associated with BLM's off-range holding facilities and adoption program.

Furthermore, at the apex of annual BLM horse and burro adoptions, only ~8,000 were adopted. Even if BLM can replicate that number, it would not be enough to keep pace with current population growth rates.

BLM Adoption Statistics: Adoptions and Expenses

Fiscal Year	Number of Adoptions	BLM Adoption Expenses	BLM Off-range Horse & Burro Holding Costs
2012	2,583	$4.6 mil.	$43.0 mil.
2013	2,311	$7.5 mil.	$46.2 mil.
2014	2,135	$7.1 mil.	$43.2 mil.
2015	2,631	$6.3 mil.	$49.4 mil.

Current trends show a decrease in annual adoption demand and rising off-range holding costs.

Current horse and burro management actions are proving to be insufficient in maintaining the number of horses and burros on public lands at appropriate levels.

Status Quo – Leave Excess Horses and Burros on the Rangelands

Pro - Leaving the horses and burros on the range would reduce some of BLM's financial burdens—for now—and would allow the horses to roam free.

Some may also view this as an opportunity to remove livestock and other uses from public lands.

Con - Horse numbers **double every 4-5 years**. Significant and concentrated population increases lead to range degradation and desertification. Animals would eventually suffer from starvation and dehydration.

(Credit: BLM Nevada)

Implement Current Fertility Control

Sterilization: Surgically rendering an individual reproductively inviable.

PZP (*procine zona pellucida*): A fertility control vaccine that is hand-administered to animals.

Pro - Lower reproductive rate means fewer gathers, horses in holdings, and taxpayer money spent on holding.

If Herd Management Areas (HMA) are maintained at Appropriate Management Levels (AML) with sufficient fertility control, horses may remain on the range where the public can visit and view them as free-roaming. Also, fewer gathers will occur, leading to less stress on the horses.

Con - PZP has limited use because it must be administered every year, but effective administration is nearly impossible within a larger HMA. **Current 2 year or longer vaccines are not working.**

Fertility control alone will not reduce herd sizes to a sustainable level in a timeframe that would save the ecosystem from severe degradation.

(Credit: John Nelson)

Gather, Remove, and Hold Excess Horses for Remainder of Their Life

Pro - Provides a thriving natural ecological balance so the remaining horses, wildlife, livestock, and other multiple uses can thrive.

Once numbers are within AML, fertility control actions can be implemented to keep numbers at that level and reduce the need for further gathers.

Con - Taxpayers fund the care of each horse in holding, which is approximately $50,000 per horse over its lifetime.

Sell Horses without Restrictions

Pro - Significantly reduces the cost of holding facilities and allows for the removal of excess horses from rangelands. Once numbers are within AML, fertility control actions can be implemented to keep numbers at that level.

Excess horses are not left on the range to degrade the range, starve to death, or held in captivity at the taxpayer's expense.

Individuals/groups wishing to protect the horses could purchase and care for them. Entrepreneurial opportunity would exist for those with large land holdings to care for privately owned "wild" horses.

Horses that are not purchased by those wanting to "protect" them could provide protein for those in need or those who choose to use it.

Con - Emotional issue for some individuals, as they consider horses and burros as pets and fear they would be sold for slaughter or treated inhumanely.

(*See generally*) United States Department of the Interior. Bureau of Land Management. Wild Horse and Burro Quick Facts. 2016. <http://www.blm.gov/wo/st/en/prog/whbprogram/history_and_facts/quick_facts.html> Accessed 28 March 2016.

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HORSE AND BURRO WELL-BEING

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Competition for resources can lead to starvation, dehydration, and death of wild horses and burros.

Even if all cattle were removed from the rangelands, wild horse and burro populations are projected to **surpass what Herd Management Areas (HMA) can support** by 2018.

BLM removed **9,073** animals from the range in **24** emergency gathers from **2006-2015**

Cold Creek Emergency Gather, Sept. 2015

(Credit: BLM Nevada)

Horses and burros that do not have adequate access to food will suffer a long, drawn-out death from starvation or become more susceptible to disease as a result of their poor health and emaciated condition.

The herd in this area was traveling more than 10 miles between water and forage areas, adding additional stress to the population. Veterinary reports found some individuals to be emaciated beyond recovery. There were no cattle grazing in this area.

Why does this happen?

Excess horses and burros significantly impact riparian areas in the arid and semi-arid rangelands they occupy. Their foraging behaviors result in the destruction of vegetative cover that would otherwise help protect from soil erosion, water contamination, and desertification (Osterman-Kelm 2009).

As water resources become depleted through desertification, horse and burro populations concentrate around limited water supplies. This concentration then amplifies the negative impacts of their foraging behavior.

Horse and burro populations will eventually exceed HMA carrying capacity, or the maximum population a HMA can viably support. At that point, limited resource availability will result in dehydration, starvation, and die-offs unless BLM intervenes.

Cold Creek Emergency Gather, Sept. 2015

When dehydration occurs, horses and burros experience extreme thirst, cramping, and lethargy before their blood pressure becomes so low that their hearts can no longer beat.

Improved management actions are needed for the humane treatment of free-roaming horses and burros.

United States Department of the Interior. Bureau of Land Management. Wild Horse and Burro Quick Facts. 2016. <http://www.blm.gov/wo/st/en/prog/whbprogram/history_and_facts/quick_facts.html> Accessed March 2016.

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EFFECTS ON NATIVE WILDLIFE

Wild Horse and Burro Facts

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Elk, mule deer, pronghorn, and sage-grouse rely on our public rangelands to survive. The well-being of native wildlife, including those of threatened and endangered species, is put at risk by the growing population of wild horses and burros.

Dominance Behavior – Horses have been known to exhibit dominance behavior towards native wildlife over common resources. For example, **bighorn sheep**, a native species in the rangelands, avoid watering sites when horses are present. The presence of horses at a resource **reduces bighorn sheep willingness to approach by 76%** (Osterman-Kelm et al. 2008).

Competition for Food & Water – Horses and burros must share resources with native wildlife.

Growing populations of horses and burros lead to increased competition with native wildlife over scarce food and water resources.

Horse herd chasing off native elk.

Why are horses considered non-native?

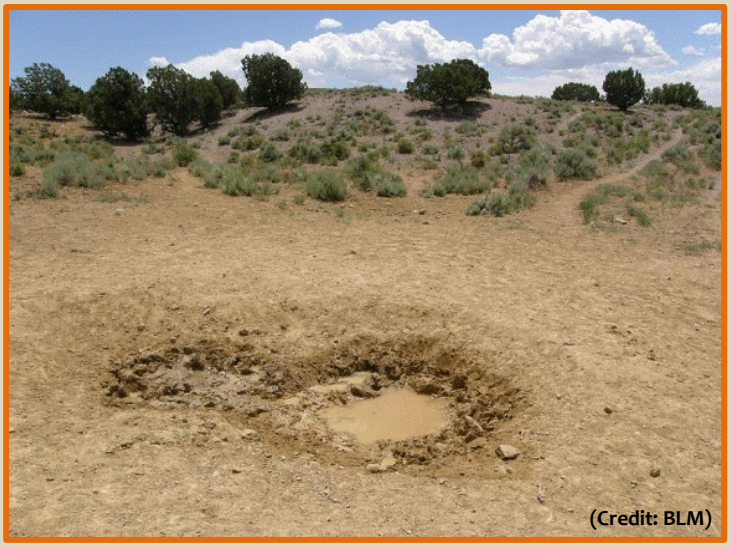
Although some horse lineages evolved in North America, they went extinct approximately 11,400 years ago.

Modern free-roaming horses in North America are descendants of a domesticated breed introduced from Europe and are therefore considered a **non-native species.**

Impacts to Habitat - Horses exhibit non-selective grazing behavior, trample native vegetation, and cause soil compaction near critical access points to water. These behaviors have severe negative impacts on native wildlife. Areas with an overabundance of horses and burros have fewer plant species, lower occurrence of native grasses, higher presence of invasive species, and less vegetative cover (Beever & Aldridge 2011).

Greater sage-grouse – Sage-grouse habitats overlap with 30% of BLM horse and burro rangelands, making them susceptible to the changes in vegetation composition associated with horse and burro grazing. **A decrease in grass height is directly correlated with a decrease in nest survival** (Doherty et al. 2014)


(Credit: USFWS Pacific Region)


(Credit: BLM)

Impacts to soils by wild horses.

Ant Populations – Horse and burro foraging behavior has had a negative impact on ant populations. Ants are a necessary component of the western ecosystem, acting as decomposers and soil aerators.

In the western U.S., ant mounds have been found to have **2.2 – 8.4 times greater abundance in areas where horses have been removed** (Beever & Herrick 2006).

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Doherty, K.E., D.E. Naugle, J.D. Tack, B.L. Walker, J.M. Graham, and J.L. Beck.2014. Linking conservation actions to demography: grass height explains variation in greater sage-grouse nest survival. Wildlife Biology 2014 20 (6), 320-325

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(*See generally*) United States Department of the Interior. Bureau of Land Management. Wild Horse and Burro Quick Facts. 2016. <http://www.blm.gov/wo/st/en/prog/whbprogram/history_and_facts/quick_facts.html> Accessed March 2016.

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RANGELAND ECOSYSTEM

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Overpopulation of horses and burros on rangeland ecosystems can lead to several negative impacts, including the spread of invasive species, water contamination, and desertification.

Horses and burros damage landscapes by **trampling vegetation, compacting soil, and over-grazing forage plants.** Areas inhabited by horses and burros tend to have fewer plant species, less vegetative cover, and an increased susceptibility to invasive plant species – which can have **ecosystem-wide implications.**

Species that may be affected by excess wild horses and burros:

Greater Sage-Grouse

(Credit: U.S. Fish and Wildlife Service)

Bighorn Sheep

(Credit: Jon Sullivan)

Reptiles and Mammals

(Credit: Seney Natural History Assoc)

Horses have physiological attributes that are unique for rangeland ungulates, leading to greater ecosystem damage (Mernard 2002).

Effects on water quality and riparian areas:

Root systems break up and aerate soil, allowing rain water to penetrate. When horses and burros deplete vegetation and remove roots, erosion and soil temperatures increase. This can lead to a shift in plant and animal communities (Osterman-Kelm 2009).

Appropriate management levels (AML) are based on the amount of forage resource available in an area, with regard to multiple land uses.

What about cattle grazing?

To prevent overgrazing, livestock permits are based on available forage. Authorized livestock grazing on BLM-managed land has declined by nearly 50% since the 1940's, and has **declined on public rangelands by 30% since 1971.** Meanwhile, the horse and burro population on BLM land has **increased by 250% since 1971.**

In studies where horses and burros were excluded from plots of land, exclusion areas had higher plant density and diversity than horse-grazed areas. The more heavily vegetated area behind the fence is a horse exclusion plot (Beever 2000).

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THE WESTERN HERITAGE

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The western rangelands have been utilized by ranchers, farmers, hunters, and recreationists for centuries. Wild horse and burro overabundance has depleted resources that are valuable to the western way of life.

Ranching & the Western Tradition

The BLM manages **155 million acres of public land** for livestock grazing and administers **18,000 permits and leases** to ranchers to graze on public lands.

Cattle ranching is a living tradition in the American West and one that exemplifies the identity of the region. For modern-day Western communities, well-managed rangelands provide economic opportunity, support habitat for wildlife, and preserve an iconic way of life.

Multiple-Use Rangelands

Under the Federal Land Policy and Management Act of 1976, the BLM must manage public lands for multiple-use, including public recreation, wildlife conservation, and cattle grazing. The excess horse and burro populations above **Appropriate Management Levels (AML)** upsets the balance provided by multiple-use land management and required by federal law.


(Credit: USDA)

Recreation & the Economy

Ecosystem degradation caused by horses and burros **negatively impacts** the economic value of public lands for rural western towns.

$646 billion is contributed in direct spending in the American West by outdoor recreationists, including hikers, hunters and bird-watchers for equipment and travel. This spending generates approximately **$39.7 billion** in state and local tax revenue.


(Credit: BLM)


(Credit: BLM - Nevada)

Hikers explore the rangelands in Nevada.

Outdoor recreation supports over 6.1 million jobs and funds $110.3 billion in salaries/wages.

Federal agencies cannot control when and where wild horses and burros graze. Therefore, it is important that the BLM and Forest Service manage populations to a level where the range is able to support them.

(*See generally*) United States Department of the Interior. Bureau of Land Management. Wild Horse and Burro Quick Facts. 2016. <http://www.blm.gov/wo/st/en/prog/whbprogram/history_and_facts/quick_facts.html> Accessed March 2016.

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TAXPAYER DOLLARS

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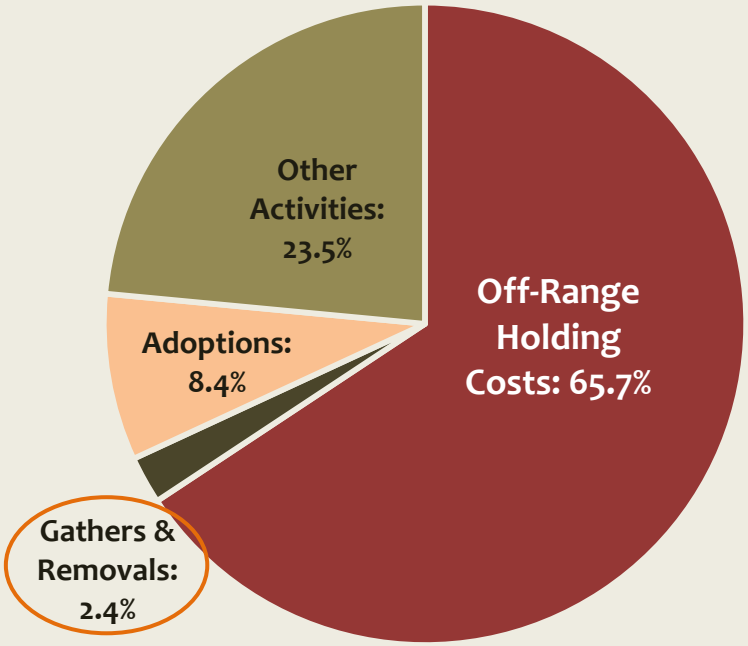
The biggest cost to the American public is leaving horses and burros on the range because of their long-term, negative environmental impacts. However, funding for on-range management continues to decrease.

BLM Wild Horse and Burro Program Fiscal Year 2015 Expenses



Horses in holding at the Northern Nevada Correctional Center.

In 2015, each horse or burro adopted into private care cost BLM an average of **$2,400** in program costs.

Each animal kept in holding costs the BLM nearly **$50,000** over its lifetime.

In 2015, off-range holding costs amounted to nearly $50 million

Between Fiscal Years 2012-2015…

Off-range holding costs have increased by **$6.4 million**

Gathers and removals spending has decreased by **$6 million**

Increasing funding for off-range holding fails to address the core issue of rangeland overpopulation.

Overpopulation of on-range horses and burros results in substantial financial costs to public land managers and private landholders, limiting multi-use yields (Bastian 1999).

In 2015, BLM spent about **$100,000** on implementing **population growth suppression measures** on **469 animals.**

BLM is investing **$11 million** over 5 years to research longer-lasting **fertility control methods,** inluding safe and humane spay/neuter methods.

Modeling Study: How Much do Various Management Scenarios Cost?

Simulations of a variety of management scenarios find that fertility control treatments reduce program costs, but **only as long as removal rates were maintained.** When fertility control treatments were utilized in conjunction with a decrease in removals, overall costs went up.

Overall, there was an inverse correlation between cost-effectiveness and average annual population sizes – cheaper management options corresponded to smaller population growth.

Contraceptive use did not eliminate the need to remove wild horses and burros from the range in any of the scenarios (Barthalow 2007).

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