

WILDLIFE SOCIETY

Feral Horses and Burros: Impacts of Invasive Species



Feral horses at the Gold Mountain Herd Management Area (HMA) in Nevada show malnourishment due to the overabundant population of feral horses and burros on public lands. BLM sets Appropriate Management Levels for each HMA; total populations exceed this by over 22,500 animals2 (Credit: BLM Nevada).

What's the difference between wild and feral animals?

Wild animals' ancestors have never been domesticated - modified by selective breeding - whereas feral animals' ancestors were once domesticated but are now free-ranging in the absence of human care. The freeranging horses and burros in America are feral animals, the descendants of domestic animals introduced to North America by the Spanish in the 1500s.1

America's free-ranging horses are a western icon and a potentially destructive non-native species that threatens native wildlife and their habitats.

In the 1500s, Spanish explorers introduced domestic horses and burros to North America. 1 Over time some horses and burros escaped or were released, creating a population of feral animals. Horse and burro populations on public Bureau of Land Management (BLM) managed lands and facilities have soared from 25,000 in 1971 to over 113,300 in 2016.2 Slightly more than half of the feral horses and burros - about 67,000 - range freely on public land, while 46,300 are maintained in government-run corrals and pastures. The BLM management of feral horses and burros costs over \$71 million annually.2

affect native habitats and wildlife

Free-roaming herds currently range across 31.6 million acres of public land.² Feral horses and burros damage landscapes by trampling vegetation, hardpacking the soil, and over-grazing.³

Horses and burros cut vegetation very close to the soil surface; lower than other ungulates on the range.4 This grazing technique damages the plant in a manner that stunts its re-growth.4 Areas inhabited by feral horses tend to have fewer plant species, less plant cover, and more invasive plants such as cheatgrass; this can have a pervasive influence on the entire ecosystem.4

Feral horses and burros Horse and burro occupied sites typically have less abundant small mammal and reptile populations.3 The extensive habitat disturbance cause by horses and burros reduces the availability of vegetative cover and burrows that these species depend upon.

> Horses exhibit aggressive behavior around watering holes and grazing sites, effectively excluding native elk and bighorn sheep from preferred areas.5 Feral horse herds aren't restricted to lower elevations like cattle, and often range to higher elevations to graze.4 That means that when horses are added to an ecosystem nearly all habitat from the grassy plains to steeper, rockier areas are negatively impacted.

BLM management of feral horses and burros

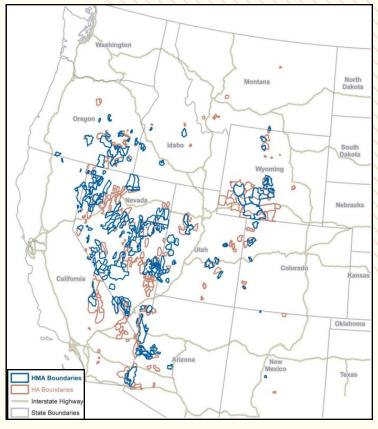
The Wild and Free-Roaming Horses and Burros Act of 1971 charged the Bureau of Land Management (BLM) with managing and protecting free-roaming horses and burros as well as the 26.9 million acres of BLM rangeland they occupy. The law requires BLM to maintain a thriving natural ecological balance on public lands and consider the needs of all native wildlife that inhabit the lands.

To ensure healthy rangeland, the agency determines the Appropriate Management Level (AML) of horses and burros that would allow for a natural ecological balance. The agency utilizes various methods including roundups or "gathers," fertility control, and adoption events to strive for AMLs.² BLM manages federally-owned pastures and corrals to hold animals collected from the range and awaiting adoption.

Efforts are made to adopt out the horses and burros. However, the number of animals removed from ranges far exceeds the adoption demand, and the demand for feral horses continues to decline. BLM placed 5,700 animals into private care in FY 2005; however in FY 2015 less than half as many - only 2,600 animals - were adopted out, while 3,189 animals were removed from the range and placed into holding facilities.²

Horses lived in North America thousands of years ago - doesn't that make them native?

Although many now-extinct horse species evolved in North America, modern feral horses in North America are descendants of domestic horses in Europe. Wild horses have been absent from North America for 10,000 years after going extinct during the Pleistocene. Since then, the western United States has become more arid and many of the horses' natural predators, like the American lion and sabertoothed cat, have disappeared; the ecosystem and the relationship horses have with the ecosystem has changed. Feral horses are not a natural part of the existing western ecosystem.



This map depicts BLM's Herd Areas (HA) and Herd Management Areas (HMA). Over 49,000 feral horses and burros range freely on public land throughout 10 western states² (Credit: BLM).



Feral horses and burros at the Sheldon National Wildlife Refuge, Nevada trample foliage and degrade rangelands Areas inhabited by feral horses tend to have fewer plant species (Credit: FWS).

Monetary cost to support feral horses and burros in captivity

As of FY 2013, BLM has spent \$893,000,000 since 1981 to address the growing horse and burro population and protect the range.² The total costs of rounding up and maintaining feral horses and burros has been rising rapidly, from \$38.8 million in FY 2007 to \$71.8 million in FY 2013.² Costs are projected to increase in the coming years, especially with slowing adoption rates.

1 United States Department of the Interior. Bureau of Land Management. Wild Horse and Burro Myths and Facts. 2014. http://www.blm.gov/wo/st/en/prog/whbprogram/history_and_facts/myths_and_facts.html Accessed 20 Aug 2014.

2United States Department of the Interior. Bureau of Land Management. Wild Horse and Burro Quick Facts. 2016. 4 http://www.blm.gov/wo/st/en/prog/whbprogram/history_and_facts/quick_facts.html>

3 Beever, E. A., and P. F. Brussard. 2004. Community- and landscape-level responses of reptiles and small mammals to feral-horse grazing in the Great Basin. Journal of Arid Environments 59:271–297.

4 Beever, E. A., R. J. Tausch, and W. E. Thogmartin. 2008. Multi-scale responses of vegetation to removal of horse grazing from Great Basin (USA) mountain ranges. Plant Ecology 196: 163-184. http://www.biomedcentral.com/1472-6785/9/22 Accessed 11 Aug 2014.

5 Osterman-Kelm, S., E.R. Atwill, E.S. Rubin, M.C. Jorgensen, and W.M. Boyce. 2008. Interactions between feral horses and desert bighorn sheep at water. Journal of Mammalogy 89(2): 459-466.



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