

Wild And Free-Roaming Horses And Burros

Necessary management for land health

Members of *Coalition for Healthy Nevada Lands, Wildlife, and Free-roaming Horses* recall many experiences walking public lands and celebrating the diversity of wildlife. We also worry about loss of habitat and soil erosion, often from a history of overgrazing. We are a group of conservationists and wildlife biologists dedicated to the value of native wildlife in balance with wild horses and burros.

Recently our worries have focused on growing-season-long grazing that concentrates animals in the small vital areas near water. Repeated close grazing wears plants out. Worn out plants fail to build and protect organic soils. Managing grazers allows plants to thrive OR NOT, depending on number of animals and/or their movement to allow plant growth or regrowth. Livestock must be moved. Free-roaming animals are not moved. Therefore, their numbers must be restricted for continued plant growth.

Wild and free-roaming horses and burros are at once a cherished, charismatic symbol of freedom and also a remnant of a history that now requires thoughtful management. Like native ungulates, they thrive within a carrying capacity. Unlike deer, pronghorn, and elk which are controlled by predators or hunting, horses and burros were domesticated with selection for fast reproduction over five thousand years. By the time Europeans brought domestic horses to North America, the American lion, cheetah, saber tooth cat, cave bear, and dire wolf that had preyed on now extinct native horses were also extinct. Reproduction of privately owned or cared for horses and burros is the responsibility of individuals. Population control of wild horses and burros must be managed by the Bureau of Land Management (BLM) and Forest Service with funding from Congress.

The 1971 Wild and Free-roaming Horses and Burros (WFRHB) Act requires agencies to manage for a thriving natural ecological balance. To achieve this balance on the public lands, WFRHB should be managed in a manner that assures significant progress is made toward achieving the Land Health Standards for upland vegetation and riparian plant communities, for watershed function, and for habitat quality for animal populations, as well as for other site-specific or landscape-level objectives, including those necessary to protect and manage Threatened, Endangered, and Sensitive Species.

In deserts, only a few small areas have water at

the surface throughout the year or most of the growing season. Oddly, many plants living in saturated soil grow dense root systems. Their roots and the soil that they hold form a sponge. These riparian stabilizer plants protect their rich organic soil against the forces of cloudbursts and keep the water cleaner, and available for aquatic and riparian habitats. They keep pools or streams from filling with sediment or draining away down eroding gullies. Of Nevada's 256 wildlife species of conservation concern, 130 are aquatic, and 60 birds, mammals, or reptiles are riparian dependent. Sage-grouse need meadows to remain functioning, so forbs (wildflowers) stay moist and green to provide chicks needed protein in the heat of summer (figure 1). Horses used riparian meadows at 18 times the rate of elk, deer and pronghorn combined.



Figure 1. This meadow, important to sage-grouse, is threatened by a headcut. Both photos Sherman Swanson

Appropriate management level (AML) is the standard which the 1971 WFRHB Act provides for necessary management of horses and burros to sustain habitats for native wildlife. State wildlife agencies are specifically called out for their special role and knowledge about habitat needs for wildlife and the condition of the land and habitats of each state. Science helps refine this knowledge. Recent research found greater sage-grouse populations decline when/where wild horses populations are over AML.

When the BLM and Forest Service were handed responsibility for wild and free-roaming horses and burros in 1971, they had no infrastructure, little data, inadequate laws that needed revision, and an inadequate staff with insufficient training or knowledge for horse and

burro management. Even with ranchers claiming some free-roaming ranch horses and paying back grazing fees, free-roaming populations more than doubled by 1980 (Figure 2). By gathering and adopting out more than 230,000 horses or burros since 1971, the BLM almost achieved AML on average across the nation in 2007.

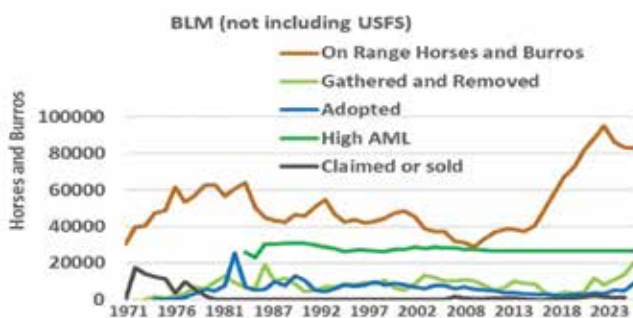


Figure 2: Prepared by the Coalition for Healthy Nevada Lands, Wildlife and Free-roaming horses and burros using BLM data.

2007 was the beginning of the Great Recession when funding for the program became inadequate. By 2020 there had been a 332% increase of on-range BLM horses and burros. With over 95,000 animals, populations were about four times AML. In Nevada the weight of WFRHB has exceeded the biomass of all big game combined since 2014.

Horses and burros live in some of the drier parts of California. Nevada is the driest state and hosts more than 60% of the Nation's excess, those over AML. Populations many times AML have been a crisis for many riparian seeps and springs. Two out of three slow-water (lentic) riparian areas in BLM herd management areas were rated as nonfunctional or functioning at risk with no upward trend (e.g. Figure 2).



Figure 3: Three lentic riparian areas, impacted by excess horses, that have lost most of their functions and habitat value. Bureau of Land Management

Population growth is the crux of the challenge. Horses evolved in North America but then crossed the land bridge to Asia during the Ice Age. Subsequently horses died out in the Western hemisphere along with many other Pleistocene megafauna. As domesticated animals, bred to reproduce faster and at a younger age, they were later returned to North America. The Mongolian takhi, wild horse, has its first foal at four years of age while our wild horses often foal first when two years old. Fast reproduction causes herds to grow at 18-22% per year on average. At twenty percent growth 100 → 120 → 144 → 173 → 207. This causes herds to double in 4 years, and increase from 100 → 200 → 400 → 800 in twelve years.

The BLM strives to achieve a thriving natural ecological balance by gathering horses and burros in excess of the AML. Gathering enough animals often enough in the 177 herd management areas, avoids the need to gather each herd annually. The BLM Comprehensive Animal Welfare Program reduces stress to the animals. While some, who believe that helicopter gathers are inhumane and take videos of the gathers, few people take videos showing the suffering when excess WHB or native wildlife die of thirst or starvation when water or forage on the land gives out. BLM census numbers suggest thousands of WFRHB died in the big winter of 2023 following two dry years. Many herds lost numbers even though they had not been gathered. Those herds in Nevada over 350% of AM, lost the most.

The crisis of too many excess WHB (those over AML) shines a bright light on the opportunity to finally achieve the vision of the 1971 law and the other laws and policies that guide BLM and Forest Service management, e.g. Clean Water Act, Endangered Species Act, Federal Land Policy and Management Act, National Forest Management Act, etc. Fewer horses and burros need be gathered if we achieve AML quickly and then maintain AML. Otherwise, free-roaming herds reproduce and increase the number that must be gathered.

Figure 4 shows on-range population numbers expected with various levels of annual gathering across BLM.

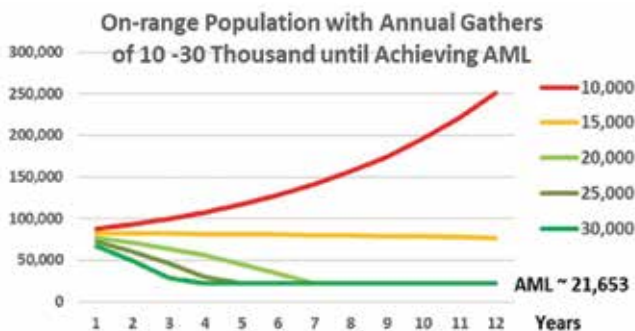


Figure 4: Figure 4 uses BLM data and 18% population growth rates.

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After achieving AML of 21,653, the number of WFRHB that must be gathered goes down dramatically from the crisis numbers of being too far over AML. This causes a dramatic reduction in annual costs for gathers and off-range holding (Figure 5).

At AML, those animals that must be gathered to stay at AML can be adopted annually. No additional WHB would need to go into off-range holding at long-term government expense. Had we gathered to AML in 2007 and placed 6,570 more horses and burros into long-term holding or adoption, we could have then adopted out all the excess annually. We would have about 50,000 fewer in long-term holding and 50,000 fewer excess WFRHB on-range today. That is, few to no un-adoptable excess on-range WFRHB from then through to today.

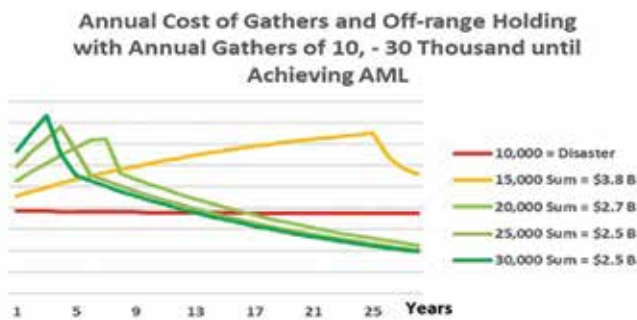


Figure 5: Prepared using BLM cost data and 18% population growth rates.

Fertility Control is creating hope, but it will only help reduce population *growth*. Fertility control will not reduce excess populations or avoid damage to wildlife

habitat unless the vast majority of mares are treated often. In the big open spaces of the Great Basin, horses must be gathered to administer fertility control treatments. While darting is an alternative for approachable horses near cities, it cannot be effective in many remote places. If long-term or permanent fertility control treatment becomes available, gathering for fertility control could be reduced. At AML, fertility control could be effective in extending the years before necessary gathers. Achieving AML quickly is the least costly nonlethal way to achieve the vision of the 1971 Law – free-roaming horses and burros in a thriving natural ecological balance with wildlife, as an integral part of the natural system of the public lands.

While this paper has focused on BLM lands and uses BLM numbers, the US Forest Service has about 20% of the national WHB population, but no WHB line item in its budget. They too need the funding for the win/win/win of Healthy Western Lands – achieving AML quickly and then maintaining AML. We regret that Congress has not provided the funding needed to accomplish the ideals of the 1971 Wild and Free-Roaming horses and Burros Act, consistent with many other laws calling for multiple use, sustained yield, land and habitat health, environmental quality, and ecosystem resilience.

Dr. Sherman Swanson is an Emeritus professor of rangeland and riparian ecology and management at the University of Nevada, Reno. He continues to teach riparian proper functioning condition assessment, integrated riparian management and riparian grazing management, and he continues to engage in science and ongoing conversations about the conservation of Nevada wildlands.

	Benefit from achieving AML quickly
Animal welfare	Horses and burros are healthier on range, well fed in off-range pastures with single-sex herds, or adopted
Fertility control	Fertility control can become effective, and less gathering is needed
Ecosystems	Thriving natural ecological balance = land health standards met
Less impactful fires	Healthy bunchgrasses resist cheatgrass and its fire cycle
Wildlife	Wildlife habitat improves. Riparian areas keep water longer 
Carbon capture	Only healthy plants - retaining leaf area for photosynthesis or recovering after grazing - can store and retain soil organic carbon
Taxpayers	Save money when AML reduces gathering and off-range holding costs
Outdoor recreation	Enjoy healthy wild horses, burros, and wildlife, and healthy beautiful public lands
Consumers	Ecosystem services increase - benefits include clean water, air, food and biodiversity
Politicians	Support a win/win/win
BLM and USFS	At AML - all excess horses and burros become adoptable