

August 15, 2023

Sagebrush Ecosystem Council
Sagebrush Ecosystem Program
201 Roop Street, Suite 101
Carson City, NV 89701

Dear Sir/Mame:

I appreciate this opportunity to give input to your important program to protect Nevada's sagebrush steppe ecosystems and will try to attend tomorrow's meeting either online or if possible-in person.

I am concerned about a tendency that I have observed over the years to target the wild horses and burros when it comes to assigning blame for the deterioration of the sagebrush ecosystem including its rare, threatened and endangered species.

Over the years, I have visited local ecosystems throughout our wonderful state of Nevada and even performed field studies, several of which have resulted in professional reports. I have learned to identify and evaluate a variety of disturbance factors that are impinging on the Sagebrush ecosystem and to rank these in the order of their intensity.

Often what I hear or read in official state reports exaggerates the impacts of the naturally living horses and burros while minimizing or even ignoring impacts that are much greater and more serious upon the ecosystems in question, including the Sagebrush ecosystem and the riparian ecosystems.

Furthermore, as an ecologist who is specialized in the Perissodactyla Order of Mammals, including the Equidae family, I am very concerned that all or nearly all of the significant, positive impacts, or contributions, that wild horses and burros make to ecosystems are not considered at all, not even mentioned. These include substantial contributions to healthy soil building involving the humus content of the soils, that can be substantially greater in areas where wild equids live, as well as the dispersal of intact germinative seeds of a greater variety, including a greater variety of native bunch grasses, forbs and other growth forms such as bushes. There are elaborate professional studies that have proven these points; these are related to the different digestive system of the equids, which are post-gastric caecal fermenters, as contrasted to the multi-stomach, rumen-fermenters that are much more promoted by established interests. These include, of course, the favored domestic bovid cattle and sheep and the hunted game cervids including deer and elk as well as bovid Bighorn sheep.

Elaborate professional studies show how the equids (and other Perissodactyla) actually benefit the ruminant Artiodactyla by restoring a greater balance in ecosystems. For example, they compensate for the depletion of soil nutrients and moisture retention that is found in ecosystems that are overly dominated by cloven-hoofed ruminant herbivores.

Also, as relates to their different hoof shapes and impacts, particularly on moist riparian habitats, as well as the tendency of certain ruminants to congregate for long periods of time around riparian habitats, such as cattle, the wild horses do not impact the riparian habitats to anywhere near the degree of domestic cattle, for example, or large groups of herded domestic sheep.

Wild horses tend to be semi-nomadic and to be constantly on the move, practicing a form of natural rest rotation, unless, of course, they are unnaturally inhibited in so doing, as occurs when their habitats are overly fragmented by fences.

Also, it is not honest to proclaim that the horses are non-native and mere "feral" or escaped domestic animals, as this ignores the greater perspective that honest and hard-working paleontologists and geneticists have established. This enhanced perspective substantiate that the horse species is a long-standing player dating back millions of years in North America including right here in our state of Nevada and that its population fluctuations sometimes lower sometimes higher in no way discounts the many important mutualistic symbioses that it has formed with many species of plants and animals. Its subsiding presence on this continent since the last Ice Age in no way obviates the proofs that the returned native horses revive many valuable relationships with a great variety and abundance of plant and animal species that are important to the overall well-being and long-term future survival of the life-community we all share.

These animals revert quickly over a few generations to their "wildtype," and they are much more natural than man-altered, i. e. "feral" especially after proving they can survive and integrate harmoniously in many of the life communities, or ecosystems, of the West, including in Nevada and its Sagebrush-Steppe. As keystone species who evolved here, they enhance the latter. They do not deserve to be scapegoated or used as red herrings to distract our attention from the real causes of ecosystem degradation and imbalance!

I would ask that you give careful consideration to the above and other related points and that you be fair in your evaluations of the various factors that influence a Sagebrush ecosystem and its riparian sites.

Furthermore, you should take a holistic view of all of Nevada's ecosystems and the evolving conditions to which Nevada and the West is currently subject, including especially Global Warming/Climate Change, the Extinction Crisis, as well as the disintegration of important and interrelated major ecosystems on Earth, with all their crucial, life-sustaining ecological services.

It is crucial that we make a conscientious effort to respond to this great challenge not just for us humans but for the whole life community. We must thoughtfully consider this greater family's urgent need to respond and adapt. This means a change in our priorities, past values, and lifestyles so that the beautiful life community -- really an

interrelated family -- can carry on here on this amazing planet Earth which has been our home and place of evolution for so many eons of time.

In closing, I would appreciate your examining the attached photos I took yesterday of the Goni Springs area just north of Carson City into the Virginia Range. Here there is an enormous rock quarry and heavy negative impacts being made by off-highway vehicles, campers, target practice shooters, hunters, people who throw away all kinds of trash, people who defecate in the riparian areas, and various polluters who introduce quite foreign, hazardous and toxic substances into this ecosystem. There are also a handful of wild horses who periodically come in to drink and who beneficially reduce the fuel load by modestly trimming the grass and other vegetation with their upper and lower incisors. They do not overly impact this ecosystem but rather help build its healthy soils, seed a variety of its suitable and healthy plants, and thus bolster the food web and contribute by increasing the biodiversity and resilience of the ecosystem.

These animals are also highly evolved and aesthetically pleasing animals who helped us people establish ourselves in this part of the world through their individual and collective toil and sacrifice. Yet, this also happens to be their cradle of evolution -- a fact that greatly supports their return here -- their being allowed to fill their ancestral niche. They should be valued as a "living heritage treasure" that attracts clear and non-prejudiced people to come and view these splendid animals living freely and naturally -- and this could be a major boost to Nevada's economy, and a wholesome one, provided the Nevadan establishment stopped being so narrow-minded and biased when it comes to learning how to share the land and freedom with such magnificent co-inhabitants, or mutually benefiting symbionts, as the naturally living horses.

Sincerely,

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