May 17, 2020

BLM Idaho State Office
Attn: Fuel Reduction & Rangeland Restoration Draft PEIS
1387 South Vinnell Way
Boise, Idaho 83709
Email: BLM_PEIS_Comments@blm.gov
Link to doc.: https://go.usa.gov/xdfgV
(Comments may be submitted via this link, by email or mail & are due by June 2, 2020.)

Dear Public Official:
I appreciate this opportunity to provide comments on your important PEIS that will affect the entire Great Basin ecosystem, an ecosystem here in America that is of vital importance for the future survival of many species, whether plants, animals, decomposers & recyclers, etc. Your proposal will affect 223 million acres including portions of CA, ID, NV, OR, UT & WA states. Its announced purpose is to provide for the long-term function, viability, resistance & resilience of Sagebrush communities (A*rtemisia* spp.), but I detect that your major goal is to secure & aggrandize various traditional resource uses, especially livestock though you use the upland game bird, the Sage Grouse that is associated with the Sagebrush-steppe ecosystem as a justification to accomplish this.

Your "Fuel Reduction and Rangeland Restoration" proposal excludes consideration of other major & valuable Great Basin ecosystems, particularly the Pinyon Pine & Juniper forests, either as single species or mixed groves. As an ecologist familiar with & lifelong resident of the Great Basin, I feel your proposal is much too lopsided & designed to perpetuate traditional uses that are harmful to many special Great Basin species, subspecies & populations & the equally special ecosystem types they inhabit. I am particularly concerned with how your proposal's extensive elimination of Pinyon Pines & Juniper trees will negate many important ecological services as well as fragment the habitats of many species that are dependent upon these trees & their associated communities. Not only will the major reduction of these trees disrupt critical ecosystem services, but they will set back crucial natural adaptations that have been ongoing for generations & that are combatting the life-threatening effects of Global Climate Change. It is extremely negligent to ignore this increasing threat to all life on Earth. We must take it seriously & recognize how important it is that the vast public lands ecosystems in our nation be allowed to holistically adapt to the rapid & accelerating changes that are now occurring. These ecosystems constitute a major defense against & remedy for the life-threatening consequences of ongoing Global Climate Change; we humans should do all within our power today to understand & assist Nature in its very wise ways of restoring balance to the life community we share with all other of Earth's species.

Of the Alternatives you analyzed, I favor Alternative A, No Action, because the other Alternatives including proposed B, as well as C & D, are lopsided approaches to the major challenges facing life on Earth today. They are too shallow & too restricted by tunnel vision & ignore life's greater whole.

Your proposed Alternative B is to treat 38.5 million acres, or 60,156 square miles, out of the total of 223 million acres, or 348,438 square miles, that are in the Project Area in the Great Basin. This presents a variety of manual, chemical, mechanical restoration treatments including prescribed fire, seeding with chosen species including non-natives, & targeted grazing by livestock or big game species, I presume. I strongly oppose this, as your agenda seems to be to make our Great Basin public lands even more of a livestock pasture than it already is! Basically, your proposal fails to address at least several major

negative impacts to Great Basin public land ecosystems. These include Off Highway Vehicles (OHV) & their nearly ubiquitous roads & nature damaging trails, mining & energy development activities, predator elimination, littering & toxic waste, pesticide & herbicide poisoning of plants & animals, illegal poaching, water monopolization by private interests, among others. I am attaching portions of my report on the Pine Nut Mountain range in western Nevada where I did an ecological analysis of a number of disturbance factors & recommend that you bring these into your analysis & address these in the revised proposal you adopt.

A major problem with your proposed, widespread, invasive treatments of natural life communities throughout the Great Basin concerns Habitat Fragmentation. This will negatively affect hundreds of species of plants & animals by disrupting habitat continuity & isolating populations whose numbers are below genetic viability. Thus, many rare species & their heretofore functioning populations would be put into precarious positions & many would die out as a consequence.

You state that 'this Draft PEIS complements USDI's proposed Categorical Exclusion for removal of encroaching Pinyon-Juniper trees as it addresses additional restoration activities.' –I strongly object to this Categorical Exclusion. It indicates a biased approach that presumes negative impacts about these trees & ignores their important values & contributions to the Great Basin ecosystem (see details below).

Page 2. Why proposing: This lopsided statement fails to recognize Global Warming & the fact that Pinyon & Juniper tree increase is both a natural comeback after widespread destruction in most recent centuries as well as a response to Global Warming. The alteration of public lands ecosystems both historically & ongoing should not be overlooked. The wonderful world of Nature is continually at work to restore damages to the ecosystem that have been & continue to be caused mainly by the human species. We need to examine our own traditional lifestyles & relations to the natural world, not be continually looking for that "quick fix" that almost always fails to deal with the root of our world's problems.

You state that Sagebrush communities will provide multiple use opportunities for *all* user groups, but this is not true, since it comes at the expense of the many values & uses of the Pinyon & Juniper forests, either as single species groves or mixed species groves, as well as other types of ecosystems. Take for example the Pinyon Jays. They have as a mainstay the nuts that pinyon pines produce in lavish quantity. These tightly co-evolved jays mutualistically store these seeds in the soil. Many are not revisted & eaten but go on to germinate & grow into mature reproducing trees. So there has been a positive feedback loop over the generations between this bird & this tree. Clark's Nutcrackers also do this with the pinyons, though not to the same degree. They are more vital to other pines at higher elevations. Many other species eat pinyon nuts including rodents such as Pinyon Mice, that has a similar mutualism in that it caches the nuts many of which remain uneaten & subsequently germinate. A variety of insects, birds & mammals also depend on the pinyon pines -- & with the Junipers there's a similar story (see below). Also of considerable importance is the fact that Pinyon Pine trees are known to [positively] influence the soil in which they grow by increasing concentrations of both macronutrients & micronutrients (see Barth, R.C. Jan. 1980. Influence of Pinyon Pine Trees on Soil Chemical and Physical Properties. *Soil Science Society of America* Journal 44(1): 112-114). Both Pinyon Pine & Juniper can be considered *Keystone Species* within the Great Basin ecosystem. Following are some irrefutable facts from a distinguished scientific expert:

"As the major tree species on millions of acres of mountains surrounded by desert, singleleaf pinon has become the supporter of many living organisms. … Seeds of the pinon trees – pine nuts, as they are

commonly called – are eaten by most birds and mammals capable of cracking the thin shells and digesting the starchy contents. Pinon mice, squirrels, chipmunks, deer, black bears, and even desert bighorns thrive on pine nuts. So do the corvids that harvest the nuts from the cones and bury them in the soil as a winter food source: Scrub, Steller's, and Pinon jays, and Clark's Nutcracker. For the pinons are bird pines probably as dependent on avian dispersers as are whitebark and limber pines. … [S]ingleleaf pinon provided the staple food of [Great Basin Indians], and much of their culture can be viewed as adaptive to the behavior and characteristics of the pine and its seeds. … After European settlement of the Basin, singleleaf pinon became the major charcoal source, and was used to smelt the silver ores that provided much of Nevada's livelihood … The environmental impact of the mining and smelting industry included the deforestation of hundreds of thousands of woodland acres, not only to supply the sacked charcoal to smelters and concentrators, but also to provide fuel for heating and cooking, and for steam engines that powered the mine hoists. The skilled Italian *carbonari* wielded sharp axes and left bare mountainsides behind them, as they 'coaled' their way across Nevada's landscape. Thanks to the activities of its seed-dispersing birds, singleleaf pinon made a spectacular comeback in most of the places its woodlands were decimated. Young stands became established on many a mountain range and high valley, and the collapse of the charcoal market allowed those stands to develop. Unfortunately, in recent decades another serious threat has emerged – the 'chaining' of huge tracts of publicly owned woodland. Chaining is done by attaching the ends of a heavy chain to two crawler tractors which then drive parallel to each other, uprooting the trees between them. The cleared area is almost always seeded with the Asian crested wheatgrass, to create artificial grasslands as a government subsidy to the livestock industry. Both the U.S. Forest Service and the Bureau of Land Management have destroyed great tracts of woodland cover throughout the Great Basin by this means. The Forest Service announced its intention in 1973 to chain almost four hundred thousand more acres in Utah and Nevada by the mid-1990s, despite its own research showing the method to be uneconomical, highly destructive of archaeological resources, and lacking previously claimed benefits for wildlife and soil conservation. Singleleaf pinon is a variable species that is adapted to a wide variety of sites. It can be found as low as thirty-three hundred feet in Utah's Snow Canyon State Park and to ten thousand feet in the White Mountains. It is highly frost-resistant and tolerant of drought, but requires full sunlight for maximum growth." (From Lanner, R.M. 1983. Trees of the Great Basin, A Natural History. University of Nevada Press, Reno. Pages 30-34. See also: Lanner, R.M. 1980. The Pinon Pine: A Natural and Cultural History. Univ. of Nevada Press, Reno.)

Now to continue from Lanner's erudite treatise: [The Utah Juniper is most probably] "the most important tree in the Great Basin … there are more acres covered with Utah junipers than with any other of the Basin's trees. It grows in virtually every mountain range in Utah and Nevada and is dominant in the desert ranges of California. The pinon-juniper woodland is our most ubiquitous forest type, and this juniper is always in that woodland except where its upper edge reaches high elevations. Utah juniper also grows elsewhere as the only tree on low hills and in valleys above the desert. Even at the upper margin of salt flats where no other tree can be found, one often sees scattered Utah junipers dotting the landscape. At higher elevations where moisture is more abundant the trees coalesce into groves and then dense stands. Further, in the establishment of new pinon-juniper woodlands, Utah juniper usually gets there first. Both of the pinon pines in our region [the Great Basin] grow more successfully where pioneering junipers have already moderated the local micro-climate by casting their shade. This tree, which seems to thrive in the most stressful and drought-ridden places between about three thousand and eight thousand feet, is as rugged in appearance as it is in behavior. … Utah juniper

has a very long history of service to man. … Juniper berries were used as food by the Indian inhabitants of the Southwest and the Great Basin. … Juniper firewood was a favored cooking fuel of Great Basin and Southwestern Indians. Its wood was also much used for carving utensils and other objects … It played an important role in providing wood products [including posts, beams, logs & boards for buildings] during western settlement in the nineteenth century as it had previously among the Indians. … Little research has been done on its growth habits, ability to withstand drought, and environmental tolerances. … The large berries of Utah juniper are devoured not only by fruit-eating birds, but by jackrabbits and coyotes as well. Excretion of the bony seeds disperses them into new habitats and allows junipers to become established there." (op. cit. Lanner, 1983. Pages 112-115).

Also, junipers provide crucial shelter for diverse species including many birds, mammals, including rodents, reptiles, insects, etc., & are significant preventers of soil scouring by the frequent strong winds of the Great Basin. And they are stabilizers & builders of its soils &, hence, its aquifers, because healthy soils are "living sponges". They are a deeply rooted native *keystone* species & their value to the overall life community should not be callously ignored merely to further promote short-term, ultimately degrading extractive activities, such as excessive livestock production in the arid Great Basin. It would also be renege not to emphasize their grand importance as air purifiers that absorb Carbon Dioxide during photosynthesis & produce Oxygen – both functions greatly needed to avert disaster for life on Earth today!

It's important to recognize the great value of the Pinyon nut both in Native American cultures in *which* it served as a staple for thousands of years, & in modern-day society. I propose it as a very appropriate alternative food source to livestock today, particularly to what we humans derive from the Great Basin & other arid ecosystems. To quote: "… in the Great Basin by moderately harvesting nutritious nuts from the pinyon pine, much more healthy food would result with much less ecological impact" [see Wheat, M. 1967. Survival Arts of the Primitive Paiutes. Univ. of Nevada Press, Reno]. Also: "… judicious use of the tart juniper berries would be another mutualism we could develop. Junipers are becoming increasingly abundant relative to pinyon pines due to global climate change [see: Kunzig, R. 2008. Drying of the West. *National Geographic*. Feb.: 90-113] but [junipers] are being unwisely targeted for removal by BLM and USFS to provide more forage for livestock. Thousands of these magnificent trees are being sawed down and left to rot or for wood gathered throughout the West due to our federal government's misguided policies that promote their destruction (as well as of pinyon) in the name of increasing patchiness of habitat but overlook the many values and ecological services of the pinyon-juniper woodland in its own right: stabilization of soils and slopes, buffer against winds, water retention, providing food, shelter and other habitat needs for many wildlife species, beauty, [air purification and renewal, noise abatement – precious peaceful silence], etc." (my quotes: Downer C.C. 2014, The Wild Horse Conspiracy, Pages 110-113). To continue: "[Rather than obstinately foisting a disharmonious way of life upon the Great Basin] we must become 'bio-regionally' identified and integrated, learning to relate to the unique life community where we live and to harmoniously derive our living and, in turn, contribute to the well-being and perpetuation of this special home. Too much is at stake for us to fail to act [to change our ways when these are simply blind to the harm they are causing]. And here's another quote (op. cit. Wheat Pp. 29-37): "Pinenuts are a highly concentrated food, rich in protein. The Indians ate them raw, roasted, or made into soup. Roasted pinenuts, cracked and eaten like peanuts, do not have enough bulk to satisfy, so the Indians ground them into a delicious, saltless gruel which could be eaten hot or cold."

Now, let's hear it again for the Junipers as well as the Pinyon pines: "I am very concerned about major past, ongoing, and proposed projects by federal and state agencies to reduce juniper and pinyon pine trees growing on the lands of the Great Basin, and elsewhere throughout the West. Both juniper and pinyon pine are ancient native species whose woodlands provide protective cover for soils and habitat for many species of associated animals and plants, fungi, etc. Pinyon pine nuts are a traditional staple for native Americans dating back thousands of years. The moderate harvest of these nutritious nuts would be a great alternative to present-day overemphasis on livestock production in the Great Basin. The removal of pinyons, along with other factors such as open-pit mining and ORVs, is having a devastating effect on those who rely on the nuts. Pinyon nuts provide a balanced mix of carbohydrates, fats, and proteins, and would provide much more food for both humans and wildlife if treated with respect and gathered with moderation, leaving plenty for wildlife such as pinyon jays, pinyon mice, and black bears. There is evidence that junipers are making a comeback into areas where they formerly occurred and that global warming is favoring their expansion. This is not a bad thing but is nature's way of adjusting, or adapting, to ongoing changes. The juniper and pinyon pine trees provide shade for many animals and plants that is vital to their well-being. This shade also reduces evaporation of precious water and augments water tables, restoring vital watersheds. Juniper and pinyon pine roots hold soils in place; their stands buffer against wind erosion that would scour precious top soils. These two tree species occur in association, displaying a strong mutually beneficial symbiotic relationship formed over centuries. I feel that the targeting of juniper and pinyon pine is being done primarily to increase forage for livestock, though expanding sage grouse habitat is used as an excuse. Pinyon-juniper woodlands provide important shelter for larger animals including deer and returned native wild horses and burros. Could the removal of these trees relate to facilitating hunters' deer kill and BLM's wild horse excessive roundups? I think that large-scale removal of junipers and pinyon pines is unwise and will result in further deterioration of the ecosystem. We should learn from nature, not impose disharmonious ways of life on the ancient yet ever-renewing living world." (Quotes from: Downer, C.C. April 22, 2016. Removal of junipers unwise. Reno Gazette Journal. Page 2A.)

Alternative A. No Action Alternative. Of the four analyzed, I favor this alternative, as it would not unwisely target the Pinyon Pines & Juniper forests for reasons given above.

Alternative B. Preferred Alternative. This would be an ecologically disastrous program aimed at perpetrating an even greater monopoly of the public lands by domestic livestock & to a lesser extent hunter interest &, I sense, other resource exploitive interests such as mining, because of the increased access that would result. By opening up vast cross-hatchings of tree-denuded lands, it would fragment hundreds, even thousands of populations of plant & animal species, preventing their interbreeding & leading to their decline & possible extinction. This concerns many small species that are nonetheless vital to the well-functioning of the ecosystem. I believe that Sage Grouse recovery is being used as a whitewash to pseudo-justify this proposal, which would be detrimental to the great majority of species living here, whether those deeply native or those simply that have become naturally well-adapted to the Great Basin. Proposal B is tricky & devious & I greatly oppose it! Authorities should be cutting back on livestock & other monopolistic interests on the public lands.

When it comes to fuel abatement to mitigate wildfires & particularly prevent the increasingly destructive catastrophic ones, we should be restoring the returned native wild horses & burros. These equids are the perfect reducers of excessive grass & other vegetation that become dry tinder later in the

year. They would perform an extremely valuable service by reducing the fuels that lead to these serious wildfires. They are non-ruminant, non-cloven-hoofed, more mobile herbivores of the Order Perissodactyla & they provide a greatly needed balance to ruminant-digesting, cloven-hoofed herbivores. These domestic cattle, sheep & game cervids have been & presently remain overabundant, not through any fault of their own, but because they have been unwisely foisted upon the Great Basin public lands as elsewhere by people. We should question traditional lifestyles & have the basic honesty & caring to admit when we need to adopt a better way of life & relate to the greater world of Nature that in so many ways sustains our species. We must become more "with it" re: current conditions & trends & strive to be in tune with the greater community of life, rather than merely concerned with our short term, materialistic advantage. Alternative B increases the monopoly of public lands by livestock & hunting interests, while giving very minor importance to the great variety of plant & animal species & eco-types that do not serve livestock & hunter as well as other resource exploitive industries. The age-old life community must be fairly represented in the Great Basin, but would seriously harmed by Alternative B! The treatment of 38.5 million acres, or 60,156 square miles, is extreme & will have many seriously harmful effects on the majority of species that have their important place & are harmonious components in the Great Basin ecosystem. (see Trimble, S. 1999. The Sagebrush Ocean, A natural History of the Great Basin. Univ. of Nevada Press, Reno & Las Vegas.)

Alternative C: While treatment areas would be less extensive, 26.8 million vs. 38.5 million acres, this would still be a major blow to the integrity of the natural Great Basin ecosystem & have serious consequences as far as fragmentation of habitats & decreased viability & mutualism among the majority of species.

Alternative D: This would be considerably less extreme than B & C, with 5.6 million acres of treatment & leaving alone Phase III Pinyon-Juniper areas. Still it would impact a significant portion of the Great Basin & I object to it for reasons given throughout this input.

Final Statement: I would like to see a different alternative developed that emphasizes reduction of cattle & sheep grazing in the Great Basin ecosystem & that gives greater recognition to the natural communities here, their benign ecosystem services, e.g. maintenance & augmentation of pure & abundant watersheds, purification & renewal of air, soil restoration, mitigating & combatting Global Warming & its life-threatening effects & similar considerations. I would like to see an alternative developed that chooses different, more harmonious ways of life that we people living here could adopt, such as the moderate harvest of pinyon nuts & juniper berries, or similar species that could be utilized in a judicious manner without removing their contribution to the natural life communities of which they are a part. These would be ways of life that respect the great majority of species that have come to establish this place as their home.

We should diversify our sources of sustenance, not be confined to just a few of the same ecosystem-monopolizing ones, like cattle & sheep, game animals, game fish, etc., that are removed from their ecosystems, thus, robbing these natural communities that sustained them. This more honest & nature-attuned alternative will recognize the imminent treat of Global Warming & respond to it by allowing Nature itself to respond & counter this very serious & mounting threat today. The natural world & all its species has taken millions of years to establish itself here on this planet. It – the Greater Family of Life -- possesses the intrinsic wisdom to restore balance & integrity to precious life on Earth, in whose great diversity there exists a splendid, all-saving unity! We *Homo sapiens*, the self-proclaimed "wise man"

(Latin), should respect, learn from & let the natural world show us a right & harmonious, freedom-respecting way of life. And we should stop arrogantly imposing a dis-attuned, overly -- & too often blindly -- tradition-bound, lifestyle that is currently killing Earth's beautiful life community for the short-term, out-of-control advantage of just one species!

I would appreciate your thoughtful response to the points I have raised. Feel free to contact me with any questions or concerns.

Sincerely,

Craig C. Downer, Wildlife Ecologist
Wild Horse and Burro Fund / Andean Tapir Fund, dedicated to saving the world's disappearing Perissodactyla as wild, naturally living, viably numbered animals in their appropriate, viably sized natural habitats.
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Cc: Various interested parties.