

# RIVER RUNNERS FOR WILDERNESS

A PROJECT OF LIVING Rivers

Chris Lehnertz  
Superintendent  
Grand Canyon National Park  
PO Box 129  
Grand Canyon, Arizona 86023  
Bison Management Plan EA

June 14, 2017

Dear Superintendent Lehnertz,

Thank you for allowing the non-profit River Runners for Wilderness (RRFW) to provide comments on the Grand Canyon National Park Initial Bison Herd Reduction Environmental Assessment (IBHREA). RRFW has over 2,000 members and our periodic news releases through our RRFW Riverwire reach well over 40,000 river enthusiasts who care about river running and resource issues pertaining to wilderness lands and the rivers that flow through them.

## **Bison bison on the North Rim**

*Bison bison* have been documented on the Colorado Plateau for at least the last 40,000 years up to the time of European contact.<sup>1</sup> Recent discoveries of bison in southern Arizona and elsewhere in Arizona are allowing bison managers to obtain a greater understanding of this animal's range.<sup>2</sup> Huffer and Plumb et al consider *Bison bison* as being native to the Park.<sup>3</sup> We clearly know very little about their pre-contact population numbers and seasonality ranges in the high country of Arizona north of the Colorado River. The IBHREA (pp 33) notes "*Bison have demonstrated awareness of hunting actions outside the park, which is one reason they spend time in the park.*" The bison themselves have in the last ten years shown us that when free from hunting pressure, as in GRCA, bison populations can thrive in the high country of northern Arizona all by themselves, with little to no agency management.

In historic time, bison arrived to the North Rim of Grand Canyon before the formation of the National Park Service. Congress established the Grand Canyon Forest Preserve including the Kaibab Plateau North rim and north half of the Grand Canyon in 1906. The Preserve's southern boundary was along the Colorado River. Bison were listed as a wildlife species that should be maintained in the Preserve (unpublished report to U.S. Congress, Protection of Wild Animals in the Grand Canyon Forest Preserve). The Kaibab Plateau was described as "*ideal for buffalo [Bison], deer and other wild game*" and was "*to be recognized as a breeding place therefore.*"<sup>4</sup>

Plumb et al (2016 pp 5) picks up the story. "*It is well known that the wild, free-ranging bison that now occupy the House Rock Valley and Kaibab Plateau of the Kaibab National Forest and GRCA North Rim are descendants of 86 privately owned bison brought to northern Arizona in 1906 by Charles Jones, a notable rancher and bison conservationist (Easton and Brown 1961, Meade 2002). Records also indicate that the herd consisted of animals caught from the wild in Texas and New Mexico, along with other animals procured from Kansas, Nebraska, Montana and Manitoba (Easton and Brown 1961). As noted below in the genetics section of this report, it*

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*is also well known there was limited success between 1906-1909 in forced cross-breeding of those bison with cattle (Mead 2002 and Wakeling 2006). By 1909, in large part due to the failed forced cross-breeding effort, the bison herd was reduced to 15-20 animals. Despite this near total failure, this small group of bison survived under little to no management, in an essentially free-ranging condition, and subsequently increased until 1927, when 98 free-ranging descendants were conveyed to Arizona for management (Brown 2012)."*

Plumb et al also state that there is concurrence between the National Park Service (NPS), Arizona Game and Fish Department (AGFD) and United States Forest Service (USFS) that: "1) *the wild, free-ranging wild bison that may occupy GRCA North Rim and adjacent USFS jurisdictions are native wildlife at the west-southwest edge of their continental historic range; 2) the genetics of the current herd can be improved and are not in conflict with NPS, USFS, and AGFD missions and policies; 3) a large landscape (about 215,000 acres) on GRCA and Kaibab National Forest lands is potentially suitable for cooperative bison management and protection of sensitive resources and values; 4) a very low density of 80-200 bison (0.0004 – 0.001 bison/ac) initially best addresses a suite of interagency bison management considerations; 5) initial population reduction to reach population objectives would be best achieved via a combined approach of live animal capture-removal, combined with skilled volunteer lethal removal on GRCA lands and licensed hunters on USFS lands; so that in the long-term hunting outside the park can serve as the primary population management approach, and 6) both the near- and long-term population management should take into account and strive to simultaneously protect sensitive resources and values and address small population conservation concerns, objectives and guidelines."*<sup>5</sup>

We do not find such a clear Pleistocene, Holocene and historic review in the statement of purpose of the IBHREA. In point of fact, it was difficult to learn much about *Bison bison* from the IBHREA, or the intention of the National Park Service with regards to the management of *Bison bison*, a native species now found in the Park.

The February, 2016, GRCA Bison newsletter noted "*The NPS and cooperators agree that the free-ranging bison occupying the park's North Rim lands and adjacent jurisdictions are native wildlife at the southwest edge of their historic range.*" This was a huge step forward and we appreciated the research GRCA planners conducted in identifying and agreeing with this key point. Yet, no such definitive statement citing *Bison bison* as being native wildlife in Grand Canyon National Park is in the IBHREA. This is in contrast to "*native vegetation*" in the Park mentioned nineteen times and "*native plants*" in the Park mentioned over thirty times. The only recognition of *Bison bison* as a native wildlife species is in the following sentence (IBHREA pg 39) "*The American bison (Bison bison, Linnaeus 1758) had the largest historical range and broadest array of ecological settings of all North American native ungulates—across boreal, coniferous and deciduous forests, Holarctic settings, local riparian to major river deltas, desert and montane grasslands, great and high plains, inter-mountain basins, and from coastal plains upwards towards 10,000 feet elevation.*"

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Clearly, the species journey of *Bison bison* follows closely the California condor. Both species experienced a severe population die off in the Pleistocene – Holocene contact, and again for the Bison 120 years ago, and for the condors, 40 years ago. Both species are worthy of recognition by the National Park Service as wildlife worthy of protection in Grand Canyon National Park. Both species come and go from GRCA, and at times, both are not to be found within GRCA. While the condor are welcome and encouraged to come and go as they like, that welcome has yet to be offered to *Bison bison*.

We wholeheartedly support the forward looking management concepts expressed in *Plumb et al. 2016*, but it is with real sadness that we do not find that holistic vision expressed anywhere in the GRCA IBHREA. This oversight needs to be addressed in any final IBHREA.

## **Zero is Less Than 200**

Nowhere in this Assessment is any target level **minimum threshold** set for *Bison* populations within Grand Canyon National Park. There is a clear maximum of “fewer than 200 bison” set for the *House Rock Bison Herd*, and this is repeated in the document almost four dozen times. ZERO is within the range of “fewer than 200 animals” and is especially true if the entire herd is relocated back to the House Rock Valley.

The IBHREA states (pp 5) that “*On the Kaibab National Forest, a common goal regarding bison for both the US Forest Service and the state is to maintain bison populations at levels that provide maximum and diverse recreational opportunities, while avoiding adverse impacts on ecosystems. To achieve this, the Arizona Game and Fish Department plans to restart a subpopulation of bison with site fidelity to the House Rock Wildlife Area and to use adaptive management strategies, including habitat management and a revised bison hunt structure outside the park to maintain most of the House Rock bison herd on USFS lands year-round.*”

Nowhere in the IBHREA is it stated GRCA intends to maintain bison populations at any level. On the contrary, at a bison population in the park of ZERO, and with a herd “*on USFS lands year-round,*” GRCA’s Reduction goals, which just so happen to mean bison elimination from the park, are met, with “*fewer than 200 animals*” in GRCA. If bison herd reduction in GRCA does not mean a zero population is possible or desired, please clearly state this is not the management intention of the IBHREA.

We note only one paragraph is offered to discuss complete elimination of *Bison* from the park. That language in the IBHREA (pg 35) states “*The purpose of taking action is to quickly reduce the density of the House Rock bison herd in collaboration with other agencies involved in bison management on the Kaibab Plateau. Modeling (see “Bison Removal Modeling” section of this chapter) indicates that at current population levels it is only possible to reduce the size of the House Rock bison herd to about 140 animals (which falls in the desired range of fewer than 200 bison) in the next 3 years, which is the target timeline for reduction of the herd (Sturm and Holm 2015). This environmental assessment is also focused on short-term management actions to*

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*reduce the House Rock bison herd. Completely eliminating bison would represent a decision about long-term management that is outside the scope of this environmental assessment. Therefore, this alternative has been dismissed from detailed analysis."*

The above paragraph speaks to the management of the House Rock Bison Herd in collaboration with other agencies involved in bison management on the Kaibab Plateau as a whole. There is no statement that says there will be a small population of bison to remain in Grand Canyon National Park. Only once, while citing Plumb et al. 2016, is a population spectrum offered. That number, 80 to 200, is used (GRCA IBHREA pg 6) here: *"More recently, staff from the park, the NPS Intermountain Regional Office, NPS Washington Support Offices, the Arizona Game and Fish Department, and the US Forest Service collaborated on a report (Plumb et al. 2016) to help inform the management of the House Rock bison herd. This report identifies a potential large landscape of about 215,000 acres on the Kaibab Plateau for possible future management of the herd. The report suggests a target population range of 80–200 bison on this landscape, based on a number of interagency resource management (including bison) considerations, including reducing the density of the House Rock bison herd to avoid impacts on park resources and to support partner goals for a free-ranging bison population that allows for public bison hunting and viewing opportunities **on the Kaibab National Forest.**"* (Emphasis added).

The IBHREA is not a plan to manage bison in Grand Canyon National Park, and as such, may very well see the complete extirpation of *Bison*, a naturally occurring wildlife species, from the Park.

While the IBHREA recognizes (pg 7) that *"bison can exhibit local and regional movements that include seasonal migration and pioneering dispersal movements in response to seasonal food availability"* nowhere in this IBHREA is seasonal movement into and away from Grand Canyon National Park mentioned as a management proposal or goal in the IBHREA.

Once the bison are extirpated from Grand Canyon National Park as part of a "herd reduction" program, we see no vision by GRCA management or language in the IBHREA to invite native bison back into the park, even on a seasonal basis. Clearly, bison are trainable (IBHREA pg 75). A bison herd that moves to the high country in Grand Canyon National Park in the summer and to the House Rock Valley in the winter will need multi-agency management to encourage the herd in this acceptable behavior.<sup>6</sup> Until that happens, extirpation of bison within GRCA is a real possibility. If extirpation of bison from Grand Canyon National Park is not the intent of the IBHREA, what are the safeguards to prevent just this type of event from happening? Any mention of safeguards against extirpation are missing from the IBHREA and must be included.

The section on Bison Removal Modeling also assists in showing how this IBHREA could easily lead to extirpation of bison from GRCA. The IBHREA (pg 19-20) notes *"Outputs from the model indicate that at a starting population of 600 animals, using multiple approaches simultaneously and accounting for hunter harvest outside the park it could take the agencies approximately 3 years to reduce the House Rock bison herd to about 140 animals (which falls in the desired range of fewer than 200 bison) before calving. Taking into account annual population growth,*

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*the model estimates this would result in the removal of approximately 560 bison over those 3 years, about 275 would be captured live, 140 would be removed lethally within the park, and approximately 140 would be removed through hunting outside the park (Sturm and Holm 2015)."*

The above numbers indicate that in the third year of the IBHREA, there could be as few as 40 bison left in GRCA. Meanwhile, *"a subpopulation of bison with site fidelity to the House Rock Wildlife Area"* (IBHREA pg 5) will be developed using Wind Cave bison.<sup>7</sup> With this subpopulation augmentation increasing the herd numbers, there is nothing in this IBHREA to keep GRCA from removing the last bison from the park. The House Rock herd would be at target levels as stated in this EA. The IBHREA states (pp 71) that the new subpopulation would have *"no knowledge of the North Rim"* and sadly, no attempt would be made to educate them to that possibility.

The IBHREA states (pp 39) that the *"Current abundance of the House Rock bison herd on the North Rim and in Kaibab National Forest lands is estimated at 400 to 600 (Plumb et al. 2016)."* Given that the actual herd size is unknown, and herd population estimates range from 400 to 600 bison, we cannot find justification in the IBHREA for the modeling figures to use the maximum of 600 bison. The IBHREA needs to justify not using the more conservative estimate of 400 bison when conducting such a quick population reduction. This only adds to our concern that ZERO is less than 200.

We would like to reiterate our earlier support for the continued presence of native bison seasonally if not yearly as an integral part of the Grand Canyon National Park high-country ecosystem.<sup>8</sup> Hence, we request that until a larger landscape of about 215,000 acres on the Kaibab Plateau is established for management of the herd, GRCA identify in the IBHREA a minimum bison population of 100 bison to be maintained within the 97,000 acre North Rim landscape of GRCA.

## **Wilderness Character**

It is encouraging to see a robust discussion of wilderness character and the preservation of same discussed in the IBHREA. We were surprised to see no mention of the wilderness recreational value of encountering bison in the wilderness of GRCA. To encounter a bull bison in the deep forest at dawn, with mist billowing out its nostrils with every breath, before it recognizes one is nearby and bolts off, brings tremendous wilderness recreational value to park visitors. We brought this concept of positive wilderness value as a result of backcountry bison encounters to the park's attention in our Bison Management Plan comments of June 3, 2014. It was surprising to see no mention of this type of positive encounter in the discussion of wilderness character. We request this omission be corrected in the IBHREA.

## **Non-game Value of Free Ranging Wild Bison**

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It is good to see the IBHREA note (pp 4-5) that the *“Arizona Game and Fish Department manages the House Rock bison herd as a free-ranging wild bison through an agreement with the US Forest Service on USFS-managed lands adjacent to the park. Arizona statute guides bison management as wildlife on USFS lands adjacent to the park. In addition, the National Park Service recognizes the non-game values (e.g., bison viewing opportunities) that the Arizona Game and Fish Department places on bison.”* We are puzzled as to why GRCA did not state clearly in this same paragraph that GRCA recognizes these same non-game values (e.g., bison viewing opportunities). Recognizing bison as a free ranging wild and native species that brings non-game value to GRCA must be clearly stated in the IBHREA, or a reason provided as to why this is not the case.

## **Timing Lethal and Non Lethal Culling**

The IBHREA discusses timing for lethal and non-lethal culling. We would offer that these tools be used to a much greater amount in the September into December period, and much less in the January through August time period. Lethal culling in the fall, from the rim escarpments northward out of the Park then with hunting west to east off the Kaibab could be used as a management tool to begin to move the bison toward seasonal migration. If done in the fall with non-lethal corralling and transport to House Rock, this would send a clear picture to the bison in one to three years that the fall is the time of GRCA leaving. In the spring this would need to be reversed, with east to west hunting pressure applied across the House Rock Valley to move the bison from the lowlands up to the Kaibab, then south back into GRCA. Lethal and non-lethal culling on GRCA land in the spring would be counterproductive to any attempt at seasonal migration patterns.

## **Where Some Numbers Would Help**

The IBHREA presents (pp 49) two photographs side by side of Crystal Pond, in an attempt to show no bison use versus high bison use. Apart from the labels “2010” and “2014”, there is no indication of when the pictures were taken. If both of these images were taken during the same week of the same month, that was not stated. If the 2010 picture was taken in early April and the 2014 picture was taken in mid to late June pre-monsoon, that was not stated.

The IBHREA discusses (pp 58) bison impacts to archeological resources, stating that in a review of twenty four archeological sites, two were found to have been *“adversely affected”* by bison. The IBHREA then states *“Based on this information, more than 50% of sites in the study are considered at risk from adverse impacts by bison activities.”* We fail to see how 50% of sites could be impacted if in reality less than 10% of the sites surveyed were *“adversely affected.”*

The IBHREA notes (pp 65) that *“Vehicular collisions involving bison are also a concern.”* No actual data is presented to show the number of collisions in GRCA due to bison or for that matter, speeding, collisions with deer, elk, or other wildlife such as turkey. If a vehicle is speeding and strikes a bison, we would offer it is not the bison’s fault. Clearly, other service

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units such as Yellowstone and Wind Cave National Park where *Bison* are present in large numbers must have this same issue as well, and yet these service units manage for robust bison populations.

The IBHREA discusses (pp 59-60) the North Rim Entrance Road Corridor Cultural Landscape. Bison are excluded from adding value to this landscape, as “*Bison were not present at the Grand Canyon during the period of significance for the cultural landscape; therefore, they are not considered contributing to the cultural landscape.*” The circular logic of the IBHREA fails to point out that bison had been forcefully removed from the area “*during the period of significance for the cultural landscape.*” Today, bison add much to the cultural landscape, and no doubt would have “*during the period of significance for the cultural landscape*” had they been allowed to be present. This needs to be mentioned in the IBHREA.

## **Fencing**

As noted in our earlier comments, we support the use of simple fencing to protect seeps, springs and archeological resources on a case by case basis. Ideally, as bison move into the Park in the spring and exit the park in the fall heading to lower elevations, different springs could be fenced, assuring population dispersal to various areas within the Park yearly.<sup>9</sup>

## **The Need for an Immediate Bison EIS**

As we stated in our comments with regards to the Bison EIS to EA transition on April 3, 2016, we do not agree that the Grand Canyon National Park Bison Management Plan Environmental Impact Statement (EIS) should be abandoned or converted to an Environmental Assessment. Immediate work on a GRCA Bison Management Plan EIS should continue while Grand Canyon National Park (GRCA) conducts a Bison population reduction plan. There is much to learn about this species and its management. Anything GRCA does today in the short term without long-term guidance may be detrimental to this native bison herd. This IBHREA needs to address data management retention with an eye toward the larger Bison Management Plan EIS.

At present, *Bison bison* in northern Arizona are treated like native fish in some locations, eradicated and or ignored in preference for exotic “sport fish.” Native *Bison* in northern Arizona have been fenced out of access to Federal lands better suited to their needs in favor of cattle grazing on BLM and USFS managed lands, and have historically been excluded entirely from GRCA lands. As such, a multi-agency long term planning environmental impact statement for *Bison* management on the North Rim of Grand Canyon National Park is urgently needed.

## **More Range, Not Less**

New research shows the entire Colorado Plateau is native bison habitat. Bison, like pronghorn antelope, desert bighorn sheep, prairie dogs, jackrabbits and coyotes, have a place on all

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federal lands. Land managers can no longer say they do not manage for bison just because they have none on their range. That is circular logic that bison demand us to reconsider.<sup>10</sup>

The IBHREA states (pp 5-6) that *“The Bison Conservation Initiative recognizes a national priority for developing partnership arrangements to improve management of bison populations in biologically suitable areas (DOI 2008).”* Also, the IBHREA notes *“Bison do not currently occur on the Arizona Strip lands managed by the Bureau of Land Management, and the BLM’s resource management plan does not include desired outcomes or actions to manage the area for bison. The Arizona Game and Fish Department has no plans to include the management of bison on these lands.”* The Plumb et al report *“identifies a potential large landscape of about 215,000 acres on the Kaibab Plateau for possible future management of the herd. The report suggests a target population range of 80–200 bison on this landscape, based on a number of interagency resource management (including bison) considerations, including reducing the density of the House Rock bison herd to avoid impacts on park resources and to support partner goals for a free-ranging bison population that allows for public bison hunting and viewing opportunities on the Kaibab National Forest.”*

The BLM has no bison because bison are kept from BLM lands by no other reason than fencing. The existence of boundary fences between agencies is no reason to exclude management of a native species on one side of the fence.

We urge GRCA to take the lead role in working with the Bureau of Land Management, the United States Forest Service and Arizona Game and Fish to begin the lengthy process of including bison in areas of the Arizona strip east and west of the Kaibab Plateau including BLM lands. Connecting a wildlife corridor for bison from the lowlands east of the Kaibab plateau and then further to the west of the Plateau is of utmost importance. We owe it to this native species to think big, not just to remove this species from GRCA and return the House Rock herd back to confinement on a five mile by ten mile area of the House Rock Valley, where the range is poor. This may be one of the key reasons the House Rock bison have no *“fidelity”* to the House Rock enclosure.

## **What’s in a Name**

As we mentioned in this letter, the Grand Canyon Forest Preserve was established in 1906 for the enhancement of bison. We propose the House Rock bison herd be re-named the Grand Canyon bison herd. This makes better regional and historic sense, especially with future planning efforts to include expansion of the herd into a larger land base.

In closing, we encourage Grand Canyon National Park Planners to do everything possible to manage a robust and healthy bison herd at Grand Canyon National Park. The survival of this magnificent species which represents our American heritage may just depend on the bison preservation actions taken by Grand Canyon National Park.



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Thank you again for this opportunity to submit IBHREA comments on the management of bison in Grand Canyon National Park.

Sincerely,



Tom Martin, Council Member  
River Runners for Wilderness

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<sup>1</sup> Late Pleistocene and Holocene *Bison* of the Colorado Plateau, Martin et al, *The Southwestern Naturalist*, 62(1):14-28, March 2017

<sup>2</sup> Wismer, M., F. Lanoë, J. Ballanger, and J. Mabry. 2016. Archaic bison of the Southwest: Recent explorations at the Cave Creek Midden Site, southeastern Arizona, U.S.A. Presentation at the 39th Annual Conference for Ethnobiology, March 16-19, 2016 at the University of Arizona, Tucson, AZ. Conference program available at <https://ethnobiology.org/sites/default/files/Program%20SoE.3.13.2016.pdf>

<sup>3</sup> Huffer, D. J. 2013. A Spatial Analysis and Zooarchaeological Interpretation of Archaeological Bison Remains in the Southwest and the Wildlife Management Implications for the House Rock Valley Bison Herd in Grand Canyon National Park, Arizona. Master's Thesis, Univ. of Arizona, 135 pp.; Grand Canyon Bison Nativity, Genetics, and Ecology, Natural Resource Report NPS/NRSS/BRD/NRR—2016/1226

<sup>4</sup> Martin et al 2014, pp 21; WAKELING, B. F. 2006. Arizona bison genetics: verifying origins, pp 25–30 in *Managing wildlife in the Southwest: new challenges for the 21st century* (J. W. Cain III and P. R. Krausman, editors). A Publication of the Southwest Section of The Wildlife Society, Tucson, Arizona.

<sup>5</sup> Grand Canyon Bison Nativity, Genetics, and Ecology, Natural Resource Report NPS/NRSS/BRD/NRR—2016/1226

<sup>6</sup> Personal communication N. Lawson, Armendaris Ranch, New Mexico

<sup>7</sup> Lutch and Mead personal communication June 2017

<sup>8</sup> Personal communication N. Lawson, Armendaris Ranch, New Mexico

<sup>9</sup> Fences and artificial water affect African savannah elephant movement patterns, Loarie, Van Aarde and Pimm, *Biological Conservation*, Vol 142, Issue 12, December 2009

<sup>10</sup> Late Pleistocene and Holocene *Bison* of the Colorado Plateau, Martin et al, *The Southwestern Naturalist*, 62(1):14-28, March 2017 (pp 15)