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Sent via electronic mail

Buffalo Field Campaign Supplemental Comments on APHIS Evaluation of GonaCon™, an Immunocontraceptive Vaccine, as a Means of Decreasing Transmission of *Brucella abortus* in Bison in the Greater Yellowstone Area

1. Evaluate and disclose how Animal and Plant Health Inspection Service's (APHIS) bison population control program is in conflict with a stated purpose of the Interagency Bison Management Plan (IBMP) of maintaining a wild free ranging bison population in the ecosystem.

The taking of up to 108 wild bison by APHIS for long term confinement in pens and in habitat the population could otherwise migrate, repeated handling, intrusive testing, micro-chipping, artificial feeding, use of chemical sterilant/hormone disrupter to artificially interfere with bison's birthing cycle, genetic and natural selection, incineration or landfilling of bison carcasses due to human health concerns, stands in stark contrast to the public's idea of a wild free ranging bison population in the ecosystem.

The prospect that APHIS and or the IBMP would contemplate a program for the entire bison population through initiation of a study cannot be reconciled

with your stated purpose of maintaining a wild-free ranging bison population in the ecosystem.

2. We incorporate by reference and include as Buffalo Field Campaign's, Gallatin Wildlife Association's March 7, 2012 comments and request that APHIS fully disclose and evaluate all comments submitted.

3. We incorporate Halbert's (2012) findings and ask APHIS to fully evaluate and disclose how the agency's bison population control program impacts America's last wild bison in the ecosystem including genetically distinct subpopulations found by scientists:

“... the identification of genetic subpopulations in this study raises serious concerns for the management and long-term conservation of Yellowstone bison.”

“It is not clear at this point how the subpopulations may be changing over time or how the current bison management plan (US Department of Interior and US Department of Agriculture 2000) might influence the genetic integrity of the subpopulations.”

“In conclusion, we have presented strong evidence for the existence of 2 genetically distinct subpopulations of bison within Yellowstone National Park. Our study has also revealed longitudinal differences in migration patterns among Yellowstone bison, as it appears that bison moving to the park boundary in the vicinity of West Yellowstone are consistently from the Central subpopulation, whereas those moving to the park boundary in the vicinity of Gardiner may originate from either the Central or Northern subpopulation. These observations warrant serious reconsideration of current management practices. The continued practice of culling bison without regard to possible subpopulation structure has the potentially negative long term consequences of reducing genetic diversity and permanently changing the genetic constitution within subpopulations and across the Yellowstone metapopulation. Population subdivision is a critically important force for maintaining genetic diversity and yet has been assessed in only a handful of species to date. The identification

of cryptic population subdivision of the magnitude identified in this study exemplifies the importance of genetic studies in the management of wildlife species...”

4. We request APHIS take no further action taking bison from Yellowstone National Park or in Montana and release all bison currently held in pens by APHIS for population control into the Gardiner basin.

APHIS and the IBMP must first undertake scientific peer-reviewed and independent studies thoroughly analyzing bison population viability that accounts for genetically distinct subpopulations.

To proceed with bison population control as APHIS proposes to do is another example of the arbitrary nature of decisions made under the IBMP, APHIS’ disregard for a primary purpose of the IBMP - maintaining a wild free ranging bison population - and is a clear example of APHIS ignoring the best available science and adaptive management by subjecting America's last wild bison to harm and impairment in an unjustified program.

5. We dispute and ask APHIS to address the assumptions of your study that bison who retain their identity as a wildlife species are overpopulated, pose a disease risk to cattle that would be minimized by attempting to reduce disease prevalence in the entire bison population when less intrusive cattle management practices are available to APHIS to manage specific and identifiable risks, and that wider ranging and vastly more numerous wild elk are not a risk to cattle - ignoring Beja-Pereira (2009) DNA tracing identifying elk as a source of cattle infections - but that one remaining bison population with rare, unique and irreplaceable characteristics is a risk.

The fact is bison that retain their identity as a wildlife species and continuously occupied their native range since pre-Columbian times have been reduced to one population in the United States (Geist 2011). Furthermore, bison are extinct in greater than 99% of their original range, and ecologically extinct in numerous ecosystems in which the wild species played keystone roles. Plains bison is near threatened in North America according to the IUCN. In Montana, bison’s status is S2: "At risk because of very limited and/or potentially declining population numbers, range and/or habitat, making it vulnerable to global extinction or extirpation in the state. Montana Fish, Wildlife, and Parks also designated bison a Tier I species: “Greatest conservation need. Montana Fish, Wildlife & Parks has a clear

obligation to use its resources to implement conservation actions that provide direct benefit to these species, communities, and focus areas.” (Online: http://fieldguide.mt.gov/detail_AMALE01010.aspx)

APHIS is required to take a hard look at its own assumptions guiding its purpose of action. If APHIS did you would find several of the agency’s assumptions to be false or misleading or dated requiring the agency to re-evaluate the best available science before taking action. We request APHIS take a hard look by reviewing and evaluating your assumptions in a thorough public analysis.

6. New information is significant and a clear controversy exists requiring APHIS to prepare an environmental impact statement.

APHIS’ proposed action is highly controversial and a public dispute exists over impacts to America’s last wild bison warranting detailed study in an environmental impact statement. Alternatively, APHIS can and should take no action and release the captive bison immediately and forego the costs of developing an appropriate level of analysis.

Halbert's (2012) findings call into question an assumption adapted in the IBMP of a single bison metapopulation when there is "strong evidence for the existence of 2 genetically distinct subpopulations of bison." Using 3,000 bison as a baseline to take wild species from the ecosystem including through APHIS proposed action, has resulted in actions by APHIS and the IBMP that are “disproportionately” impacting bison subpopulations:

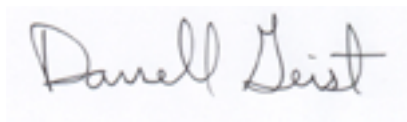
“Yellowstone bison have long been treated as a single metapopulation whereby the total number of bison is assumed to be the most important factor in determining appropriate winter cull levels (US Department of Interior and US Department of Agriculture 2000; Plumb et al. 2009). However, the unequal census sizes of the 2 subpopulations call this strategy into question: The Northern subpopulation ranges from 16% to 31% of the total population (US Department of Interior and US Department of Agriculture 2000; Gates et al. 2005). It is highly likely, therefore, that the 2 subpopulations have been disproportionately culled in some years. For example, approximately 735 bison were culled near Gardiner at the park’s northern boundary during the 1996–1997 winter.

Applying our estimate that around 68% of the bison culled near Gardiner that year originated from the Northern subpopulation (Figure 3A), we calculate that approximately 500 of the bison culled during the 1996–1997 winter were from the Northern subpopulation. Given the prewinter estimate for the Northern subpopulation of 877 bison (US Department of Interior and US Department of Agriculture 2000; Gates et al. 2005), the 500 culled bison represent approximately 57% of the entire subpopulation.”

7. In the face of clear scientific uncertainty on the genetic integrity of the bison population and the viability of genetically distinct subpopulations, APHIS must adopt a cautious and scientifically sound approach and reconsider its entire program for bison population control.

Because of uncertainty surrounding decisions made by APHIS and under the IBMP and how these decisions are influencing the genetic integrity of bison subpopulations, Halbert and scientists called upon the agencies to “determine the appropriate effective population size for the long-term sustainability of the subpopulations, a thorough population viability analysis should be conducted.”

We believe such a viability analysis must be performed before APHIS and the IBMP take bison from the ecosystem. The prudent course is development of an on-going scientific analysis subject to peer review and independent scrutiny to determine a baseline for bison viability in the ecosystem.

A handwritten signature in cursive script that reads "Darrell Geist". The signature is written in dark ink on a light-colored background.

Darrell Geist, habitat coordinator
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Are wild buffalo a threat to Montana's economy?
<http://www.buffalofieldcampaign.org/faq/wildeconomy.html>

References

Attachments incorporated by reference for review and evaluation by APHIS in its Environmental Assessment for the Evaluation of GonaCon.

1. Beja-Pereira, Albano, Betsy Bricker, Shanyuan Chen, Claudia Almendra, P. J. White, and Gordon Luikart. 2009. DNA Genotyping Suggests that Recent Brucellosis Outbreaks in the Greater Yellowstone Area Originated from Elk. *Journal of Wildlife Diseases* 45(4): 1174–1177.
2. Gallatin Wildlife Association, Evaluation of GonaCon™, an Immunocontraceptive Vaccine, as a Means of Decreasing Transmission of *Brucella abortus* in Bison in the Greater Yellowstone Area, March 7, 2012.
3. Geist, Darrell. 2011. The endangered circumstances and status of wild American bison in North America today.
4. HALBERT, NATALIE D., PETER J. P. GOGAN, PHILIP W. HEDRICK, JACQUELYN M. WAHL, AND JAMES N. DERR. 2012. Genetic Population Substructure in Bison at Yellowstone National Park. *Journal of Heredity* Advance Access published February 8, 2012.