United States Department of the Interior

U.S. GEOLOGICAL SURVEY
ALASKA SCIENCE CENTER
4210 University Drive
Anchorage, Alaska 99508

IN REPLY REFER TO:

7 March 2013

Tim Jennings, Assoc. Regional Director-Fisheries and Ecological Services
Attn: "WOOD BISON"
U.S. Fish and Wildlife Service
1011 E. Tudor Road
Anchorage, Alaska 99503-6199

Dear Mr. Jennings,

As requested, here is my peer review of the proposed rule to establish a nonessential experimental population (NEP) of wood bison in Alaska (Federal Register (FR) 78(13):4108-4119, dated 18 January 2013). In addition to studying the proposed rule, I have reviewed the associated draft Environmental Assessment (EA; dated 21 June 2012) as crucial supporting information for the rule. Overall, the proposed rule provides a concise and accurate summation of the available scientific information on the biology, current status, and recovery efforts for wood bison. The proposed establishment of a NEP in Alaska to facilitate wood bison reintroduction is well-supported by the best available scientific information. The proposed NEP area is a logical extension of the available paleontological and historical information. Further, the success in reestablishing wood bison populations in Canada through reintroduction indicates a high likelihood that similar reintroductions in this region of Alaska will also be successful.

While the feasibility of conducting reintroductions of wood bison in Alaska is clearly supported by the proposed rule and material in the EA, I am concerned that it may be unwise to assume that "All released wood bison would likely remain in areas adjacent to release sites and well within the boundaries of the NEP due to presence of prime habitat and surrounding geographic barriers." (FR pg 4112, 2nd col., 3rd. para.). Alaska's Copper River bison originated from a release at Slana, 70 miles north of their current range (Paul, T. W. 2009. Game transplants in Alaska. Technical Bulletin No. 4, second edition. Alaska Department of Fish and Game. Juneau, Alaska. 150pp.). Similarly, the Aishihik wood bison reintroduction in southwest Yukon occurred west of Carmacks around 1990 and that population subsequently expanded to ranges 100 miles from the release site (Government of the Yukon. 2012. Management Plan for the Aishihik Wood Bison (*Bison bison athabascae*) Herd in southwestern Yukon. Environment Yukon, Whitehorse, Yukon. 28pp.). Further, Aishihik bison have unexpectedly made significant use of montane habitats. Given the proximity of the Innoko River Proposed Reintroduction Site within 40 miles of the boundary of the NEP area, I recommend including drainages into the southern and eastern margins of Norton Sound in the NEP area as supported by the prehistoric distribution of wood bison from Figure 2 of the EA. This extension will markedly reduce the potential for wood bison to become established outside the NEP area.

Sincerely,

/s/ Layne G. Adams

Layne G. Adams, Ph. D.
Research Wildlife Biologist

Enclosure: Current CV

Northwest Territories Environment and Natural Resources

"WOOD BISON"
U.S. Fish and Wildlife Service
1101 East Tudor Road
Anchorage, Alaska 99503
USA

Attention: Sonja Jahrsdoerfer

2013 March 19

Re: Review of the Notice of the Proposed Establishment of a Nonessential Experimental Population of Wood Bison in Central Alaska

Dear Ms. Jahrsdoerfer:

I found the background and proposed rule to be clear and well written. It provides thorough coverage of the biology and recovery efforts for wood bison to date, and a clear and compelling rationale for establishing a NEP of wood bison in Alaska.

It is wise to include the role of regulated hunting in bison recovery and as a tool for bison management, for all four reasons given on page 4110. Regulated hunting has been important for re-building acceptance of bison on the land and support for bison recovery in Canada (see Gates et al. 2001) and is very likely to be needed in Alaska.

The only threat to wood bison in the proposed NEP area not discussed is the potential for hybridization with plains bison. ADF&G's web site indicates a plains bison population that appears to be within the NEP area (http://www.adfg.alaska.gov/index.cfm?adfg=bisonhunting.main, accessed 2013 March 6), but it is not clear if there is a barrier to bison movements between the proposed release areas and those occupied by plains bison. Canada's National Recovery Plan for the Wood Bison (Gates et al. 2001) discusses the importance of maintaining the genetic distinctiveness and integrity of bison subspecies. I suggest that maintenance of physical and genetic separation of plains bison and wood bison be addressed when management plans are developed for wood bison in Alaska.

Reintroducing wood bison within the historical range is feasible and has been successful in Canada, where populations in areas with suitable habitat and sufficient space have thrived (Gates et al. 2001).

Establishing one or more free-ranging wood bison populations in Alaska will be an important step in the recovery of wood bison. I wish the Fish and Wildlife Service and Alaska great success in bison recovery and management.

Sincerely,

T. Armstrong

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Review of Endangered and Threatened Wildlife and Plants: Proposed Establishment of a Nonessential Experimental Population of Wood Bison in Alaska

Docket No. FWS-R7-ES-2012-0033; 70120-1113-0000-C3

I would like to commend the U.S. Fish and Wildlife Service and the State of Alaska for their well-thought-out proposal to reintroduce wood bison to Alaska, part of their original North American range. This project will improve the conservation and recovery of wood bison in North America.

I have reviewed the document from a science and technical perspective, especially concerning the conservation and recovery of wood bison in Canada. My comments are below.

1) Section: Background; Subsection: Legislative; Paragraph 1: This paragraph doesn't quite capture the listing history of wood bison in Canada. Currently, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) recommends listings to appropriate Federal departments, which then accept or reject these listings under the Species at Risk Act (SARA). SARA came into force in 2003. Before this time, COSEWIC listings were not recognized under a specific federal endangered species act. Wood bison were listed by COSEWIC as Endangered in 1978, and downlisted to Threatened in 1988. When SARA came into force, the listing of wood bison as Threatened was recognized under the Act.
2) The Canadian National Wood Bison Recovery Team has been officially dissolved, resulting in some tense issues throughout the document (i.e., "The Wood Bison Recovery Team *places*…" should be changed to "The Wood Bison Recovery Team *placed*…"
3) Section: Background; Subsection: Biological; Paragraph 1: The historical range of wood bison also included part of northern Saskatchewan.
4) Section: Background; Subsection: Recovery Efforts; Paragraph 1: Most recent estimates suggest that there are 6,000 wood bison in 5 free-ranging herds that are not confirmed to be disease-free.
5) Section: Background; Subsection: Recovery Efforts; Paragraph 2: As required under SARA, Environment Canada is currently drafting a National Wood Bison

Recovery Strategy. This is a separate document from the National Wood Bison Recovery Plan from 2001.

6) Section: Background; Subsection: Role of Regulated Hunting in Recovery; Paragraph 1: The current size of the Mackenzie herd is closer to 1,500.
7) Section: Background; Subsection: Management; Sub-subection Genetics: The Elk Island National Park population is not particularly genetically diverse compared to other wood bison populations, particularly Wood Buffalo National Park (Wilson and Strobeck 1999). Artificial reproductive techniques could be considered to augment genetic diversity in Alaskan populations. Genetic diversity within the Alaskan herds should be monitored through time, to ensure that it is not being lost through the processes of genetic drift and differential reproductive success (Wilson et al. 2005).

References:

Wilson GA, C Strobeck. 1999. Genetic variation within and relatedness among wood and plains bison populations. Genome 42: 483-496.

Wilson GA, JS Nishi, BT Elkin, C Strobeck. 2005. Effects of a recent founding event and intrinsic population dynamics on genetic diversity in an ungulate population. Conservation Genetics 6: 905-916.