Memorandum

May 12, 2009

To: Administrative Record

From: P. J. White, Supervisory Wildlife Biologist, Yellowstone National Park

Subject: Adaptive Adjustments to the Interagency Bison Management Plan

The Interagency Bison Management Plan (IBMP) was signed in December 2000 to coordinate bison management between the State of Montana and Yellowstone National Park (YNP). Five agencies work cooperatively within an adaptive management framework to implement the plan—the U.S. Department of Agriculture's Animal and Plant Health Inspection Service and Forest Service; the Department of the Interior's National Park Service; and the State of Montana's Department of Fish, Wildlife, and Parks and Department of Livestock.

These agencies anticipated future adaptive management adjustments to the IBMP based on research, monitoring, and feedback from the implementation of a suite of conservation and risk management actions. After eight years of experience in implementing the IBMP, the agencies formally agreed to several short- and long-term adaptive management adjustments in December 2008. These adjustments were based largely on new information, changing land ownership and use, and newly gained operational experience. However, they were intended to be applied within the framework of the IBMP and not alter its basic management direction or goals.

This document links each of the management actions in the Adaptive Adjustments to the IBMP (2008) to text from the Record of Decision (ROD) for the Final Environmental Impact Statement (FEIS) for the IBMP (2000).

Management Action 1.1.a—Allow untested female/mixed groups of bison to migrate onto and occupy the Horse Butte peninsula and the Flats each winter and spring in Zone 2.

> The Joint Management Plan [JMP] of the ROD indicates "[a] series of three adaptive management steps are prescribed in this Joint Bison Management Plan that will minimize the risk of transmission of brucellosis to cattle grazing on public and private lands adjacent to Yellowstone National Park and will, when all criteria are met, provide for the tolerance of a limited number of untested bison on public lands and private lands where permitted adjacent to Yellowstone National Park during winter" (page 22).
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> The Mitigation Measures section of the ROD indicates "[t]o ensure bison remain as wild and free-ranging as possible within the constraint imposed by all of the mandates of the agencies charged with managing them, the Joint Management Plan would gradually increase tolerance of limited numbers of bison on winter range outside park boundaries. The agencies would move toward allowing untested bison onto winter range to the north and west of the park" (page 36).

Management Action 1.1.b—Use adaptive management to gain management experience regarding how bison use Zone 2 in the Gardiner basin, and provide space/habitat for bison in cattle-free areas.

> The JMP of the ROD indicates "[a] series of three adaptive management steps are prescribed in this Joint Bison Management Plan that will minimize the risk of transmission of brucellosis to cattle grazing on public and private lands adjacent to Yellowstone National Park and will, when all criteria are met, provide for the tolerance of a limited number of untested bison on public lands and private lands where permitted adjacent to Yellowstone National Park during winter" (page 22).
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> Appendix A of the ROD (i.e., Response to Comments on Final Environmental Impact Statement; Specific Changes to the MPA [Modified Preferred Alternative]; Topic: Types of Bison Allowed Outside the Park) indicates "[i]n Step 3 of the plan, for instance, untested bison, regardless of their serological or "risk" status, are allowed into the management zones up to a prescribed tolerance level. However, this is only possible after the agencies have proven to each other that seronegative bison are manageable, and a series of requirements regarding the completion of research and monitoring has been completed and applied.

This research includes the viability of the *B. abortus* bacteria in the environment of the analysis area, the results of telemetered female bison and remote vaccination of vaccine-eligible bison" (page 53).

Management Action 1.1.c—Use research findings on bison birth synchrony and fetal and shed *Brucella abortus* field viability and persistence to inform adaptive management.

The Mitigation Measures section of the ROD indicates "[t]he agencies would move toward allowing untested bison onto winter range to the north and west of the park. The means to accomplish this are described above in the Joint Management Plan, and include: Completing research on the viability of *Brucella abortus* in these environs to further refine temporal separation between bison and cattle" (page 37).

Appendix A of the ROD (i.e., Response to Comments on Final Environmental Impact Statement; Broad philosophical or approach issues; Topic: Science and Bison Management) indicates "[a]n ongoing study to determine viability of the bacteria in the winter and spring in the study area is planned to begin in 2001. The research mentioned is high priority research (see appendix D, vol. 1 of the FEIS)" and "[t]he additional research regarding the viability of *Brucella abortus* will inform the agencies' determination of a sufficient temporal separation period between the dates certain and the dates when cattle may be turned on to allotments" (page 50).

Management Action 1.2.a—Allow bachelor groups of bull bison to occupy suitable habitat areas outside the west boundary of YNP in the portion of Zone 2 south of Duck Creek each year within the parameters of conflict management.

Same portions of ROD described for Management Action 1.1.a

Management Action 1.2.b—Allow bachelor groups of bull bison to occupy suitable habitat areas in Zone 2 outside the north boundary of YNP within the following parameters of conflict management.

Same portions of ROD described for Management Action 1.1.a

Management Action 1.3.a—Work with private land owners and livestock producers and operators to provide conflict-free habitat in the Hebgen and Gardiner basins.

The JMP of the ROD indicates that "[t]he management of bison under this plan will include actions to protect private property; actions to reduce the risk of transmission of brucellosis from bison to cattle; and, actions to maintain a viable, free-ranging population of Yellowstone bison" (page 22).

Management Action 1.3.b—Work with landowners who have human safety and property damage concerns, as well as those who favor increased tolerance for bison, to provide conflict-free habitat in the Hebgen and Gardiner basins.

Same portion of ROD described for Management Action 1.3.a

Management Action 1.3.c—Annually, the Gallatin National Forest will ensure conflict-free habitat is available for bison and livestock grazing on public lands, as per management objectives of the IBMP.

The Decision section of the ROD indicates that "[w]hen the bison are on national forest system lands, the U.S. Forest Service has responsibilities under federal laws to provide habitat for the bison, a native species" (page 6).

The Statutory Basis for the Joint Management of Yellowstone Bison section of the ROD indicates that "[t]he Forest Service administers national forests for multiple purposes, including providing habitat for wildlife and grazing allotments for cattle" (page 8).

Management Action 2.1.a—Increase the understanding of bison population dynamics to inform adaptive management and reduce sharp increases and decreases in bison abundance.

The Decision section of the ROD indicates "[t]he Joint Management Plan meets the goals of the state and federal agencies identified in the draft and final environmental impact statements. Those goals included specific commitments relating to the size of the bison herd, both within and outside Yellowstone National Park;" … "and maintenance of a viable population of wild bison in Yellowstone National Park from biological, genetic, and ecological terms. The plan is based on factual information, which recognizes that the scientific database is changing" (page 8).

Management Action 2.1.b—Increase the understanding of genetics of Yellowstone bison to inform adaptive management.

In Appendix A of the ROD (i.e., Response to Comments on Final Environmental Impact Statement; Broad philosophical or approach issues; Topic: Bison Genetics), the National Park Service committed to "conducting additional research on genetics in bison. If the additional information suggests the management practices of the Joint Management Plan adversely affect genetic diversity, the NPS will review management actions and recommend adjustments" (page 51).

Management Action 2.1.c—Increase understanding of the ecological role of bison to inform adaptive management by commissioning a comprehensive review and assessment.

Same portion of ROD described for Management Action 2.1.a

Management Action 2.2.a—Use slaughter only when necessary; attempt to use other risk management tools first.

The Alternatives Considered section of the ROD indicates that risk mitigation measures under the modified preferred alternative include: "[t]o minimize lethal control, agencies would maximize the use of hazing to keep bison off private lands, to keep them from exiting the park, and to return them to the park if exiting would mean their removal to slaughter or quarantine" (page 20).

Management Action 2.2.b—In Zone 2 lands adjacent to YNP, emphasize management of bison as wildlife and increase the use of state and treaty hunts to manage bison numbers and demographic rates, limit the risk of brucellosis transmission to cattle, and protect human safety and property.

The Application of this Decision section of the ROD indicates "[t]he state FEIS sets out and analyzes the Joint Management Plan as it existed at one point during the federal-state mediation. One important difference is the state's intent possibly to request the Montana legislature to authorize the Montana Fish, Wildlife and Parks Commission to establish regulations for the public hunting of bison. If approved, the state would administer regulated public hunting outside the park to accomplish bison controls outlined in the Joint Management Plan and to provide recreation on public lands. The state also stated that in addition to controlling the size of the bison population, they may also use hunting to maintain the distribution of bison within Zone 2 in the western boundary area and to prevent movements of bison from public land to private lands or beyond the boundaries of Zone 2." (page 15).

Management Action 2.2c—Complete the quarantine feasibility study and consider an operational quarantine facility to provide a source of live, disease-free bison for tribal governments and other requesting organizations.

The JMP of the ROD indicates "[i]f the agencies believe it would serve in better managing bison, a quarantine facility would be constructed and operated. If so, the agencies, with APHIS as lead agency, would undertake a NEPA process to determine the design, location, and operation procedures of a bison quarantine facility. The agencies anticipate they will decide on whether to pursue a quarantine facility when the management plan reaches Step Three in both management areas" (page 13).

Management Action 3.1.a—Continue bison vaccination under prevailing authority.

The JMP of the ROD indicates "the agencies will use vaccination of bison and cattle to reduce risk even further and to work toward the eventual elimination of brucellosis in bison" (page 11).

The JMP (page 11) further indicates the release of untested bison outside the park relies on "the initiation of a vaccination program for bison in the park with a safe and effective vaccine and a safe and effective remote delivery system."

The Mitigation Measures section of the ROD indicates "[t]he agencies would move toward allowing untested bison onto winter range to the north and west of the park. The means to accomplish this are described above in the Joint Management Plan, and include: The NPS will conduct a remote vaccination program of vaccination-eligible bison within the park to allow a limited number of untested bison on winter range lands outside the park" (page 37).

Management Action 3.1.b—Complete EIS processes (MEPA/NEPA) for remote delivery vaccination of bison and use the outcomes to inform adaptive management.

The JMP of the ROD indicates the release of untested bison outside the park (i.e., Step Three) "relies on the initiation of a vaccination program for bison in the park with a safe and effective vaccine and a safe and effective remote delivery system." (page 11).

Appendix A of the ROD (i.e., Response to Comments on Final Environmental Impact Statement; Specific Changes to the MPA [Modified Preferred Alternative]; Topic: Vaccination of Bison and/or Cattle) indicates that "[a]dditional NEPA analysis would also occur prior to initiating a park-wide, remote vaccination program" (page 54).

Management Action 3.1.c—Test and vaccinate cattle.

The JMP of the ROD indicates "the agencies will use vaccination of bison and cattle to reduce risk even further and to work toward the eventual elimination of brucellosis in bison" (page 11).

The JMP of the ROD further indicates "[i]n addition to bison vaccination, the State of Montana will encourage voluntary vaccination of vaccination eligible cattle that may graze in areas outside the Park that bison may occupy in the winter. If by the fall of 2001, 100% voluntary vaccination of vaccination-eligible cattle in areas outside the Park that may be occupied by bison was not achieved, the State will make such vaccination mandatory" (page 31).

In addition, the JMP of the ROD indicates "[b]eyond these steps, APHIS and Montana will conduct additional monitoring of cattle herds that graze in areas that bison may occupy during the winter, which may include regular testing of test-eligible cattle and possible adult vaccination of these cattle herds" (page 32).

Management Action 3.2.a—Use spatial and temporal separation and hazing to prevent cattle/bison interactions.

The JMP of the ROD indicates the "agencies will control the risk of transmission to cattle outside the boundary areas by limiting the number of bison in the boundary areas through intensive monitoring and zone management. The agencies will increase the intensity of management as bison move toward the edges of management Zone 2 (Figure 1). The agencies will use hazing, capture facilities, or shooting, if necessary, to prevent bison from leaving management Zone 2, enforce zone management, and ensure the removal of all bison from management Zone 2 in the spring, to maintain temporal separation as described in the Joint Management Plan, *infra*" (page 11).

Management Action 3.2.b—Evaluate the use of limited, strategically placed fencing when and where it could effectively create separation between domestic livestock and bison, and not create a major movement barrier to other wildlife.

The JMP of the ROD indicates that "[t]he management of bison under this plan will include actions to protect private property; actions to reduce the risk of transmission of brucellosis from bison to cattle; and, actions to maintain a viable, free-ranging population of Yellowstone bison" (page 22).

Management Action 3.2.c—Haze bison from the Hebgen basin into YNP with a target date of May 15.

> The JMP of the ROD indicates that "[a]dditionally, in the spring the agencies will haze bison back into the park, at or near the time when bison historically can return to the park based on snow and weather conditions, or capture or shoot them if hazing is unsuccessful" (page 11).
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> Appendix A of the ROD (i.e., Response to Comments on Final Environmental Impact Statement; Broad philosophical or approach issues; Topic: Science and Bison Management) indicates "[u]nder the Joint Management Plan, the length of the time period separating bison and cattle use of lands outside Yellowstone National Park will not impact the timeframe when bison are allowed outside the park. The bison will be allowed outside the park until certain dates (May 15 in the western boundary area and April 15 in the Reese Creek area of the northern boundary). Historically, on these dates, the agencies have been able to haze the bison back into the park successfully. The temporal separation period will be added on to those dates to determine when cattle may be turned on to cattle allotments" (page 50).

Management Action 3.2.d—Haze bison from the Gardiner basin into YNP with a target date of May 1.

> *Same portions of ROD described for Management Action 3.2.c*