

Memorandum

December 1, 2011

To: Files

From: Federal and State Interagency Bison Management Plan Agencies

Subject: Adaptive Management Adjustments to the Interagency Bison Management Plan and National and Montana Environmental Policy Act (NEPA/MEPA) Documentation

This document evaluates whether adaptive management adjustments represent a significant change in the proposed action relevant to environmental impacts that were disclosed in the Final Environmental Impact Statement (FEIS) and the federal and state Records of Decision (ROD) for the Interagency Bison Management Plan (IBMP) signed in December 2000 to coordinate bison management between the State of Montana and Yellowstone National Park.

The National Park Service (NPS) and the Department of Agriculture, Forest Service (USFS) were co-leads on the Final Environmental Impact Statement (FEIS), and the Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) was a cooperating agency. The Montana Department of Livestock (MDOL) and Montana Department of Fish, Wildlife, and Parks (MFWP) considered the FEIS prepared by the federal agencies in preparing their ROD in December 2000. These five agencies agreed to work cooperatively within an adaptive management framework to implement the IBMP. The Confederated Salish and Kootenai Tribes, InterTribal Buffalo Council, and Nez Perce Tribe became IBMP agencies in 2009.

The IBMP agencies anticipated adaptive management adjustments to the 2000 IBMP based on research, monitoring, and feedback from the implementation of a suite of conservation and risk management actions. Adjustments are intended to be applied within the framework of the IBMP and not alter its basic management direction or goals. In 2008, the federal and state agencies approved adjustments to the IBMP. The adjustments addressed circumstances for bison occupying lands outside the park, re-affirmed commitments to vaccinating bison and minimizing shipment of bison to domestic slaughter facilities, developed a method for sharing decision documents with public constituencies, and contained metrics for annual monitoring of and reporting on IBMP actions. These adjustments were documented in an adaptive management plan (see website <ibmp.info>).

During March 31 through April 21, 2011, the IBMP agencies signed an agreement to (1) allow bison on habitat on USFS and other lands north of the park boundary and south of Yankee Jim Canyon, (2) trailer up to 300 female and calf bison testing negative for brucellosis from the Stephens Creek capture facility to a double-fenced quarantine facility in Corwin Springs for holding until release back into the park in spring, and (3) evaluate the effects of these adjustments and modify as necessary to prevent bison from occupying lands north of the hydrological divide and minimize the risk of transmission of brucellosis to livestock. During the week of May 2, 2011, the State of Montana under a special use permit from the U.S. Forest Service installed wing fences from a bison guard on Highway 89 (installed on March 14, 2011) and a bison guard and wing fences along the county road west of the Yellowstone River.

The IBMP agencies now contemplate additional adjustments to the adaptive management plan for the IBMP. The agencies agreed in principle to these adjustments at a public IBMP meeting in May 2011 and are now documenting them for future implementation. These adjustments are: 1) allow bison to remain on the Horse Butte peninsula in Montana, where there are no cattle, until May 15 or as agreed-upon by

the agencies for hazing bison back into Yellowstone National Park; 2) develop funding sources for assisting landowners with fence repairs and compensating livestock operators for delaying the release of cattle on summer range; 3) recognize hunting by American Indian tribes and accommodate additional public and treaty hunting opportunities on suitable habitat in Montana; 4) consider the findings of recent genetic analyses and the effects of various management actions on genetic diversity in bison (with additional analysis after the evaluation is complete); and 5) implement changes in monitoring and documentation that will not have an impact on the environment (Table 1).

Proposed Adaptive Management Adjustments

Tolerance for Bison on Horse Butte

- Add management action 1.1a, management response 5 as “Allow bison to remain on Horse Butte, where there are no cattle, until May 15 or the agreed-upon haze-back date and plot the movement patterns and migration routes (without hazing) of bison with GPS collars.”

Landowner and Livestock Operator Compensation

- Add management action 1.3b, management response 3 as “Consider developing a new funding source to assist land owners with fencing damage from bison.”
- Add management action 1.3d as “Consider a voluntary compensation program to allow for adjusting the dates livestock are released on private land beyond May 15.
 - Monitoring metric 1: Annually document the number of acres and days made available to bison through the voluntary program (Leads = MDOL and MFWP).”

Public and Treaty Hunting

- Add “Objective 1.4: Recognize tribal treaty rights for hunting bison.
 - Management action 1.4 a: Allow bison to occupy National Forest System lands and other areas determined suitable within the designated tolerance area (Zone 2), and maximize timing and geographical extents to increase tribal hunt opportunities.
 - Monitoring metrics:
 1. Annually document the number of acres and number of days available for tribal hunting. (Leads = USFS and Tribes).
 2. Annually document the number of bison (by age and sex) harvested by tribal hunters. (Leads = Tribes).
 - Management action 1.4 b: Coordinate management activities that could potentially impact opportunities for tribal members to exercise their treaty rights.
 - Monitoring metric:
 1. Annually document the number of hazing operations while tribal hunts are occurring. (Leads = MDOL and Tribes).
 - Management responses:
 1. Tribal leadership involvement in and signatories to annual Operations Plan.
 2. Complete evaluation of opportunities for tribal hunting outside of the hunt period for licensed Montana hunters when bison are typically available in greater number (i.e., late winter or spring).”
- Add management action 2.2b, monitoring metric 2 as “Complete an assessment of suitable bison habitat in the Hebgen and Gardiner basin watersheds and explore appropriate new areas with increased tolerance for bison that could accommodate additional hunting opportunities (Leads = IBMP Subcommittee).”
- Add management action 2.2b, management response 2 as “Consider adjusting conservation zones and allow for increased tolerance in some areas to increase state and treaty hunting opportunities in

habitat outside YNP. For example, the Eagle Creek area could be expanded to include Maiden Basin, located north of Little Trail Creek and adjacent to Bison Hunting District 385.”

Genetics

- Replace management action 2.1b, monitoring metric 1 with “IBMP managers will consider the findings of genetic analyses that evaluate effective population size, allelic diversity, and effects of various management actions on the genetic diversity of Yellowstone bison and document findings as necessary (Lead = NPS).”

Monitoring and Documentation

- Revise management action 1.1a, monitoring metric 2 as “Annually document the number of bison in the west boundary management area and the number and type of management activities needed to manage bison distribution (Leads = MDOL and NPS).”
- Revise management action 1.1b, monitoring metric 2 as “Annually document the numbers and dates that bison attempt to move north of Yankee Jim Canyon into Tom Miner basin or the Paradise Valley (Leads = MDOL and MFWP).”
- Revise management action 1.1b, monitoring metric 3 “Annually document the number of bison in the north boundary management area and the number and types of management activities needed to (1) track disease management (Lead = MDOL), and (2) provide for public safety and property protection (Lead = MFWP).”
- Revise management Action 1.1b, monitoring metric 4 as “Annually collect data to update the relationships between bison herd and/or population size, snow pack, and the number of bison moving near or beyond the boundary of YNP (Lead = NPS).”
- Revise management action 1.2b, monitoring metric 3 as “Annually document the numbers and dates that bull bison attempt to move north of Yankee Jim Canyon into Tom Miner basin or the Paradise Valley (Leads = MDOL and MFWP).”
- Management Action 3.1c, Monitoring metric 1 “By June 15, determine and document the vaccination status of all “at-risk” cattle in or coming into the Hebgen and Gardiner basins (Leads = MDOL and APHIS).”
- Management Action 3.2a, Monitoring metric 3 “Annually document the amount of strategic fencing erected to minimize bison/cattle interaction (Leads = MDOL, MFWP, and USFS).”

Applicable National and Montana Environmental Policy Act Documents and Other Documents that Address the Proposed Adjustments

Montana Department of Livestock and Montana Fish, Wildlife, and Parks. 2000. Interagency bison management plan for the state of Montana and Yellowstone National Park. Record of Decision. December 22, 2000. Helena, Montana.

Montana Fish, Wildlife, and Parks. 2004. Final bison hunting environmental assessment. <[http://ibmp.info/Library/4%20-%20Hunt %201 %20 EA.pdf](http://ibmp.info/Library/4%20-%20Hunt%201%20EA.pdf)>.

Montana Fish, Wildlife, and Parks. 2004. Decision notice. Bison hunting. <[http://ibmp.info/Library/4%20-%20Hunt%202 %20ROD.pdf](http://ibmp.info/Library/4%20-%20Hunt%202%20ROD.pdf)>.

Montana Fish, Wildlife, and Parks. 2006. Letter DO348-06 dated July 21 from M.J. Hagener to Chairman J. Steele, Jr. regarding the exercise of treaty-reserved buffalo/bison hunting rights in Montana by the Confederated Salish and Kootenai Tribes of the Flathead Nation. Helena, Montana.

Montana Fish, Wildlife, and Parks. 2009. Letter DO488-09 dated December 14 from J. Maurier to Chairman A.A. Coby regarding the exercise of treaty-reserved buffalo/bison hunting rights in Montana by the Shoshone-Bannock Tribes. Helena, Montana.

Montana Fish, Wildlife, and Parks. 2010. Letter DO228-10 dated July 1 from J. Maurier to Chairman E. Patawa regarding the exercise of treaty-reserved buffalo/bison hunting rights in Montana by the

Confederated Tribes of the Umatilla Indian Reservation. Helena, Montana.
Office of the Governor, State of Montana. 2006. Letter DO056-06 dated January 27 from B. Schweitzer to Chairman R.A. Miles regarding the Nez Perce Tribe's exercise of treaty-reserved buffalo/bison hunting rights in Montana. Helena, Montana.
U.S. Department of the Interior, National Park Service (USDI) and United States Department of Agriculture, Forest Service, Animal and Plant Health Inspection Service (USDA). 2000. Final environmental impact statement for the interagency bison management plan for the State of Montana and Yellowstone National Park. Washington, D.C.
USDI and USDA. 2000. Record of decision for final environmental impact statement and bison management plan for the State of Montana and Yellowstone National Park. Washington, D.C.
USDI, USDA, and the State of Montana. 2008. Adaptive adjustments to the interagency bison management plan. National Park Service, Yellowstone National Park, Wyoming. <www.ibmp.info>.

NEPA and MEPA Adequacy Considerations

1. Are the proposed adjustments a feature of, or essentially similar to, actions or alternatives analyzed in the existing NEPA and MEPA documents? Is the project within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA and MEPA documents?

Yes. As described below, the proposed adjustments are actions or alternatives analyzed in the existing NEPA/MEPA documents, and will be implemented in the analysis area contemplated in the existing NEPA/MEPA documents. No additional NEPA/MEPA analyses are needed. Table 1 to this document displays the proposed adaptive management adjustments and describes the analysis in the FEIS.

Tolerance for Bison on Horse Butte

This adjustment would allow bison to remain on Horse Butte, where there are no cattle, until the May 15 date or as agreed-upon by the agencies for hazing bison back into Yellowstone National Park. Cattle have not been present on the Horse Butte peninsula since at least summer 2007. However, cattle are located nearby and across the lake, and bison have been known to swim across the lake or walk across it while the lake is frozen. The Modified Preferred Alternative in the FEIS indicated that, with experience and knowledge gained from adaptive management steps and tolerance limits, zone boundaries and management actions within the zones may be modified (page 186). Factors used by the agencies to estimate tolerance limits for bison in Montana include interspersed public and private lands, public and private landowner tolerance for bison in an area, geological or hydrological features limiting bison movement within a particular area, previous experience and observations of animal use on public lands in an area, and previous tolerance for wildlife on or adjacent to private lands (page 192). Thus, the adaptive management recommendation to extend the tolerance for bison on the Horse Butte peninsula does not exceed the impacts disclosed in the 2000 FEIS for the IBMP. This adjustment is consistent with the IBMP provision for a capture facility on Horse Butte. The option for the state to operate a capture facility on Horse Butte gives the State a tool to manage bison in the event that bison do not remain on the peninsula or threaten to move to areas with active cattle grazing. The state has not operated the Horse Butte capture facility since approximately 2008, but the option for them to do so could still be important under certain circumstances.

Landowner and Livestock Operator Compensation

These adjustments consider developing compensation programs to assist land owners with fencing damage and allow for adjusting the dates livestock are released on private land. Alternative 2 (Minimal Management) of the FEIS focused on changes in cattle operations for ranchers as the primary means to

minimize the risk of disease transmission. This could only take effect if ranchers were willing to sell land or easements, or receive compensation for changes in their existing cattle operations. It was recognized in the FEIS that determining which lands were appropriate for such changes, which owners were willing to sell, and negotiating compensation would take time (page 113). Changes could occur for producers with the modification of grazing allotments, purchase or easement of private property, and possible conversion of operations. The FEIS indicated modification of grazing allotments would have moderate to major adverse impacts on the owners of displaced herds (page 462) and that property damage could increase when bison were allowed outside the park (page 475). Overall, impacts on property from bison were expected to be negligible to minor, though individual landowners could experience moderate to major adverse effects. Effects are within the scope of those considered within the FEIS, as described above).

Public and Treaty Hunting

These adjustments recognize tribal treaty rights for hunting bison and coordinate management activities that could affect these hunts. Alternative 3 of the FEIS analyzed the management of Yellowstone bison with emphasis on public hunting. Alternative 3 called for the acquisition of bison winter range through purchase of grazing rights, easements, or property from willing sellers, modifications in cattle allotments, and/or changes in livestock operations to remove susceptible cattle (page 123). This winter range would include lands on the east side of the Yellowstone River on the Gallatin National Forest and on the west side of the river between Reese Creek and Yankee Jim Canyon (page 127). The MDOL, with help from the other agencies, would maintain a boundary at Yankee Jim Canyon, and hunting would be used to control population size and distribution of the bison herd (page 125).

Montana Fish, Wildlife, and Parks completed an environmental assessment and decision notice during 2004 for hunting by permit on public and private (with owner permission) lands specifically defined as areas where bison are seasonally tolerated outside the northern and western boundaries of Yellowstone National Park. Pursuant to Montana Code §81-2-120(1)(c), the MDOL, through its Board of Livestock, and the State Veterinarian authorized a limited public bison hunt as described in the final environmental assessment and decision notice. The MDOL incorporated as its own the analysis of the impacts to the human environment in the final environmental assessment. Under Senate Bill 91 (2005), 16 hunting licenses for bison are offered to eight American Indian tribes in Montana. Also, four American Indian tribes (Confederated Salish and Kootenai, Confederated Tribes of the Umatilla Reservation, Nez Perce, Shoshone-Bannock) have aboriginal rights to hunt bison on certain federal (USFS, BLM) and state lands in the Yellowstone area of Montana under treaties with the U.S. Government.

The impacts of public and treaty hunts on Yellowstone bison are consistent with Alternative 3 of the FEIS and the environmental assessment completed by MFWP. The State of Montana has taken the position that 50% of the bison harvest should be allocated to tribes with treaty rights and the remainder should be allocated to state-licensed hunters. Each season, MFWP sets a quota for state-licensed hunters and has taken the position that tribal treaty hunters are entitled to an equal total quota to be allocated among eligible tribes. Starting in 2007, MFWP set a state quota of 44 either-sex permits with up to 100 additional cow-calf permits if more than 60 bison were in a hunting district. The permits are allocated between two hunting districts in the Gardiner and West Yellowstone areas. The tribes have not formally agreed to this allocation, but have generally adhered to the recommendations in practice during 2005-2011. American Indian tribes have coordinated each summer with MFWP since 2007 regarding bison permits and harvests, and to ensure fair chase hunts, avoid killing every bison that is allowed out of the park, and preserve respect for the bison as a game animal and as a valuable part of tribal heritage and culture. Also, the State of Montana and American Indian tribes enforce regulation and permit requirements for their hunters by sending enforcement officers to oversee hunts. The IBMP agencies will continue to coordinate regarding bison quotas and harvests.

Genetics

This adjustment indicates that IBMP managers will consider the findings of genetic analyses that evaluate effective population size, allelic diversity, and effects of various management actions on the genetic diversity of Yellowstone bison. All alternatives in the FEIS predicted an increasing bison population within the range of 1,700 and 3,500, resulting in effective genetic population size well above the recommended theoretical minimums of 50-500 bison (pages 83, 388). However, the IBMP agencies indicated they would reevaluate the minimum population size when new information became available and adjust that number if necessary (Page 96, FEIS, Vol. 2). The NPS collaborated with the University of Montana during 2009-2010 to assess the effects of population fluctuations, management strategies, and variance in male reproductive success on genetic variation in Yellowstone bison (Beja-Pereira et al. 2009). Conservation of 95 percent of current genetic diversity was likely during the next 100 years regardless of the culling strategy they considered if there were more than 2,000 bison, moderate-to-high male reproductive success, and approximately five alleles per locus (Beja-Pereira et al. 2009). Yellowstone bison are believed to have moderate male reproductive success and microsatellites with approximately five alleles per locus, which is the specific location of a gene or DNA sequence on a chromosome. With similar male reproductive success and allele frequencies, the maintenance of 95 percent of genetic diversity for more than 200 years would likely be achieved with a fluctuating population size that averages about 3,000 bison and, at times, increases to more than 3,500 bison. The overall abundance of Yellowstone bison during the IBMP period (2001-2010), based on summer counts, was between 2,432 and 5,015 (average = 3,721). Thus, the analyses contained in the FEIS are still valid. We note that the NPS has analyzed information presented by Pringle (2011) in a separate analysis that is described below.

Monitoring and Documentation

These adjustments to the monitoring metrics in the 2008 Adaptive Management Plan for the IBMP will further enable the IBMP agencies to assess the effects and effectiveness of the IBMP and make adjustments under the adaptive management framework to achieve desired outcomes. The Modified Preferred Alternative in the FEIS employs an adaptive management approach that allows the agencies to gain experience and knowledge before proceeding to the next management step, particularly with regard to managing bison on winter range outside Yellowstone National Park (page 581). Likewise, the Joint Management Plan in the ROD indicates the agencies may agree to modify elements of this plan based on research and/or adaptive management findings ... which may provide agency personnel with flexibility to achieve the objectives of the actions set forth in this plan (page 32).

The NPS's monitoring activities are also categorically excluded under NPS's Director's Order 12. More specifically, categorical exclusion 3.4E.5 refers to nondestructive data collection, inventory, study, research, and monitoring activities for actions related to resource management and protection. A categorical exclusion is appropriate because there are no impacts to the human environment and no extraordinary circumstances.

2. Is the range of alternatives analyzed in the existing NEPA and MEPA documents appropriate with respect to the new proposed adjustments, given current environmental concerns, interests, and resource values?

Yes. The proposed adjustments are within the range of alternatives analyzed in the FEIS and ROD for the IBMP, as described under NEPA and MEPA Adequacy Consideration #1. The adjustments still maintain separation between cattle and bison, but also allow for bison to expand their habitat pursuant to the plan.

The range of alternatives analyzed in the FEIS is still appropriate in light of the adjustments that are being made.

3. Is the existing analysis valid in light of any new information or circumstances? Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the proposed adjustments?

The analyses contained in the FEIS for the IBMP are still valid and there is no new information or circumstances that would substantially change the analysis of impacts relative to the proposed adjustments, as described below.

Brucellosis Transmission Risk—Bison to Cattle

Two recent independent risk assessments concluded the risk of brucellosis transmission from bison to cattle was likely to be a relatively rare event and far outweighed by the risk from elk (Kilpatrick et al. 2009, Schumaker et al. 2010). These assessments were based on the current management regime of separating bison from cattle. However, the risk of brucellosis transmission between bison and cattle is still tangible and these assessments indicate risk will increase with increasing bison numbers, severe snow fall or thawing and freezing events, and as the area bison occupy outside Yellowstone in the winter increases and encompasses additional cattle grazing allotments. Thus, a deliberate risk management strategy such as the IBMP is necessary to maintain separation between bison and cattle during the bison birthing period.

Brucellosis Transmission Risk—Elk to Cattle

There have been several brucellosis infections to cattle from elk in the greater Yellowstone area during the past decade and the prevalence of the disease in elk has significantly increased in some areas. However, this new information does not change the analysis contained in the FEIS. The FEIS for the IBMP did “not analyze brucellosis in elk” per se (page x) because the stated purpose of the FEIS was to “... maintain a wild, free-ranging population of bison and address the risk of brucellosis transmission ...” by those bison to Montana cattle in the impact area (page 62). The FEIS acknowledged that elk carry brucellosis and detailed seroprevalence rates known at that time. However, the purpose of the FEIS has not changed and the existing analysis on risk of brucellosis transmission from bison to cattle is still valid.

APHIS Interim Rule

The APHIS published an interim rule in 2010 that removes the provision for automatic reclassification of any Class Free State or area to a lower status if two or more herds are found to have brucellosis within a 2-year period or if a single brucellosis-affected herd is not depopulated within 60 days. Under this protocol, detections of brucellosis in domestic livestock within the greater Yellowstone surveillance area are dealt with on a case-by-case basis. As long as the outbreaks are investigated and contained, then state status does not change. In fact, brucellosis was detected in several domestic bison and cattle herds in Idaho, Montana, and Wyoming during 2009 to 2011 without a change in state status. Thus, the negative economic impacts of any transmission of *Brucella* from bison to cattle will be less than described in the FEIS for the IBMP and would not substantially change the analysis of the proposed adjustments. However, it is still possible for a state to lose their brucellosis-free status and any Class Free State or area with *Brucella abortus* in wildlife must develop and implement a brucellosis management plan approved by the APHIS to maintain Class Free status. As a result, a deliberate risk management strategy such as the IBMP is still necessary to maintain separation between bison and cattle.

Bison Birth Synchrony and *Brucella* Persistence

The FEIS indicated that the separation of bison and cattle on public grazing allotments by 45 days should be adequate to eliminate the risk of cattle being exposed to viable *Brucella* bacteria (p. 189). New

information indicates that 99% of all births, when bison are mostly likely to shed *Brucella* bacteria, are completed before June 1st. Also, new information indicates the persistence of *Brucella* bacteria shed in the environment during late pregnancy is probably limited to a few weeks. This information should allow the agencies to adjust the temporal separation between cattle and bison, given prevailing climatic conditions outside the park during the spring. Based on this information, the time periods for bison being outside the park could be modified by the joint agreement of the agencies pursuant to and consistent with the FEIS (page 23).

Genetic Mutations

A study by Dr. T. H. Pringle in 2011 concluded that some Yellowstone bison have deleterious genetic mutations and, as a result, “are predicted significantly impaired in aerobic capacity, disrupting highly evolved cold tolerance, winter feeding behaviors, escape from predators and competition for breeding.” Dr. Pringle's work has not yet been peer reviewed. Pringle recommended excluding bison that do not carry the double mutation and are primarily found in the northern breeding herd from any culls if the NPS intends to manage the bison back to genetic health. Even if the genetic sequences and analyses reported by Pringle are correct, the information regarding bison genetics in the FEIS is still valid. This is true because genetic mutation does not automatically equal genetic disease—there are multiple compensating mechanisms in biological systems that combine to overcome theoretical metabolic deficiencies. Also, there is direct evidence that even if Yellowstone bison have some sort of genetic deficiency, it has not been manifested through any biologically significant effect on their ability to survive. Estimated annual survival rates and birth rates for adult female bison were quite high during 1995-2006; especially given the severe, prolonged, high-elevation winter conditions and predator-rich environment in and near Yellowstone National Park. The NPS is taking steps to follow-up on Dr. Pringle's work, and has completed an initial evaluation of his work in the context of the FEIS in a separate document.

4. Are the direct, indirect, and cumulative effects that would result from implementation of the new proposed adjustments similar (both quantitatively and qualitatively) to and within the range of those analyzed in the existing NEPA and MEPA documents? Yes. The proposed actions were analyzed in previous environmental analyses, as described under NEPA and MEPA Adequacy Consideration #1. Implementation of the adaptive management changes will result in similar direct, indirect, and cumulative effects that were analyzed in the MEPA/NEPA documents.

5. Is the public involvement and interagency review associated with existing NEPA and MEPA documents adequate for the current proposed action? Yes. Significant public involvement occurred during the initial planning and completion of the 2000 ROD for the IBMP. Since that time, the IBMP agencies have met several times per year in public venues to deliberate on monitoring actions and recommendations for adaptive management adjustments.

6. Have the proposed adjustments been discussed with stakeholders? Yes. The proposed adjustments were described and discussed at public meetings of the IBMP agencies during December 2010 and May 2011 and summarized in meeting notes posted on the IBMP website (ibmp.info).

Conclusion: Based on the review documented above, we conclude that the proposed adaptive management adjustments conform to the 2000 FEIS and ROD for the IBMP and documents prepared by the State of Montana under MEPA. The proposed adjustments constitute compliance by the federal and state agencies with the requirements of the NEPA and MEPA. No supplementation of the FEIS is required and there would be no impairment to the resources and values of Yellowstone National Park from implementation of the proposed actions.

Approval



Dan Wenk, Superintendent, Yellowstone National Park
12/1/2011
Date


Mary Erickson, Forest Supervisor, Gallatin National Forest
12/1/11
Date

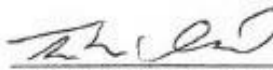
* 
Brian McCluskey, Western Regional Director, APHIS
12/17/11
Date


Christian MacKay, Executive Officer, Montana Board of Livestock
12/1/11
Date

* 
Marty Zaluski, State Veterinarian, Montana
17 Jan 2012
Date


Pat Flowers, Region 3 Director, Montana Fish, Wildlife, and Parks
12/1/11
Date

* 
Brooklyn Baptiste, Chairman, Nez Perce Tribe
1-19-12
Date


Tom McDonald, Division Manager, Confederated Salish and Kootenai Tribes
12-1-11
Date


Ervin Carlson, President, Inter Tribal Buffalo Council
12-1-11
Date

* = signatures added electronically following the meeting

Table 1. Management actions discussed in the 2000 Final Environmental Impact Statement (FEIS) for the Interagency Bison Management Plan (IBMP), adjustments to these actions (including monitoring metrics and management responses) in the 2008 Adaptive Management Plan, and proposed adjustments to the Adaptive Management Plan that were agreed on in May 2011.

2000 FEIS	2008 Adaptive Management Plan	May 2011 Proposed Adjustments	Impacts
Tolerance for Bison on Horse Butte			
<p>With experience and knowledge gained from adaptive management and tolerance limits, zone boundaries and management actions within the zones may be modified (page 186). The adaptive management framework allows the agencies to adjust tolerance limits for bison outside the park based on new information and experience (page 52).</p>	<p><u>Action 1.1a:</u> Consistent with the management responses outlined below, allow untested female bison (or mixed groups of males and females) to migrate onto and occupy the Horse Butte peninsula (between the Madison Arm of Hebgen Lake and Grayling Creek) and the Flats (the area east of South Fork Madison River, south of the Madison Arm, and west of Highway 191) each winter and spring in Zone 2.</p>	<p>Add <u>management response 5:</u> Allow bison to remain on Horse Butte until May 15 or as agreed by the agencies, where there are no cattle, until the agreed-upon haze-back date and plot the movement patterns and migration routes (without hazing) of bison with GPS collars.</p>	<p>The modified preferred alternative in the FEIS analyzed up to 100 untested bison spending winter in the West Yellowstone area (pages 429-437). Alternative 3 analyzed the effects of hunting in movement areas where bison might be found during winter, including Horse Butte peninsula (pages 127, 401-405).</p>
Landowner and Livestock Operator Compensation			
<p>The purpose for taking action is to prevent the transmission of brucellosis from Yellowstone bison to cattle (page 304). Bison outside the park can pose a serious but infrequent threat to public and private property (page 319).</p>	<p><u>Action 1.3b:</u> 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.</p>	<p>Add <u>management response 3:</u> Consider developing a new funding source to assist land owners with fencing damage from bison.</p>	<p>Property damage could increase slightly when bison are allowed outside the park. Impacts on property would be negligible to minor, though individual owners may experience moderate to major adverse effects (FEIS, page 475).</p>
<p>Alternative 2 (Minimal Management) of the FEIS focuses on changes in cattle operations for ranchers as the primary means to minimize the risk of disease transmission. This could only take effect if ranchers were willing to sell land or easements, or receive compensation for changes in their existing cattle operations. Determining which lands were appropriate for such changes,</p>	<p><u>Objective 1.3:</u> Reduce conflict between landowners, livestock operators, and bison outside Yellowstone National Park (YNP) via permit management, improved relations, education, and incentives.</p>	<p>Add <u>action 1.3d:</u> Consider a voluntary compensation program to allow for adjusting the dates livestock are released on private land beyond May 15. Add <u>action 1.3d, monitoring metric 1:</u> Annually document the number of acres and days made available to bison through the voluntary program.</p>	<p>Changes could occur for producers with the modification of grazing allotments, purchase or easement of private property, and possible conversion of operations. Modification of grazing allotments would have moderate to major adverse impacts on the owners of</p>

<p>which owners were willing to sell, and negotiating compensation would take time (page 113).</p>			<p>displaced herds (FEIS, page 462).</p>
<p>Public and Treaty Hunting</p>			
<p>Four American Indian tribes (Confederated Salish and Kootenai, Confederated Tribes of the Umatilla Reservation, Nez Perce, Shoshone-Bannock) have aboriginal rights to hunt bison on certain federal and state lands in the Yellowstone area of Montana under treaties with the U.S. Government. This was not included or discussed in the 2000 FEIS.</p>	<p><u>Goal #1</u>: Increase tolerance for bison in Zone 2 outside the north and west boundaries of YNP with no unacceptable consequences (e.g., transmission of brucellosis from bison to cattle, unacceptable impacts on public safety and private property).</p>	<p>Add <u>objective 1.4</u>: Recognize tribal treaty rights for hunting bison. Add <u>management action 1.4a</u>: Allow bison to occupy National Forest System lands and other areas determined suitable within the designated tolerance area (Zone 2), and maximize timing and geographical extents to increase tribal hunt opportunities. Add <u>management action 1.4a, monitoring metric 1</u>: Annually document the number of acres and number of days available for tribal hunting. Add <u>management action 1.4a, monitoring metric 2</u>: Annually document the number of bison (by age and sex) harvested by tribal hunters. Add <u>management action 1.4 b</u>: Coordinate management activities that could potentially impact opportunities for tribal members to exercise their treaty rights. Add <u>management action 1.4b, monitoring metric 1</u>: Annually document the number of hazing operations while tribal hunts are occurring. Add <u>management action 1.4b, management response 1</u>: Tribal leadership involvement in and signatories to Annual Operations Plan. Add <u>management action 1.4b, management response 2</u>: Complete evaluation of opportunities for tribal hunting outside of the hunt period for licensed Montana hunters when bison are</p>	<p>Tribal treaty hunters follow their own regulations, but the impacts of treaty and public hunts are expected to be similar to those analyzed under Alternative 3 of the FEIS since staff from Montana Fish, Wildlife, and Parks and the American Indian tribes coordinate each year regarding bison permits and harvests.</p>

		typically available in greater number (i.e. late winter or spring).	
Alternative 3 would rely on hunting of bison to regulate population numbers and distribution of bison outside the park, and on separation of bison in time and space to preclude contact of bison with cattle (page <i>xviii</i>).	<u>Action 2.2b</u> : 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.	Add <u>action 2.2b, monitoring metric 2</u> : Complete an assessment of suitable bison habitat in the Hebgen and Gardiner basin watersheds and explore appropriate new areas with increased tolerance for bison that could accommodate additional hunting opportunities.	Alternative 3 of the FEIS analyzed the management of bison with emphasis on public hunting. Montana Fish, Wildlife, and Parks completed an environmental assessment for a public bison hunt during 2004.
Alternative 3 would rely on hunting of bison to regulate population numbers and distribution of bison outside the park, and on separation of bison in time and space to preclude contact of bison with cattle (page <i>xviii</i>).	<u>Action 2.2b</u> : 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.	Add <u>action 2.2b, management response 2</u> : Consider adjusting conservation zones and allow for increased tolerance in some areas to increase state and treaty hunting opportunities in habitat outside YNP. For example, the Eagle Creek area could be expanded to include Maiden Basin, located north of Little Trail Creek and adjacent to Bison Hunting District 385.	Alternative 3 of the FEIS analyzed the management of Yellowstone bison with emphasis on public hunting. Montana Fish, Wildlife, and Parks completed an environmental assessment for a public bison hunt during 2004.
Genetics			
All alternatives in the FEIS predict increasing bison population within the range of 1,700 and 3,500, resulting in effective genetic population size well above the recommended minimums (page 388). However, the agencies will reevaluate the minimum population size when new information becomes available and adjust that number if necessary (Page 96, Vol. 2).	<u>Action 2.1b, monitoring metric 1</u> : Complete an assessment of the existing genetic diversity in Yellowstone bison and how the genetic integrity of Yellowstone bison may be affected by management removals (all sources combined) by October 2010 to estimate existing genetic diversity and substructure in the population.	Replace <u>management action 2.1b, monitoring metric 1</u> with: IBMP managers will consider the findings of genetic analyses that evaluate effective population size, allelic diversity, and effects of various management actions on the genetic diversity of Yellowstone bison.	Recent genetic assessments indicate an average of more than 3,000 bison on a decadal scale should retain the populations' adaptive capabilities with relatively high genetic diversity. The abundance of bison during the IBMP period was 2,432-5,015 (average = 3,721).
Monitoring and Documentation			
The adaptive management approach allows the agencies to gain experience and knowledge before proceeding to the next management step, particularly with regard to managing bison on winter range outside Yellowstone (page 581).	<u>Action 1.1a, monitoring metric 2</u> : Annually document the number of bison using Zone 2 and the number and type of management activities needed to manage bison distribution	Revise <u>action 1.1a, monitoring metric 2</u> as: Annually document the number of bison in the west boundary management area and the number and type of management activities needed to manage bison distribution.	This action consists of a change in monitoring and documentation that will not have an impact on the environment.
The adaptive management approach	<u>Action 1.1b, monitoring metric 2</u> :	Revise <u>action 1.1b, monitoring metric 2</u>	This action consists of a

allows the agencies to gain experience and knowledge before proceeding to the next management step, particularly with regard to managing bison on winter range outside Yellowstone (page 581).	Annually document the numbers and dates that bison attempt to exit Zone 2 by passing through Yankee Jim Canyon, west up to Mol Heron Creek canyon, or to the east side of the Yellowstone River and north of Little Trail Creek.	as: Annually document the numbers and dates that bison attempt to move north of Yankee Jim Canyon into Tom Miner basin or the Paradise Valley.	change in monitoring and documentation that will not have an impact on the environment.
The adaptive management approach allows the agencies to gain experience and knowledge before proceeding to the next management step, particularly with regard to managing bison on winter range outside Yellowstone (page 581).	<u>Action 1.1b, monitoring metric 3:</u> Annually document the number of bison using Zone 2 and the number of management activities needed to manage bison distribution.	Revise <u>action 1.1b, monitoring metric 3</u> as: Annually document the number of bison in the north boundary management area and the number and type of management activities needed to manage bison distribution.	This action consists of a change in monitoring and documentation that will not have an impact on the environment.
The adaptive management approach allows the agencies to gain experience and knowledge before proceeding to the next management step, particularly with regard to managing bison on winter range outside Yellowstone (page 581).	<u>Action 1.1b, monitoring metric 4:</u> Annually collect data to update the relationships between bison management at the Stephens Creek facility and the interaction between bison density and snow pack in the central and northern herds.	Revise <u>action 1.1b, monitoring metric 4</u> as: Annually collect data to update the relationships between bison herd and/or population size, snow pack, and the number of bison moving near or beyond the boundary of YNP. Consider the findings of analyses evaluating these relationships.	This action consists of a change in monitoring and documentation that will not have an impact on the environment.
The adaptive management approach allows the agencies to gain experience and knowledge before proceeding to the next management step, particularly with regard to managing bison on winter range outside Yellowstone (page 581).	<u>Action 1.2b, monitoring metric 3:</u> Annually document the numbers and dates that bull bison attempt to exit Zone 2 by passing through Yankee Jim Canyon, west up Mol Heron Creek canyon, or to the east side of the Yellowstone River and north of Little Trail Creek.	Revise <u>action 1.2b, monitoring metric 3</u> as: Annually document the numbers and dates that bull bison attempt to move north of Yankee Jim Canyon into Tom Miner basin or the Paradise Valley.	This action consists of a change in monitoring and documentation that will not have an impact on the environment.
One risk mitigation measure under the modified preferred alternative is that the vaccination of cattle in the impact area would be required if 100% voluntary vaccination is not achieved (page xxiii).	<u>Action 3.1c, monitoring metric 1:</u> By May 1, determine and document the vaccination status of all cattle in or coming into the Hebgen and Gardiner basins.	Replace <u>action 3.1c, monitoring metric 1</u> with: By June 15, determine and document the vaccination status of all “at-risk” cattle in or coming into the Hebgen and Gardiner basins.	This action consists of a change in monitoring and documentation that will not have an impact on the environment.
The modified preferred alternative relies on strict enforcement of spatial and temporal separation of potentially infectious bison or their birth products and susceptible cattle (page xxii).	<u>Action 3.2a:</u> Use spatial and temporal separation and hazing to prevent cattle/bison interactions.	Add <u>action 3.2a, monitoring metric 3:</u> Annually document the amount of strategic fencing erected to minimize bison/cattle interaction.	This action consists of added monitoring and documentation that will not have an impact on the environment.