DECISION NOTICE

Year-round Habitat for Yellowstone Bison Environmental Assessment
November 2015

Background

The environmental assessment evaluated the potential for the presence of bison year-round within locations adjacent to Yellowstone National Park (YNP) in Montana. Currently, bison migrating out of the Park during the winter are tolerated in specific areas within the Gardiner and Hebgen Basins. There were six alternatives evaluated that would be considered as an adaptive management adjustment to the Interagency Bison Management Plan (IBMP), in addition to the No Action Alternative in which no changes to the management of migrating Yellowstone bison would occur.

Five of the alternatives considered were based in part upon recommendations of the Yellowstone Bison Citizens Working Group (CWG). CWG's habitat recommendations were based upon the fact that the current bison population does not have access to enough year-round habitat outside of YNP. The CWG acknowledged that it would like to see bison have access to more of this habitat to allow for more fair-chase hunting as a population management tool, which is more desirable than the expenditure of taxpayer and sportspersons' license dollars to haze, capture, and slaughter of migrating bison.

The IBMP was established in 2000 in order to coordinate bison management among five agencies: Montana Fish, Wildlife & Parks (FWP), Montana Department of Livestock (DoL), National Park Service (NPS), United States Forest Service – Custer Gallatin National Forest (CGNF), and United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS). The Confederated Salish and Kootenai Tribes, InterTribal Buffalo Council, and Nez Perce Tribe became IBMP cooperating agencies in 2009; as such they also participate in any adaptive management adjustment decisions. In keeping with the adaptive management framework set up by the IBMP, the IBMP partner agencies meet several times a year to assess the effectiveness and outcomes of the IBMP management activities and incorporate short and long-term adaptive management adjustments to the IBMP based on prevailing conditions, experience, and new data.

Alternatives Analyzed

A) No Action – Management of migrating YNP bison would continue under guidance of the IBMP and bison would be confined to specific bison-tolerant zones in the Gardiner Basin and Hebgen Basin (Horse Butte and Madison Flats). Bison could use those zones during the winter and would be hazed back into YNP in May each year.

B) YNP Bison could use habitats year-round in the Gardiner Basin (bulls only) and portions of the Custer Gallatin National Forest (CGNF) near West Yellowstone (both sexes) – Under this alternative, the following adaptive management adjustments to

the IBMP would apply on 421,821 acres. Of those acres, 141,870 are currently used seasonally by bison.

- YNP bison (both sexes) could access and utilize habitat on portions of the CGNF west and north west of the park boundary, including: Horse Butte, the Madison Flats, south of U.S. Hwy 20, Monument Mountain Unit of the Lee Metcalf Wilderness, Cabin Creek Wildlife and Recreation Area, and Upper Gallatin River corridor to Buck Creek.
- YNP bull bison could access and utilize habitat on CGNF and other lands north of the park boundary and south of Yankee Jim Canyon year-round. Bison would be managed to prohibit travel north of the hydrological divide (i.e., mountain ridge-tops) between Dome Mountain/Paradise Valley and the Gardiner Basin on the east side of the Yellowstone River, and Tom Miner Basin and the Gardiner Basin on the west side of the Yellowstone River.

C) YNP bison (both sexes) could access and utilize habitats year-round on Custer Gallatin National Forest lands known as Horse Butte and north along the U.S. Highway 191 corridor north to Buck Creek

This alternative covers a smaller geographic area than Alternative B. It does not include the Madison Flats or the areas north and south of U.S. Highway 20. Total number of acres included is approximately 255,714. Management of bison on the west side would be identical to what was described for Alternative B except within a smaller area.

Ongoing documentation of bison management activities would continue under this alternative as described under Alternative B. New monitoring metrics would be added to track the effects of year-round bison within new areas.

D) YNP bison (both sexes) could access and utilize habitats year-round on Custer Gallatin National Forest lands near West Yellowstone only within the existing Zone 2 boundaries (Horse Butte and Madison Flats)

This alternative would include Horse Butte, the Madison Flats, and small area along U.S. Highway 8. These areas encompass approximately 37,870 acres and were identified in the 2000 ROD as Zone 2.

Management of bison in Zone 2 on the west side would not change from the IBMP Operating Procedures with the exception of the elimination of a permanent haze-back date for bison into YNP for the west side. The measurement matrixes currently used to monitor bison behaviors and movements, document livestock and landowner concerns/calls, summarize ongoing brucellosis/bison genetics research data and findings, summarize bison harvest by license and treaty hunters, and status of vaccination programs for bison and cattle would continue to be used.

E) YNP bison (both sexes) could access and utilize habitats year-round only on Horse Butte within Custer Gallatin National Forest near West Yellowstone

This alternative is identical to Alternative D except the geographic boundary of the year-round bison-tolerant area is smaller and bison within Zone 2 and outside Horse

Butte would be hazed either onto Horse Butte or back into YNP. Horse Butte encompasses approximately 11,500 acres.

Ongoing documentation of management activities would continue under this alternative. New monitoring metrics would be added to the management activities to track the effects of year-round bison within new areas. The metrics would be the same as described under Alternative B, with the exception of the elimination of any associated with the Gardiner Basin.

F) YNP bison (bulls only) could access and utilize existing bison-tolerant areas year-round within the Gardiner Basin

Bull bison currently may access and utilize the Eagle/Bear Creek area year-round. Under this alternative, bull bison could remain year-round in the Gardiner Basin, which includes the area between the northern boundary of YNP and the southern entrance to Yankee Jim Canyon. Bison would be managed to prohibit travel north of the hydrological divide (i.e., mountain ridge-tops) between Dome Mountain/Paradise Valley and the Gardiner Basin on the east side of the Yellowstone River, and Tom Miner basin and the Gardiner Basin on the west side of the Yellowstone River. Total number of acres within the northern bison-tolerant area is approximately 104,000.

New monitoring metrics would be added to the management activities to track the effects of year-round bison within new areas. The metrics would be the same as described under Alternative B, with the exception of the elimination of any associated with the west side management area.

G) Addendum: Geographic Tolerance Dependent upon Overall Bison Population

This alternative combines components of three alternatives (A, C, and E), with some additional management tools depending upon population levels. Montana is committed to maintaining a minimum population of 2,500 bison and maintaining wildlife viewing and hunting opportunities.

Montana Environmental Policy Act & Public Process

State agencies are required by the Montana Environmental Policy Act (MEPA) to assess potential impacts of its proposed actions to the human and physical environments, evaluate those impacts through an interdisciplinary approach, including public input, and make a decision to proceed or not with the project.

Draft Environmental Assessment

In preparation for the drafting of the environmental assessment (EA), the project and potential geographic alternatives was presented to 2,855 interested parties in the form of a scoping notice on July 23, 2012 and was posted on the FWP and DoL websites. In addition, a press release regarding the scoping effort was distributed to all major newspapers within the State of Montana on the same day. During the scoping period (July 23 - August 24, 2012), FWP and DoL hosted meetings in West Yellowstone (August 20) and in Gardiner (August 21). Approximately fifty

people attended each meeting. Comments by participants were transcribed at the meeting to ensure their accuracy and the commenter's intent. A total of 1,887 different individuals submitted comments via email and regular mail from instate, out-of-state, and international addresses during the scoping period.

An environmental assessment was completed by FWP and DoL and released for public comment originally from July 12, 2013 through August 13, 2013. In response to numerous requests to extend the public comment period, the agencies extended the comment period to September 13, 2013. This adjustment was publicized through a July 25th press release and on FWP's and DoL's websites. Both press releases were submitted to all the regional newspapers, including the *Bozeman Chronicle* and *Helena Independent Record.*

Two legal notices announcing the availability of the EA were published in each of the *Helena Independent Record, Livingston Enterprise,* and *The Bozeman Chronicle.* In addition to the announcement, the EA was posted on FWP's webpage - http://fwp.mt.gov/news/publicNotices/environmentalAssessments/plans/pn_0014.html .

An announcement regarding the availability of the EA was also distributed to over 3,100 individuals and organizations within Montana including local, state, and federal government offices; non-profit organizations; and other interest parties who have expressed interest in bison management in the past. Announcements were sent in the forms of an email, postcard or hard copy.

Addendum to the EA

With the completion of the public comment period, both the Director of FWP and DoL's Board of Livestock were presented with a summary of the public comments received and recommendations from their respective staff for a final decision. During an evaluation period by the Director and Board, a final decision could not be reached between the agencies on which alternative to choose. The Board of Livestock eventually sided with the no action alternative, while Fish, Wildlife and Parks wanted to choose Alternative B.

Since the two agencies reached differing conclusions and were unable to resolve their differences, the Governor directed that a new alternative be developed for a stepped approach for expanded tolerance on the west side of YNP, based on three total population ranges for bison, and no changes to seasonal bison management north of YNP.

The EA addendum was completed by FWP and released for public comment from November 10, 2014 through December 11, 2014. An announcement regarding the availability of the EA was distributed to over 3,500 individuals and organizations within Montana including local, state, and federal government offices; non-profit organizations; and other interest parties who have expressed interest in bison management in the past. Announcements were sent in the forms of an email or postcard. Additionally, the addendum was posted on FWP's website and a press release was distributed to all state media outlets.

Decision

The environmental assessment and its addendum considered an adaptive change to the Interagency Bison Management Plan (IBMP) to allow the presence of bison year-round in Montana on the perimeter of Yellowstone National Park (YNP). This modification is appropriate because of several changes in the science and factual circumstances underlying the original IBMP decision that was finalized in the year 2000. Those changes are:

- Cattle are no longer found on Horse Butte because of change in ownership and subsequent changes in land use.
- Several Forest Service grazing allotments have been closed, including those on Horse Butte and in the Taylor Fork drainage. For remaining allotments in the larger area, the Forest Service has adopted an adaptive approach to minimize risk of brucellosis transmission.
- Modifications in the federal rules that govern the response to brucellosis infection in cattle.
- New research indicating negligible risk of transmission of brucellosis from bull bison to cattle.
- Research on brucellosis persistence indicating decreased risk related to cattle turnout dates in the Hebgen Basin.
- Recognition of the role of elk as the primary transmission route of brucellosis infection to livestock.

All alternatives in the environmental assessment plus addendum were intended to:

1. Maintain a wild, free-ranging population by providing year-round habitat north and west of YNP.

2. Reduce the risk of brucellosis transmission between bison and cattle and manage other conflicts.

3. Provide the potential for greater hunting opportunities and the use of hunting as a tool for bison population management.

4. Expand opportunities for remote vaccination of bison for brucellosis.

5. Increase IBMP partner knowledge of bison behavior and movements within a larger geographic area.

The public offered over 100,000 comments on the draft EA and many additional comments were offered on the addendum, which are summarized with responses beginning on page 11. Many valid concerns were raised and the departments' responses are provided. With the ample public comment there was little agreement among the interested parties regarding the management of bison on year-round habitat outside of YNP. These wide-ranging opinions applied not only to the original alternatives, but also to the alternative offered in the addendum.

The acrimony surrounding this issue as captured in public comments on draft proposals is once again a reflection of conflicting public values and the complexity of bison management

surrounding YNP. Adding to the complexity is the nomadic nature of bison that results in seasonal bison movements across the YNP boundary into Montana, where different management expectations and approaches apply. Montana applies an approach that includes hazing, seasonal tolerance zones, and when necessary lethal removal, blended with treaty tribal and state-regulated hunting to limit numbers and address social conflicts. YNP generally relies on natural processes to regulate their wildlife populations, although through the IBMP the Park is committed to the use of the Stephens Creek trap and strategic hazing within YNP boundaries. Montana's challenge is to find a management solution that reconciles the differing management approaches within and outside YNP in a manner that best meets the management goals for bison in Montana.

On-going rancor regarding YNP bison management can lead to indecision or a default to status quo or a "no action" alternative, regardless of whether the current management is effective. In this case, Montana can improve upon bison management efforts by carefully implementing changes on the ground. Managers have and will continue to learn from this adaptive process, which is at the heart of the current bison management plan. It is in the spirit of continued improvement through adaptive measures that the selected alternative combines the valuable qualities of the alternatives previously considered in the draft EA and addendum.

Selected Alternative

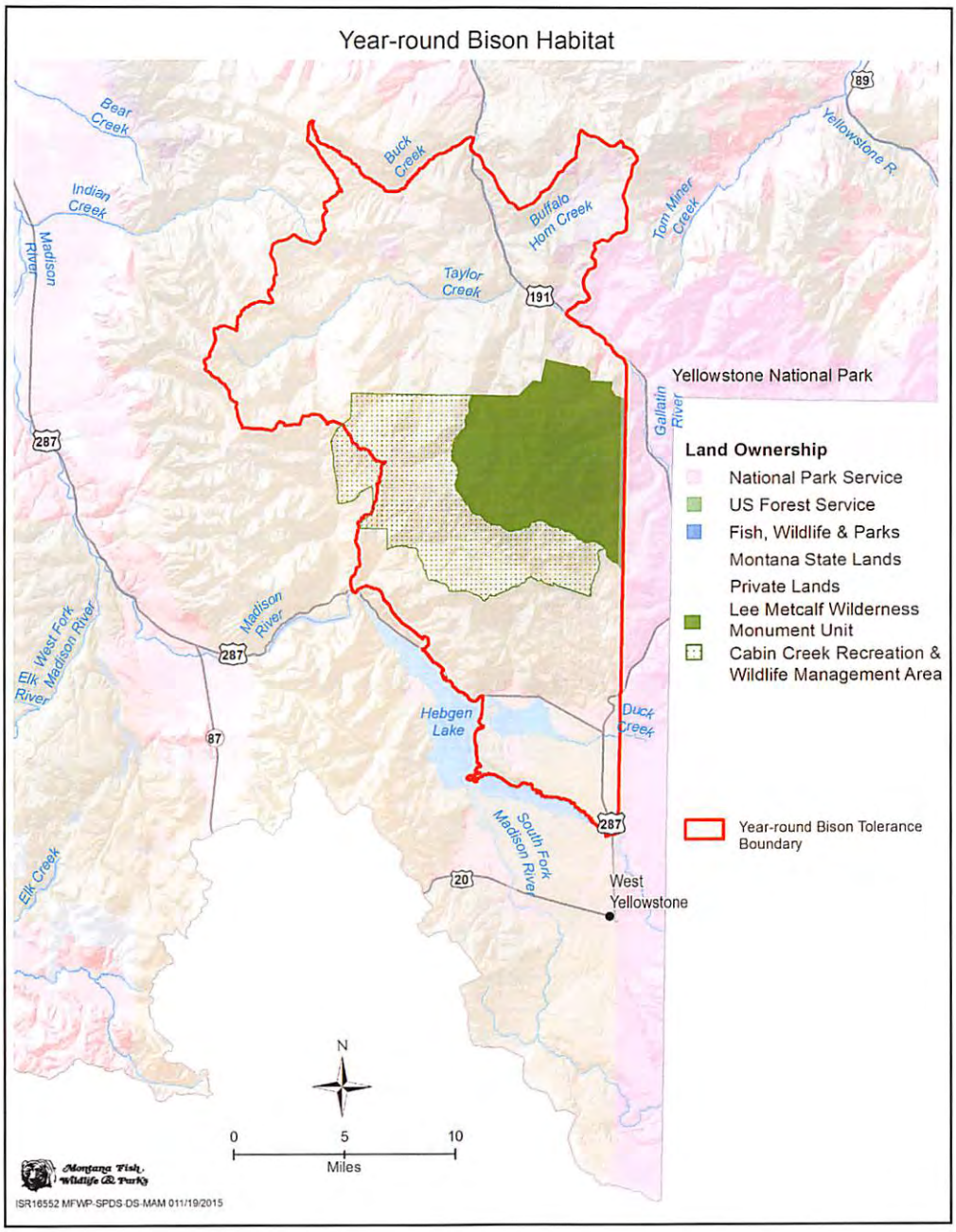
The selected alternative incorporates key features of previously considered Alternatives A-G. Montana will continue to use the management tools (as needed) that are associated with those alternatives, while applying them on the same landscape where bison will be tolerated year-round as described in Alternative G (page 8 of the 2014 Addendum to the Year-round Bison Habitat Draft Joint Environmental Assessment). Specifically:

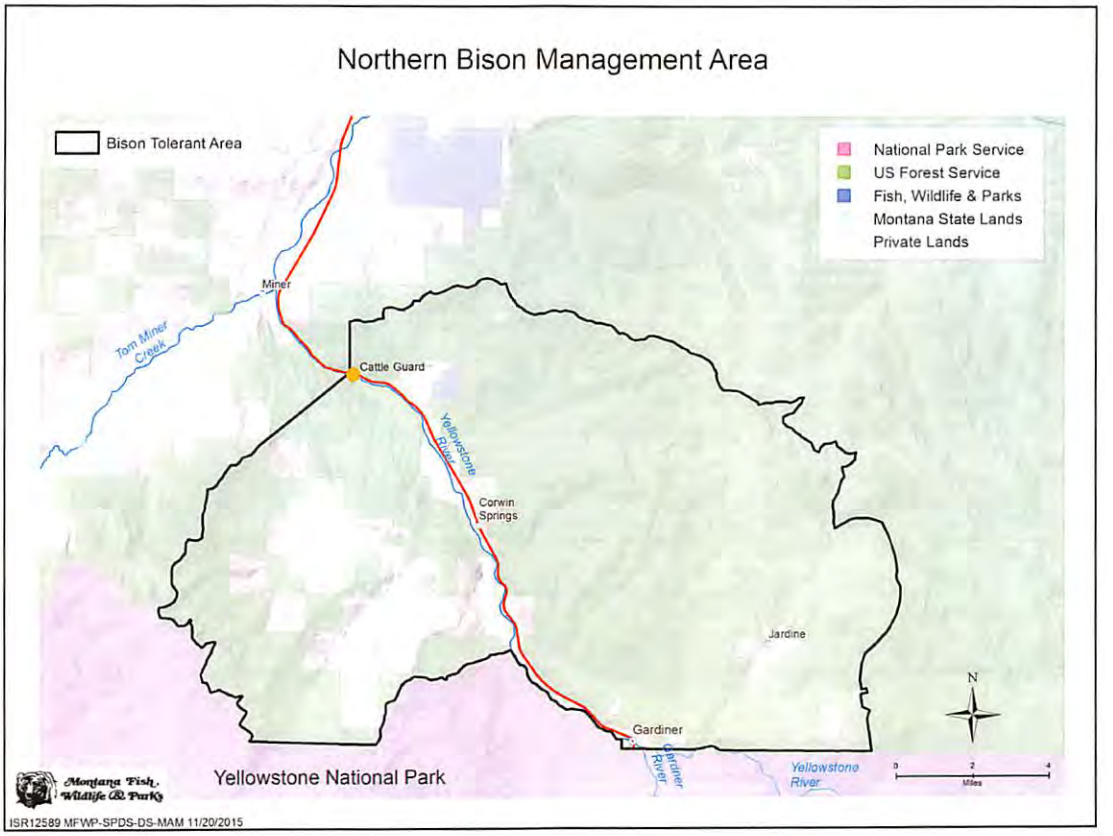
Geographic Range

- YNP bison will have access year-round to Horse Butte, and north along U.S. Highway 191 up to and including the Taylor Fork Drainage, as well as the Cabin Creek Wildlife Management Area and the Monument Mountain Unit of the Lee Metcalf Wilderness (year-round tolerance has been allowed in the Cabin Creek and Monument Mountain areas since the original IBMP in 2000).

- YNP bison will not have access south of the south fork of the Madison River outside of YNP, and in that area will continue to be managed under the 2000 IBMP Record of Decision and subsequent adaptive management changes. This area has been, and will continue to be, an area of complex and specialized management that needs to be addressed through further adaptive management actions.

- Bull bison will have year-round access within the Gardiner Basin from the northern boundary of YNP to the southern entrance of Yankee Jim Canyon. All bison will be managed to prohibit travel north of the hydrologic divide (i.e. mountain ridge-tops) toward Dome Mountain/Paradise Valley and Tom Miner Basin.


Year-round Bison Habitat
Bear Creek
Indian Creek
Madison River
Buck Creek
Buffalo Horn Creek
Taylor Creek
Tom Miner Creek
Yellowstone R.
89
191
287
Yellowstone National Park
Gallatin River
Land Ownership
National Park Service
US Forest Service
Fish, Wildlife & Parks
Montana State Lands
Private Lands
Lee Metcalf Wilderness Monument Unit
Cabin Creek Recreation & Wildlife Management Area
Madison River
West Fork Madison River
Elk River
87
Hebgen Lake
Duck Creek
South Fork Madison River
20
West Yellowstone
Elk Creek
Year-round Bison Tolerance Boundary
N
0
5
10
Miles
Montana Fish, Wildlife & Parks
ISR16552 MFWP-SPDS-DS-MAM 011/19/2015



Management

- This decision provides state agency managers (Montana Department of Livestock and Montana Fish, Wildlife and Parks) management discretion on the ground to address potential threats as they are anticipated or arise, rather than simply applying a uniform, inflexible management response that at times may be unnecessary and costly.

- Bison will be managed to enforce tolerance zones and address situational conflicts as appropriate, with a variety of tools including:

    - Hazing will be used to move bison away from imminent or anticipated contact with cattle, damage to private property, or risk to human safety. Bison will be hazed in the most efficient manner possible to eliminate the immediate risk and to limit the need for repeated hazing.
    - If hazing is impractical or ineffective in addressing imminent or anticipated contact with cattle, damage to private property, or risk to human safety, then bison may be trapped or lethally removed.
    - If bison go beyond the tolerance zone boundaries they will be hazed back within the tolerance area, removed by hunters with a valid license or treaty hunters, or removed through administrative action, such as portable trapping, shipment to slaughter, or lethal removal based on the discretion of state managers.

- The opportunity for bison to use year-round habitat in Montana will not be specifically linked to population levels within YNP. However, the efforts of YNP to manage population levels within the Park will be a consideration for state managers in adaptive management, as well as the number of bison migrating into Montana on the west side of YNP.

- State managers will manage the bison population in the Horse Butte area and up through the Taylor Fork Drainage within ranges or limits that avoid unacceptable human conflicts. The bison population ranges and limits will vary seasonally given the nomadic nature of bison and their sensitivity to specific weather patterns, population pressures, and winter range condition:

    - **Winter Season** (January through February) -- The initial range will be up to approximately 450 bison. This level of tolerance recognizes the role and importance of hunting as the preferred wildlife population management tool.

    - **Spring Season** (March through June) -- The initial desired range will be up to approximately 600 bison, recognizing that during this season population numbers can vary substantially because of weather and or conditions within YNP. Based on current experience, the spring migration of bison and winter range conditions often dictate bison spring movement in larger numbers into the Hebgen Basin. However, managers will continue to ensure bison stay within this expanded tolerance area. Once environmental conditions allow, bison tend to migrate back to YNP.

    - **Summer Season** (July through September) -- The initial limit will be up to approximately 250 bison. This level of tolerance allows bison to take advantage of summer conditions as needed within the tolerance area. Experience has shown that most bison will choose to move back to familiar summering areas within YNP.

    - **Fall Season** (September through December): The initial range will be up to approximately 450 bison. Again, this level of tolerance recognizes the role of hunting as the preferred wildlife population tool.

- This decision acknowledges that bison are nomadic in nature, and they will move in and out of Montana in varying numbers depending on the population size, time of year and environmental conditions. The largest migration has historically occurred in the spring as bison seek the early green up conditions that occur in the Hebgen Basin.

- If necessary, state managers may restrict the geographic range of the tolerance zones, limit additional migration of bison into these areas, and utilize any other management tool currently available, such as hazing or lethal removal.

- The ability to maintain temporal and spatial separation between bison and cattle operations remains a key conditional element and has already been successfully

demonstrated to protect cattle operations. Cattle and bison will not be permitted to comingle. There are no active cattle allotments on public lands in the management areas at issue on the west side tolerance area, so efforts there to protect existing cattle operations will depend upon the cooperation of the state agencies and private operators. The DoL, FWP and other IBMP agency partners will explore fencing and other options related to cattle and grazing properties within the tolerance areas at issue, engage affected landowners and operators, and consider available options and associated costs for further strengthening temporal and spatial separation.

- This state decision represents a proposed adaptive change under the adaptive management framework established by the current Interagency Bison Management Plan. If adopted by the IBMP managers, this adaptive change will be evaluated on an ongoing basis, and specifically reviewed by state managers approximately two years after it is formally adopted. Specific considerations for further adaptive change will include, but not be limited to: bison movements outside of tolerance areas, effectiveness of hunting in managing population and distribution, commitments and efforts of YNP to manage populations, private property and public safety conflicts, comingling events with cattle, adequacy of resources available for management in tolerance areas, and impacts to Montana's Designated Surveillance Area for brucellosis and brucellosis class-free status.

Monitoring

Existing IBMP management actions would continue to be measured and reported in IBMP Annual Reports. Many of the existing management actions and their metrics would be expanded to include documentation of the year-round activities of bison management and the tracking of public safety incidents, landowner relations, and brucellosis transmission. In addition to these monitoring metrics, FWP and DoL would add the following metrics to establish baseline and ongoing data about bison behavior and movements within the new tolerance zones.

- Complete periodic surveys of the number and distribution of bison within Horse Butte, the Flats, south of U.S. Highway 20, Monument Mountain Unit of the Lee Metcalf Wilderness, Cabin Creek Wildlife and Recreation Area, and Upper Gallatin River corridor to Buck Creek.
- Complete periodic surveys of the number and distribution of bull bison within the Gardiner Basin.
- Determine natural routes and timeframes for bison migrating back into YNP from tolerance zones.
- Document bison movements within tolerance zones.
- Annually document the numbers of bison and dates bison attempt to exit tolerance zone boundaries.
- Document and annually evaluate bison population interactions and coexistence with resident wildlife within tolerance zones.
- In cooperation with other agency partners, monitor existing vegetation and rangeland conditions. Document and evaluate any changes to conditions.
- Evaluate the effectiveness of natural boundaries of tolerance zones.

Conclusion

The selected alternative best balances the goals of this decision, as they were originally stated in the EA and restated in this decision document. It provides an opportunity for bison to utilize suitable habitat in Montana outside YNP within manageable confines, and limits the risk to property, public safety and disease transmission, while lowering the anticipated costs of management. Under this alternative, Montana can continue to employ the necessary tools to efficiently address management conflicts as they occur on the ground, rather than applying uniform and inflexible management measures on a large scale that have at times proven costly and ineffective.

The selected alternative will allow Montana to take full advantage of the willingness of Montana licensed and treaty tribal hunters to assist in the management of bison in a way that maintains a stable bison population, and achieves a desired population target by providing greater opportunity for bison hunting. Judging from past experience, it can be expected that hunting alone will at times be insufficient to maintain bison populations at desired levels, especially when mild winters do not force bison movement into Montana. When this circumstance arises, state managers will make every effort in subsequent years to look for additional hunting opportunities along with utilizing other population control measures.

The presence of brucellosis prevents YNP bison from being directly transported elsewhere to establish conservation herds, so managers will continue to retain existing population management tools beyond hunting, for example, trapping and shipping bison to slaughter as necessary. YNP managers have recognized that harvesting and culling of bison is necessary to limit abundance and distribution, and maintain tolerance for bison in nearby areas of Montana. YNP biologists have offered general guidelines for managing bison within a range of 2,500 to 4,500 animals, whereby: at the low end of the range, lethal removals are not employed; at the middle of the range, public and treaty hunting in Montana and some culling are employed; at the high end of the range, public and treaty hunting in Montana and increased culling are employed. In making further adaptive management decisions, state managers will consider, among other things, the actions being taken by YNP managers and the effectiveness of those actions.

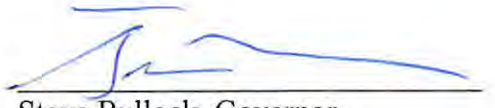
In determining appropriate tolerance for bison, state managers must also remain mindful of the state resources available for bison management. Montana must not allow tolerance levels for bison to exceed the state's available resources or abilities to manage them.

Finally, the northern and central bison herds have somewhat unique and predictable movement patterns within and outside of YNP, and become available for hunter harvest at different times of the year and in different numbers. These differences can and will be addressed as managers design population management guidelines intended to maintain stable populations within both groups, and Montana will continue to collaborate with YNP to achieve that end.

Within the bounds of the selected alternative, managers will adjust these approaches as needed on the ground to satisfy the goals of this alternative to the fullest extent possible.

This decision is for the State of Montana is pursuant to MCA 87-1-216. Before it is implemented under the IBMP procedures, it must be adopted by the IBMP partner agencies under their standard process for adaptive changes to the IBMP.

All those who submitted written comment will receive a copy of the Decision Notice. Additionally, this decision notice will be posted to FWP's website and a press release will be distributed to statewide newspapers.



Steve Bullock, Governor

Summary of Public Comments

Public participation is a mechanism for agencies to consider substantive comments on a proposal. Over 116,300 comments were received on the original draft EA in the forms of a unique letter or form letter from 92,433 individuals, which over 1,200 letters were from Montanans. For the addendum, just over 9,100 individuals submitted comments in similar forms as previously described, of which 700 were from Montanans.

All of the alternatives received some level of support, including the No Action Alternative. Of the seven alternatives, Alternative B received the highest level of support both in unique comments and those comments received as form letters from a variety of non-profit organizations.

Thirty-nine different organizations and government offices submitted comments. These ranged from non-profits with various focuses (wildlife, access, hunting, livestock, etc.) to local, state, and federal offices. In addition, five ranches from within the potential project area submitted comments.

Numerous comments were received pertaining to bison management in general and the status of the health and population of Yellowstone bison. Those comments are beyond the scope of this EA and are not addressed in the subsequent section. These include: 1) updating the IBMP 2) bison genetics, 3) consideration of other locations in Montana for bison expansion or relocation, 4) state agency jurisdiction over bison in Montana, 5) evaluation of habitats in nearby Montana state agency-owned lands and Idaho, and 7) classification of wild bison within Montana.

The following is a synopsis of comments received and the State's response to relevant comments generated during both public comment periods.

<u>Bison Management</u>

1. The National Park Service is not managing bison properly. Bison should be kept inside the park.

   Response: Wildlife residing within YNP is under the jurisdiction of the National Park Service and when wildlife migrates beyond those boundaries into Montana, they fall under the State's jurisdiction. In the case of Yellowstone bison, eight partner agencies have collaborated to manage, conserve, and protect the species through the guidance of the IBMP. Agencies involved with the IBMP include the Animal and Plant Health Inspection Service, Confederated Salish and Kootenai Tribes, InterTribal Buffalo Council, Montana Department of Livestock, Montana Fish, Wildlife and Parks, National Park Service, Nez Perce Tribe, and U.S. Forest Service.

   No wildlife, including bison, are confined within YNP because the NPS seeks to preserve and protect natural ecological processes, including unimpaired wildlife migrations or movements.

2. The bison herd should be thinned to match the available forage and winter range capacity. The overpopulation needs to be managed.

   Response: The theoretical food-limited carrying capacity for bison in Yellowstone is a population of 6,200. It is not the lack of forage with the Park that motivates bison to migrate; it's the lack of access to that forage under deep snow that motivates bison to move to lower elevations and potentially to areas outside the Park's boundaries. NPS biologists have observed when there is less snow cover within the Park, bison movements are more limited and shorter distances. When winter weather conditions are mild within the park, theoretically there would be ample forage for them to remain within the park's boundaries.

   It is the IBMP partner agencies' intent is to manage the bison population to a target of 3,000 bison through hunting and to use the trap at Stephens Creek when necessary for capture activities. Obtaining this target has been challenging because of varying hunting success rates and the inability to cull and ship bison for processing through Montana in recent years. Over the past four years, the population of Yellowstone Park's bison has ranged between 3,000 in 2008 and approximately 4,900 in the summer of 2015.

   As described in the 2015 IBMP Winter Operations Plan, "the IBMP Partners recommend removing 800-900 bison, with a goal (based on the 900 animal scenario) of 180 calves, 70 yearling females, 410 adult females, 60 yearling males, and 180 adult males. To reduce abundance and productivity, it is most important to meet the removal objectives for females and calves". The implementation of the Selected Alternative will provide an opportunity for greater access to bison earlier in the bison hunting season which could increase the hunter harvest level for tribal and license hunters. It is the preference of IBMP partner agencies to reduce the bison population through hunting rather than use the Stephens Creek capture facility.

3. Bison management should be consistent with the Forest Service's goal of providing habitat for indigenous species.

   Response: Current bison management considers the resources management goals of the Forest Service. The Forest Service is one of the IBMP partner agencies and provides input and guidance for adaptive management adjustments to the IBMP. Additionally, FWP staff have and will continue to consult directly with the Custer Gallatin National Forest staff on bison-related projects within the Gardiner and Hebgen Lake Ranger Districts.

4. The haze back date for the western boundary should be eliminated because it is unnecessary for disease management purposes and stressful on new born bison calves.

   Response: The target haze back date for the western boundary is May 15 and was set to ensure spatial and temporal separation of migrating bison and cattle; both permanent and seasonal occupants of the area's grazing leased lands. Although, the hazing date is set for mid-May, it often takes additional hazing activities by FWP and DoL staff through

mid-June to move all the bison back into the Park. As noted in the draft EA, typically bison calving begins by mid-April, but most births occur during May.

With the implementation of the Selected Alternative, migrating bison on the west side of YNP would have the opportunity to utilize designated year-round habitat, which would eliminate the need for hazing bison back into YNP during the spring and potentially reduce stress on new born calves. Within the Gardiner Basin, some spring hazing activities may be necessary to ensure female bison and calves return to YNP.

Further, bison management activities will continue to be used as needed to address specific situational conflicts.

5. FWP and DoL must follow the original IBMP guidelines. Both agencies are interpreting adaptive management beyond the intent of the original scope of the IBMP.

   Response: The adaptive management adjustments in the Selected Alternative are consistent with the original objectives of the IBMP that are "to maintain a wild, free-ranging population of bison and address the risk of brucellosis transmission to protect the economic interest and viability of the livestock industry in Montana." The implementation of the Selected Alternative will provide Yellowstone bison with the opportunity to migrate into a greater area of their historic range and allow the agencies to better manage bison numbers through hunting, and avoid unnecessary costs.

6. The agencies will not be able to confine the bison to the proposed new boundary.

   Response: Identical to the 2011 IBMP adaptive management adjustments that changed the boundary for the Gardiner Basin, bison are expected to be confined within the year-round habitat by the topography and by bison management actions, such as the use of fencing, hazing, and lethal removal, as needed to address situational conflicts.

7. Lethal removals could increase with project. This could have negative impacts on the public's perception of bison management.

   Response: The State does not expect the implementation of the Selected Alternative will require an increase in lethal removals of bison. However, lethal removal of bison will continue to be one of the management tools IBMP partner agencies could use to manage bison to protect personal property, provide for public safety, and prevent disease transmission.

   Public perceptions about bison and the species management may change with greater tolerance of bison within Montana. Providing year-round habitat in Montana to migrating Yellowstone bison should increase tribal and state licensed bison harvest as bison utilize the additional habitat thus decreasing the population's level and potentially, reducing bison human conflicts.

8. Need to update the IBMP to reflect adaptive management adjustments and evolving landscape. The IBMP will need to be updated if Alternatives B-E is chosen.

   Response: In November 2014, the State of Montana and NPS committed to cooperatively prepare an environmental impact statement (EIS) as an update to the 2000 Bison Management Plan EIS, which would provide the foundation for a revised IBMP. With the Selected Alternative, components of this alternative would need to be integrated into the discussion of the EIS's alternatives as appropriate. At this time, the State and NPS have completed the scoping phase for the development of the EIS. The results of this phase are available at http://parkplanning.nps.gov/documentsList.cfm?projectID=50877. The draft EIS is expected to be released for public comment in late summer 2016.

Brucellosis and Livestock

1. FWP needs to remove itself from the fourth objective on the IBMP, "elimination of brucellosis…".

   Response: As a partner agency of the IBMP, FWP cannot remove itself from the aforementioned objective since the objective was developed by the all IBMP partner agencies. FWP supports efforts to eradicate brucellosis from the YNP bison but recognizes the challenges limiting success and that any attempt toward eradication requires a cooperative effort among the IBMP partners.

2. Bison habitat expansion helps to spread brucellosis, thus impacting Montana ranchers. Bison will have increased exposure to brucellosis-infected elk in the areas thus serving as a conduit for spreading brucellosis to cattle.

   Response: Bison habitat expansion as proposed would not measurably increase the transmission risk of brucellosis within the State because we do not expect increased risk of exposure, and cattle producers within the Designed Surveillance Area (DSA) are already required to vaccinate and test their cattle for brucellosis. These DSA protocols would not change with the implementation of the Selected Alternative.

   As described in the draft EA, birth synchrony and cleaning behavior of bison, along with scavenging of birth tissues and bacterial degradation, quickly remove infected tissue from the environment, and the viability of Brucella is reduced resulting in lower risk of transmission. Transmission risk to cattle is very low by June 1 and essentially non-existent by June 15 (Aune et al. 2007; Jones et al. 2010).

   Kilpatrick et al. (2009) showed that areas of transmission risk from bison to cattle are localized in time and space. The current DSA requirements, DoL fencing program, and ongoing bison management protocols would continue to ensure spatial and temporal separation between bison generated Brucella and cattle. Additionally, DSA vaccination and testing requirements help to reduce the potential for transmission.

In response to the concern of bison having increased exposure to brucellosis-infected elk in the area, research conducted by Proffitt et al. (2010) between bison and elk on a shared winter range in the Madison headwaters area of Yellowstone during 1991 through 2006 showed that despite this relatively high risk of transmission, levels of elk exposure to B. abortus (2-4%) were similar to those in free-ranging elk populations that do not commingle with bison (1-3%), suggesting that B. abortus transmission from bison-to-elk under natural conditions is rare.

3. There is no scientific evidence that bison spread brucellosis.

   Response: Although bison-to-cattle transmission has been demonstrated experimentally, it has not been reported in the Greater Yellowstone Area, probably because of ongoing rigorous management actions to keep cattle and bison spatially and temporally separated (Rhyan et.al. 2013). However, because the potential for transmission between bison and livestock does exist, YNP bison are designated as a "species in need of management". Under the current laws of the State of Montana, FWP and DoL are obligated to work cooperatively to manage bison, thus managing the potential of the spread of a contagious disease to persons or livestock and for damage to persons and property by bison (§ 87-1-216 MCA).

4. Expensive and extensive testing measures are required for cattle shipped from Montana, because of the perceived lax control of brucellosis within the state (reference to Texas Animal Health Committee actions). More restrictions are likely to come from other states from this project, which will have economic impacts to Montana's beef industry.

   Response: Restrictions placed by the Texas Animal Health Commission on cattle imports from the DSA are the result of repeated findings of brucellosis in livestock which have been linked to exposure with brucellosis infected elk. The proposed alternative will not increase the risk of transmission of brucellosis from bison to livestock. There are no suggestions that more states intend to place additional restrictions on Montana's cattle exports.

5. Brucellosis causes fistulous withers in horses. More bison on the landscape increases the exposure of horses to an infectious disease.

   Response: Equine brucellosis is caused by B. abortus and most commonly manifests as fistulous withers. Horses usually become infested by ingestion of B. abortus-contaminated feed or comingling with cattle testing positive for B. abortus (Mair and Divers 2009). The incidence of B. abortus infection in the form of fistulous withers has significantly declined over time which has been attributed to the US Department of Agriculture's Brucellosis Eradication Program for cattle (McFadden 1994).

   FWP and DoL do not expect that additional bison on the landscape will increase risk of brucellosis infection in horses because of the birth synchrony and cleaning behavior of bison, along with scavenging of birth tissues and bacterial degradation, quickly removes

infected tissue from the environment, and the viability of Brucella is reduced resulting in lower risk of transmission through birthing tissues and fluids.

6. Bull bison can be carriers of brucellosis too.

   Response: Yes, bull bison can be carriers of brucellosis and the infection is focused in the reproductive organs. When infected with B. abortus, bulls develop orchitis, epididymitis, and seminal vesiculitus (Cheville et al. 1998). Painful lesions in genital organs of bull bison appear to affect fertility and libido; males with painful testes do not compete successfully in breeding (Cheville et al. 1998).

   The results of a recent study by USDA, "Shedding and Venereal Transmission of Brucella abortus by Bison Bulls in the Greater Yellowstone Area" found of the 50 bison tested for Brucella, a very small percentage (9%) of sero-positive bison were able to have brucellosis cultured in their semen though not at concentrations considered an infective dose for transmission to female bison (B. Frey APHIS, unpublished results 2012).

7. The presence of bison on Forest Service lands will impact grazing allotments. Once bison are allowed on public lands, cattle will not be able to use them. There is no guarantee bison will be out of the allotment areas when cattle arrive in the summer.

   Response: The perception that the presence of bison on Forest Service lands will immediately impact or trigger changes to grazing allotments is false. Through correspondence with Custer Gallatin National Forest (CGNF) by FWP during the scoping process and development of the draft EA, the Forest Service stated that they have the tools necessary to modify management of existing livestock grazing allotments to address any perceived conflicts between livestock and cattle on a case-by-case basis. Those tools include, but are not limited to: changing arrival and departure timing of livestock on an allotment or changing the class of livestock using a grazing area. However, at this point it is not known whether any changes would be considered necessary for the allotments in the CGNF where bison will be present year-round.

8. Removing or shifting seasonal livestock should occur on public lands.

   Response: The designation and use of public lands for cattle grazing is under the jurisdictions of the CGNF. The State of Montana does not have authority over those decision making processes. Many different resource goals area identified in the Gallatin National Forest Plan (1987) two of which recognized both the need to manage the forest for the benefit of indigenous wildlife and to improve range management and associated forage production.

Costs and Agency Resources

1. The EA doesn't mention monies or resources being expended to keep bison from destroying private property.

Response: As described in the draft EA, between November 2011 and August 2012, FWP staff responded to over 440 calls related to public safety, property damage, and hazing activities not related to the seasonal hazing of bison back into YNP. During the same months from 2012-13, FWP staff responded to 358 bison-related calls. These activities are considered part of the routine duties of FWP regional staff, and are covered by their annual salaries.

Monies expended by The Yellowstone Bison Coexistence Project, which is supported by Defenders of Wildlife, Greater Yellowstone Coalition, Natural Resources Defense Council, and Sierra Club, helped pay for fencing on private property to mitigate concerns about free-roaming bison. Past projects have included fencing for private property including home sites, trees and shrubs, cattle pasture, and a spring box. As of December 2013, the partners of the Coexistence Project have expended $20,800 to complete 15 projects since 2011.

2. Additional bison-related assistance by local agencies may increase with the expansion of year-round habitat, thus leading to added cost and strain to those agencies and being a burden to taxpayers.

   Response: As acknowledged in the draft EA, local law enforcement staff could be impacted as well in responding to bison-related conflicts because they may have a shorter distance to the incident than an FWP warden or they might be the first person who is contacted. Currently, FWP wardens and other IBMP partner agency staff work closely with local law enforcement offices to coordinate responses to bison-related incidents.

   It is FWP's intention to investigate the opportunity to hire additional staff that could be dedicated to bison management, such as the bison technician as described in Section 2.8 of the draft EA, thus lessening the burden on local law enforcement.

3. Could use monies generated from bison hunting to address property damage by bison.

   Response: Although this would be a creative option to fund efforts to reduce damage to private property, this use of license funds for the purpose of paying for property damage by FWP would be considered a diversion of license funds and would jeopardize FWP from receiving federal funds for fisheries and wildlife conservation and restoration projects. In order to receive Wallop/Breaux, Pittman/Robertson, and State Wildlife Grants funds from the US Fish and Wildlife Service, Montana agreed to use its state hunting and fishing license revenues only for fisheries and wildlife management. (§ 87-1-701, 708, and 710 MCA)

4. Need to clarify cost estimates, including current hazing costs, in the EA for Alternative A.

   Response: As described in the draft EA, FWP expenses for bison-related management activities, which include hazing, response to landowner calls and public safety incidents,

and assistance for other IBMP partner activities, are included under the existing budgets for regional wildlife management, enforcement duties, and general administration. There is no cost accounting linked directly to bison management activities.

DoL's annual bison management budget is $250,000 which covers expenses for the handling and testing of YNP bison.

The description of costs noted above is applicable to Alternative A (No Action) since it reflects the current costs of bison management by the agencies.

5. Funding sources for the proposed management actions are missing from the EA. There will be potential increased costs associated with the proposed management actions which may be difficult to fund.

Response: As described in the draft EA and in response #4 above, the current bison management activities are part of the assigned duties of FWP staff. Those positions are funded by license dollars. As reported in the 2011 FWP Annual Report, hunting and fishing licenses contributed for approximately 65% of the department's annual budget. In contrast, DoL's bison management activities are funded by US Department of Agriculture's Animal Plant Health Inspection Service.

The implementation of the Selected Alternative would not change funding sources for bison management activities by FWP and DoL. Costs of implementation are anticipated to be reduced for DoL. Implementation of year-round tolerance will reduce annual hazing efforts, and responses to disease threats will utilize current staff with smaller, less intensive operations. It is anticipated that implementation of year-round tolerance will increase operational costs for FWP, as the department may see a greater need to respond to private property and public safety concerns, as directed by state law.

Habitat

1. Introduction of bison in to the area during the growing season of vegetation will negatively impact the forage available for elk and other ungulates.

Response: As described in the draft EA, presence of year-round bison in designated portions of the CGNF would not likely affect ungulate species based on the following:

- *Bighorn sheep and bison diets are not significantly associated with each other (Singer et al. 1994). Furthermore, traditional bighorn sheep range in much of North America typically is located in terrain not associated with bison use (Reynolds et al. 2003).*
- *Pronghorn antelope are highly selective feeders (Schwartz et al. 1977) whereas bison are more flexible in choice of diet. The theory that large and small ruminants will not compete with each other for food resources (Bell 1971) is further affirmed by similarity in sheep and pronghorn diets and dissimilarity to bison diets (Peden 1972).*

- *Moose and bison habitats of the plains do not overlap (Reynolds et al. 2003). Moose forage on willows and other woody browse, particularly when preferred forage is of poor quality (Larter et al. 1994). Furthermore, because of the difference in height, moose are able to take advantage of taller browse than bison. In general, moose are primarily browsers and bison are primarily grazers and therefore are considered to be more complimentary than competitive in feeding habits (Reynolds et al. 2003).*
- *Elk have a low to moderate diet overlap but high habitat overlap with bison; however at much higher ungulate densities, these species did not have to compete for either in the analysis area (Singer et al. 1994).*
- *As for deer species, there appears to be little, if any, habitat or diet overlap between white-tailed deer and bison. Although bison and mule deer experience some degree of overlap in habitat use, there appears to be little or no competition between these two species because of differing diet preferences (Singer et al. 1994). Competition may also be precluded by seasonal distribution differences and by the limited ability of deer to deal with deep snow (Barmore 1980).*

A chart comparing the habitat use and food habits of ungulates and bison is available on page 76 in the draft EA.

With the implementation of the Selected Alternative, FWP and DoL would: 1) document and annually evaluate bison population interactions and coexistence with resident wildlife within tolerance zones and 2) in cooperation with other agency partners, monitor existing vegetation and rangeland conditions and document and evaluate any changes to conditions.

2. Dome Mountain Wildlife Management Area should be open year-round to bison.

   Response: At the present time and under the Selected Alternative the Dome Mountain WMA is beyond the boundaries of the approved bison tolerant area north of YNP. Other impediments for considering the use of the WMA by bison include: close proximity of numerous cattle operations north of Yankee Jim Canyon, difficulty of keeping bison within the WMA's boundaries, numerous adjacent privately-owned lands, and the need to isolate a species needing special management.

3. Bison will destroy riparian areas and threatened plant species of concern.

   Response: FWP believes bison pose no more of a threat to riparian area and species of concern plants than do other mammals using the project area. Results of three studies showed that bison do not center their foraging activities on permanent water sources [Nelson (1965), Norland (1984) and Van Vuren (2001)]. Instead, once the bison's water needs were satisfied, they immediately began grazing and moving away from the water body. Since bison do not remain in specific spots (locations) for long periods of time, they allow plant communities to recover before being regrazed during the growing season.

FWP acknowledges the potential impact bison may have by consuming or trampling vegetation and sensitive plant species associated with riparian areas by consumption as described in the draft EA and applicable to the Selected Alternative as well, potential impacts to vegetation are anticipated to be mixed with impacts characterized as beneficial for maintenance of biological diversity in native plant communities but detrimental to goals of monoculture type communities as managed by many agricultural interests.

As described in the description of the Selected Alternative, FWP and DoL would work with other agency partners to monitor existing vegetation and document and evaluate any changes to those conditions.

4. Bison have the potential to spread noxious weeds into new areas.

   Response: As described in the draft EA, bison wallowing behavior also has the potential to spread seeds, both native and invasive. Many seeds have adaptations such as hooks, awns, and/or barbs that increase efficiency of seed dispersal by animals (Mori et al. 1998). When bison wallow, they embed plant seeds into their fur and later release the seeds into the environment as they wallow elsewhere (Stoneburner 2012). The addition of bison within the new habitats may have positive benefits to some plant species in the dispersion of their seeds. Rosas et al. (2008) concluded that bison were potentially important dispersers of forbs and graminoids.

   The ongoing weed management efforts by the Forest Service is expected to help mitigate potential negative impacts of bison by decreasing the spread of noxious weeds through a combination of techniques including herbicides, biological control agents, mechanical treatments, and cultural treatments (e.g. re-seeding or grazing) (USFS 2005).

   As previously described, with the implementation of the Selected Alternative FWP and DoL would work with other agency partners to monitor existing vegetation and document and evaluate any changes to those conditions, including the spread of noxious weeds.

5. Bison will not utilize the higher elevations of the Gardiner Basin. The Cabin Creek and Monument Mountain areas have no winter range for bison. Bison will move down to lower elevations and private property.

   Response: As reflected in Appendix D of the draft EA, Current and Predicted Bison Habitat Maps, within the Gardiner Basin approximately 7,100 acres of the 102,501-acre bison-tolerant area is currently being utilized by bison during the winter and early spring. If bison were able to utilize the Gardner Basin year-round, it is predicted an additional 23,000 acres would be used by bison, which included high mountain meadows and creek drainages. It is correct to assume bison would not use the upper elevations of Basin since their preferred forage would not be present and the terrain is not conducive for bison movements.

As for the attributes of the Cabin Creek and Monument Mountain areas, the elevation ranges from 7,200 to over 10,000 feet above sea level. In comparison, the elevation of West Yellowstone is 6,667 feet above sea level. The vegetation present within the Cabin Creek Area and adjoining Monument Mountain Unit is associated with forested, mountain meadow, alpine meadow, or rock rubble habitats (USDI et al. 2000a). Although, the higher elevations of the Cabin Creek and Monument Mountain areas would be inaccessible to bison during the winter because of deep snow, the lower drainages are anticipated to provide some winter habitat.

As described in the draft EA, bison utilize the woodlands in the winter when the accumulation of snow prevents feeding in more open terrain (Meagher 1978; Burde and Feldhamer, 2005). Bison have evolved with the ability to remove up to 18 inches of snow with their large low-hanging head in order to access the underlying vegetation (Meagher 1978; Picton 2005). This adaptation allows bison to effectively feed on natural sources during the winter season in conditions that may limit the forage ability of other wild ungulates and may require the diet of domestic livestock to be supplemented (Meagher 1978). Furthermore, based on observations by NPS staff, bison have been seen at elevations of 8,500 when windswept ridges are cleared of snow and grasses are exposed. NPS have also observed bison remove snow up to 36 inches in depth to reach vegetation in marshes and wetlands.

If bison movements or presence threaten public safety or private property, FWP enforcement staff would intervene as they are currently doing to decrease seasonal bison-human conflicts around the communities of Gardiner and West Yellowstone.

As described in the narrative of the Selected Alternative, FWP and DoL would: 1) complete periodic surveys of the number and distribution of bison within Horse Butte, the Flats, south of U.S. Highway 20, Monument Mountain Unit of the Lee Metcalf Wilderness, Cabin Creek Wildlife and Recreation Area, and Upper Gallatin River corridor to Buck Creek, 2)complete periodic surveys of the number and distribution of bull bison within the Gardiner Basin, and 3) in cooperation with other agency partners, monitor existing vegetation and rangeland conditions and document and evaluate any changes to conditions. This data would be used to show where and how bison are using the new available habitat.

6. Increasing the amount of forage available to bison may lead to a rapid increase in the bison population and surpass the IBMP's population goals. An increasing bison population will drive the need for further habitat expansion.

Response: The availability of forage has not been a trigger for higher birthrate and the migration of bison to year-round habitat is not expected to affect the current birthrate of the species. As noted in an earlier response (page 8 #2), the theoretical food-limited carrying capacity of 6,200 in Yellowstone; thus the carrying capacity within the park has yet to be tested.

Future increases in the number of YNP bison would not be the driving factor for the need for further habitat expansion. The IBMP partner agencies have set the target population goal at 3,000, which is the amount of bison considered necessary to conserve the genetic integrity of the species and balance the needs of public (e.g. public safety, manage for disease, etc.). The implementation of the Selected Alternative will not change the target population of 3,000 bison.

The implementation of the Selected Alternative, would provide bison the opportunity to utilize habitat beyond YNP year-round, but it could also increase the number of bison harvested by tribal and license hunters, contributing to a decrease in the actual population level.

7. There should be some discussion of different dispersal mechanisms to new habitats, such as translocations to the Upper Gallatin, other than relying on natural migration.

   Response: The use of artificial methods was originally considered by FWP and DoL to assist in the dispersal of bison to new habitat because that idea was submitted to the agencies during the scoping process for the EA. Translocation of YNP bison to new habitats under consideration was dismissed because it conflicted with the intent of the proposed action: to provide opportunities for the natural migration of bison to occur.

   If artificial methods were used to assist in the dispersal of bison to new year-round habitats, such as movement of bison by trucks, the requirements of §87-1-216 MCA would need to be met before the project was initiated.

Hunting

1. Hunting opportunities should increase to control bison population when carrying capacity is exceeded. Consider changing the bison hunting season to expand hunting opportunities and help reduce the population.

   Response: FWP agrees that hunting opportunities for bison should be used to assist in the reduction in the population of YNP bison. As approved by the FWP Fish and Wildlife Commission in December 2013, adjustments were made to the bison hunting regulations to increase the number of available licenses from a total of 50 to 80 and the Cabin Creek/Monument Unit and the West Yellowstone areas of HD 395 were combined to increase the physical area where bison can be legally hunted.

   As described in the response to comment #2 under Bison Management, the current population (approx. 4,900) of bison has not reached the theoretical carrying capacity (6,200 bison) of the available forage within YNP. The target population for bison has been set by the IBMP partner agencies of 3,000, and that target remains the same with implementation of the Selected Alternative.

2. Using hunting as a population management tool is not working.

   Response: Using hunting as the only bison population management tool was not the intent of reestablishing a bison season. Hunting is one of the tools available for management of numbers and distribution of Yellowstone bison, as is the transfer of bison to Native American tribes and capture/slaughter. Use of all the population management tools will control population levels. The main challenge for a successful bison hunt is the alignment of weather conditions within the Park to motivate bison to migrate beyond the park's boundaries and hunting season dates. FWP has the ability to adjust the dates to increase the potential of hunting success, but obviously cannot control the natural variability of weather.

   Year-round presence of bison in designated areas may increase hunting opportunities for tribal and license hunters given the current bison hunting season period.

3. The section in the EA on hunting should include commitments for ethical hunting management: support of fair-chase hunting, avoid the take of pregnant cows during late gestation and minimize interference with natural selection and genetic drift by targeting yearlings and very old bison.

   Response: FWP is committed to providing opportunities for fair-chase hunting for all game species. This issue is an ongoing discussion topic among IBMP partners and they made efforts to ensure fair-chase hunting. Improvement has occurred, but more efforts are needed.

4. The EA did not include a discussion of tribal hunting strategies (e.g. number of permits issued and the timing of tribal hunts).

   Response: FWP meets annually with those tribes to discuss the coordination of license and tribal bison hunting in Montana, as well as, the ongoing management and conservation of the species. Tribal hunting strategies are under the jurisdiction of the individual treaty tribes that include the Nez Perce, Confederated Tribes of the Salish and Kootenai, the Shoshone-Bannock Tribes, and Confederated Tribes of the Umatilla Reservation. Treaty tribes are those who retain treaty rights to hunt Yellowstone bison on any open and unclaimed federal lands such as those owned by the US Forest Service or Bureau of Land Management.

9. A population management discussion must occur before habitat expansion proposals can be thoroughly examined. Work with Tribes to establish a minimum year-round population objective.

   Response: The target population identified in the IBMP is 3,000 bison, and that will remain the same under the selected alternative. The InterTribal Buffalo Council, Nez Perce, and Confederated Salish and Kootenai Tribes are represented as partner agencies of the IBMP and their input regarding the management of Yellowstone bison is considered, as is the input of all the other partner agencies.

Other Wildlife

1. Additional fencing along highways would negatively impact migrating wildlife (e.g. antelope within the Gardiner Basin).

   Response: Numerous fences already exist in both proposed project areas adjacent to YNP, erected by private landowners for various purposes including the containment of cattle or horses, delineation of property boundaries or irrigated fields, exclusion of wildlife, and protection of private property.

   FWP is sensitive to the needs of resident and transient wildlife species in the areas adjacent to the Park. Any new fencing necessary to restrict or redirect bison movements would consider the needs of all wildlife when they are designed and installed.

   Three different fence designs have been used effectively in the Gardiner Basin for a spatial barrier between bison and cattle and to protect private property that could be used along highways. The first design is a 4-5 foot wire high tensile fence with visual markers on the top wire. A smooth wire can be installed twenty inches from the fence's base as needed. The other two designs are variations of a jackleg fences with top rail at a height of five foot and the lowest rail placed at three feet above the ground to allow for wildlife passage.

- *Ongoing adjustments to any new fencing may be necessary to continue to minimize impacts to wildlife movements. As previously described, with the implementation of the Selected Alternative FWP and DoL would document and annually evaluate bison population interactions and coexistence with resident wildlife within tolerance zones.*

Property Damage

1. Migrating bison will destroy private property such as fences, trees, and landscaping. Some damages caused to private property are influenced by hazing activities. The elimination of hazing activities will decrease damages to private property.

   Response: During the winter bison migrations beyond YNP bison have caused some damage to private property, which have been documented in IBMP Annual Report. As reported in the 2014 Annual Report, between December 2013 and July 2014 FWP staff responded to 413 calls related to bison-related public safety and private property incidents.

   With implementation of any of the alternatives, some damage to private property may continue to occur as bison migrate into Montana during the winter. Currently, threat of damage to private property has been lessened by the installation of additional fencing with the assistance of the Yellowstone Bison Coexistence Project and on-going communication between FWP staff and landowners when location-specific hazing

activities are required. These types of methods, as well as lethal removal, would continue to be used under the Selected Alternative.

The frequency and intensity of hazing activities will decrease under the Selected Alternative, which could lead to a decrease in private property damage during hazing activities as describe in the EA and EA addendum.

2. The federal and state governments offer no viable plan to mitigate losses caused by bison.

   Response: In the draft EA numerous methods to decrease or mitigate the potential damages caused by bison are described, such as site-specific hazing activities, uses of fencing to redirect bison movements or to protect private property, and use of additional signage to inform the public of bison presence along roadways. Also, see response to #5 of this section.

3. Additional fencing to keep bison away from private property will be burdensome to landowners and businesses. Some compensation should be provided to landowners. Most insurance groups will not cover damages caused by bison.

   Response: There are two programs currently supported by different entities which assist landowners with fencing in order to minimize damage to private property and comingling of bison and livestock. First is the Yellowstone Bison Coexistence Project is supported by Horse Butte Neighbors of Buffalo, Yellowstone Basin Inn, Defenders of Wildlife, Greater Yellowstone Coalition, Natural Resources Defense Council, and Sierra Club. The 2012 program offers landowners in the Gardiner and Hebgen Basins financial assistance for the installation of fencing to help mitigate concerns about free-roaming bison. Past projects have included fencing wetlands, private yards by homes, trees and shrubs, cattle pasture, and a spring box. The second is DoL's program to assist livestock owners in the Gardiner and Hebgen Basins, on a case-by-case basis, with fencing projects to minimize bison-cattle contact.

4. Private landowners need to be compensated for having to install additional fencing.

   Response: As previously described, there are two programs to assist private landowners with the costs of additional fencing. Additionally, the Montana Supreme Court addressed the wildlife-landowner rights in State v. Rathbone (1940) that wildlife is a natural part of the landscape, and that the rights and privileges of private property ownership also come with the challenge and benefits associated with having wildlife on the landscape. The court stated, "Wild game existed here long before the coming of man. One who acquires property in Montana does so with the notice and knowledge of the presence of wild game. Wild game does not possess the power to distinguish between fructus naturales and fructus industriales, and cannot like domestic animals be controlled through an owner. Accordingly a property owner in this state must recognize the fact that there may be some injury to property or inconvenience from wild game for which there is no recourse."

Public Safety

1. Bison pose a serious risk to people, especially children.

   Response: All wildlife has the potential to be a risk to personal safety, especially when startled or threatened. In those situations, bison are no different and they can be especially dangerous during the peak of the rut (mating season) or when they sense that a calf may be in danger.

   Humans contribute to safety risk by moving too close to bison. Research completed by Taylor et al. (2003) investigated the perceptions of hikers and mountain bikers to the responses of wildlife, including bison, on Antelope Island in Utah. The results of their study showed that most recreationists felt that it was acceptable to approach wildlife at a much closer distance than was tolerated by the wildlife. On average, bison approach tolerance was approximately 103 yards versus the recreationist perception of 64 yards. In YNP, the average distance between the bison and the human when the bison charged was 28.5 feet as estimated by reporting YNP rangers (Olliff et al. 2003).

   The risks of personal injuries can be minimized through educational efforts which may include the following:

   - *distribution of educational materials at local hotels and venues to inform the public to be aware of the presence of bison and*
   - *host informational meetings for local educate residents regarding coexistence with bison.*

   Additionally, with the implementation of the Selected Alternative, human-bison conflicts will continue to be evaluated annually by all IBMP partner agencies. FWP and DoL retain the ability to restrict the geographic range of the tolerance zones, limit additional migration of bison into these areas, and utilize any other management tool currently available to decrease threat to public safety.
   Further, FWP would continue working with members of the Yellowstone Bison Coexistence Project to coordinate information regarding potential applicants to their program that seeks to increase tolerance for bison in areas surrounding YNP. This is often through efforts to help decrease damage to private property. However, individual member organizations of the Project have also made other contributions to increase tolerance, such as the purchase of materials to address safety concerns at or near school bus stops.

2. Highway Related: Bison are a traffic hazard on highways. Adding more warning signs or lowering speed limits will not help. Lowering speed limits will be burdensome to locals and interstate trucks.

   More hazing activities will be necessary during the summer when more tourists are present and there is higher volume of traffic on area highways.

Response: Highway signage along US Highways 191, 287 and 89 is already in place to warn motorists of the potential of bison and other wildlife on the roadways during the winter season that could be used during the summer season too. FWP believes that with the implementation of the Selected Alternative the bison would not congregate near roadways but seek preferred vegetation and water resources away from highways.

There is the potential that more site-specific hazing activities may be necessary in the summer when tourist activity and seasonal resident use increases. Not only is human activity higher, but those groups are often less aware of how to coexist with bison on the landscape.

All potential options to decrease bison-vehicle conflicts such as lowering speed limits, installation of additional warning highway signage, or fencing within the right-of-way, would require consultation with the Montana Department of Transportation (MDT). Previously, FWP worked with MDT for the installation of cattle guards across Highways 287 and 89 to prohibit bison from moving beyond seasonal tolerance areas north and west of YNP.

3. Bison pose a health risk to humans (e.g. undulant fever), and as such expansion of bison habitat is a violation of Montanan's constitutional right to a "Clean and Healthful Environment".

   Response: Presence of bison on the landscape does not increase the potential for infection of Brucella to humans. Humans are generally infected in one of three ways: eating or drinking something that is contaminated with Brucella, breathing in the organism (inhalation), or having the bacteria enter the body through skin wounds. The most common way to be infected is by eating or drinking contaminated milk products (CDC 2010).

   There is a limited possibility that hunters may be infected through skin wounds or by accidentally ingesting the bacteria after cleaning deer, elk, or moose that they have killed (CDC 2010). Brucellosis is not very common in the United States where 100 to 200 cases occur each year (CDC 2010). There have been 32 reported cases of brucellosis in Montana since 1960 (M. Zaluski DoL, pers. comm. 2012). Of those reported cases, at least two hunters identified with the disease; one in 1986 and one in 1995 (DoL 2012).

   The expansion of bison habitat does not violate a resident's right to a Clean and Healthful Environment because the State of Montana is only allowing bison, a native species, the opportunity to utilize habitat that was in the bison's historic range.

4. Yellowstone National Park bison have no fear of people or cars. They do not run away from vehicle and people the way other wildlife react.

   Response: YNP bison are accustomed to human presence to a certain point, but the bison are wildlife and respond accordingly when threatened or when their tolerance threshold has been reached (e.g. too close proximity with a person or car). Typically,

bison only react when threatened by predators, specifically wolves. Humans and vehicles are not considered predators by bison. However, this reaction is changing with an increase in bison hunting.

The research completed by Taylor et al. (2003) investigated the perceptions of hikers and mountain bikers to the responses of wildlife, including bison, on Antelope Island in Utah. The results of their study showed that mule deer and pronghorn alert distance (and flight distance was greater than bison. Meaning those species (deer and pronghorn) recognized human presence earlier and moved a great distance from their original spot as humans moved closer. Another finding in the study found that most recreationists felt that it was acceptable to approach wildlife at a much closer distance than was tolerated by the wildlife. On average, bison approach tolerance was approximately 103 yards versus the recreationist's perception of 64 yards.

5. More bison on Horse Butte will bring more grizzly bears to the area. Grizzlies pose a serious threat to public safety.

   Response: FWP disagrees. As described in the draft EA, increased distribution of bison outside YNP might result in increased distribution of carcasses providing food for scavengers, such as bears, wolves, and coyotes, in areas where this food source was not previously available. However, grizzlies are omnivores and not known to actively hunt bison given the opportunity to catch easier prey. Yellowstone grizzlies have 234 species of 179 genus of vegetative, insect and vertebrate food sources, including the high caloric cyclic crops of army cutworm moths, whitebark pines seeds, and large mammal meat (Gunther et al, 2012).

   The presence of anthropogenic foods (i.e. garbage, livestock feed, pet food, bird seed, human foods, garden crops, honey) pose a larger incentive for the presence of grizzlies wherever humans and bears coexist, and most often in years when important natural foods fail. In the Greater Yellowstone Area, considerable effort has gone into eliminating the availability of anthropogenic foods and these efforts have been largely successful in reducing incidents of bear-human conflicts.

   As described previously, with the implementation of the Selected Alternative state managers will manage the bison population in Horse Butte area up through the Taylor Fork Drainage within ranges or limits that avoid unacceptable human conflicts (i.e. disease, property, safety) and have the ability to restrict the geographic range of the tolerance zones, limit additional migration of bison into these areas, and utilize any other management tool currently available to decrease threat to public safety.

6. The agencies are not taking the concerns of locals into consideration. Local residents will become prisoners in their own home with bison around all the time.

   Response: Public scoping meeting were held in communities most likely to be affected by the project alternatives under consideration to solicit input and comments for the development of the environmental analysis document. Furthermore, local residents, as

well as the public at-large, were engaged to provide comments on the draft EA. Substantive comments were taken under consideration for the project's final decision.

The residents of Gardiner and West Yellowstone have had experience living with the seasonal appearance of Yellowstone bison for many years and have successfully continued their daily routines. Bison began to consistently migrate into the Gardiner Basin during the winter of 1984 and into the West Yellowstone area in 1987.

The agencies recognize that summer-only residents of those areas lack the experience of conducting their daily routine with bison present. Educational efforts, as described in the draft EA (e.g. distribution of bison-related brochures, meeting with local residents, etc.), have been implemented to educate residents living within bison-tolerant areas about bison behavior and methods to avoid conflicts/confrontations with individual animals. Workshops will also be offered by FWP to help spread knowledge about living in bison country.

If private property landowners are concerned about bison on their property or threatening their livestock and if DoL is unavailable, § 81-2-121 MCA empowers them or their agent to take publically-owned wild bison suspected of carrying disease. Additionally, FWP will continue to respond to calls from concerned residents when bison are on their property.

7. The proposed mitigation strategies, particularly fencing, will be ineffective to decrease bison-human conflicts.

Response: The experience of IBMP partner agencies in implementing bison management strategies has shown that fencing installed by the Coexistence Project and DoL can be effective to deter bison movements on private property or reduce bison-cattle comingling. Where new fencing has been installed, no new complaints have been received by FWP from those landowners.

The fencing design that is often installed is not entirely bison-proof since its design allows for the passage of other wildlife, but is a deterrent to bison movements to a specific site. Any fencing efforts are completed in consultation with the property owner.

Presently, the fencing used for a spatial barrier between bison and cattle has been constructed in two different configurations to meet the needs of the individual site. One design is a 5 foot high, 4-5-wire high tensile fence with the top wire electrified. The top wire has visual markers on it. The other design is a 5 foot high jackleg fence with braces at 15 foot intervals.

The fencing constructed to protect private property is a jackleg fence with two wooden rails. The height of the top rail is five feet with the other rail placed at three feet above the ground. A smooth wire can be installed twenty inches from the fence's base as needed. This fence is designed to be a visually-restrictive barrier to most bison while allowing for wildlife passage above and below it.

Recreation

1. Conflicts between recreationalists using the Gallatin National Forest will occur, such as snowmobilers using the Taylor Fork and Buck Creek areas. Overtime the recreationalists will lose out to the needs of the bison.

   Response: The Forest Service (FS) manages the Custer Gallatin National Forest's resources in a manner in which the interests of wildlife, natural resources (e.g. vegetation, water, etc.), and the public are considered and balanced. Only under special circumstances do the needs of a specific species impact a resource management decision, such is the case with grizzly bears and Canadian lynx. Both these species are designated as threatened by the US Fish and Wildlife Service under the Endangered Species Act. Because of this designation, the FS is required to adhere to specific road and developed site restrictions in national forests with grizzlies and lynx inhabit.

   Bison are not an ESA listed species, so no adjustments to the FS's current resource management plan is expected. However, if circumstances warrant, the FS could make adjustments to trail routes or other forest uses to ensure the public's safety and to provide safe habitat for bison.

2. Bison pose a threat to horses and their riders.

   Response: As described in the previous response, the presence of bison within the GNF may impact some recreational activities, including horseback riding. FWP and DoL do not expect bison will pose any greater threat to horses and their riders than other wildlife using the same area. This opinion is based upon the statistical information on bison-horse incidents from NPS provided for the draft EA. As stated in the draft EA, during 2010 and 2011, there were no reported incidents between bison and horses with the Park. During the 2011-2012 winter, FWP responded to four bison-horse incidents; comingling occurred three times on the north side and pushed through a fence on the west side of the Park. No horses were reported injured by the incidences.

   Bison are known to prefer to use established trails and roads when moving within heavily wooded areas or winter snow within YNP. In order to decrease the potential for bison-human conflicts on established trails, bison-related educational materials, such as those attached as Appendix E to the draft EA will be distributed to guest ranches and businesses providing horseback riding experiences in the project area to educate clients and ranch staff of bison behavior and conflicts avoidances techniques. Additional coordination and communication between FWP and CGNF may occur when it is necessary to haze bison away from guest ranches and high-use trails in order to decrease the potential of bison-human conflicts.

Miscellaneous

1. Need additional educational efforts toward landowners and others to build bison tolerance.

   Response: Yellowstone Bison Citizens Working Group with the support of IBMP partner agencies collaborated in developing the Understanding Bison as Wildlife Educational Series. Three pamphlets are completed: Bison Basics, Staying Safe in Bison Country, and *Bison and Tribal Peoples. These can be accessed at http://www.ibmp.info/bisoneducation.php. Other brochure themes, such as Landowners Living with Bison* and *Brucellosis, are being considered for additional publications by FWP.*

2. The State of Montana is mandated by § 75-1-103 MCA to fulfill their public trust responsibilities.

   Response: The State is meeting their responsibilities described as the policy for environmental protection (e.g. § 75-1-103 MCA). In Montana, FWP is the trustee of the state's wildlife resources and is charged to manage those resources for the benefit of the species for current and future generations. Montana's broad statutory discretion for management is described as including protection, preservation, management, and propagation of wildlife resources. See § 87-1-201 MCA.

Questions

1. How can FWP and DoL make a decision on federally managed lands that will be a significant change and would require National Environmental Policy Act (NEPA) review?

   Response: The proposed project is not a federal action nor does it require a federal permit to occur, thus compliance to the National Environmental Policy Act is not necessary. The natural migrations of indigenous species do not trigger a NEPA review.

2. Define what "free ranging bison" means?

   Response: As described in the 2000 FEIS, the interagency team defined a "wild, free-roaming population" of bison as one that is not routinely handled by humans and can move without restriction within a specific geography area

3. Will the bison tolerance area continue to expand if the perimeter is not fenced?

   Response: The ability to fence or not to fence the bison tolerant area does not influence the decision of the IBMP partners when considering the expansion of a bison tolerant area. Topographical features have been used to define the current bison tolerant areas so that the need for fencing was minimized.

4. What effect will this project have on the number of bison?

Response: The implementation of the Selected Alternative will not impact the target population for YNP bison set by the IBMP partners. The target population will remain 3,000.

5. Regarding tribal hunting: Can FWP regulate tribal take of bison? Concerned about overharvesting by members.

   Response: Currently, FWP staff annually meets with representatives from the Nez Perce, Confederated Tribes of the Salish and Kootenai, Shoshone-Bannock, and Confederated Tribes of the Umatilla Reservation to discuss the take of bison. These four tribes retain treaty rights to hunt Yellowstone bison on any open and unclaimed federal lands, such as those owned by the USFS or Bureau of Land Management.

   Since the tribes retain treaty rights, FWP cannot regulate their members' harvest of bison. Each tribe sets their own hunting regulations and thus, oversees their members' bison hunts. However, through the discussions at the annual meeting the interests and goals of both the department and tribes are clarified so that the interests for conservation of the species and continued hunting opportunities can be maintained.

   Similar to licensed bison hunting, tribal hunting is dictated by the movements of bison beyond the boundaries of YNP thus tribal hunting typically occurs between November and mid-March.

6. Do any changes to hunting district require DoL Board action?

   Response: No. Only FWP's Fish and Wildlife Commission has the authority to change hunting districts per 87-1-301 (b) MCA.

7. Will any new capture facilities be constructed? If so, will the current ones be relocated? If so, location of new facilities and will there be any impacts to the local environment?

   Response: No new capture facilities are planned as part of the proposed project.

8. How does FWP plan on controlling the actual number of migrating bison near stated boundaries? Will hazing continue as a management strategy? Is hazing healthy for the bison herd?

   Response: Migrating bison will be kept to within the designated geographic boundaries through a combination of topographic features, hazing if necessary, and fencing when appropriate.

   Over the past 13 years, IBMP partner agencies have used hazing tool to move bison away from cattle operations, private property, roadways, and annually back into the Park in May. Overall, hazing activities have not been determined to harm bison, although some individual animals may become stressed during the actual hazing activities.

Hazing activities can be stressful to bison because it seeks to influence the animal's natural behavior. Used judicially, hazing can be a useful conflict management tool, as is the case for the current management of bison under the guidance of the IBMP.

References

Aune, K., Rhyan, J., Roffe, T., 2007. Environmental persistence of Brucella organisms in natural environments of the greater Yellowstone area – a preliminary analysis. United States Animal Health Association 110, 205–212.

Barmore, W.J. 1980. Population Characteristics, Distribution, and Habitat Relationships of Six Ungulates in Northern Yellowstone Park. Final report. Yellowstone National Park, WY: National Park Service.

Bell. R.V.1971. A grazing ecosystem in the Serengeti. *Scientific American* 225:86-93.

Burde, J.H. and G.A. Feldhamer. 2005. *Mammals of the National Parks*. Baltimore: The Johns Hopkins University Press.

Centers for Disease Control. 2010. Brucellosis: General Information. Retrieved from: http://www.cdc.gov/nczved/divisions/dfbmd/diseases/brucellosis

Cheville N.F., D.R. McCullough, and L.R. Paulson. 1998. Brucellosis in the Greater Yellowstone Area. Washington, DC: National Academy Press.

Gunther, K.A., R. Shoemaker, K. Frey, M.A. Haroldson, S.L. Cain, and F.T. van Manen. In press. Grizzly bear foods in the Greater Yellowstone Ecosystem, 1891-2012. Ursus.

Jones, J.D., Treanor, J.T., Wallen, R.L., White, P.J., 2010. Timing of parturition events in Yellowstone bison—implications for bison conservation and brucellosis transmission risk to cattle. *Wildlife Biology* 16, 333–339.

Kilpatrick, A.M., Gillin, C.M., Daszak, P., 2009. Wildlife–livestock conflict: the risk of pathogen transmission from bison to cattle outside Yellowstone National Park. *Journal of Applied Ecology* 46, 476–485.

Larter. C.C. and C. Gates. 1994. Home-range size of wood bison: Effects of age, sex, and forage availability. Journal of Mammalogy 75:142-49.

Mair, T.S. and Divers, T.J. 2009. Brucellosis in the Horse. Excerpt from Infectious Diseases of the Horse. Manson Publishing. pg 275-280.

McFadden, G. 1994. Equine Brucellosis. Indiana Animal Disease Diagnostic Laboratory Newsletter. University of Purdue.

Meagher, M. 1978. Bison. In J.L Schmidt and D.L. Gilbert (Eds.), *Big Game Of North America Ecology and Managemen*t. pp.123-134. Harrisburg, PA: Stackpole Books.

Montana Department of Livestock. 2012. Brucellosis Epidemiology. Retrieved from: http://liv.mt.gov/ah/diseases/Brucellosis/incidence.mcpx

Mori S.A. and J.L. Brown. 1998. Epizoochronous dispersal by barbs, hooks, and spines in a lowland moist forest in central French Guiana. *Brittonia* 50:165-173.

Nelson, K.L. 1965. Status and habits of the American Buffalo (Bison bison) in the Henry Mountain area of Utah. Utah State Department of Fish and Game Publication No. 65-2.

Norland, J.E. 1984. Habitat use and distribution of bison in Theodore Roosevelt National Park. M.S Thesis, Montana State University, Bozeman, MT.

Olliff, T. and J. Caslick. 2003. Wildlife-human conflicts in Yellowstone: when animals and people get too close. *Yellowstone Science* 11:18-22.

Cheville, N.F., McCullough, D. R., and Paulson, L.R. 1998. Brucellosis in the Greater Yellowstone Area. National Research Council. pg 25.

Peden, D. G. 1972. The trophic relations of *Bison bison* to the shortgrass plains. Ph.D. Dissertation, Colorado State University, Fort Collins.

Picton, H.D. and T.N. Lonner. 2008. *Montana's Wildlife Legacy: Decimation to Restoration.* Bozeman, MT: Media Works Publishing.

Proffitt, K. M., P. J. White, and R. A. Garrott. 2010. Spatio-temporal overlap between Yellowstone bison and elk – implications for wolf restoration and other factors for brucellosis transmission risk. *Journal of Applied Ecology* 47:281-289.

Reynolds, H.W., C.C. Gates, and R.D. Glaholt. 2003. Bison. In: G.A. Feldhamer, B.C, Thompson, and J.A. Chapman (Eds.), *Wild Mammals of North America: Biology, Management, and Conservation Second Edition*, pp.1009-1059. Baltimore: The Johns Hopkins University Press.

Rhyan JC., Nol P., Quance C., Gertonson A., Belfrage J., Harris L., et al. Transmission of brucellosis from elk to cattle and bison, Greater Yellowstone Area, 2002-2012. *Emerging Infectious Diseases.* Dec 2013

Rosas, C. A., Engle, D. M., Shaw, J. H. and Palmer, M. W. 2008. Seed dispersal by *Bison bison* in a tallgrass prairie. Journal of Vegetation Science, 19: 769–778. doi: 10.3170/2008-8-18447

Schwartz, C.C., J. Nagy, and R. Rice. 1977. Pronghorn dietary quality relative to forage availability and other ruminants in Colorado. *Journal of Wildlife Management* 41:161-68.

Singer, F.J., and J.E. Norland. 1994. Niche Relationships within a Guild of Ungulate Species in Yellowstone National Park, Wyoming, Following Release from Artificial Controls. *Canadian Journal of Zoology* 72:1383–4.

Stoneburner, L. 2012. Santa Catalina: the Bison's Makeshift Home. Retrieved from: http://dornsife.usc.edu/enst-320a/water-and-soil/?p=348

Taylor, A.and R.L. Knight. 2003. Wildlife Responses to Recreation and Associated Visitor Perceptions. *Ecological Applications* 13(4): 951-963.

U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service; USDI, National Park Service; Montana Fish, Wildlife & Parks; USDA, Forest Service; Montana Department of Livestock; Confederated Salish & Kootenai Tribes; InterTribal Buffalo Cooperative; and Nez Perce Tribe. 2014. Interagency Bison Management Plan Annual Report. Retrieved from: http://www.ibmp.info/library.php

U.S. Department of Agriculture, Forest Service (USFS). 1987. Gallatin National Forest Land and Resource Management Plan. Retrieved from: http://www.fs.usda.gov/detail/gallatin/landmanagement/?cid=stelprdb5130417

2005. Record of Decision for the Gallatin National Forest Noxious and Invasive Weed Treatment Project.

U.S. Department of the Interior (USDI), National Park Service, and United States Department of Agriculture, Forest Service, Animal and Plant Health Inspection Service. 2000a. 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. Retrieved from: http://www.ibmp.info/library.php

Van Vuren, D.H. 2001. Spatial relations of American bison (Bison bison) and domestic cattle in a montane environment. *Animal Biodiversity and Conservation* 24:117-124.