

## DECISION NOTICE

### **Bison Quarantine Feasibility Study**

Montana Fish, Wildlife and Parks (MFWP) prepared an Environmental Assessment (EA) to review the impacts associated with a proposed feasibility study of bison quarantine. This Decision Notice summarizes the proposal and the final decision. A description of the issues expressed by the public review of the Draft EA and MFWP's responses are attached as Appendix A.

#### Proposal

The Interagency Bison Management Plan (IBMP) was approved in 2000. The IBMP did not include provisions to establish a bison quarantine facility. However, it did consider whether a quarantine facility would be an appropriate component of the plan and concluded that bison removed from the population could be used for approved research or sent to quarantine. It also indicated that further environmental review would be completed to determine the design, location and operation parameters for a bison quarantine facility. At this time, MFWP in cooperation with USDA/APHIS proposes to specifically address the issue of operation parameters by implementing Phase I of a bison quarantine feasibility study.

A Draft EA that assessed the impacts of three alternatives for the feasibility study was offered for public review on October 12, 2004. The three alternatives considered in the Draft EA were:

- 1. No action:** MFWP would not implement a bison quarantine feasibility study at this time.
- 2. Conduct Phase I of the bison quarantine feasibility study and terminate all research animals at the end the study after Phase I.** MFWP and the cooperating agencies would retain up to 200 sero-negative bison calves that are captured during normal operations pursuant to the IBMP. These calves would be divided into a test and a control group and held for one year in a test at a research facility at Corwin Springs. During the course of the year, all calves will be periodically serially tested to screen for brucellosis. Periodically, animals from the control group will be euthanized for the purpose of collecting tissue samples for culture tests in an attempt to isolate *Brucella abortus*. At the end of the year, the animals that remain in the test group also will be euthanized.
- 3. Conduct Phase I of the bison quarantine feasibility study and, contingent upon information gathered during Phase I, retain the bison that remain at the end of Phase I and, potentially, proceed with Phase II and Phase III of the study (preferred alternative).** MFWP and the cooperating agencies would retain up to 200 sero-negative bison calves that are captured during normal operations pursuant to the IBMP. These calves would be divided into a test and a control group and held for one year in a test at a research facility at Corwin Springs. During the course of the year, all calves will be periodically serially tested to screen for brucellosis. Periodically, animals from the control group will be euthanized for the purpose of collecting tissue samples for culture tests in an attempt to

isolate *Brucella abortus*. At the end of the year, the sero-negative animals that remain in the test group would be available if MFWP determines that it is appropriate to proceed with Phase II and Phase III of the study.

### Public Process and Comment

The EA was offered for public review on October 12, 2004. Initially, MFWP requested that comments be submitted by November 11, 2004. During the comment period, MFWP received many e-mail requests for an extension to the public comment period. On November 10, 2004 MFWP announced that the public comment period had been extended until November 24, 2004.

MFWP received 2,228 comments in response to the Environmental Assessment. Comments came from 2,188 non-residents and 40 residents. Comments arrived from 49 states and the District of Columbia (Table 1). The state of origin for some comments could not be determined because some e-mail respondents did not include a return address. In addition, comments arrived from 11 countries other than the United States. The majority of the comments were submitted electronically (Table 2).

Responses also were received on behalf of the following organizations:

Gallatin Wildlife Association	The Greater Yellowstone Coalition
Natural Resources Defense Council	The National Wildlife Federation
The National Parks Conservation Association	The Fund for Animals
The Humane Society of the United States	The Buffalo Field Campaign
Bear Creek Council	Prickly Pear Sportsmen
National Park Service	American Buffalo Foundation

There were 1,946 (88.3.0% of the total) responses that followed one of two different standardized formats or suggested talking points posted on websites for either the Fund for Animals or Buffalo Field Campaign. The vast majority of these format responses were from Non-residents (99.4%, n=1,935) as opposed to Montana residents (0.06%, n=11). There were 63 additional comments expressing similar content and language as the talking points format but with modified layouts from the website format. There were another 51 comments that followed this basic talking point format but identified additional issues including expanding the available habitat for bison or managing cattle near Yellowstone Park, neither issue being relevant to the decisions and issues addressed by this Environmental Assessment. Finally, there were 145 comments that were classified as simple statements of opposition coming in the form of simple one-paragraph e-mails with no specific content relevant to the issues.

The majority of the comments included some expression of dissatisfaction with the current Interagency Bison Management Plan (IBMP). The 2,205 comments based on talking points or simple objections to the project expressed opposition to killing, captivity or domestication of bison; concern for animal welfare; criticism for the credibility of science on which bison management is based; concern for the waste of taxpayer money; and, a concern that Montana Environmental Policy Acts (MEPA) and National Environmental Policy Acts (NEPA) processes had not followed been followed. A few additional comments expressed

these same viewpoints but also mentioned the need to manage cattle and concerns for habitat management.

Only 23 comments provided unique and specific comments relative to the proposed action to evaluate the feasibility of bison quarantine protocols. Of these, 15 preferred Alternative 1, while 7 supported Alternative 3 and 1 expressed concerns as well as supportive comments but did not state which alternative was preferred. Key issues identified from these 15 opponents to Alternative 3 that were relevant to the EA were domestication of wild bison, animal welfare, cost of the project, preventing escapes by maintaining fences, and the credibility of the science. Some of the comments supported the concept of restoring bison but objected to using bison from Yellowstone or felt that the Interagency Bison Management Plan had not advanced enough to allow this type of management tool to be applied. Comments supporting Alternative 3 indicated that the quarantine feasibility study could help us better understand brucellosis and these bison calves could be utilized for a better purpose than being sent to slaughter.

The vast majority of comments supported Alternative 1 (no action alternative), while few supported Alternative 3 (the preferred alternative) (Table 2). Most of the comments supporting Alternative 1 were submitted electronically and primarily addressed dissatisfaction for the IBMP with little direct reference to issues and decisions identified in the EA. Very few comments were specifically directed at the relevant issues and decisions identified in the Environmental Assessment. Comments indicated a widespread misunderstanding of the purpose for the EA and limited understanding of existing provisions of the IBMP and Environmental Impact Statement completed in 2000. The EA did explain the statutory authority surrounding the proposed action and referenced the IBMP numerous times. Finally, comments indicate that few distinguished that the proposed action was specific to a temporary research project to determine the feasibility of quarantine protocols. Instead, they commented as though the proposal was to implement a permanent quarantine program. The EA stated that future decisions and additional environmental compliance would be necessary to establish an approved quarantine program for the Greater Yellowstone Area (GYA).

MFWP compiled a comprehensive list of all substantive comments. Even though most of the comments are outside the scope of the EA, MFWP also prepared an appropriate response to all of these comments. Our purpose in providing informational responses to comments that are within the broader scope of the IBMP is to help direct concerned citizens to sources and references that will improve understanding of the Interagency Bison Management Plan and its relationship to research projects such as the Quarantine Feasibility Study.

Nearly all of the comments supporting the “no action” alternative expressed a concern for killing bison. The basic purpose for initiating this quarantine feasibility study is to provide a possible non-lethal and alternative means for removing bison from this ecosystem in a manner consistent with the management prescriptions identified in the IBMP and to use those animals as seed stock for bison conservation projects. This action is consistent with the public's expressed desire to minimize lethal removal of animals from the GYA and is consistent with established conservation measures for restoring a species.

The comments and MFWP responses are presented in Appendix A. Consultations that contributed to the development of the proposal and EA are detailed in Appendix B.

### Final Decision

Based on the analysis in the EA and the comments received it is MFWP's decision to authorize a bison quarantine feasibility study as described under the preferred alternative.

Based on the analysis in the EA and the applicable laws, regulations and policies, MFWP has determined that this action will not have a significant effect on the natural or human environment. Therefore, the EA is the appropriate level of review and an environmental impact statement will not be prepared. It is MFWP's decision to implement the preferred alternative.

By notification of this decision the Draft EA, including the additional information provided in the response to public comment, is hereby made the Final EA. The Final EA may be viewed at or obtained from Montana Fish, Wildlife and Parks at 1400 S 19th Avenue, Bozeman, MT 59718. An electronic copy of the final EA also may be obtained from MFWP's website at: [www.fwp.mt.gov/publicnotices](http://www.fwp.mt.gov/publicnotices).

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Montana Fish, Wildlife and Parks

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Date

**Table 1. States and Countries Presenting Comments  
on the Quarantine EA\***

State	No. Comments	State	No. Comments
California	292	Wisconsin	19
New York	172	Louisiana	18
Florida	142	Kansas	16
Texas	114	Tennessee	14
Maryland	103	Nevada	13
New Jersey	99	Iowa	13
Illinois	99	Rhode Island	12
Pennsylvania	95	Maine	11
Ohio	76	Kentucky	11
Michigan	65	Nebraska	11
Washington	59	Oklahoma	11
Massachusetts	56	West Virginia	11
Virginia	49	New Mexico	11
Georgia	41	New Hampshire	10
Arizona	41	Utah	8
Connecticut	40	Vermont	7
Montana	40	Alabama	7
Indiana	38	Wyoming	6
North Carolina	37	Hawaii	6
Colorado	34	Mississippi	6
Minnesota	29	Washington D.C.	5
South Carolina	24	Idaho	4
Oregon	22	Delaware	4
Missouri	22	Alaska	4
		North Dakota	1

Country	No. Comments	Country	No. Comments
Canada	11	Australia	1
Africa	3	Argentina	1
Brazil	2	Thailand	1
Netherlands	2	Spain	1
United Kingdom	1	Singapore	1
Panama	1		

\* The state of origin could not always be determined for a respondent because return addresses were not always included in e-mails.

**Table 2. Summary and General Content of Comments**

<b>Comment Type</b>	<b>Non-Resident</b>	<b>Resident</b>	<b>Total Comments</b>	<b>For Alternative</b>
E-mail Form Letter Comment (website letter and talking point formats)	1935	11	1946	1
Minor Variations in E-mail Format (Content Same as Above)	59	4	63	1
E-mail Form Letter with Specific Comment to Save Habitat	42	3	45	1
E-mail Form Letter with Specific Comment to Manage Cattle in GYA	5	1	6	1
Simple Statements of Opposition (No Specific Content)	142	3	145	1
Sub Total	2183	22	2205	1
Comments Not of a Standard Format with Relevant Issues				
For Alternative 1	4	11	15	1
For Alternative 3	1	6	7	3
Preferred Alternative Not Identified	-	1	1	Unknown
Sub Total	5	18	23	
<b>GRAND TOTAL</b>	<b>2188</b>	<b>40</b>	<b>2228</b>	

## Appendix A. Substantive Comments to the Bison Quarantine Feasibility Study and EA, including MFWP responses to comments.

### Management Purpose

Comment: The purpose and need should focus on the potential for bison from the Yellowstone bison population having a high value for long-term conservation of the species and that determining the feasibility of the proposed USDA Quarantine procedures/protocol becomes critical to the program moving forward.

Response: Generally, MFWP agrees with this purpose and proposes this study as the first step toward realizing the long-term conservation of bison. However, it should be noted that this EA focuses specifically on the need to first evaluate the feasibility of Phase I of the established USDA/APHIS quarantine protocols. If the protocols and procedures tested by this study are successful, subsequent decisions could be made to amend the IBMP to incorporate the protocols and establish a program for the conservation of bison that have been certified as disease free. Each of those decisions must be supported by the appropriate level of environmental review.

Comment: The quarantine feasibility study is not consistent with the purpose of the IBMP. “The only truth here is that the stated *goal* of the IBMP is to conserve the bison herd and its free-ranging reputation, but they are not free ranging until they can enter Montana without being shot, hazed, or shipped to slaughter.”

Response: The IBMP is based on the recognition that bison are an essential component of Yellowstone National Park (YNP) because bison contribute to the biological, ecological, cultural, and aesthetic purposes of the Park. The IBMP also is based on the knowledge that the bison herd in YNP is chronically infected with brucellosis; without management, transmission of brucellosis from bison to cattle could occur; and the knowledge that, without control, YNP bison threaten Montana’s brucellosis class-free status and the ability to market livestock in interstate and international trade. As stated in the federal Final Environmental Impact Statement (FEIS), *The purpose of the proposed interagency action is 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 the state of Montana.* Currently, bison do enter Montana in specific areas where they are not shot, hazed or shipped to slaughter. In the IBMP there are precise prescriptions to progressively allow bison to free-range in specified zones of Montana when there is no risk for transmitting brucellosis to cattle. In addition, there are specified population targets for bison that determine the relative intensity of removals. This study will explore an alternative to lethal means of removing bison from the GYA when prescribed by the IBMP and will not affect decisions related to bison distribution or population size in this ecosystem. Evaluating the feasibility of including quarantine as a management tool in the GYA is consistent with the stated purpose of the IBMP.

Comment: The quarantine feasibility study would establish a new precedent in the management of “publicly-owned” wildlife, is illegal and is inconsistent with the terms of the IBMP. Because of the potential precedent, the agencies must take a large step backwards

and both evaluate the merits of whether a quarantine operation for a free-ranging wildlife species, particularly a species originating in a national park, is warranted and subject its proposed study to independent and objective peer-review.

Response: Provisions for quarantine and subsequent live distribution was considered in four of the alternatives that were evaluated in the FEIS for the IBMP, including the preferred alternative. In the Records of Decision (ROD), the agencies committed to evaluate whether a quarantine facility would be an appropriate component of the IBMP. They also committed to complete additional NEPA/MEPA analyses to determine the design, location and operation parameters for a bison quarantine facility. The proposed feasibility study is the beginning step leading toward consideration of quarantine for management of bison. Prior to making that decision, the agencies will complete additional environmental review, pursuant to the requirements of NEPA and MEPA.

The development of this proposal included reviews and comments from over 20 different scientists involved with bison management, wildlife conservation, and wildlife diseases (Appendix B). The proposed study has been peer reviewed by internal agency scientists and through an external non-agency peer review process. Experts within the USAHA brucellosis committee and the Greater Yellowstone Interagency Brucellosis Committee (GYIBC) have examined the proposal. The proposal has already been examined and reviewed by several non-governmental groups such as the Inter-tribal Bison Cooperative, Wildlife Conservation Society, National Wildlife Federation and several scientists working on a similar project for the Wood Bison in Canada.

Comment: Several comments recommended expansion of the range of the Yellowstone bison herd. They suggested that Montana's first priority should be tolerance of bison outside Yellowstone and should emphasize acquisition of conflict-free habitats for bison. The first step in developing a solution to concerns about population and migration is to identify and designate additional bison habitat and reduce spatial and temporal conflicts with cattle outside of Yellowstone.

Response: The purpose of the proposed action is to evaluate the feasibility of the proposed quarantine protocols. Revisions to the IBMP to change the boundaries of the bison management areas and promote habitat acquisition are outside the scope of the Environmental Analysis. Conducting this study will not hinder MFWP's interest in protecting or enhancing habitat for bison or other wildlife in Montana. MFWP is committed to continuing its long-standing tradition of conserving wildlife habitat while protecting the greater public interests of our state.

Comment: Phase I is merely the opening stage in a plan to domesticate the entire Yellowstone bison herd.

Response: The purpose of the proposed action is to evaluate the feasibility of the proposed quarantine protocols. MFWP has no desire or intention to domesticate all bison in Yellowstone. It is not the stated goal of the IBMP to which MFWP is a signatory to domesticate bison in Yellowstone. It is not possible for state/federal agencies committed to the IBMP to domesticate the entire Yellowstone bison herd. The proposed research project will not affect the interagency management commitments made through the IBMP or



modify interagency management actions prescribed under the approved management plan. If quarantine protocols tested at the conclusion of this study are found to be scientifically sound and can establish disease-free bison that are accepted by society then the agencies should consider its application in the management of bison as allowed under the existing or future management plans. Quarantine for the sake of species conservation is a reasonable and scientifically accepted tool that could provide a live removal alternative of animals that would otherwise be killed to help regulate population levels and help restore bison to other suitable habitats.

### **Impacts to Bison**

Comment: Population levels alone do not justify this research or quarantine. The pros and cons of this research proposal should be evaluated on their own merit, independent of concerns about bison population and migration. The EA notes that this proposal may serve to limit wild bison population levels in the Greater Yellowstone Area. “The proposal is...yet another method to perpetuate the ongoing bison slaughter/eradication program on the border of YNP.” “While repopulating ‘some place’ with genetically pure disease free bison is a worthy goal, doing so at the expense of truly free roaming wild bison within the Greater Yellowstone Area is unacceptable.”

Response: MFWP does not intend to eradicate bison nor could it accomplish this task. Through interagency commitments MFWP is interested in managing the population of bison in Yellowstone to achieve the goals stated in the IBMP. The IBMP defined a population trigger for the whole herd at 3,000 bison. The IBMP also defined population objectives for the bison management areas. The IBMP describes a variety of management actions that may be taken to reduce population size when the herd exceeds 3,000 bison and/or numbers exceed objectives for the management areas. The IBMP also includes contingencies to increase the population by constraining removals of bison in the event that the population declines to 2,300.

The bison population in Yellowstone is robust and has continued to increase despite periodic removals. The estimate bison population was 2,616 during summer 2000, when the IBMP was approved. Since then, 231 bison have been captured and removed from the West Boundary Area and 495 bison have been captured and removed from the Reese Creek Boundary Area. The current population estimate is 4,240 bison. The Yellowstone bison have demonstrated great viability in the face of existing removal, and we have no biological reason to believe it would not sustain removals on an annual basis.

The quarantine research project does not supersede previous decisions or the prescriptions outlined in the IBMP and would not prevent the eventual free ranging of bison in the GYA. If, at some time in the future, quarantine programs are considered and developed by the management agencies, quarantine could provide a non-lethal alternative for removing bison. Quarantine would be used in a manner that is consistent with the conservation of a wild bison herd in Yellowstone. Conservation restoration projects would be considered only when animals are available for slaughter under the provisions of the management plan and not at the expense of maintaining a viable Yellowstone bison herd.

Maintaining a single genetically pure and important wildlife population at one location is not sound conservation. Stochastic catastrophic events put this single population at risk. To establish several populations with pure genetics is a sound conservation measure and will increase the likelihood of species conservation.

Comment: Several comments suggested that the annual wintertime slaughter of Yellowstone bison is unacceptable, is not based on credible scientific evidence, and has resulted in enormous cruelty to bison. “Stop the annual winter slaughter of Yellowstone bison!” “No more reasons to kill off American's most beautiful native animal.” “Hasn't American's history spoken loud enough in regards to this beautiful beast?” “We have already once in our country’s history decimated the bison population for unjust and inhumane reasons, let’s not do it TWICE!” “This proposed study that would quarantine two hundred of these animal (and that would kill at least half of these) and that is intended to pave the way for further quarantines that could hold bison in quarantine for years) is too great a burden to place upon this free-roaming herd, among the last left of our pure, original bison.” “The Yellowstone bison should be considered a sacred trust by the government to be protected at all costs, not sacrificed.” “We need to be managing these lands and these animals with the interests of the American public in mind, and so I am expressing the view that these animals are an integral part of the park experience and have a role in the ecosystem of the region.”

Response: This comment is outside the scope of the EA. The rationale for the IBMP was documented in the Montana FEIS and Federal FEIS and RODs that were prepared in 2000. The bison population in Yellowstone is not in jeopardy and is robust. Annual removals of bison are currently being sustained in the bison herd and the population has actually increased each year. Today, there are more bison in Yellowstone than has ever been reported in history. The quarantine feasibility study could provide a non-lethal means for removing bison while exploring future possibilities for conserving the species on a continental scale should the results prove favorable. The intended purpose of this study is to explore and perhaps improve a time-tested and well-established conservation tool for reversing the decline in bison populations and the shrinking distribution experienced at the turn of the century.

Comment: The MFWP has presented no evidence that the current population size is in excess of the carrying capacity of the Yellowstone ecosystem and the EA did not discuss how quarantine will impact bison herd dynamics, bison genetics, or the overall health and viability of wild bison in Yellowstone.

Response: The FEIS for the IBMP disclosed an analysis of the bison population in the Yellowstone ecosystem, including the rationale for an overall population target and population objectives for each of the management zones. The EA proposes to intercept bison that might otherwise go to slaughter under provisions of the IBMP, so it was not necessary to address these issues.

Comment: The quarantine facility and related operations appear to be just another government method of lethal control for wild bison attempting to leave YNP.

Response: The purpose of the proposed action is to evaluate the feasibility of the proposed quarantine protocols. Any decision to remove bison from the system would be made

according to provisions already established under the IBMP. A portion of the bison put into quarantine research will be slaughtered and necropsied as a temporary step in the research protocol to establish a valid scientific basis for future quarantine procedures that would not require the slaughter of animals. Once protocols are successfully established and approved then simple blood testing would be the basis for graduation through the quarantine protocol.

Based on previous research on the epidemiology and pathology of bison in Yellowstone we anticipate that under these quarantine procedures it is likely that most bison, except those necropsied during the early phase of research, will not express latent infection. For those advancing through quarantine we expect most will successfully graduate through the protocol and be available for restoration projects.

Comment: The proposed action is not appropriate until there is more information.

Response: MFWP is not proposing to amend the IBMP to include quarantine procedures. The purpose of the proposed action is to evaluate the feasibility of the proposed quarantine protocols. The purpose of this research study is to provide more information applicable to management of bison and brucellosis.

Comment: Several comments expressed concern that quarantine might result in the domestication of bison.

Response: This proposal does not intend to keep bison in quarantine for several generations and is intended to allow natural behaviors as is possible. The project will not involve capturing newborn calves, but calves that become available during their first winter when they have already established some independence from their mothers. We expect calves that enter the program at nearly one year of age will have learned many natural behaviors.

Holding wildlife in captivity for varying periods of time until they are released to the wild is a historically accepted and commonly employed conservation method used throughout the world to restore wildlife populations. There are many published examples in the scientific literature and historical models demonstrating that captive animals have routinely been successfully reintroduced into the wild and will reacquire wild behaviors. This fact has been well established through many successful captive breeding programs for rare or endangered species. It has also been applied during wildlife rehabilitation programs commonly employed in many areas of the world to save individual animals.

All of the public bison herds, including Yellowstone bison, have experienced periods of captivity in their history. Prior to 1967, bison were held captive and managed behind fence for many decades within YNP. During this era, the majority of bison were routinely handled, many were vaccinated, most were artificially fed, some were herded or confined to influence distribution and some were culled to limit numbers. In addition, the landscape was also managed to produce additional forage by irrigation and by haying to produce winter feed near the current center of the existing herd of Lamar Bison. The historic captivity of introduced bison did not hinder their eventual adaptation to the natural environments of YNP after they were released from the ranch style management at the Lamar Valley in 1967. More recently bison captured at Stevens Creek were held in captivity for periods until they could be released back into Yellowstone Park. These bison have not shown any tendency to

become domesticated. Despite this history of management, bison in YNP are perceived by most to be wild.

Although behaviors may be dampened by captivity, the basis for much behavior is genetic. Capturing the genetics of the Yellowstone herd is one way to ensure that wild behaviors are retained. Genetically based behaviors that are temporarily dampened by captivity will be expressed again as bison are restored to natural landscapes. There is substantial evidence for this in field experience with rehabilitated animals and restoration projects.

Comment: Park visitors have reported seeing very few bison and no other wildlife in the Park. They questioned the management of the Park.

Response: Management of wildlife within YNP is outside the scope of this environmental analysis. The size of the bison herd is substantially larger now than when the IBMP was adopted.

Comment: Several comments expressed concern for the effect that quarantine might have on young bison calves.

Response: The proposed action is to evaluate procedures to manage bison calves in quarantine. The calving season for the Yellowstone bison herd extends from March into May. The majority of bison that are used during the proposed study would be captured during January and February and the calves used in the study would be 8 to 12 months of age. In no case would newborn calves be consigned to the quarantine facility.

Comment: MFWP failed to evaluate the potential for non-brucellosis diseases issues among the captive bison. The proposed facility once was a game farm and other disease organisms may persist at that facility.

Response: The proposed study outlined several critical protocols for operations that are or will be developed as the proposed study unfolds. A protocol for health assessment has been considered and will be developed prior to operation. Disease monitoring will be established to evaluate the health status of bison and maintain the quarantined herd in a healthy condition. Several studies of the YNP bison and elk herds have already been conducted and agency scientists have explored a variety of disease issues and have determined that the YNP bison herd does not appear to harbor other diseases significant to the agricultural and wildlife interests of the GYA. There is no evidence that any significant wildlife or domestic animal disease is persistent in the proposed facility.

Comment: It is entirely inappropriate to subject 200 bison, or 5% of the park's population to testing for brucellosis when less than 1% of the cattle in the United States are subject to testing for mad cow disease.

Response: The number of bison held each year would be 100 out of a total population size of 4000 or more. The annual percent removed would be 2.5%. The current population has experienced growth despite natural mortality and annual removals of 5-10 percent. The annual removal rate of 2.5% would not jeopardize this population of bison.

The purpose of quarantine is not to test bison for brucellosis but to use testing to screen out disease free bison with some degree of certainty using a specified set of rigorous protocols. Bison held in quarantine would be animals that would be subject to management removal, as per the provisions of the IBMP. Brucellosis is endemic in the Yellowstone bison population and additional testing is not necessary to confirm that fact. Testing would occur only to evaluate the quarantine protocol and to ensure that the protocol is adequate to certify disease free bison.

The issue of mad cow disease is outside the scope of this EA.

## **Genetics**

Comment: Considering the documented genetic uniqueness and purity of Yellowstone's bison, purposefully removing bison from the population for slaughter or for experiments may jeopardize the long-term genetic health and viability of the population. Removing bison calves for the proposed quarantine experiment, since they have never had the opportunity to breed and pass along their genes, is particularly dangerous. The 3000 bison population target, which allows for actions such as quarantine is an arbitrary number instituted by the IBMP as a political compromise between Montana's livestock industry and the Park Service.

Response: The Federal FEIS included information regarding genetics as it relates to determination of a minimum viable bison population (FEIS p. 286 – 288). Anticipated population levels are well in excess of the minimum population necessary to avoid the consequences of genetic drift. Quarantine procedures, if amended into the IBMP, would provide an alternative method for removing bison and would not significantly change the number of bison that would be removed from the population.

Genetics of Yellowstone bison are not so much unique as they are very important for the conservation of bison. Work by Halbert (2003) discovered a wide diversity but little uniqueness in the genetics of bison from YNP. Yellowstone bison probably demonstrate a diversity of genetic composition due to the historic importation of bison from several herds managed in captivity during the turn of the century. After bison were introduced into YNP in the early 1900's they increased dramatically and in some sense overwhelmed the remnant free-ranging bison reported to live in YNP at that time. Removing calves that are the least likely age group to survive a winter and already are genetic products of animals within the population would have the least impact on the population gene pool.

From a genetic conservation perspective it is not advisable to maintain only one population of genetically important bison but rather allow for multiple herds to exist. This would provide a hedge against the catastrophic loss of that one genetically important bison population. Bison in Yellowstone exist upon a volcanic caldera and within historically marginal bison habitat subject to extreme weather. The catastrophic eruption of the Yellowstone caldera or significant weather events could significantly reduce Yellowstone bison. The proposed study could lead to the development of other genetically identical bison herds in more stable environments to ensure the conservation of bison genes in spite of unpredictable, catastrophic events in Yellowstone.

Comment: Other free-ranging and genetically pure herds should serve as the source of stock for reintroductions at this time.

Response: There are few suitable source stocks for reintroductions at this time. There are 13 conservation herds available for consideration (Boyd 2003). Most of these are very small in size and could only provide a few animals. Most have been behind fence for many generations and have not been subject to natural forces of selection but selectively managed by humans. Several of these herds are genetically depauperate. Many of the current conservation bison herds are also plagued with domestic cattle genes. Halbert (2003) has identified Yellowstone and Wind Cave bison as the most genetically diverse and pure plains bison conservation herds in North America. The current population at Wind Cave is only 350 animals and could not provide any surplus animals this past year.

Two very large plains bison herds with expanding populations are Yellowstone and the Jackson herds found within the GYA. These herds are exposed to brucellosis but we believe this disease concern can be overcome through an appropriate quarantine procedure. From the conservation perspective (naturally managed, genetically appropriate and numerically robust), Yellowstone bison are an ideal source herd once declared brucellosis free through an accepted bison quarantine program.

### **Brucellosis**

Comment: It must be emphasized that owners of domestic cattle were the original culprits. These people initially infected our wild elk and bison with their diseased cattle. They should accept the responsibility for protecting their livestock from the elk and bison they originally infected.

Response: This comment is beyond the scope of this EA. The strain of brucellosis (*Brucella abortus*) that occurs in Yellowstone bison is a livestock disease that originated in Europe and came into this country when cattle were first imported into this country. The original source of infection for Yellowstone bison is unknown. The two most likely sources were either the bison that were transplanted into the Park in the early 1900's and/or dairy cattle that were maintained at the bison ranch in the Lamar Valley.

Comment: There is no scientific basis for the management of bison as prescribed in the IBMP.

Response: This comment is beyond the scope of the EA. The Federal FEIS included a description of brucellosis and an explanation of the risk that the disease poses to Montana's livestock industry. The FEIS also explained the risk of brucellosis transmission from bison to livestock and the potential economic consequences in the event that transmission should occur. Research since implementation of the IBMP tends to confirm the explanation of risk that was presented in the FEIS. Many highly qualified scientists were involved in the research and management discussions considered while developing the IBMP.

Comment: The two hundred bison that would be quarantined for this study are among those that have tested sero-negative for exposure to brucellosis. Although they have never

been exposed to brucellosis, and therefore they could not possibly transmit the disease to cattle, at least half of them, and possibly all of them, will lose their lives.

Response: It has been scientifically demonstrated in Yellowstone and elsewhere that, although unlikely, some of these calves could have been exposed to brucellosis at birth or shortly thereafter. The proposal to study the feasibility of implementing quarantine procedures is based on the assumption that it is possible to distinguish between bison calves that were not exposed in early life and do not harbor *Brucella abortus* from those bison calves that have been exposed using a complex series of serological tests to search for bacterial DNA or antibodies to the disease organism. A critical aspect of the feasibility study is to determine, with certainty, whether that assumption is correct. There are two methods to confirm that sero-negative bison calves do not have a latent infection. One method requires holding the animal in quarantine, isolated from potential exposure to brucellosis, until sexual maturity and their first parturition event, thereafter, testing again for antibodies to the brucella organism. The other method requires euthanizing the animal and, with a comprehensive set of culture tests, attempt to isolate *Brucella abortus* from the animal's tissues. The proposed study, as described in the Environmental Analysis, would employ both methods and sufficient sample sizes of test animals to ensure a valid research result.

Comment: Several comments suggested that there is no scientific evidence linking Yellowstone bison to brucellosis in domestic cattle. "There has never been a single proven case of transmission of brucellosis to cattle by bison in the wild, and that, in any case, such transmission could only occur at the time a calf is born, and that this disease can never be transmitted by males (it is transmitted in birthing fluids)." Therefore, there seems to be no rationale at all for regularly rounding up bison that move from YNP into Montana as part of their natural migration.

Response: As noted above, the Federal FEIS explained the risk of brucellosis transmission from bison to livestock and the potential economic consequences in the event that transmission should occur. The purpose of the IBMP is to maintain temporal and spatial separation between bison and domestic livestock. There has not been a documented instance of brucellosis transmission from bison to domestic livestock because, at least in part, the agencies have been successful in maintaining temporal and spatial separation between bison and cattle. There have been cases of transmission between elk and cattle in Wyoming suggesting that the opportunity for transmission from bison is very real. It remains unclear if venereal transmission is possible through male bison. Further study would be necessary to state that males can never transmit brucellosis. The GYIBC has produced a white paper on the subject of venereal transmission that is available on the GYIBC website.

Comment: Bison, which have tested negative for exposure to brucellosis, should be allowed to migrate.

Response: This comment is beyond the scope of this EA. The IBMP already addressed the prescriptions upon which bison removals will be made. This EA does not determine when and how bison removals are implemented. This feasibility study could lead to a non-lethal alternative to removal of bison when prescribed under the IBMP.

A single serological test that is negative for the presence of antibodies to *Brucella abortus* is not sufficient to confirm that an individual bison is free of brucellosis because latent infections can occur with this disease. Research conducted with YNP bison has shown that *Brucella abortus* can be cultured from the tissues of bison that were negative for brucellosis on the basis of serological tests taken at one point in time. Information obtained from the quarantine feasibility study would shed considerable light on the issues of latent infection and interpretations of serology. This could significantly benefit the management of bison under the current plan.

Comment: MFWP should rely on a report regarding wildlife diseases that was prepared by the Jackson Hole Conservation Alliance, “Wildlife Diseases in Greater Yellowstone: Current Problems, Future Threats and Solutions that Work”. A copy of the report is available on the Internet at <http://www.jhalliance.com/reports/disease.pdf>.

Response: This report has its greatest relevance to issues associated with management of brucellosis relative to elk and bison on feedgrounds. The discussion of brucellosis in bison promotes the supposition that the primary route of transmission within Yellowstone bison differs from that in cattle. The literature on which the authors of the report based that conclusion was considered when the agencies developed the IBMP. At that time, the preponderance of the literature supported the conclusion that the primary route of brucellosis transmission in bison is similar to that in domestic livestock. Research conducted since implementation of the IBMP has tended to confirm that conclusion.

### **Quarantine Operation**

Comment: If the calves are negative for the bacteria why do they need to be quarantined? Furthermore, if they are negative for the bacteria why do they need to be necropsied?

Response: As stated in the Environmental Analysis, MFWP proposes to evaluate the potential for the latent expression of brucellosis and test the sensitivity of quarantine procedures for detecting such infection. Brucellosis is endemic in the Yellowstone bison herd and, therefore, any animal that originates from that herd has potentially been exposed to brucellosis. Typically, there is a latent period between exposure to brucellosis and subsequent infection. Serological tests for brucellosis determine the presence of antibodies to the disease and the standard blood tests are not sensitive enough to distinguish disease-free animals from those that have been exposed but have not yet developed infection. This has been demonstrated through research and monitoring for some of the bison migrating outside of Yellowstone.

Evaluation of the feasibility of the proposed quarantine protocols will employ a complex series of blood tests to determine which bison are appropriate for quarantine. The study then will test the hypothesis that these blood tests, used in combination, are able, with 95% certainty, to identify disease-free bison calves. During the study, the test animals will be held in quarantine to isolate them from exposure to brucellosis. To determine whether the bison are, in fact, disease-free, it is necessary to either hold the animals in quarantine or euthanize the animal to obtain tissue samples for culture tests. The feasibility study incorporates both options to reduce uncertainty in the final results.



Finally, to gain acceptance for these bison in restoration projects it is important that we demonstrate to animal health regulators that these animals do qualify as disease free, therefore can be transported across state lines and pose no risk for bison restoration activities outside of the GYA.

Comment: It is not appropriate to use Yellowstone bison for the quarantine study. Instead, the study should use elk, cattle or bison from a domesticated herd.

Response: The purpose of the study is to evaluate the feasibility of quarantine procedures for the purpose of identifying Yellowstone bison that are disease free and, therefore, suitable for unrestricted live release. As is recognized by many, bison from Yellowstone have important genetics and part of that genome influences immune system function and performance. One objective of this study is to reliably establish the disease status of Yellowstone bison by measuring very specific immunologic responses so that we can sort infected and non-infected animals. The only animals suitable for the study are Yellowstone bison. Elk, bison or cattle from a domestic herd would not fit the research design and would not produce results applicable to the purpose of the study.

Comment: Crowding on a quarantine facility like crowding on an elk feedgrounds can have unwanted negative consequences.

Response: The study assumes that animals that are put in quarantine are disease free. If, however, the study includes a bison with a latent infection, other bison in quarantine would be exposed to brucellosis. For that reason, bison will be held in smaller test groups so that a single, infected animal cannot compromise all of the study animals.

Comment: The study should evaluate the PCR Real Time DNA test for brucellosis.

Response: The proposed evaluation of the feasibility of the proposed quarantine protocols will take advantage of the specificity and sensitivity of multiple tests to screen out suspect animals during the quarantine process. As the study proceeds, we anticipate using many technical improvements in field diagnostics. These will include the use of PCR tests. However, MFWP also understands that, when used alone, none of the serological tests, including PCR, is sufficient to certify that an individual animal is not infected with brucellosis.

Comment: The research conducted at this facility must be reviewed by independent scientific peers to establish its credibility. A panel that includes scientists from the National Park Service, Fish and Wildlife Service and U.S. Forest Service should oversee the research at this facility. If the process of certifying the health of these bison fails, the failure must be legitimate, i.e., that the process was unable to remove the latent infection from the herd. Risk of failure of the experiment due to a design or logistical flaw must be reduced to a minimal level.

Response: MFWP agrees that the results of the study must be credible and is committed to the highest professional standards in the conduct of the study. MFWP and USDA/APHIS developed the concept through routine discussion and interaction with a variety of specialists and interested publics (Appendix B). The project design and concepts were peer-reviewed by

many scientific experts outside of government as well as within including MFWP, the Montana Department of Livestock, USDA/APHIS, the Greater Yellowstone Interagency Brucellosis Committee, the United States Animal Health Association and the Intertribal Bison Cooperative. Several field tours of potential quarantine sites and many discussions with leading authorities in wildlife conservation, bison management, and veterinary science were conducted. Comments were integrated at all steps in the process to improve the study design. The National Park Service Research Review Committee examined the project proposal prior to approval of a research permit. The project will proceed within the framework of the IBMP and, thus, all of the cooperating agencies will have some involvement in project oversight. The project is designed to continue integrating input from several scientific experts outside of government and inside the cooperating agencies as the project steps forward. However, final authority for approving a brucellosis quarantine protocol is vested in USDA/APHIS and the declaration of disease free status can only be determined by a state or federal veterinarian with statutory authority.

Comment: If a quarantine facility was established for bison, the quarantine protocol is so restrictive that few, if any, bison would ever survive the process and the cost to the taxpayers would be exorbitant.

Response: The current USDA/APHIS quarantine protocol for bison was established during the development of the IBMP and is published in that document (Appendix B of the IBMP). The protocol for bison calves is long because they must produce a viable calf to conclude the quarantine procedures. However, bison calves are easily managed and less likely to be exposed due to the limited time mingling with infected bison. Bison experts we have consulted and field experience indicate young bison are most likely to survive the process and we expect high survival during the process.

We do not have evidence before us to conclude that bison will not survive this procedure or that it will be too costly. The purpose of the feasibility study is to evaluate the current protocol for calf bison and determine whether it is feasible and cost effective. This study was conducted to evaluate calves because they were the most likely to succeed through the procedures. The results from this study may identify options for future bison quarantine programs that would be less restrictive, less expensive to implement and with a higher probability of clearing more animals for subsequent release.

The initial screening process for bringing animals to this facility will be rigorous and we anticipate that most animals accepted to the project would eventually qualify for release. The probability for latent expression is known to be fairly low and, if screening is successful, many bison introduced into the study, with the exception of those used for the culture-testing phase, will graduate through the process. We anticipate that, once the research project has established credible evidence for success, the culture steps will not be necessary and quarantine protocols can be streamlined.

Comment: Whatever metric is used to indicate disease-free status, the assessment must be accurate.

Response: MFWP agrees. The assessment must not only be accurate but accepted by animal health regulators and the conservation/restoration project partners.

Comment: The quarantine facility is not secure and bison could escape. When the facility was a game farm, elk would knock the fence down and escape.

Response: The project will operate in compliance with all of the requirements of a federally approved quarantine facility. The facility will be double fenced and the standards for the design of the fence were developed in consultation with people who are experienced in the management of ranched bison. The integrity of the existing fence has been examined and improvements will be completed before stocking the facility. The operation will include an emergency response protocol and the facility will be regularly staffed. Security measures will include boundary sensors and other technology to assist in monitoring fence-line activity.

## **Humane Treatment**

Comment: Animals held in quarantine must be treated humanely. Because the bison will be held for an extended period, quarantine could negatively affect animal health, wildness and behavior. A Humane Bison Handling Task Force was established and it submitted recommendations to the agencies, but compliance with the recommendations has been marginal.

Response: The proposed study would minimize handling, while achieving the goals and objectives of quarantine feasibility research. Bison brought to this facility will be monitored for health and well being during the entire quarantine process. Specialists with experience handling bison and many veterinarians from within and outside of government have already been consulted and will frequently be involved in animal management decisions and protocol development. Humane treatment and management of these bison is of primary importance to the success of this project.

Comment: The proposed “research” project violates the Animal Welfare Act. The Animal Welfare Act (AWA) is the primary federal law governing the use of animals in research, entertainment, and whose use affects interstate commerce. The AWA requires that “every research facility ... shall register with the Secretary...” Furthermore, each “research facility” must establish a committee (referred to as an Institutional Animal Care and Use Committee) that oversees and evaluates research done at the “research facility.” The MFWP, at present, is not registered as a research facility or organization and, therefore, cannot participate in the proposed “research” without violating federal law.

Response: The research facility is not managed by MFWP and is currently leased by USDA/APHIS so is registered with the Secretary. USDA/APHIS is the lead agency with primary authority and responsibility for the research facility including the oversight of the research by a USDA Institutional Animal Care and Use Committee in compliance with the Animal Welfare Act. USDA/APHIS is the primary agency governing the animal welfare act. MFWP’s role will be to support this research cooperatively by providing transportation, technical counsel, manpower, equipment, and funding. MFWP does not propose to manage, control or lease the research facility but proposes to cooperate with USDA/APHIS as stated in the EA.

## **Montana Environmental Policy Act/National Environmental Policy Act**

Comment: MFWP failed to conduct a public scoping process and failed to solicit public opinion on the merits or justification of implementing a quarantine program for bison.

Response: The MEPA regulations grant agencies discretion whether to schedule a scoping period prior to the preparation of an EA and MFWP elected to prepare the EA without scoping. In preparing the EA, MFWP benefited from the extensive public involvement associated with the development of the IBMP. Although it was not a scoping process, as defined by the MEPA regulations, MFWP had considerable discussion with other agencies and organizations, as described in the EA, prior to preparing the EA for public review and comment (Appendix B).

Comment: Several people requested an extension of the public comment period.

Response: The EA was released for public review on October 12, 2004 with public comment scheduled to close on November 11. On November 10, MFWP announced that the public comment period had been extended to November 24.

Comment: The Environmental Analysis is pre-decisional, inadequate and illegal because it failed to solicit public opinion, failed to evaluate and disclose the environmental effects or evaluate a full range of reasonable alternatives. Evaluate the quarantine program in its entirety through an EIS rather than segmenting its public review by phases.

Response: As noted in the ROD, the IBMP included provisions to evaluate whether a quarantine facility would be an appropriate component of the IBMP. It also included a commitment to complete additional NEPA/MEPA analysis to determine the design, location and operation parameters for a bison quarantine facility. The purpose of the proposed action is to evaluate the feasibility of the proposed quarantine protocols. It is not a proposal to implement a quarantine program and such a program proposal cannot be developed without benefit of the results of the proposed study. Additional environmental review will be prepared prior to making a decision to implement quarantine procedures. We solicited public comment through publication of a Draft EA. We think the current EA assessed the environmental impacts and a reasonable range of alternatives.

Comment: The agencies attempt to downplay the impacts of the proposed action by only evaluating Phase I of the research clearly constitutes an example of illegal segmentation.

Response: A decision to proceed to Phase II is contingent upon a successful outcome during Phase I. Additional environmental review will be completed prior to that decision. There are no decisions regarding Phase I that will obligate MFWP to move forward with Phase II or III. This research project is designed to examine uncertainty and as such needs to test various hypotheses in a stepwise process according to the scientific method. Consequently, the environmental review will also be completed incrementally.

Comment: The EA lacks direction about where the study will go if approved. Will more bison be captured in year three?

Response: The EA is not the appropriate document to disclose finer details of the proposed quarantine feasibility study. The EA analyzed the impacts to the human environment associated with conducting Phase I of the project, which is contingent upon bison being available from capture operations. The study proposal outlines in more detail what steps will be considered in each phase of the hypothesis testing (a study plan is available at MFWP). The EA explains that a decision to proceed with the next research step depends on success in Phase I and results of the impact analysis associated with a decision to conduct Phase II and III. Additional environmental review would be completed prior to major changes to the project or a decision to amend the IBMP based on the results of the evaluation. This is outlined in section 2.4 “Identification of the Preferred Alternative”.

Whether bison are captured in year 3 is dependent upon decisions made by the agencies according to the IBMP. Specific capture operations will not be conducted to perform this research but according to the management prescriptions outlined by the IBMP. The quarantine research project does not supersede previous decisions or the prescriptions outlined in the IBMP and would not prevent the eventual free ranging of bison in the GYA. If, at some time in the future, quarantine research or management programs are considered and developed by the agencies, quarantine could provide a sustainable non-lethal alternative for removing bison. Quarantine would be used in a manner that is consistent with the conservation of a wild bison herd in Yellowstone in accordance with the stated purpose of the IBMP. Conservation restoration projects would be considered when animals become available for slaughter under the provisions of the management plan and not at the expense of maintaining a viable Yellowstone bison herd.

Comment: The MFWP has illegally segmented the proposed action into separate parts to avoid preparing a more comprehensive EIS to provide a more detailed evaluation of the proposal’s impacts. The claim that future study phases may or may not proceed depending on the outcome of Phase I is not a legitimate justification for failing to evaluate all impacts in a single document.

Response: The EA is tiered to the FEIS that was prepared for the IBMP. It is not possible to evaluate impacts associated with future and, as yet, unknown contingencies. Additional environmental review will be completed prior to any decision to proceed beyond Phase I. This research project is designed to examine uncertainty and as such needs to test various hypotheses in a stepwise process according to the scientific method. The environmental compliance produced to evaluate a scientific method for a research project is hypothesis driven and meaningful environmental reviews for Phase II and Phase III are dependent upon the results of hypotheses tested during Phase I. Once again, there are no decisions regarding Phase I that will obligate MFWP to move forward with Phase II or III.

Comment: The proposed action is clearly inconsistent with the terms of MEPA because MFWP failed to justify the need for the proposed action; failed to consider a reasonable range of alternatives; and, failed to evaluate the full range of potential impacts. Moreover, under the MEPA implementing regulations, an EIS is clearly required to properly evaluate the full range of impacts inherent to the proposed action.

Response: As noted in the ROD, the IBMP included provisions to evaluate whether a quarantine facility would be an appropriate component of the IBMP. The EA notes that,

prior to the development of a science-based quarantine program some preliminary research is needed to test various steps toward developing an appropriate science-based quarantine protocol and to quantitatively evaluate the risks associated with quarantine programs. The FEIS for the IBMP evaluated the concept of including the quarantine as a component of the IBMP. The EA disclosed the impacts associated with the evaluation of the feasibility of the quarantine protocol. Additional environmental review will be conducted prior to any decision to amend the IBMP to include quarantine at which time alternative approaches to implementation will be evaluated and impacts associated with that decision would be disclosed.

Comment: The EA did not disclose cumulative effects of the proposed action relative to other bison management actions, including the proposed hunt and other bison research that is occurring at the Brogan facility. The agency needs to start considering the cumulative impacts of its actions, and providing some semblance of baseline scientific knowledge on what is happening so the public can make better informed decisions.

Response: All of the actions referenced are occurring within the context of the IBMP and the effects were analyzed in the FEIS. Cumulative effects of the impacts to the human environment associated with this project were identified under each of the alternatives in the EA.

Comment: A very recently passed Congressional spending package included \$864,000 money for this quarantine facility near Gardiner, MT. This implies that the placement and operation of the quarantine facility was predetermined.

Response: Appropriations were made for quarantine programs in 1997 and these USDA/APHIS funds were not expended. A federal appropriation does not require that the money be expended. The resources referred to is an allocation to the Montana Department of Livestock. Although listed as quarantine funds, this is an annual appropriation to Montana for implementation of state management activities under the IBMP. This appropriation can be used for many activities including, but not exclusively, for quarantine. Funds from this appropriation will not be allocated to this activity until a final record of decision has been posted. In addition, the President has not signed the budget bill and the disbursement of federal funds to appropriate federal agencies has not taken place. The inclusion of monies in the federal budget to support bison management in Montana does not require MFWP to make a decision to proceed with the study.

Comment: Since this is a captive program created and totally funded by the federal government NEPA requirements should be in force and a complete EIS procedure followed for the siting and operation of the quarantine facility. The potential effects are on a bison herd on federal lands and are of national importance and a full environmental impact statement that reveals the consequences for bison should be available for public scrutiny.

Response: The purpose of the proposed action is to evaluate the feasibility of the proposed quarantine protocols. To the extent that the study affects a public bison herd on federal lands, those affects already have been evaluated in the Environmental Impact Statement that was prepared for the IBMP. If the evaluation is successful, the agencies likely will consider incorporating a quarantine protocol into bison management. Prior to any decision to amend

the IBMP, the agencies will prepare additional analysis, pursuant to the Montana and National Environmental Policy Acts.

Comment: The Environmental Analysis did not evaluate methods and locations for subsequent release of disease-free bison.

Response: The EA addressed impacts associated with Phase I of the study. Decisions to advance the study to Phase II and III or release animals from the study are dependent upon findings from this study phase. Any decision to advance the study will be supported with an appropriate environmental review.

Comment: USDA/APHIS did not evaluate the environmental impacts of a quarantine facility under the National Environmental Policy Act.

Response: USDA/APHIS determined that its decision to participate in the feasibility research is categorically excluded from environmental review under NEPA and documentation for their determination is included in the administrative record. A copy of the Cat-Ex produced can be obtained from the USDA/APHIS.

### **Bison Re-Introductions**

Comment: Where will quarantined publicly owned wild bison be released and how they will be managed once they get there? Where are these locations? What are the regulatory hurdles and how can they be expected to play out over time and in cost? What caveats apply for the direction, duration and sources of funding that future work will entail? We see no need to study the feasibility of wild bison quarantine unless MFWP can clearly articulate where these bison will go and how they will be managed when they get there.

Response: MFWP agrees that all of these questions are relevant and will be considered prior to any decision to include quarantine procedures into the management plans and how Yellowstone bison relate to a broader bison conservation strategy. However, MFWP and the other agencies do not feel it is necessary or efficient to initiate a more comprehensive environmental review to address these issues until there is a higher level of assurance that there is a feasible quarantine procedure to certify disease-free bison. It is essential that data from Phase I of this study be considered in the analysis of the environmental effects of future actions.

The cooperating agencies are committed to locating suitable restoration sites for the study bison. A procedure has been outlined for this step and that process will determine the best sites available for restoration projects depending upon some specific criteria established by the agencies. Furthermore, the Interagency Tribal Bison Cooperative has already indicated an interest in using these bison for restoration projects on Native American lands. MFWP cannot know nor can it commit to the ultimate destination of disease-free bison until that decision process established in the study proposal has been conducted and the environmental reviews are completed. This process will take place concurrent with the study so that decisions for restoration projects are not necessary for at least three years after the implementation of Phase I.

Comment: Should the process of certifying Yellowstone bison as disease-free be successful and a relocation plan be developed, healthy bison must be destined for public or tribal land habitats where they remain in the public trust under the authority of federal, state or tribal wildlife management agencies. Bison should not be transferred from the public domain to private control.

Response: The cooperating agencies are committed to locating suitable restoration sites for the study bison. A procedure has been outlined for this step and that process will determine the best sites available for restoration projects depending upon some specific criteria established by the agencies. Furthermore, the Interagency Tribal Bison Cooperative has already indicated an interest in using these bison for restoration projects on Native American lands. MFWP cannot know nor can it commit to the ultimate destination of disease-free bison until that decision process established in the study proposal has been conducted and the environmental reviews are completed. This process will take place concurrent with the study so a siting decision is not required for at least three years following the implementation of Phase I.

MFWP agrees that disease-free bison should be used to augment other existing public bison herds, augment tribal herds, used as seed stock for new public bison herds or returned to YNP. MFWP does not support transferring publicly owned bison for commercial ventures.

Comment: The long-term goal of conserving bison by relocating them to portions of their former range would be better served using source populations other than Yellowstone.

Response: The purpose of the proposed action is to evaluate the feasibility of the proposed quarantine protocols. If, at some time in the future, the IBMP is amended to include quarantine procedures, quarantine then would provide a non-lethal alternative for removing bison.

There are few suitable source stocks for reintroductions at this time. There are 13 conservation herds available for consideration (Boyd 2003). Most of these are very small in size and could only provide a few animals. Most have been behind fence for many generations and have not been subject to natural forces of selection but selectively managed by humans. Several of these herds are genetically depauperate. Many of the current conservation bison herds are also plagued with domestic cattle genes. Halbert (2003) has identified Yellowstone and Wind Cave bison as the most genetically diverse and pure plains bison conservation herds in North America. The current population at Wind Cave is only 350 animals and could not provide any surplus animals this past year.

Two very large plains bison herds with expanding populations are Yellowstone and the Jackson herds found within the GYA. These herds are exposed to brucellosis but we believe this disease concern can be overcome through an appropriate quarantine procedure. From the conservation perspective (naturally managed, genetically appropriate and numerically robust), Yellowstone bison are an ideal source herd once declared brucellosis free through an accepted bison quarantine program.



## National Bison Conservation Strategy

Comment: A quarantine facility may eventually produce brucellosis-free genetically sound bison as seed stock for approved conservation herds outside of YNP. Although bison relocation and management authorities are not addressed in this assessment, it is not too early to begin advocating for this critical conservation decision for relocated bison.

Response: If the feasibility study is successful and if the agencies agree to consider the development of a larger quarantine program, those issues will be addressed through corresponding environmental reviews. The agencies have been discussing and considering the regulations, rules and authorities that apply to restoration projects and found that these can vary from country to country, state to state, land management jurisdictions or on Native American lands. Until a specific restoration project is identified through the proposed selection process, MFWP cannot know what management authorities; regulations or rules may apply to the restoration project. Each restoration project will bring its own unique set of conditions and subsequent environmental issues to be analyzed. That is why it is not possible to anticipate these scenarios and prepare these compliance documents in advance of Phase I. We anticipate that our comprehensive selection process to identify suitable sites will consider the regulatory aspects of each project and address them accordingly.

MFWP and many other agencies agree that we need to consider long-term strategies for bison conservation in North America. There is increased interest in bison restoration expressed by many groups and the IUCN bison specialist group has already considered developing a conservation strategy for North America. The proposed quarantine feasibility study may yield valuable information to support these efforts and could provide some animals from a robust bison population to pilot some restoration projects following the guidelines and prescriptions IUCN has established for restoration projects. However, this first research step to test quarantine protocols is necessary before we can advocate for a larger conservation program or make many of those critical conservation decisions.

Comment: There is no unified conservation plan for bison in North America and the future of bison conservation depends on restoration of disease-free bison to habitats suitable for their long-term occupancy. There is public support for the concept of establishing additional populations of bison, using the Yellowstone herd as a source herd, across the continent and then considering the entire population as a meta-population, with appropriate management actions.

Response: MFWP and many other agencies agree that we need to consider long-term strategies for bison conservation in North America. There is increased interest in bison restoration expressed by many groups and the IUCN bison specialist group has already considered developing a conservation strategy for North America. The proposed quarantine feasibility study may yield valuable information to support these efforts and could provide some animals from a robust bison population to pilot some restoration projects following the guidelines and prescriptions IUCN has established for restoration projects. However, this first research step to test quarantine protocols is necessary before we can advocate for a larger conservation program or make many of those critical conservation decisions.

The purpose of the proposed action is to evaluate the feasibility of the proposed quarantine protocols. A unified bison conservation plan for North America is beyond the scope of the feasibility study. To the extent that it is within the scope of the authority of the cooperating agencies, issues related to a unified conservation plan would be addressed in the environmental review of any decision to incorporate quarantine procedures into the IBMP. Amending quarantine procedures into the IBMP should increase the chance for success in the conservation and restoration of bison in North America while maintaining a viable population of bison in the Yellowstone ecosystem.

### **Livestock Management**

Comment: In the ROD for the Management of Yellowstone Bison, the State of Montana committed to ensuring 100% vaccination of all cattle in the conflict zone. To date, we are not aware of any data provided to the public regarding the level of compliance with this vaccination goal.

Response: Vaccination of cattle outside of Yellowstone is beyond the scope of this EA. Two cattle herds graze seasonally on private lands in Zone 2 in the West Boundary Area. The operator of one herd resides in Idaho and grazes cattle on his own property. A Certificate of Veterinary Inspection (CVI) and a Montana importation permit are required for this operator to graze cattle on his property in Montana. Montana law requires all vaccination eligible female cattle imported into Montana are official calfhood vaccinates (OCV) against brucellosis. This owner also operates in compliance with a plan administered by the Idaho State Veterinarian that requires testing of the test-eligible cattle upon return to Idaho. The other operator is a Montana resident who leases private land. Department of Livestock and the operator have developed a herd plan. Although the plan has not yet been finalized, the operator operates in compliance with it. The herd plan requires calfhood vaccination of all eligible cattle and annual testing of all test-eligible cattle grazing in the West Yellowstone Area. The agencies are working with the operators to develop herd management plans for cattle that graze in the vicinity of the North Boundary area.

### **Risk to the Livestock Industry**

Comment: Bison quarantine facilities should not be permitted outside of the park because it extends the quarantine and testing area further into cattle producing areas impacting the ranchers greater than before.

Response: The quarantine feasibility study will take place within the broader framework of the IBMP and with the concurrence of all of the cooperating agencies, including the Montana State Veterinarian and USDA/APHIS. The facility will not pose a risk to ranchers in the area. Bison coming to the facility are aggressively screened to be serologically negative for brucellosis and will be contained in a double fenced facility with aggressive security measures in place to monitor the animals.

## Migration Route

Comment: The quarantine facility is located on bison winter range and astride a potential bison migration corridor to public land at Dome Mountain. The location precludes the establishment of wild bison on the east side of the Yellowstone River.

Response: The quarantine facility is located on private property and on lands that are outside the bison management zone defined by the IBMP. Bison are not allowed to migrate into this area according to the current management plan. Amendments to the IBMP would be required to make those lands and the public land at Dome Mountain available for bison. Such a proposal is beyond the scope of this project to evaluate bison quarantine procedures.

Comment: The proposed quarantine facility is located right in the heart of critical wild bison and elk winter habitat on the northern range. This is also a critical migration corridor for a variety of wildlife. It appears the MFWP, in cooperation with the Animal Plant and Health Inspection Service (APHIS), is proposing to maintain or establish what could be described as a game farm and/or feed ground that may significantly impact a variety of wildlife and their access to critical habitat.

Response: The proposed quarantine facility is located on private land that previously was operated as a game farm. Existing improvements will be adapted for the purpose of the feasibility study. Any impacts on elk migration or other impacts to wildlife and access to critical habitats have been in effect since the establishment of the game farm. No additional impacts are expected as a result of the feasibility study.

## Habitat

Comment: Anecdotal evidence from relocated buffalo herds and common sense indicate that the exposure rate for brucellosis will naturally decrease over time if buffalo are provided more habitat in which to spread out. For example, elk on feedgrounds in Wyoming test 17 to 60 percent positive for brucellosis exposure while elk utilizing natural habitat outside of feedgrounds test between 0 and 2 percent positive for brucellosis exposure. Brucellosis is a disease that is spread primarily because animals are congregated in confined areas. Habitat expansion is a proven technique in reducing exposure to brucellosis.

Response: The purchase of habitat for bison is beyond the scope of this EA. MFWP understands that unnatural concentrations of elk and bison on artificial food sources on the National Elk Refuge contribute to the rate of brucellosis infection in those herds. MFWP also understands that either unnatural concentrations or other circumstances that contribute to frequent exposure are necessary to maintain infection in an elk herd. MFWP has frequently expressed these views in public forums and published much of the information about managing brucellosis in elk through habitat programs.

Bison ranging within the Yellowstone system are not fed and with the rare exception of the transboundary areas already naturally distribute themselves among suitable habitats. However, MFWP is not aware of any information to support the suggestion that acquisition of additional habitats would cause reduced rates of exposure and infection among Yellowstone bison.

Some of the suitable bison habitat outside of Yellowstone is privately owned and not available for purchase. Should a landowner be willing to sell those properties then a habitat purchase could be considered by the managing agencies.

Comment: In Montana, natural quarantine through habitat access has worked for elk, as compared to the feed grounds and vaccination programs implemented in Wyoming. These opportunities for wild bison recovery and conservation in the Greater Yellowstone Area must not be sacrificed by this quarantine/population control proposal.

Response: MFWP is not aware of any opportunities to naturally quarantine bison through habitat access. With habitat expansion, cows and calves would continue to move in groups. Susceptible bison would continue to be exposed to infected bison. The potential for free association between infected bison and susceptible cattle would significantly increase and the capability to manage for temporal and spatial separation of bison and cattle would significantly decrease. Implementation of quarantine would not affect the current distribution of bison or impact their ability to utilize existing habitats according to the management prescribed in the IBMP.

Comment: What would be best for bison now would be for them to be free over a wide range of land without contact with rancher's cattle. The ranchers do not own all the land in Yellowstone, they just act like they do and lately the government is acting like they do.

Response: The spatial-temporal separation of bison and cattle is addressed in the IBMP. The purpose of the proposed action is to evaluate the feasibility of the proposed quarantine protocols. Change from current land use allocation of public land or acquisition of private lands to dedicate more habitat for bison is outside the scope of the proposed action.

Many ranchers and other Montana citizens do own land adjacent to Yellowstone Park. MFWP is obligated by statute to address wildlife damage to private property and works diligently to maintain a cooperative atmosphere between landowners, whose livelihood comes from the land, and our agency to ensure tolerance and acceptance for wild animals. It is by nurturing this acceptance that we maintain wildlife populations throughout our state.

Comment: The EA appears premature in light of the many other studies or management protocols underway or soon to be implemented. For instance, Dr. Cormack Gates is under contract with YNP to determine the body of scientific and cultural knowledge that exists pertaining to bison dispersal and movement in the Greater Yellowstone Ecosystem (GYE).

Response: We do not consider the proposal for the quarantine research to be premature and this methodology has been in existence for nearly 100 years. Its application in the GYA has been discussed carefully for decades. The IBMP took 10 years to complete and already considered the ecological consequences of removal of bison for slaughter research or quarantine. Now is the appropriate time to conduct specific research to advance an idea that has been discussed at length.

Additional ecological and scientific data will be considered but there are always uncertainties in management decisions. New information relative to ecological effects will be more

relevant to the larger management decisions discussed in the IBMP. Dr. Cormack Gates has been consulted and we do not anticipate significant changes in our understanding of the ecology of bison. MFWP agrees that results from new ecological studies should be used to revise the population target or the boundaries of bison management zones. Irrespective of the issue of brucellosis, bison management plans for Montana must include provisions to manage bison numbers and distribution in the GYA. Quarantine, if implemented, would be one management tool useful for accomplishing that purpose while meeting other conservation objectives.

Comment: Please discuss a brucellosis-proof habitat and livestock management planning alternative in detail allowing for wild bison movements to identified elk ranges in the Greater Yellowstone Area.

Response: The purpose of the proposed action is to evaluate the feasibility of the proposed quarantine protocols. The Federal FEIS for the IBMP analyzed eight alternatives, including a minimal management alternative. If implemented, this alternative would have provided for the largest bison distribution, while still meeting all of the other objectives of the IBMP. The state managed elk winter ranges in the Greater Yellowstone Area lie beyond the boundaries defined for the minimal management alternative. It is not possible to permit bison to migrate that far and ensure temporal and spatial separation of bison and cattle. It also would not be possible to ensure against the risk of extensive damage to private property.

Comment: It seems that nearly 300,000 acres of potential habitat, mostly publicly owned, lies vacant of wild bison, only because we will not let them access this area. If no more than 400 cattle were simply moved to equitable alternative pastures away from the border of Yellowstone, with fair compensation for the trouble, there would be no buffalo-brucellosis issue around Yellowstone Park.

Response: The distribution of bison is defined by the IBMP. The decision to implement the IBMP was supported with a Federal and a State FEIS. Removing cattle from these areas is beyond the scope of this study.

### **Endangered Species**

Comment: There is also a failure to consider, disclose and evaluate the impacts of removing a significant food source for threatened grizzly bears, bald eagles, grey wolves and other listed species that depend on bison for their survival.

Response: Impacts to threatened and endangered species were evaluated in the FEIS for the IBMP and the concept for the quarantine evaluation is within the scope of that analysis. The bison used for this project will be those captured during the routine implementation of the IBMP and not specifically for this project. There will be no additive impacts not already addressed in the FEIS.

Comment: The bison quarantine may attract bears and potentially lead to an increase in human conflicts.

Response: The facility has been in grizzly bear habitat for many decades and has not experienced any problems with bears. The existing fence has a high tensile, electric component to it and has been proven to be an effective barrier to bears. Implementing this study by the agencies will actually decrease the potential impacts to bears in this area when compared to the current situation. The study proposal, which contains more detail than the EA, has addressed the need for additional electric fencing surrounding the perimeter of the facility. Management within the boundaries of this private property will become a cooperative effort between the agencies and the private landowner. The agencies will bring additional influence to the management of fences and bear attractants within the property. Specific measures will be established within the facility to reduce conflicts with large carnivores. The project will make special efforts to manage bear attractants and will cooperate with state and federal bear management specialists to avoid conflicts.

### **Project Cost**

Comment: The EA did not disclose project costs.

Response: The EA was specifically written to examine the impact of this project on the human environment. The study proposal outlines in detail the project budget. The proposal can be requested by contacting MFWP. MFWP is not obligated to finance any of the direct costs for this project and much of the initial budget will be derived from existing USDA/APHIS budgets. Once the Phase I is approved additional funding sources may be pursued by MFWP. The proposal discusses a cost/benefit analysis to be completed at the end of the project so that there can be full public disclosure of the cost versus public benefit. The long-term benefit of conserving a species will be difficult to address but considered in the final analysis. Managing the existing bison in the GYA is also very expensive but considered important to many. A budget for Phase I of the feasibility study follows:

#### **Phase 1 Facility- Development schedule and operations budget**

Upgrade Brogan Facility	
Fencing-Summer/Fall 2004	\$100,000.00
Upgrade Handling Facility—Aug-Dec 2004	100,000.00
Lease 2004	60,000.00
Pilot Study group 1	
Capture, test, and ship calves-Jan.-Apr. 2005.	5,000.00
Facility Operations	40,000.00
Lease 2005	60,000.00
Pilot Study group 2	
Capture, test, and ship calves-Jan.-Apr. 2006	5,000.00
Facility Operations	40,000.00
Lease 2006	60,000.00
Personnel	<u>90,000.00</u>
	<b>\$560,000.00</b>

Comment: Several comments questioned the cost of the project and suggested that funds should be spent differently, especially spent for habitat acquisition.

Response: The Department acknowledges that the quarantine project will be costly in the short term. The adaptive step-wise research design with phased in study elements is designed to minimize the costs associated with this research effort. The cost for the current management of bison within the Yellowstone system is also high. MFWP will continue efforts to preserve and manage habitat in the Greater Yellowstone Area independent of a decision to perform research. The cost of even small parcels of habitat in the GYA would far exceed that of performing this research study. The purchase of habitat is dependent upon willing sellers and can only be addressed on a case-by-case basis.

MFWP believes the benefits of the quarantine project and bison management outweigh the costs. The potential economic risk of not managing bison is substantial. That impact was evaluated in the FEIS for the IBMP. Long-term benefits of maintaining a viable bison population in YNP and the potential for Yellowstone bison to contribute more broadly to restoration of plains bison are values that cannot be measured.

Comment: This project, whether limited to Phase I or extended to implement other phases, will cost a significant amount of money but will provide very little benefit in return.

Response: At the conclusion of this study a cost/benefit analysis will be completed to share with the public. The Department acknowledges that the quarantine project will be costly in the short term. The adaptive step-wise research design with phased in study elements is designed to minimize the costs associated with this research effort. The cost for the current management of bison within the Yellowstone system is also high. The long-term benefit of conserving a species will be difficult to address but considered in the final analysis. We believe that, if this process proves successful, the long-term benefits may become priceless to our constituents.

### **Management Authority**

Comment: The Montana Legislature was in error to give wild bison management responsibilities to a livestock agency. The Montana Department of Livestock and APHIS should not be involved with the management of bison. We suggest MFWP must clearly articulate that MFWP is ready and legally cable of accepting full responsibility for wild bison management in the State of Montana before proceeding with this quarantine operation.

Response: The allocation of management authorities by legislature is beyond the scope of this EA. Authorities for bison management have been defined by state and federal statutes and are referenced in the various environmental documents. Successful implementation of the IBMP is dependant upon a commitment by all agencies to cooperate in the IBMP and is not a matter of how the authorities are divided among the agencies.

Comment: The proposed study is outside the scope of the MFWP mandate. While Montana Code 87-1-216 provides for MFWP cooperation with the DOL on bison management, nowhere does the law provide authority for the agency to conduct unnecessary experiments upon the Yellowstone buffalo herd.

Response: The authority to conduct research projects for the purpose of improving wildlife management derives from MFWP's Powers and Duties, as defined by 87-1-201 M.C.A. In addition, MFWP is specifically authorized by 87-1-210 M.C.A. to enter into cooperative agreements for the purpose of wildlife research, management and demonstration projects.

## **Appendix B. Meetings, Public Contacts and Expert Consultations made During Project Development, May 2003-Dec. 2004**

### **Landowner Meetings**

RTR sponsored Landowners Meeting in Gardiner-by Aune/Flowers  
Mr. Rich Kenke-Landowner and Hay Contractor-Paradise Valley-by Aune/King  
Dome Mtn. Ranch-Landowner near Dome Mtn. Wildlife Management Area-by Aune/Rhyan  
Mr. Bob Cartier-Landowner near Lens Lake and Dome Mtn. Wildlife Mgmt. Area-by Aune/Rhyan  
Mr. Paul Rigler-Landowner near Dome Mtn. Wildlife Management Area-by Lemke  
HOBNOB-meeting with West Yellowstone landowners concerned about bison-by Flowers

### **Interagency Coordination**

Introductory Presentation to MFWP Helena Staff-by Aune  
MFWP Region 3 Staff-multiple meetings and discussions-by Aune  
Presentation to MMFWP Regional Managers and discussion-by Aune  
Field Tours-NPS, USFS, MMFWP, USFWS, USDA/APHIS, ITBC and MDOL-by Aune/Rhyan  
Presentation to USFS Regional Staff in Missoula-by Aune  
Ad-hoc committee to identify potential study sites-USFS, USDA/APHIS, MFWP, NPS, MDOL  
National Park Service-Multiple meetings for input and discussion-by Aune/Rhyan  
Inter-tribal Bison Cooperative-Fred Dubray-Bison manager-restoration expert-by Aune/Rhyan  
Greater Yellowstone Interagency Brucellosis Committee-Two presentations-by Aune/Rhyan  
Montana Board of Livestock-Two presentations and discussions of project-by Aune  
Montana Fish, Wildlife and Parks Commission-Presentation and discussions-by Aune/Flowers

### **Bison Consultants** (Includes many direct conversations and field tours of proposed sites)

Mr. Duane Lammers-S. Dakota-National Bison Association and bison owner-by Aune/Rhyan  
Dr. Temple Granden-Col. State University specialist in animal handling- by Rhyan/Aune  
Mr. Mark Costler-Bison manager for Turner Enterprises/fencing and management-by Aune/Rhyan  
Mr. Rob Tierney-Montana Department of Livestock-management of bison-by Aune/Rhyan

### **Scientific Specialists Consulted for Input**

Dr. Francisco Roberto-INEEL Scientist working on PCR test for brucellosis-Aune/Rhyan  
Dr. James Derr-Texas A and M—Genetics of bison- by Rhyan  
Dr. Cormack Gates-University of Alberta-by Aune/Rhyan  
Dr. Brett Elkin-Northwest Territories-Wildlife Veterinarian for wood bison-by Aune/Rhyan  
Dr. John Nishi-Leader of Hook Lake Salvage Project-NWT-wood bison-by Aune/Rhyan  
Dr. Robert Cook-Wildlife Veterinarian for Wildlife Conservation Society-by Rhyan/Aune  
Dr. M.D. Salman-Colorado State University-Animal Population Health Inst.-by Rhyan/Aune  
Dr. Tom Roffe-U.S. Fish and Wildlife Services-Wildlife Vet-Bison health-by Aune/Rhyan  
Dr. Helen Schwantje-B.C. Wildlife Veterinarian-by Aune  
Dr. Steve Olson-USDA/ARS-Ames Iowa-by Rhyan  
Dr. Steve Torbit-National Wildlife Federation-by Aune/Rhyan  
Dr. Glenn Plumb-National Park Service-by Aune/Rhyan  
Wayne Brewster-National Park Service-by Aune/Rhyan  
Rick Wallin-National Park Service-by Aune/Rhyan

### **Sportsmens Groups**

Livingston Sportsmen's Association-by Lemke  
Gallatin Wildlife Association-Two meetings and regular phone conversations-by Aune/Flowers  
Skyline Sportsmen-during scoping for the hunt-by Alt



### **Conservation Organizations**

Wildlife Conservation Society-Field tour of sites and presentation in NY-by Rhyan/Aune  
Boone and Crockett Club-Two visits with full presentations-by Aune/Rhyan  
Rocky Mountain Elk Foundation-Two visits to leadership-by Aune/Rhyan  
Greater Yellowstone Coalition-Two visits with leadership-by Flowers/Aune  
World Wildlife Fund and American Prairie Foundation-Presentation-by Aune  
Turner Endangered Species Fund-presentation and discussion-by Aune

### **Animal Health and Livestock Organizations**

United States Animal Health Association- 2 presentations-Brucellosis Committee-by Aune/Rhyan  
Western States Livestock Association-1 presentation and discussion  
Montana Livestock Association-Presentation to the Public Lands Commission-by Aune

### **Media Contacts**

#### Newspapers

Bozeman Chronicle-Front page feature article on bison quarantine  
Legal Notices for EA-Livingston Enterprise, Bozeman Chronicle, Montana Standard,  
Independent Record

#### Television

Interview by Channel 7-Aune  
Interview by Channel 28-Alt

#### Magazine

Montana Outdoors-Buffalo hunt and quarantine

#### GYIBC Information and Education Subcommittee

GYIBC Annual Report-One page story on the quarantine feasibility project  
GYIBC posted articles on the Internet  
GYIBC posted minutes of each meeting when quarantine was discussed