EXECUTIVE SUMMARY

Introduction

This Environmental Assessment (EA) has been prepared to evaluate the feasibility of a limited public hunt for bison from the Yellowstone herd that enter Montana. While some people oppose hunting of bison by licensed sportsmen, others believe that it is the best option available if the Yellowstone population has to be controlled (see National Park Service 2000, volume 2 for comments from both viewpoints). The perceived need for control of bison in and outside YNP has varied substantially over the past 40 years (Meagher 1973, Yellowstone National Park 1997, National Research Council 2002), but agencies with responsibility for bison occupying the Montana – YNP boundary area, NPS, Montana Fish, Wildlife, and Parks (MFWP), and Montana Department of Livestock (MDOL), have accepted the necessity of controlling both numbers and distribution of bison. The agreement under which bison numbers and distribution are currently managed (State of Montana and Yellowstone National Park 2000a, 2000b) emphasizes hazing, brucellosis testing, and removal of bison from the population (either by capture and shipping to slaughter facilities or shooting by agency personnel) when specific spatial, temporal, or numeric limits are exceeded. Hunting by the public was analyzed in the Final EIS for bison management (National Park Service 2000) and is considered to be one of the tools available for management of numbers and distribution of Yellowstone bison when biological and social conditions are appropriate. The Environmental Assessment process will be used to determine if conditions are suitable for introducing public hunting.

SB395 was submitted to the 2003 Montana Legislature to give Montana residents the opportunity to harvest bison that migrate from YNP. The bill passed, and a statute (MCA 87-2-730) consistent with earlier statutes related to management of wild bison in Montana (see MCA 81-2-120) was drafted that authorized MFWP to explore the potential for developing a hunting season for bison that: 1) does not interfere with management efforts by YNP, MDOL, or MFWP personnel; 2) is compatible with accepted land uses on public and private lands; and 3) can be conducted under ethical hunting conditions (i.e. fair chase). MCA 81-2-120 requires MDOL and MFWP authorization for a bison hunt and requires that both agencies cooperate in developing rules for such a hunt. Any hunt configuration approved would have to minimize bad publicity such as that generated by the public hunt authorized by the 1985 Montana Legislature and rescinded by the 1991 Montana Legislature. The hunt would not be the primary mechanism for controlling the Yellowstone bison population unless and until the brucellosis issue has been resolved and substantial numbers of bison are allowed to reside outside YNP, but it would allow a limited number of hunters the opportunity to harvest a native species that was a historically important source of protein.

Bison from the Yellowstone herd were legally hunted in Montana in the early 1950s and late 1980s (Montana Fish, Wildlife, and Parks 2001). Public hunts in 1953 and 1954 corresponded with the initiation of an aggressive program to eliminate brucellosis in cattle herds in Montana but did not result in substantial harvests of bison. The second

public hunt period (1986-1991) occurred ~20 years after YNP adopted a policy of minimal management of bison (1967-1968). Annual harvests were modest except in the winter of 1988-1989. Negative publicity from this winter led to closure of the public hunt by the 1991 Montana legislature and a greater concern for agency cooperation in bison management.

In 1989, MFWP and YNP personnel began developing an Environmental Impact Statement (EIS) on management of the Yellowstone bison herd. This resulted in a "Final Interim Operating Plan" signed by YNP, Gallatin National Forest (GNF), MFWP, and MDOL in 1992. EIS development continued, and a "Revised Interim Bison Management Operating Plan" was signed by the same agencies in 1994. Although concern over loss of brucellosis-free status spurred Montana to sue the federal government over bison management in YNP, concern over excessive bison removals led to suits by non-governmental organizations, and inter-agency disputes slowed selection of preferred alternatives in the EIS, bison were managed under the revised interim plan (which allowed MDOL and YNP to remove bison by capture and shooting) through 1999.

The draft EIS on bison management was released in 1998. Public comment and negotiations among agencies on the preferred alternative occurred until late 2000. MDOL, MFWP, and YNP signed a final record of decision on the preferred alternative in December 2000 and began managing bison under the new document in January 2001. The preferred alternative described in this document (State of Montana and National Park Service 2000b) emphasized risk control. Bison and cattle were to be separated in time and space, but some bison in areas with no cattle were to be tolerated outside YNP. Brucellosis incidence was to be reduced through capture and slaughter of sero-positive bison and vaccination of sero-negative bison. The plan emphasized adaptive management and phase-based changes in management tools. More bison would be tolerated outside YNP as managers became more efficient at controlling sero-positive animals. Hunting was not included in the early phases of the management plan, but it was not precluded, and the Final EIS (National Park Service 2000) included an intensive analysis of hunting that implied that hunting could be adopted as a management tool when conditions were appropriate.

This EA will allow managers to determine if conditions are appropriate for public hunting. After evaluating alternatives presented in this EA and the public response to alternatives, MFWP will pursue one of three actions: 1) implement a hunt; 2) reject any hunt at this time; or 3) develop a complete Environmental Impact Statement (EIS) from which a decision on the feasibility of a bison hunt will be reached at a later date.

Issues raised in scoping, comments on the draft EA, and public meetings

Public input directly related to this EA was initiated at the MFWP Commission meeting on September 11, 2003 when MFWP personnel were directed to determine the feasibility of a limited public hunt for bison in southern Gallatin and Park Counties. This EA will allow a decision on the hunt to be reached by the MFWP Commission in October 2004 and possibly authorize a public bison hunt by January 2005. Public comment was sought

during the scoping process (February – March 2004), during the comment period for the Draft EA (June – July 2004), and at two public hearings (Bozeman – 38 registered attendees; Butte – 22 registered attendees) and one public meeting (West Yellowstone – 25 registered attendees) held in MFWP Administrative Region 3 during June and July 2004. Additional public comments will be accepted following release of the Final EA, and the public is welcome to attend MFWP Commission meetings and Board of Livestock (BOL) public meetings where the issue is scheduled to be discussed.

During the scoping process, 232 letters and e-mails arrived by the closing date (including 6 unrelated to bison hunting). These documents were used to identify issues included in the Draft EA. The Draft EA drew 891 valid written responses, including e-mails and letters from individuals (870) and organizations (21). Sixty-nine individuals signed 13 petitions requesting consideration of a different alternative than those included in the Draft EA, a "citizen's alternative." Multiple documents by the same individuals or organizations were only included once in these totals, and mail that did not include opinions on the bison hunt (those requesting information but not expressing opinions on the hunt and messages on topics unrelated to bison hunting) were not included in totals Comments received during the scoping process were approximately evenly split between those favoring and those opposed to a bison hunt. The majority of responses to the Draft EA opposed a public hunt, at least at this time and under conditions described in the Draft EA. The "citizen's alternative" was the only new issue identified in comments we received in response to the Draft EA.

We categorized issues raised by the public as: 1) issues appropriate for evaluation in this EA; 2) issues considered but not evaluated in this EA; and 3) issues determined to be beyond the scope of this EA. The issues we evaluated included concerns about the impact of a limited hunt on YNP bison numbers, population viability, and genetic integrity; questions about the ethics and humaneness of killing bison; questions related to the legality of a hunt for bison in Montana; worries about the edibility of meat due to brucellosis vaccination; the potential for contracting brucellosis while handling bison carcasses; public safety issues; impacts of a bison hunt on other species; the potential of a hunt to impact (positively or negatively) bison damage to private property; impacts of a recreational bison hunt on activities mandated under the Interagency Bison Management Plan; problems specifically associated with hunting bison near the boundary of Yellowstone National Park; and economics and social impacts not directly associated with YNP.

Issues considered but not evaluated included allowing "natural" control mechanisms to limit bison numbers, the role of brucellosis in elk, and the impacts of designating bison as wild animals on private ownership of bison. Alternatives to human action as mechanisms for controlling bison numbers in the Yellowstone area were not evaluated because the policy of "limited management" under which bison were managed in YNP from 1967-1996 did little to control the population or emigration into Montana. Brucellosis in elk was not evaluated because it is not directly related to hunting bison and it is not a major problem in Montana. Elk do not seem to be able to support self-sustaining infections with brucellosis unless they are lured to feed grounds. Montana does not allow elk feed

grounds. A few respondents were worried about loss of bison as livestock if they were hunted by the public. This would not be a problem since bison are defined as "wild" (currently animals in the Yellowstone herd) and domestic (animals owned by private individuals). Questions about the authority of MDOL to manage bison were not addressed in this EA since MDOL has specific legislated authority to prevent bison that carry brucellosis from jeopardizing Montana's compliance with livestock disease control efforts on private and public land (MCA 81-2-120).

A "citizen's alternative" presented in petition form called for four specific changes in bison management (1) MFWP must be the sole agency responsible for bison management in Montana; 2) bison must be allowed unfettered access to public lands outside YNP year-round; 3) additional habitat (beyond that identified in the IBMP) must be designated for bison; and 4) MFWP should cease participating in the Interagency Bison Management Plan). While we do appreciate the concerns expressed by the people who signed petitions supporting the citizen's alternative, MFWP cannot meet any of the four conditions without legislative action in Montana and/or changes in cooperative agreements with other federal and state agencies. Because these actions cannot be completed in the time period under consideration in this EA, the citizen's alternative would, in effect, require MFWP to adopt the "no action" alternative at this time.

Several respondents raised issues that were clearly beyond the scope of this EA. Morality of hunting, the role of bison in reparations for ill treatment of Native Americans, tribal hunting rights, wolf management, corruption in public agencies, and the need for educating ranchers to tolerate damage from bison were not appropriate to address in this EA. Distribution of bison captured, sent to slaughter, or shot by agency personnel and hazing and capture protocols were determined in the Interagency Bison Management Plan. A suggestion to establish a state bison management plan is a good idea but best covered in other forums.

Alternatives

Four alternatives were evaluated (no action and three limited hunt scenarios). All alternatives that permitted hunting include 13 common conditions/restrictions:

1. Hunting will be restricted to individuals with permits issued via a drawing process similar to that employed for other special permits issued by MFWP. Hunts will not be administered via a call-up list.

2. Fee structure will follow MCA 87-2-113: $75 for residents, $750 for non-residents.

3. Hunters will not be allowed to harvest bison that have been vaccinated for brucellosis within the mandated withdrawal period (the time interval between vaccine administration and proven safety for meat consumption by humans. The withdrawal period for the vaccine, RB51, is 21 days).

4. Initially, weapons will be limited to firearms (required by Statute 81-2-120). Firearms will be restricted to those capable of propelling bullets with sufficient force to produce a quick kill.

5. Hunting will be allowed on public land and on private land with landowner permission.

6. No bison hunting will be allowed within 100 yards of major highways in areas open to bison hunting to protect public safety and minimize traffic obstructions. This would initially include segments of Highways 20, 191, and 287 on the western boundary of Yellowstone National Park (YNP) and Highway 89 near the northern boundary of YNP. Hunting on National Forest lands will follow restrictions in USFS order 36 CFR 261.10 (d) (firearm discharges are prohibited within 150 yards of a residence, building, campsite, developed recreation site, or occupied area or across a forest service road or body of water).

7. All hunters will be advised of restrictions and special problems that might be encountered in a bison hunt near YNP in application announcements.

8. Applicants who draw permits will be provided with information on the most effective ways to kill bison and on carcass handling procedures that will minimize meat spoilage and brucellosis infections in humans.

9. If a preference system is created, hunters that apply and do not draw permits will be given preference in the same manner that preference points are awarded in other special permit hunts.

10. Initially, bison hunting will be allowed only between November 15 and February 15.

11. Bison permits will be valid in both areas open to hunting near West Yellowstone (on the western boundary of YNP) and areas near Gardiner (on the northern boundary of YNP).

12. Agencies involved in bison or land management in areas of Montana with wild bison will be informed or, in the case of MDOL (a legislatively mandated partner in bison management in Montana), consulted on changes in hunting regulations.

13. Permit numbers, hunting district boundaries, and season structure can be modified by the MFWP Commission (*i.e.* If bison numbers in the Yellowstone herd drop below 2,500, permit number can be reduced. When bison are tolerated outside YNP in larger areas and in greater portions of the year, more permits can be issued).

In general, a public hunt for bison associated with the Yellowstone herd would be limited to permit holders drawn by lottery, would involve a minimum of supervision by agency personnel, would mirror administrative procedures used in other permit hunts in Montana, and would rely on educating hunters to avoid problems with brucellosis, public safety, trespass, and damage to public natural resources.

Six alternatives for hunting seasons were considered but not selected for analysis.

1) Unlimited permits issued via over-the-counter-purchase was rejected because the hunting area and number of bison available would not support an open hunt.

2) The option of limited permits available on a first-come-first serve basis was rejected because there was no way to fairly administer this type of hunt.

3) Preference for Native Americans was not considered because of Montana's equal opportunity laws.

4) Primitive weapons permits were not considered at this time because of the legislative language requiring firearms to be used in the hunt and the request by MFWP enforcement personnel to simplify regulations to insure that weapons with adequate power to make quick kills are used As MFWP gains experience with managing bison hunts (and assuming the legislature modifies statutes to allow use of bows) use of muzzle-loading firearms and bows may be permitted.

5) An early fall season was eliminated from consideration because few bison leave YNP in September and October, meat can easily spoil, and carcasses could serve as attractants to grizzly bears.

6) A late winter – early spring season was rejected because of the stress that could be placed on pregnant females, the chance of attracting emerging grizzly bears to carcasses and viscera, and the problems of identifying animals vaccinated in spring programs brucellosis vaccination programs that have been or will be initiated by MDOL and YNP (animals vaccinated with the RB51 vaccine are not considered safe for human consumption during the first 21 days following vaccination).

Alternative 1: No action

The first alternative evaluated (Alternative 1: no action) maintains the *status quo*. Bison in "no tolerance" areas (Zone 3 as defined in the Interagency Bison Management Plan of 2000) would be hazed into traps, chased into areas where they were tolerated, or shot by agency personnel.

Maintaining the *status quo* is not impact-free. The substantial economic, social, and environmental costs and benefits of the current bison management plan are described in the Final EIS on bison management released in 2000 (National Park Service 2000). In the absence of hunting, environmental, social, and economic costs and benefits would be driven by the factors that currently influence them: 1) the number of bison leaving Zones1 (lands inside YNP where bison are tolerated and cattle prohibited throughout the year) and 2 (specifically designated lands where cattle are absent, at least in winter and spring, and limited numbers of bison are tolerated in seasons when contact with cattle is unlikely); 2) the movement patterns of bison before and during control operations, and 3)

the activities of people opposed to actions mandated by the Interagency Management Plan. Predictions for both positive and negative impacts outlined in the Interagency Bison Management Plan Final EIS (National Park Service 2000) provide a reasonable estimate of conditions expected under the "no action" alternative.

Hunting by the public would have no impacts because hunting would not be allowed. The bison population would continue to be regulated by climate, predation, disease, accident, and management actions approved in the Interagency Bison Management Plan.

Alternative 2. Bison hunting by permit only in a late fall/early winter (November 15 – February 15) season limited to areas outside YNP where bison presence is currently tolerated under the Interagency Bison Management Plan (State of Montana and Yellowstone National Park 2000a, 2000b) .

If this alternative were approved, hunting would be permitted in areas where bison are currently tolerated outside YNP including: 1) lands defined as "Zone 2" in the Interagency Bison Management Plan - except the Zone 2 area west of the Yellowstone River including the Royal Teton Ranch where cattle are still grazed; 2) portions of the Absaroka Beartooth Wilderness north of YNP (including the upper portions of the Hellroaring and Slough Creek drainages); and 3) public land with no cattle allotments in the Cabin Creek Recreation and Wildlife Management Area, the Monument Mountain Unit of the Lee Metcalf Wilderness, and the upper Gallatin River drainage south of the mouth of Taylor Fork. Only sero-negative and vaccinated bison are tolerated in the Zone 2 areas of the West Yellowstone Basin. In other "tolerance" areas, bison are not subject to hazing, capture, or shooting during specified seasonal periods (generally winter and spring) except when they threaten public safety, cause significant property damage, or exceed numbers agreed to by agencies bound by the Interagency Bison Management Plan (State of Montana and Yellowstone National Park 2000a, 2000

Applicants would apply for permits as they do in other limited entry hunts administered by MFWP, and one to 25 applicants would receive permits. The MFWP Commission would set the number of permits each year prior to the season. Permits would be valid for the entire season (November 15 – February 15), valid for both the northern and western hunting area, and would be valid for any wild bison (i.e. no age or sex restrictions) unless vaccination program are active during the hunting season. If bison are being vaccinated without being conspicuously marked, hunters will be restricted to harvest of adult males (adult males are not scheduled to be vaccinated by MDOL or YNP personnel and can be reliably identified by most hunters). When bison are tolerated in higher numbers and in greater areas outside YNP, areas open to hunting and numbers of permits may be expanded.

Under this alternative, a maximum of 25 bison would be harvested in any year and impacts on population size and genetic structure would be minimal. "Fair chase" hunts will be facilitated by defining large hunting areas (including areas where bison can move to escape hunting pressure) and prohibiting hunting from vehicles (although vehicles may be used to access hunting areas and retrieve carcasses). Spring vaccination programs

initiated by MDOL and YNP should not be affected by a winter hunt. If vaccination programs occur in other seasons, hunters may be limited to harvesting adult males, which are not scheduled to be vaccinated and can be identified by most hunters. Threats to public safety, property damage, disturbance of other animal and plant species, and interference with agency management actions mandated under the Interagency Bison Management Plan would be minimal because of the low number of hunters. Education of hunters in handling carcasses can limit the potential for spreading brucellosis. As with environmental impacts, economic and social impacts would be small under this alternative. A few hunters would have an opportunity to harvest bison. Some funds would be spent in Gardiner and West Yellowstone by hunters pursuing bison. A few non-hunters might be sufficiently offended by hunting to avoid visiting Montana. No significant short, mid, or long-term negative impacts would be expected under this alternative.

Alternative 3. PREFERRED ALTERNATIVE - Late fall – early winter season (November 15 – February 15), limited entry hunt with permits valid for the entire season, and hunting open in areas in which bison presence does not trigger agency management actions and Zone 3 areas where bison presence is not tolerated.

Impacts of this alternative would be very similar, especially under present management rules where bison are not allowed to remain in Zone 3 lands for long periods, to Alternative 2. This alternative would allow hunters to harvest bison they happen to see in Zone 3 areas that are open to hunting (public lands and private lands in which owners permit hunting and in situations that do not endanger public safety or private property) as well as in lands outside YNP in which bison are tolerated in specific seasons. Hunting would not be used to replace efforts by agency personnel to remove bison from Zone 3. On rare occasions, agency personnel hazing bison in Zone 3 could interfere with hunters stalking bison, but given the low number of hunting permits, this problem would likely be small.

As with Alternative 2, applicants would apply for permits as they do in other limited entry hunts administered by MFWP, and one to 25 applicants would receive permits. The MFWP Commission would set the number of permits each year prior to the season. Permits would be valid for the entire season (November 15 – February 15), valid in both the northern and western hunting areas, and valid for any wild bison (i.e. no age or sex restrictions) unless vaccination program are active during the hunting season. If bison are being vaccinated without being conspicuously marked, hunters will be restricted to harvest of adult males (adult males are not scheduled to be vaccinated by MDOL or YNP personnel and can be reliably identified by most hunters). When bison are tolerated in higher numbers and in greater areas outside YNP, areas open to hunting and numbers of permits may be expanded.

As with Alternative 2, a maximum of 25 bison would be harvested in any year under Alternative 3. Impacts would be similar to Alternative 2 (minimal impacts on population size, age/gender structure, and genetic makeup) The influence of hunting on population distribution would also be similar to that described for Alternative 2, but under

Alternative 3, hunters would be able to kill bison in more areas than in Alternative 2. The impacts of Alternative 3 on environmental, social, and economic concerns in short to long-range time periods would be the same as those described for Alternative 2.

Alternative 4. Late fall – early winter season (November 15 – February 15) for a limited entry hunt with permits valid for 10-day intervals.

Permits would be valid in areas outside YNP where bison are allowed to remain without triggering management agency and opportunistically in areas designated as Zone 3 (no bison tolerance). Permits would be limited to one to 25 per 10-day period between November 15 and February 15. This would create 9 hunting periods and would allow 9 (1 permit per period) to 225 (25 permits per period) hunters to pursue bison in each hunting season. This alternative would provide more opportunity for hunters to receive permits but would likely reduce hunter success because bison are not usually available outside YNP during all days between mid- November and mid-February. No more than 25 hunters would be in areas open to hunting on any given day so most positive and negative impacts would be low during each hunting period.

As with Alternatives 2 and 3, applicants would apply for permits via procedures established for other limited entry hunts administered by MFWP. The MFWP Commission would set the number of permits each year prior to the season. Permits would be valid for both the northern and western hunting areas and would be valid for any wild bison (i.e. no age or sex restrictions) unless a vaccination program is active during the permit period. If bison are being vaccinated without being conspicuously marked, hunters will be restricted to harvest of adult males (adult males are not scheduled to be vaccinated by MDOL or YNP personnel and can be identified by most hunters).). When bison are tolerated in higher numbers and in greater areas outside YNP, areas open to hunting and numbers of permits may be expanded.

In this alternative, a maximum of 225 bison would be harvested in any year. Fewer bison would likely be harvested because: 1) few bison leave YNP during early to mid winter (November – January) except in the most severe winters so success rates in the early hunting periods are likely to be low; 2) hunters would remove some of the bison that currently move in and out of the Park during November – February and contribute to inflation in total bison counts in Zone 2; 3) public hunting would not be allowed in months (March – April) when the highest number of bison leave YNP; and 4) even if large bison herds enter areas open to hunting, no more than 25 hunters could take advantage of the ingress in each 10-day hunting period. Although hunter selection for adult bulls and differential probability of emigration among sub-populations increase the possibility of concentrating harvest within one or more genotypes, hunter impacts would not equal the impacts of capture operations mandated under the Interagency Bison Management Plan (State of Montana and Yellowstone National Park 2000a, 2000b), and hunter harvest would replace some agency-mandated removals . By varying hunter permit numbers as bison population size changes (i.e. more permits issued when population size exceeds 3,000 and fewer when the population is lower), risks of substantial impacts on bison numbers or genetic variability can be reduced.

The restrictions on hunter distribution and the potential for "fair chase" hunting would be similar to those described for Alternative 3. Although Alternative 4 would allow more hunters to participate, maximum hunter number on any day during the season would be no different than under Alternatives 2 and 3. Impacts on the environment would be greater for this alternative than for Alternatives 2 and 3, but when impacts are considered in relation to the large number of human activities currently occurring in potential hunting areas, bison hunters would be unlikely to add measurable amounts to environmental impacts that already occur. Adding 2,250 bison hunter-days (maximum) to a system that supports millions of recreation days from hunters seeking other species, anglers, skiers, snowmobilers, hikers, wildlife watchers, mushroom hunters, antler collectors, and a dozen other outdoor activities is very unlikely to create additional irreparable environmental impacts on short, medium, or long time scales.

The positive social and economic impacts of Alternative 4 would be approximately nine times greater than for Alternatives 2 and 3 (i.e. a linear relationship), Negative social and economic impacts, however, would likely be much greater under Alternative 4 than under Alternatives 2 and 3. Negative impacts would be magnified primarily because opponents of hunting would have much greater opportunity to plan and carry out protests of hunting. Alternatives 2 and 3 would spread a low number of hunters over a 90-day hunting season. Alternative 4 would give protesters nine groups of hunters to confront and nine "opening days" on which to stage protests.