PROPOSAL

To Restore Public, Wild Bison

On

the Charles M. Russell National Wildlife Refuge

2020

Submitted by: Montana Wild Bison Restoration Coalition

Supported by:

Bear Creek Council

Blue Goose Alliance

Gallatin Wildlife Association

Great Old Broads for Wilderness, Bozeman Chapter

Helena Hunters and Anglers Association

National Wildlife Refuge Association

Western Watersheds Project

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The 2020 Montana Fish, Wildlife & Parks (FWP) Environmental Impact Statement (EIS) and Record of Decision (ROD) solicited proposals from Montana citizens to restore public wild bison at specific locations (ROD 2020:1-3). **This proposal, submitted in early 2021, was rendered meaningless when a new Governor voided the 10-year EIS study. It is archived to present the level of compromise that has been rejected by Montana.**

This proposal is submitted by the Montana Wild Bison Restoration Coalition whose long-term mission is to (1) to enhance public awareness of conservation opportunities for wild, public bison in Montana; and (2) to establish a bison herd on public land and private land where bison are accepted within and near the Charles M. Russell National Wildlife Refuge (CMR). These goals are elaborated on the Coalition website at mtwildbison.org.

This proposal is to request preparation of an Environmental Assessment and management plan for bison restoration on the CMR. The EA and plan would be developed by FWP in collaboration with the Fish & Wildlife Service (FWS, see CMR 2010:93, 285). This proposal is also intended to stimulate public discussion of issues related to restoring public, wild bison on the Refuge.

PROPOSAL GOALS

Fulfill mandates of the Montana Constitution to prevent unreasonable degradation of a natural resource; to restore a historic, cultural and recreational object for use and enjoyment by the people; and to preserve opportunity to harvest a wild game animal as a heritage for individual citizens.

Cooperate with the US Fish & Wildlife Service with bison restoration as a major contribution to the Charles M. Russell National Wildlife Refuge goal of reestablishing natural processes and biological diversity on the Refuge (CMR 2010:52).

Contribute to the national goal of ecological restoration and maintenance of genetically diverse plains bison subject to natural selection (DOI 2008).

This restoration project will be:

in compliance with legislative guidelines in MCA 87-1-216;

with recognition of and compliance to most recommended parameters developed by the Montana stakeholders and FWP (EIS: 206-209);

a test project with a containment area of sufficient size and diversity, and allowing the herd to reach a sufficient size, to provide FWP and CMR with realistic experience in maintaining and managing wild bison across public lands.

Reestablished bison will be:

public trust bison managed primarily by Fish, Wildlife & Parks;

wild bison under the legal definition in the Montana Code, and, ultimately, also under the biological definition of being influenced by a preponderance of natural selection;

pure plains bison, with no cattle-gene introgression;

largely, if not entirely, a huntable population;

founded with the best available bison, obtained with minimal public expense.

The containment area for this restoration will be:

on the Charles M. Russell National Wildlife Refuge;

within a general area with minimal private or public land where bison are not accepted;

a large and diverse habitat that will allow bison to exhibit their evolved characteristic of great mobility, and will provide for a diversity of natural selection;

monitored as necessary for bison impacts to the local biota, hydrology and soils.

The restoration project will:

provide annual reports of activities and analysis of results;

utilize an advisory group of both local and state-wide stakeholders that will meet at least annually to review progress and consider any alterations in management;

provide opportunities that may enhance and diversify the local economy.

BACKGROUND

History

1910: William Hornaday, Smithsonian biologist, unsuccessfully petitioned Congress for a bison reserve on the south bank of the Missouri River, Montana.

2009: FWP Director says development of a state-wide bison plan is ongoing.

2011: FWP Commission endorses study of the potential to restore wild bison to Montana. FWP publishes “Background Information on Issues of Concern for Montana: Plains Bison Ecology, Management and Conservation”.

2012: FWP holds 8 scoping meetings around Montana re bison restoration.

2012-2013: FWP appoints “Discussion Group” for a bison management plan, holds 4 more public meetings.

2014: FWP offers, then abandons framework bison management plan, with options for between 50 and 1000 bison.

2015: FWP releases draft environmental impact statement for bison conservation and management in Montana. This is labeled a “programmatic plan”.

2020: FWP releases final EIS and Record of Decision for bison conservation and management in Montana; requests public proposals for site-specific plans for developing Environmental Assessments (EIS 2020:60).

Genetically adequate wild bison herd

A genetically adequate bison herd, wild or domestic, must be large enough to avoid significant inbreeding and to maintain sufficient genetic diversity and evolutionary potential for adapting to future environmental conditions. In addition, a wild bison herd must be subject to a preponderance of natural selection to maintain the evolved allelic diversity and organization of the wild population genome. In contrast, with drift and artificial selection, simplification and reorganization of the wild genome gradually leads to domestication of the species.

Restoration and management components for achieving and maintaining genetic adequacy in a restored wild bison herd are (1) founding herd size, (2) robust population growth in the first several years, (3) achievement of a herd size and sex-age structure adequate to (3a) prevent significant inbreeding and to (3b) avoid loss of alleles and significant weakening of natural selection by genetic drift, (4) minimal artificial selection that would also replace natural selection, and (5) an environment that provides a diversity of natural selection. These five issues must be considered in planning for restoration of a public, wild bison herd.

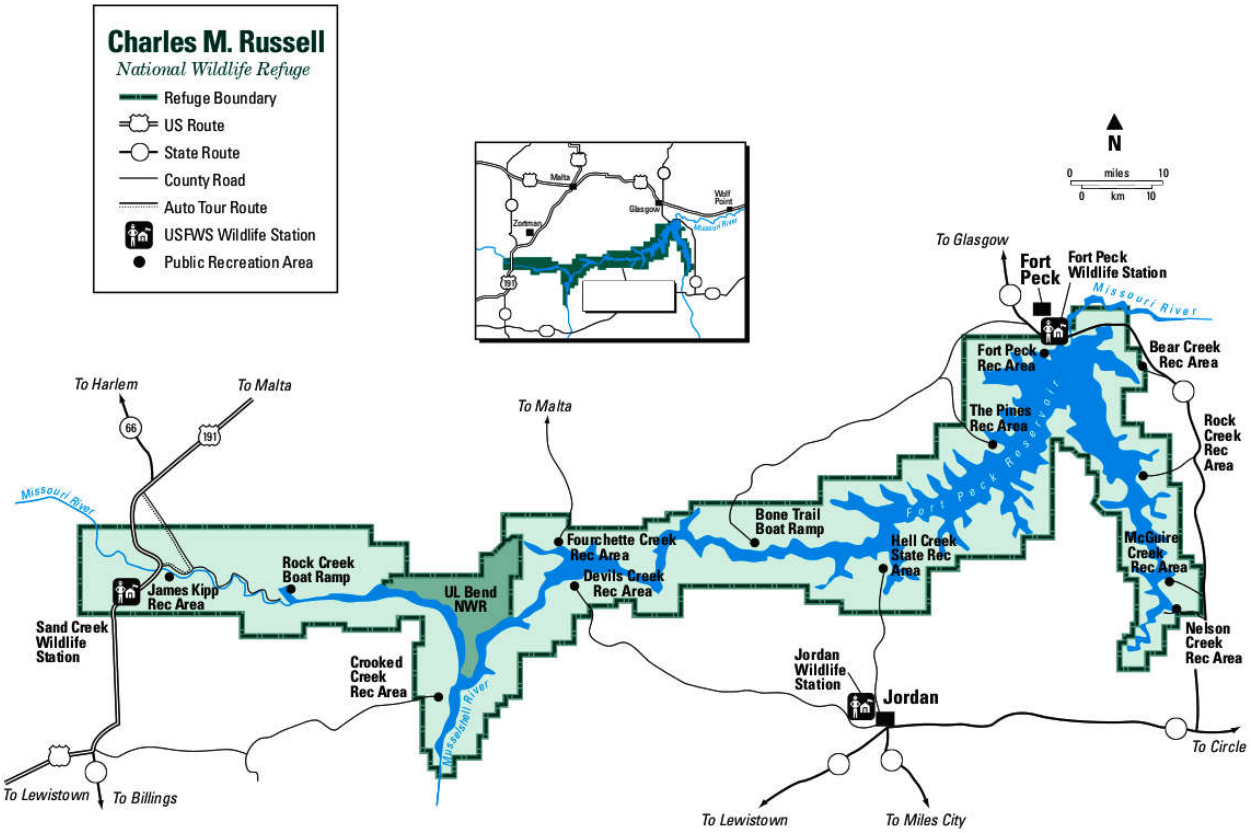
Effective natural selection requires a diverse environment that will maintain a diversity of natural selection, not only for bison abilities to avoid a diversity of threats, but also to effectively utilize a diversity of habitat opportunities.

Estimates for minimum or optimum herd size, sex- or age-ratios, or range size to achieve a genetically adequate wild population are, at best, informed judgements. However, within the array of available opportunities, as determined by social and environmental conditions, more animals, a more even sex ratio, and a larger, more diverse habitat will always be better than less of any of these components.

“Bison can best achieve their full potential as an evolving, ecologically interactive species in large populations occupying extensive native landscapes where human influence is minimal and a full suite of natural limiting factors is present.” (Gates et al. 2010:2). At least 1000 animals has been recommended for a genetically adequate herd of bison (EIS 2020:26).

CHARLES M. RUSSELL NATIONAL WILDLIFE REFUGE

The CMR contains more than 1400 square miles of terrestrial habitat, virtually all of which is potential plains bison habitat. It is the largest federal refuge within the historic range of plains bison.



Legal mandates and management goals for CMR are reviewed in the Comprehensive Plan and Environmental Impact Statement (CMR 2010). The Refuge goal (p. 52) is to emphasize natural ecological processes to restore, and maintain the biological diversity, biological integrity, and environmental health of the Refuge. Restoration of bison would be a major step toward these goals.

CMR recognizes bison as the dominant herbivore and keystone species with which Refuge ecosystems evolved; such that natural ecological processes would be improved by the presence of bison (p. 284-5). CMR will pursue a shifting pattern of fire-herbivory disturbance and plant succession to create a dynamic mosaic of habitat types that will benefit overall biological diversity (pulse disturbance, p. 178, 269). Applying this prescription with bison as a dominant herbivore will require a large bison range in which bison will alternate intensive use of habitat patches over periods of several years. Moreover, the intended prescribed-fire program on CMR may be used to manage bison distribution in desired ways, as has been demonstrated on the Wichita Mountains National Wildlife Refuge in Oklahoma.

The Fish and Wildlife Service/CMR is committed to working with Montana FWP and other agencies and organizations to develop a cooperative restoration and management plan that will address population objectives and management, movement of animals outside restoration areas, genetic conservation and management, disease management and conflict resolution procedures (CMR 2010:93). The EIS describes a FWS expectation to cooperate with FWP in developing details of the restoration project.

LOCAL COMMUNITIES, SOCIO-ECONOMICS

Socio-economics of the six-county area surrounding the CMR are discussed in CMR (2010:239-253) and by Sage (2017). Phillips County includes the proposed bison restoration area and is emphasized here.

Phillips County had 4253 residents in 2010, having declined by 7.5 percent since 2000. The County population has declined every decade since 1920 (Wikipedia. org). Population decline was predicted to continue at least through 2030 (CMR 2010:242). Malta, the county seat and only major community had about 1800 residents in 2008.

Total 2005 employment in Phillips County included 2645 jobs, having declined by 9 percent during 1995-2005 (CMR 2010:243). About 613 jobs (23%) were in farming and ranching. Median household income was about $33,800 in 2007 and the unemployment rate was 4.5 percent (p.245). About 18 percent of the population lives below the official poverty line (Wikipedia.org).

Phillips County is 49.5% private, 5.9% state, and 42.4% federal land (Montana State University Extension 2010).

As with many rural counties in eastern Montana, these long-term economic trends have steadily diminished funding for and availability of basic public services such as health care, retail goods, and public infrastructure.

Generally, population and economic prosperity, relative to the rest of Montana and to the nation, have been declining in Phillips County for decades. Diversification of income sources would enhance economic opportunities. Restoration of public, wild bison on a landscape scale would stimulate such opportunities related to tourism (Sage 2017).

PUBLIC SUPPORT

Three independent polls of Montana voters have shown that about 70 percent of Montana voters support restoration of public, wild bison on the CMR NWR (EIS 2020:54-56). In contrast, opposition to restoration of public, wild bison is centered largely in local communities or certain counties, and within agricultural organizations (EIS 2020:57-58). This includes proposals to extinguish any possibility for restoring public, wild bison anywhere in Montana by placing all management of the species under the Department of Livestock.

TEST PROJECT

An adaptive management “test project” for bison restoration is proposed. Such a project appears to be the only option for building trust across the diverse publics that will be affected by restoring some public, wild bison in Montana.

However, the test project alluded to in the EIS (2020, p. 74) would be too small and brief to produce useful new information, and would needlessly subject valuable bison to an unknown amount of genetic deterioration due to small-population effects. Information resulting from studying a small, constrained bison herd would have little applicability for managing a truly wild bison herd.

The test project must produce information on (1) how a genetically-adequate sized bison population would use a large and dynamic landscape; (2) the responses of native plants and animals to this presence of a wild, mobile bison herd; (3) the efficiency and effectiveness of management techniques as applied to this wild herd on a suitable-sized landscape; and (4) the responses of hunters, local landowners and the general public to this herd. Some of this information is already available from ongoing studies being conducted on the American Prairie Reserve.

For applicability to a future with a genetically-adequate, wild bison herd, a realistic test of the bison, of biotic responses, of FWP management, and of public responses, will require observing at least 400 animals on a large and diverse containment area. These requirements are recognized in the recommendations that follow.

Soon after the bison herd reaches 400 animals, there should be a major review of biotic and social responses, and of management methods. The review would provide recommendations for the future of Montana's only public wild bison herd.

CONTAINMENT AREA

The containment area will be negotiated by FWP and the CMR.

A large containment area (see map) of about 150 square miles in the UL Bend area of the CMR is proposed. It would be bounded on the south by Fort Peck Reservoir, on the east by the road to Fourchette Creek Recreation Area, and on the north by the Refuge boundary. The west boundary might be the narrow route across state land and west of unit 99 wilderness area to a bay of the Reservoir. However, due to wilderness issues, and possible difficult terrain and fencing costs, a more westward boundary might be selected along Refuge designated road 201.

We understand that the north Refuge boundary is already fenced. This fence will require inspection and likely some upgrading before introducing bison. A limited amount of other fencing, perhaps as little as 5-6 miles, will be needed on the east and west boundaries. On the south, effectiveness of the barrier of Fort Peck Reservoir will have to be observed in summer and winter. However, all land along the south shore of the Reservoir is federal land, where escaping bison may be recaptured for containment purposes.

A variety of fencing types has been effective in containing bison. Most commercial and many conservation herds are successfully contained with modest fencing EIS 2020:41-42). Consultation with APR on their experience with effective fencing is recommended.

The likelihood that bison will challenge a containment fence will be reduced by having a relatively small bison herd within a large landscape with a diversity of habitat resources (EIS 2020:41-42). Fencing must be suitable for passage by other wild ungulates. Fence type must be approved by CMR.

Proposed containment area for restoring public, wild bison on the UL Bend portion of the Charles M. Russell National Wildlife Refuge. Dashed lines represent possible locations of needed new fencing. Boundary along Fort Peck Reservoir would be unfenced.

Most of the containment area is the largest zone ungrazed by livestock on the Refuge CMR 2010:Fig. 16). Most of the small remaining area is currently available under prescriptive grazing guidelines. There is a small grazing allotment near the west boundary and a small portion of a grazing allotment near the east boundary CMR 2010: Fig. 16).

CMR has been has been monitoring grass and other vegetation on the Refuge, at least since 1986 (CMR 2010:191). Prior to bison introduction, CMR can provide an assessment of habitat and hydrologic conditions of the containment area in relation to the normal range of variability, as required (EIS 2020:62).

The area contains about 6 square miles of state land. Most of the area is within 1-2 miles of a Refuge designated road, the exception being some wilderness area. The area is

vegetatively and topographically diverse, allowing bison to use their innate mobility for selecting habitats in response to seasonal and weather variation.

THREATS TO PRIVATE LIVESTOCK

Other than American Prairie Reserve, where bison are welcome, very little private land abuts the proposed containment area. As noted above, the test herd of bison is very unlikely to cross an adequate, maintained fence at the boundary of the containment area.

Moreover, some expressed concerns that bison bulls may attempt to breed domestic cattle are unfounded. Each year, bison rutting occurs after almost all domestic cattle have been bred. Cross-breeding seems to have been difficult to force in the past. The myth that any domestic cow is apt to die in birthing a cross-bred calf, because the calf would be too large, is unsupported. Bison calves are smaller than cattle calves and cross-bred calves are not expected to be larger than cattle calves.

Bison coexist with domestic cattle in the Henry Mountains, Utah (EIS 2020:77-81) and in Jackson Hole, Wyoming. They are kept with longhorn cattle at Wichita Mountains National Wildlife Refuge.

Under MCA 87-1-216, this test project is intended to have no negative impact to Montana's ranching industry.

FOUNDING POPULATION

The founding bison population should contain the best available bison, obtained at the least public cost.

In selecting bison for restoration on the CMR, FWP should seek the advice and approval of the Department of Interior Bison Management Team according to its mission to preserve bison genetic diversity across all herds on DOI lands, including any introduced on the CMR NWR. There may be justification for using more than one source herd to found the test CMR population.

In addition, there is strong support among bison geneticists to avoid mixing bison with cattle-gene introgression into pure herds of bison. Since the American Prairie Reserve, with pure bison, abuts the CMR, and contact of CMR bison with APR bison could occur in the future, founding a CMR population with pure bison is recommended.

Bison may be obtained from herds with no known cattle-gene introgression. These include (1) bison from American Prairie Reserve; (2) graduates of the Yellowstone National Park quarantine program, including their offspring; (3) bison from Wind Cave National Park; (4) bison from the Henry Mountains, Utah; and bison from Elk Island National Park, Alberta.

Before release, the disease status of founders must be evaluated and approved by the Montana Department of Livestock (EIS 2020:63).

Initially, it appears that suitable bison may be obtained at least public cost from APR. Capture and transportation costs should be minimal. Possibly, animals could simply be herded onto the CMR containment area. APR has been on record as willing to donate

some of its bison, which are now legally livestock, to Montana, to be reclassified as public, wild bison.

Historically, the original plains bison population was severely depleted and fragmented. All existing conservation herds began with limited samples from genomes of these fragments. They have been through one, often more than one, bottleneck, and maintained for many years as small herds, suffering genetic drift, further diminishing their allelic diversities. Moreover, many herds were founded with one or a few samples from this already depleted diversity in the first surviving herds. Some such herds were again sampled to found still other new herds, a serial dilution of allelic diversity. As a result, it is important to found any new herds with a large number of animals in an attempt to obtain sufficient allelic diversity for dealing with an uncertain future of environmental change, including climate change.

For genetic diversity, the founding population should be at least 100 animals of all ages, with an approximately equal sex ratio. Aside from genetics, starting the herd with a normal sex-age structure will provide more realistic conditions for testing CMR bison management early in the restoration project. The 100 bison need not be introduced to the containment area in a single transplant. However, the founding herd should be established without delay to avoid small population breeding effects.

HERD SIZE

While the ultimate goal for restoring a genetically adequate herd of wild bison in Montana should be at least 1000 animals (EIS 2020:26), it is proposed to evaluate biotic and social responses, and management methods, with a herd up to 400 animals in this test project.

After establishing a genetically diverse founding herd of about 100 animals, the herd should be allowed to expand with little or no culling until the herd reaches 200 bison. This strategy allows replication, and less loss, of rarer alleles in the founding herd. A founding herd of 100 bison can grow to 200 animals in 5-6 years.

Testing of harvest strategies should occur with a herd growing from 200 to 400 bison during another 5-10 years. During this period, the rate of herd growth will depend upon the amount of public harvest as FWP experiments with harvest strategies.

HARVEST MANAGEMENT

Wild bison present unique challenges for harvest management. These are hunter safety and a quality hunt experience, carcass retrieval, and minimizing replacement of other natural selection with harvest removals.

Since bison are especially social animals, hunting can become quite competitive. Consequently, hunter safety and a quality hunt experience can be promoted by dispersing hunters in time with sequential seasons. Such seasons may be short because the visibility of bison in open country may not require a long hunt. Short sequential seasons would allow for more hunters and attainment of the desired total kill over the entire hunting season. The entire season should be longer than the general big-game hunting season. FWP should experiment with sequential seasons as the bison herd grows and requires more hunters to obtain a larger desired harvest.

CMR currently is annually visited by thousands of big-game hunters for elk, deer and bighorn (CMR 2010:227). Considering the large containment area and the somewhat unique habitat preferences of bison, interference between bison hunters and other big-game hunters is not expected, but should be monitored in the test project.

The size of bison presents challenges in carcass handling and retrieval. Generally, the effort necessary exceeds the ability of a lone hunter. FWP should experiment with two-person hunting permits allowing carcass handling and ownership to be shared. Or, family hunting permits are a possibility.

Most of the containment area is within less than 2 miles of Refuge roads, facilitating carcass retrieval. CMR will consider road improvements to facilitate objectives such as game retrieval (CMR 2012:120). Horses are allowed for hunting in the Refuge. Also, some of the containment area is accessible to hunters with boats CMR 2010:232).

Human predation has always been a major component of natural selection for plains bison (Bailey 2013:9). However, with a small herd, hunting can replace most other forms of natural selection, diminishing the persistence of characteristics such as disease resistance, energy efficiency, reproductive success, and much more. Therefore, it is desirable to minimize replacement of natural selection by directing most hunting mortality to the youngest and very oldest animals. Prime age animals, 5-10 years old, that have survived competition and some natural selection, should be retained to contribute reproductively for several years. Moreover, maintaining an even herd sex ratio is desirable for sustaining abundant bull competition.

Much of the harvest should be directed at yearling bison. Some permits to take adult bison should be sex-specific to retain an even sex ratio in the herd. Bulls, cows and yearling bison can be identified by hunters who have been instructed in bison sex-age identification. Development of an on-line video and a pamphlet to instruct hunters in bison sex-age identification is expected.

HABITAT MANAGEMENT

With CMR emphasis on restoring natural processes to the Refuge, artificial habitat management should be minimized and designed to mimic natural, rather than domesticated, conditions and diversity on the Refuge.

Any habitat management within the containment area will have to be conducted as a CMR project with collaboration from FWP. The Refuge is committed to promoting fire's natural role in shaping the landscape CMR 2010:30, 149) and to restoring fire-grazing interactions (pyric herbivory) to promote animal movement with long periods of habitat non-use, to increase species and structural heterogeneity on a landscape scale and to restore resilience and stability of ecosystems across the Refuge (CMR 2010:66). The Refuge is committed to monitoring 18 sentinel species of shrubs, trees and warm-season forbs in evaluating this strategy (CMR 2010:68, 191, Appendix F).

Recently burned areas from strategic management of wildfire, or from prescribed fire, are expected to attract bison. (Bison are "rotated" across the landscape of Wichita Mountains NWR with prescribed burns.) Managed fire would restore natural processes for bison and

the rest of the biota, and likely would minimize the likelihood that bison will attempt to leave the containment area.

Artificial water sources are not advised for bison on the CMR. Bison should be allowed to use their inherent mobility to access natural waters, including Fort Peck Reservoir. This process will contribute to natural selection of bison and will enhance the natural mosaic of bison grazing and resulting vegetation across the Refuge.

MONITORING

Three primary subjects to be monitored in the adaptive management test project are (1) range and habitat conditions, (2) bison health, movements, habitat use, and genetic maintenance, and (3) responses of the public, including hunters, recreationists and local landowners. FWP/CMR would collaborate to assemble annual monitoring reports as required (EIS 2020:70).

Habitat

Monitoring habitat conditions should be the primary responsibility of the CMR, with collaboration of FWP. CMR is committed to evaluating population viabilities of all species and structural heterogeneity of the Refuge landscape. Focus will be on viabilities of 18 sentinel species of woody plants and warm-season forbs CMR 2010:68).

With 400 bison, herd density will be only about 2.7 bison/square mile, certainly well below any definition of range carrying capacity and below densities at which most, if not all, conservation herds of bison are currently managed (EIS 2020:65-66). This low ecological density of bison assures sufficient availability of forage, and will exclude any need for a pre-release analysis of forage availability and “carrying capacity” on the large containment area. (With the addition of so few bison, carrying capacity could only be an issue if present numbers of herbivores, especially elk, were fully using most or all available forage, for which there is no evidence.)

Measuring habitat impacts of only 200-400 bison on the large containment area will, at least, be difficult. Bison foraging tends to be very patchy, creating sampling problems. Any realistic and useful evaluation of impacts of bison on forage resources and range health may be obtained after bison have established patterns of seasonal and among-years mobility and habitat use. The CMR approach of monitoring sentinel species in selected areas may be all that is necessary.

Bison

FWP should take the lead in monitoring bison, with assistance of CMR and Montana Department of Livestock. Other cooperating agencies, such as universities, may be involved in bison monitoring.

Upon release, many or all bison may have to be marked according to a tracking plan developed by FWP and MDOL (EIS 2020:67). It is preferred that most animals be marked with non-visible tags. However, some animals of both sexes and all full-grown age classes should be fitted with radio-collars for monitoring and analyzing bison movements, behavior, reproduction and mortality. Bison may be observed in occasional aerial flights, but frequent observations should be ground-based. CMR should consider kiosks at key locations where recreationists may record general observations of bison locations and herd sizes. A university-based study is encouraged for field observations and analysis of these data.

Presumably, disease monitoring will be minimal in the early years of this test project, as it is expected that very few, if any of the animals will be handled following release on the containment area. Isolation of the confinement area from domestic livestock indicates little risk from this situation. However, observers should be alert for visual signs of sick animals. Tissues may be obtained promptly from any animals that die, and from any bison escaping the containment area. Only a few bison will be hunted during the earliest years of the project; but hunters should be encouraged, perhaps required, to provide tissue samples for disease analysis (EIS 2020:65).

Depending on DOI goals for the herd, geneticists may recommend genome sampling of the founding animals, and later sampling to detect any significant changes with herd establishment and management. The latter sampling could involve carcasses and non-invasive methods (hair and feces). Difficult issues regarding objectives and necessary sample sizes are beyond the scope of this proposal.

Public Responses

Both FWP and CMR should be involved in tracking public responses and comments on the restored bison herd. The Refuge is already committed to an active public outreach program (CMR 2010:230, 302, 333). Public meetings with agency and other presentations, and adequate public comment periods, should occur locally and around Montana. For local input, CMR already meets frequently with a Community Working Group (cmrcwg.org). Up-to-date agency handouts dealing with frequently asked questions will be needed. These activities will generate informed public responses to bison restoration and management activities.

Additional public involvement will be obtained through a Public Advisory Group, discussed below.

The largest private landowner adjacent to the confinement area is the American Prairie Reserve, necessitating ongoing communications. FWP and CMR bison managers should develop and maintain awareness of ongoing bison/habitat research at APR.

Once public hunting has commenced, prescribed hunting methods should be evaluated using questionnaires or personal contacts with public hunters.

COSTS

This proposal for restoring a wholly public, wild bison herd on a large federal refuge is expected to cost less than would occur for restoring any other similar-sized public, wild herd in Montana.

Most examples of costs for bison restoration and management (EIS 2020:145-146) refer to bison herds that have been semi-wild, at best, with expensive artificial management of the animals and habitat. Such intensive management is not envisioned in this proposal.

At the east and west boundaries of the containment area, only 5-10 miles of new fencing is expected. Costs for inspecting and upgrading fence along the north boundary of the CMR are uncertain. Perhaps 5 or 6 roads enter the area, requiring few gates or cattle guards. Other than limited prescribed burning, no habitat management, including water developments, is needed. There will be no artificial feeding. Permanent bison handling facilities may not be necessary as annual roundups are not envisioned. Capture of bison is expected only if an unexpected disease threat is identified and requires close investigation. Likely, portable corrals could be erected in parts of the large containment area that are used by bison.

With a low ecological density of bison on the containment area, pre-release monitoring of the vegetation will not be needed; and post-release monitoring can be minimal, as noted above. CMR is already involved in monitoring sentinel plants.

It is expected that personnel costs will dominate expenses for this project. These will be shared largely by FWP and CMR, with lesser costs to other agencies. Startup personnel costs for developing environmental documents and a joint management plan and budget will be significant. Fencing and purchase of radio collars will also occur pre-release. Post-release, annual costs for personnel will largely involve monitoring bison, and communications for public involvement.

Estimating these costs is beyond the scope of this proposal. However, some needed personnel time is already supported by existing FWP and CMR budgets. Ultimately, costs will have to be estimated in a budget as part of a required plan jointly prepared by FWP and CMR.

FUNDING

MCA 87-1-216(5, 7) requires that the department identify long-term, stable funding sources that will be dedicated to implementing restoration of public, wild bison in Montana.

It is proposed that sale of hunting licenses, probably with innovative seasons that will enhance license proceeds (as well as quality hunting and public safety), will provide stable, long-term funding for bison management. In 2019, there were over 18,000 applications, including $10 non-refundable fees, for relatively low-quality bison hunts near Yellowstone National Park. About 1500 of these were from non-residents. This indicates the large demand for bison hunts and the potential for funding bison management through license sales.

Regular license sales should be augmented by a few lottery and/or auction license sales that would produce larger proceeds per license. However, this will require minor actions by the Montana legislature (additional wording to MCA 81-1-271(4) and new auction language in 87-2-Part 7). Lottery and auction license sales will be especially useful during the early stage of herd restoration when smaller numbers of regular licenses will be available.

Since the CMR long-range management plan (CMR 2010) welcomes restoration of wild bison on the Refuge, it is presumed that federal startup funding will be forthcoming. Some large conservation organizations, particularly the National Wildlife Federation, have supported restoration of wild bison. Consequently, private donations are expected for the early stages of the restoration project. These may consist of cash contributions, donations of animals, or in-kind services. Donations will be most needed to allay startup costs.

Ultimately, funding will have to be committed in a budget as part of a joint plan prepared by FWP and CMR.

DISEASE MANAGEMENT

The founding population must be certified as free of reportable diseases by the Montana state veterinarian (EIS 2020:63). A protocol for monitoring and responding to any detection of diseases within the restored herd must be developed as part of a management plan coordinating responsibilities of FWP, Montana Department of Livestock and the state veterinarian (EIS 2020:65).

FWP should consider developing a pamphlet illustrating visible symptoms of diseases in bison. Especially in the early years of the test project, the pamphlet should be given to anyone expected to frequently observe the animals. As noted above, radio collars will enhance the frequency of observing bison on the large containment area. Later in the project, blood or other tissue samples may be obtained from hunter harvested animals.

CONTINGENCY PLANS

Plans and agency agreements should be in place to deal with any bison leaving the containment area. (Note: FWP may not allow public, wild bison on any land where bison are not accepted by the landowner; and FWP would be liable for any damages that may occur from wandering bison. – MCA 87-1-216). Bison leaving the containment area may be eliminated, hazed back into the containment area, or captured and returned.

LOCAL ECONOMIC BENEFITS

While some local lifestyles in Phillips County are preferred and fiercely defended, many residents are deprived of economic opportunities and public services, as noted above. To alleviate these conditions, “business as usual” is a prescription for failure (Freese et al. 2009:50). In contrast, rural counties with more stable and prosperous populations and economies throughout the West often contain attractive natural resource amenities including public lands. This implies an opportunity to enhance economic opportunities in Phillips County by developing natural resources, and access to them, on the CMR. Wild, public bison could become an especially attractive natural amenity on the Refuge (EIS 2020:140).

Sage (2017) analyzed the potential to attract increased numbers and expenditures by tourists who would respond to the presence of wild bison in and near Phillips County. He predicted that spending by non-Montana residents could become at least $12-13 million, and possibly up to $56 million. However, tourism is currently limited by a lack of lodging and dining facilities (and probably all-weather roads) in the region.

Developing a public, wild bison herd on the CMR would be a major visitor attraction to Phillips County. Moreover, increased tourist spending could stimulate public and private investment in tourist infrastructure, to further enhance a tourism industry. The test herd proposed here could be a forerunner to a substantial tourist industry in Phillips County. Such diversification will enhance economic stability in the County.

In this project, the test herd of public, wild bison would at first accommodate only a few hunters. After the herd reaches 200 animals, more hunters would be attracted. Hunters purchase food, fuel, lodging, guiding services, carcass retrieval and processing, and supplies. Much of these expenditures can be local, especially since the relative isolation of Phillips County will require multi-day hunting trips for most participants. Expenditures of more than $200/day/hunter are expected (EIS 2020:140).

Currently, there are about 11 outfitting permits on the Refuge (CMR 2012:228) and more may be obtained. As well as for hunting, guiding tours for wildlife viewers is a possibility.

PUBLIC ADVISORY GROUP + SCIENCE TECHNICAL COMMITTEE

A public advisory group would be formed to advise FWP and CMR (EIS 2020:69). As noted in the EIS, landowners, business persons, ranchers, conservation districts, livestock owners, county commissions and perhaps domestic bison producers would represent local interests. (Some individuals might represent more than one of these categories.) The largest adjacent landowner, American Prairie Reserve, should be represented. Statewide or regional interests would be represented by nearby tribes, recreationists, hunting advocates, wildlife advocates and conservation organizations. The Coalition recommends a balance between local and state-national interests, including an organization that has members who are retired FWS employees, such as the National Wildlife Refuge Association or the Blue Goose Alliance. All meetings of the group would be open to the public.

A science-technical committee is recommended to advise and complement the public advisory group. This committee would participate in advisory group meetings, but may meet or otherwise communicate separately to focus on more technical issues. The science-technical committee would consist of representatives of FWP, CMR, Montana Department of Livestock and also a bison geneticist and a bison behaviorist.

All meeting agendas and meeting minutes or conclusions/recommendations should become available to the public on the FWP and CMR websites.

REVIEW

Shortly after the herd reaches 400 bison, there should be a review of the test project and, with public participation, a decision on its future. Options will be to eliminate the herd,

maintain it at 400 animals on the proposed containment area, or expand the herd and its range.

CONCLUSION

The Charles M. Russell National Wildlife Refuge is the best place, socio-politically economically and biologically, for restoring public, wild plains bison in Montana, and probably in the United States. Development of a FWP/CMR joint plan is expected for open, public discussion.

Planning would include developing a joint environmental analysis, management plan and a budget, as required by MCA 87-1-216. The effort would be led by FWP and CMR. The Refuge is already committed to this process (CMR 2010:93). Montana Department of Livestock, Montana Department of Natural Resources Conservation and any other agencies are expected to have lesser roles.

The environmental analysis process, including open public discussion, will allow FWP and CMR to fulfill their legal, mission and policy mandates to assist in the recovery of public, wild plains bison in Montana and within the federal refuge system (EIS 2020:9; MTFWP 2005; CMR 2010:xvi, xix, 3-5).

Restoration of public-trust, wild bison on the Charles M. Russell National Wildlife Refuge will provide ecological, social and economic benefits for the people of Montana and for the nation. It’s time.

Submitted by James A. Bailey, Coordinator, Montana Wild Bison Restoration Coalition.

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