

## APPENDIX C: COMPATIBILITY DETERMINATION FOR BISON HUNTING

**Use:** Bison Hunting

**Refuge Name:** National Elk Refuge, Teton County, Wyoming

### Refuge Purposes and Establishing Authority:

“ . . . the establishment of a winter game (elk) reserve...” Stat. 293, dated Aug. 10, 1912.

“For the establishment and maintenance of a winter elk refuge in the State of Wyoming. . . .” 37 Stat. 847, dated March 4, 1913.

“ . . . all lands that now are or may hereafter be included within the boundaries of . . . the Elk Refuge, Wyoming...are hereby further reserved and set apart for the use of the Department of [Interior] as refuges and breeding grounds for birds.” Executive Order 3596, dated Dec. 22, 1921.

“ . . . for the use of the Secretary of [the Interior] as a refuge and breeding grounds for birds. . . .” Executive Order 3741, dated September 20, 1922.

“ . . . for grazing of, and as a refuge for, American elk and other big game animals. . . .” Stat. 1246, dated Feb. 25, 1927.

“ . . . for the development, advancement, management, conservation, and protection of fish and wildlife resources. . . .” Fish and Wildlife Act of 1956.

“ . . . suitable for – (1) incidental fish and wildlife-oriented recreational development. (2) the protection of natural resources. (3) the conservation of endangered species or threatened species. . . .” 16 USC 460k-1 (Refuge Recreation Act of 1962).

### National Wildlife Refuge System Mission:

The mission of the National Wildlife Refuge System is “to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife and plant resources and their habitats, of the United States for the benefit of present and future generations of Americans” (National Wildlife Refuge System Administration Act of 1966, as amended [16 USC 668dd–668ee]).

Additionally, the National Wildlife Refuge System Act specifically addresses wildlife-dependent recreation:

“compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System and the purposes of many refuges, and which generally fosters refuge management and through which the American public can develop an appreciation for fish and wildlife.” 16 USC 668dd(a)(3)(B).

“when the Secretary determines that a proposed wildlife-dependent recreational use is a compatible use within a refuge, that activity should be facilitated, subject to such restriction or regulations as may be necessary, reasonable, and appropriate.” 16 USC 668dd(a)(3)(D).

“the terms ‘wildlife-dependent recreation’ and ‘wildlife-dependent recreational use’ mean a use of a refuge involving hunting, fishing, wildlife observation and photography, or environmental education and interpretation.” 16 USC 668ee (2).

### Description of Use:

The National Elk Refuge will administer a bison hunting program for the general public licensed by the Wyoming Game and Fish Department (WGFD) and could potentially allow for a small ceremonial event for Native American tribes historically associated with the Jackson Hole area. Both the hunt and the ceremonial

event are being instituted for the purpose of removing surplus bison as determined in the *Final Bison and Elk Management Plan and Environmental Impact Statement* (Final Plan/EIS). Under the Preferred Alternative in the Final Plan/EIS the bison herd will be adaptively managed based on habitat and population monitoring, and the U.S. Fish and Wildlife Service (USFWS) and the National Park Service (NPS) will recommend a population objective of approximately 500 animals for the Jackson bison herd. WGF D sets the objective levels for the herd through a public review process that requires approval by the Wyoming Game and Fish Commission.

**General Public Hunt.** Hunters will be required to meet all State of Wyoming requirements for the hunting of bison, including rifle caliber, wearing of hunter orange clothing, reporting of kills, and providing biological samples for disease testing and genetic analyses. Hunters must show evidence of having passed a state sponsored and approved hunter safety course. Hunters will be provided instructional materials on identification of sex and age of bison in the field to enhance selection of the type of animal that their permit specifies.

Bison hunting for the general public will occur on the refuge at approximately the same time that elk hunting for the general public is occurring. The National Elk Refuge program will be highly managed. Members of the general public wishing to hunt on the refuge must have a valid State of Wyoming Bison Hunting License, and a valid Hunter Safety Card (or certification) or a current Hunter Safety Instructor Card issued by a state. While hunting on the refuge, individuals must also possess a Wyoming Conservation Stamp. Hunt dates, bag limits, hunter quotas, and any adjustments to Refuge Hunt Zones will be determined on an annual basis, in consultation with WGF D.

**Ceremonial Event by Tribes.** The refuge manager would potentially allow for the removal of up to five bison annually on the National Elk Refuge by Native American tribes for ceremonial purposes.

All special National Elk Refuge regulations governing personal conduct during elk hunting shall also apply to tribal members. The National Elk Refuge manager has the authority to close hunting seasons to prevent resource (soil and vegetation) damage during inclement weather or to insure public safety.

#### **Availability of Resources:**

It is anticipated that annual planning and execution of the proposed bison hunting and reduction programs will require approximately 95 staff-days of work, spread among the Refuge Manager, Biological, Visitor Services and Law Enforcement staff and cost approximately \$26,000 to operate. Refuge resources are expected to be augmented by the services and volunteers and partnership with WGF D personnel.

#### **Anticipated Impacts:**

Impacts on National Elk Refuge lands, waters or interests will be limited to permitting hunters to access closed areas of the refuge to pursue, harvest and remove bison based on fair-chase principles. An annual elk hunting program has been conducted on the National Elk Refuge for over 50 years. The general public bison hunt is anticipated to occur concurrently with elk hunting to limit disturbance to other wildlife to the same period of time. The program will require no facility development or conversion of habitat areas to administrative use.

The bison hunt will likely have minimal impacts to other refuge wildlife and significant beneficial impacts on the soil and flora of the refuge (Final Plan/EIS). Hunting can benefit habitats by reducing the number of bison that forage on the refuge in the winter, thus controlling ungulate grazing and browsing pressure.

Direct negative impacts of the hunting program on most wildlife will be minimal because hunting occurs in the fall when breeding and nesting seasons are over. Most Neotropical birds have migrated to their wintering grounds. Any disturbance impacts on most predators and scavengers, including threatened or endangered species, will be far outweighed by the increase in food in the form of gut piles and carcass remains. Migrating bald eagles and other raptors, in particular, benefit from this food source (Griffin, pers. comm. 2002). Grizzly bears and wolves could benefit from this food source in the future if these species begin to occur on the refuge with greater frequency.

Implementing a public hunt on the refuge will likely affect bison movements, distribution, and behavior once bison understand that traditionally safe areas are no longer safe. Bison will likely move away from hunt areas to non-hunt areas on the refuge and in the park. Bison hunting in the northern end of the refuge may encourage bison to move south, possibly into the town of Jackson although this is unlikely. If they move to private lands, WGF D will have the prerogative to haze or destroy them because of safety or damage concerns. Hunting may also increase agitation, nervousness, and energetic expenditures associated with fleeing from hunters and the sounds of weapons firing, possibly lowering nutrition because bison will stop foraging while being displaced from these areas (Smith, pers. comm. 2003).

The National Elk Refuge is bordered by public lands to the north and east, i. e. Grand Teton National Park and Bridger Teton National Forest. Fencing on the western and southern boundaries of the refuge is designed to prevent ungulates from moving onto private lands and crossing Highway 89. Bison will continue to be able to move freely between their winter range on the National Elk Refuge and their summer range on Grand Teton National Park and their limited use of private lands and adjacent forest land.

### **Public Review and Comment:**

The draft compatibility determination for bison hunting was presented for public review and comment in conjunction with the public comment period for the Draft Plan/EIS, beginning on July 21, 2005. The comment period closed on November 7, 2005.

At three public hearings, and throughout the comment period for the Draft Plan/EIS, substantial public input was received regarding the provisions in the Proposed Action to provide a hunting program and ceremonial event for bison at the National Elk Refuge.

Only one comment specifically addressed the draft compatibility determinations, and the commenter expressed the view that the compatibility determinations were inadequate, premature and suggested a predetermined outcome of the EIS process.

With respect to public comments, a large number of individuals and some conservation groups expressed concern that the population objective of 450–500 (Draft Plan/EIS) is at the low end of what is considered to be a genetically viable population. The public overwhelmingly desires that the bison herd be managed like other big game species and not be reduced to the lowest genetically viable population. Several studies indicate this number to be about 400 (Berger 1996; Gross and Wang 2005). The Preferred Alternative in the Final Plan/EIS was modified to state that the bison herd would be adaptively managed based on habitat monitoring, and that the lead agencies will recommend a population objective of approximately 500 animals. WGF D sets the objective levels for the herd through a public review process, and the Wyoming Game and Fish Commission must approve.

Overall, most agencies, conservation groups, and Native American tribes that submitted comments support the reduction of the bison herd through hunting. Letters were received from WGF D, the Shoshone-Bannock Tribes, the Town of Jackson, and numerous conservation and sportsmen groups. The Shoshone-Bannock Tribes oppose limiting the small ceremonial event to five animals annually, while WGF D opposes the ceremonial event by Native Americans. As stated above, most people support reducing the herd as long as the herd is not reduced to the minimum for a genetically viable population. Two animal rights stakeholder groups and a few individuals voiced their opposition to the bison hunt. In addition to issues of whether a hunt based on “fair-chase” principles can be implemented, they raised concerns about whether visitors to Grand Teton National Park would have fewer opportunities to view bison, and they were generally opposed to hunting and how that affects a person’s overall experience.

A 2004 study by Loomis and Koontz and a 2005 study by Koontz and Hoag analyzed visitor preferences for different management alternatives and actions, including bison hunting, across three geographic areas — Teton County, the State of Wyoming, and the rest of the United States. The study found a strong correlation between stakeholder viewpoints and preferred management actions. Assessment about the dynamic of hunting on an individual bison or the bison herd found it would unlikely change the impact of summer visitor experiences in Grand Teton National Park. Loomis and Koontz (2004) found that having a hunting program on the National Elk Refuge would not lead to a change in visitors coming to Grand Teton National Park unless there were major changes in numbers of animals.

In the professional judgment of the undersigned, none of the issues received during the comment period warrants changing the proposal for allowing a public bison hunt on the National Elk Refuge. The proposal to allow for a small ceremonial event by Native Americans was modified as potentially allowing for the removal of five bison for ceremonial purposes. Hunting is clearly an appropriate use of the National Wildlife Refuge System by law and policy. The costs of the program are mostly salaries of personnel expended over the course of a fiscal year and are not excessive compared to many refuge programs. Hunting is an effective tool for ungulate population management that provides a wholesome outdoor recreational experience. In accordance with the U.S. Fish and Wildlife Service's Compatibility Policy (2000), seeking public comment during the comment period on the Draft Plan/EIS is appropriate and recommended.

**Compatibility Determination:**

Using sound professional judgment (603 FW 2.6U., and 2.11A), place an "X" in the appropriate space to indicate whether the use would or would not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes of the National Elk Refuge.

Use is Not Compatible

Use is Compatible

**Stipulations Necessary to Ensure Compatibility:**

The following stipulations would allow the bison hunting program to be compatible from the standpoint of direct and short-term effects on the ability of the USFWS to fulfill the mission of the National Wildlife Refuge System and the purposes of the refuge:

- Weapons will be limited to rifles. No archery or handguns will be allowed.
- The bison hunt must be detailed in an approved hunting plan prior to implementation.

**Justification:**

Jackson Hole has the second largest free-ranging bison herd in the United States and the largest herd within the National Wildlife Refuge System. The current Jackson bison herd numbers over 1,000 animals, more than 500 animals above the recommended population objective of 500 animals. WGFD conducts a sport hunt for bison in Bridger-Teton National Forest in an effort to reduce herd numbers. Because few bison move outside the boundaries of the refuge and the park, the Wyoming Game and Fish Department has had difficulty in achieving its bison herd objective. The bison hunt and reduction programs on the refuge would assist the state in achieving this objective.

The USFWS, NPS, and WGFD jointly manage the Jackson bison herd. The herd increases at a rate of 10%–14% annually, largely because of low winter mortality. The herd winters on the refuge and consumes pelleted alfalfa hay. Winter range for bison is limited due to human occupation of winter range that is now cattle ranchlands and subdivisions. Therefore, the size of the bison herd must be controlled to prevent habitat damage and to reduce the potential for disease transmission.

Annual censuses of the bison herd are conducted each summer to determine calf production, and each winter to determine population size, age and sex composition, and recruitment. Several evaluations of the bison herd's population genetics have established that a herd of 400 bison is likely large enough to ensure that the herd's genetic diversity will be protected (Shelley and Anderson 1989; Berger 1996; Gross and Wang 2005). The recommended herd objective would be approximately 500 bison.

Annual censuses of bison and elk are conducted on the National Elk Refuge each winter. Almost every winter that 7,000 or more elk (plus varying numbers of bison, mule deer and moose) have wintered on the refuge, forage supplies have been depleted and supplemental feeding has been necessary (USFWS 1990–2004). The refuge capacity to support large ungulates is being exceeded, and considerable degradation is occurring to woody vegetation on the refuge from bison and elk. This jeopardizes the long-term health of plant communities and their ability to support a diverse fauna. It also places elk and bison at risk of increased susceptibility to disease.

Forage utilization surveys conducted each spring on the refuge indicate that the use of herbaceous forage on the southern half of the refuge has consistently exceeded 50% in recent years. In the McBride management unit, where the bison spend much of their six months on the refuge, forage utilization rates have averaged more than 70% during the past 15 years (USFWS 1990–2004). Changes in plant communities have also occurred, particularly in the cottonwood habitats along upper Flat Creek and in the sagebrush community in Long Hollow. Excessive browsing by elk and bison has prevented regeneration in aspen and cottonwood habitats. Willow, serviceberry, chokecherry, currant, and other shrubs are also heavily browsed and declining in vigor, particularly on the southern half of the refuge (Smith, Cole, and Dobkin 2004). In addition, nonnative invasive plant species are increasing in National Elk Refuge grassland habitats and reducing the carrying capacity for herbivores. As a result, a concerted effort has been made in recent years to reduce the size of the wintering elk herd. Likewise, the size of the bison herd must be controlled to reduce negative effects on refuge plant communities and other wildlife species that use these habitats.

The Jackson bison herd is infected with brucellosis and may pose some level of risk of infection to livestock. As a result, surplus bison cannot be trapped and relocated to other areas outside Jackson Hole. Brucellosis and other contagious bovine diseases are far more likely to spread and be maintained in a herd under the crowded conditions experienced on the National Elk Refuge in the winter. Bovine tuberculosis, in particular, could cause extensive losses in Jackson bison, threaten the health and welfare of area cattle, elk and other wildlife, and pose a significant human health risk, should this disease infect the bison herd. Lower numbers of bison, combined with fewer years of feeding, may reduce the risk of disease transmission among bison and from bison to cattle, other wildlife, and humans.

The use of fertility control was considered in the Draft Plan/EIS but was not selected as the Preferred Alternative in the Final Plan/EIS. Hunting is a form of wildlife-dependent recreation and is considered to be a priority use of the National Wildlife Refuge System (Refuge Improvement Act 1997). As stated above, hunting helps control ungulate populations, and provides scientific data for surveillance of the bison populations for brucellosis and other diseases.

**Mandatory Re-Evaluation Date:** (provide month and year for “allowed” uses only)

- Mandatory 15-year Re-Evaluation Date (for priority public uses)
- Mandatory 10-year Re-Evaluation Date (for all uses other than priority public uses)

**NEPA Compliance for Refuge Use Decision:** (check one below)

- Categorical Exclusion without Environmental Action Statement
- Categorical Exclusion and Environmental Action Statement
- Environmental Assessment and Finding of No Significant Impact
- Environmental Impact Statement and Record of Decision

**Determination**

Prepared by  
Refuge Manager:

 (Signature) 11-3-06 (Date)

**Concurrence**

Regional Chief,  
National Wildlife  
Refuge System:

 (Signature) 11/9/06 (Date)

**Literature Cited and Personal Communications**

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