

# INTRODUCTION AND BACKGROUND

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## OVERVIEW

This *Bison and Elk Management Plan* has been selected as the course of action for managing bison and elk on the National Elk Refuge (refuge) and in Grand Teton National Park and John D. Rockefeller, Jr., Memorial Parkway (the park) for a 15-year period. The plan is a result of a planning process begun by the U.S. Fish and Wildlife Service and the National Park Service in the spring of 2000.

The National Elk Refuge is a 24,700-acre unit of the National Wildlife Refuge System that is administered by the U.S. Fish and Wildlife Service. Grand Teton National Park is 309,995 acres, and John D. Rockefeller, Jr., Memorial Parkway is an additional 23,777 acres, for a total of 333,772 acres administered by the National Park Service. The areas are just north of the town of Jackson in northwestern Wyoming and in the southern portion of the greater Yellowstone ecosystem (see the “Greater Yellowstone Area” map).

There are an estimated 13,000 elk and over 1,000 bison in the Jackson elk and bison herds, one of the largest concentrations of these animals in North America. The elk migrate across several jurisdictional boundaries, including the National Elk Refuge, Grand Teton National Park, John D.

Rockefeller, Jr., Memorial Parkway, Yellowstone National Park, Bridger-Teton National Forest, Bureau of Land Management (BLM) resource areas, and state and private lands. The bison range largely within Grand Teton National Park and the refuge, with some crossing into Bridger-Teton National Forest and onto state and private lands in the Jackson Hole area. Because of their large numbers, wide distribution, effects on vegetation, and their importance to the area’s predators and scavengers, both species contribute significantly to the ecology of the southern greater Yellowstone ecosystem. Elk are the priority species on the refuge because they are the only species specifically mentioned in the refuge’s enabling legislation.

In preparing this plan, the U.S. Fish and Wildlife Service and National Park Service worked closely with several cooperating agencies: the U.S. Forest Service and the Bureau of Land Management administer resource areas in the Jackson Hole area, and the U.S. Animal and Plant Health Inspection Service is in part responsible for preventing the introduction and spread of significant livestock diseases. These agencies provided significant contributions in the development of this plan.



Bison and elk on the National Elk Refuge.

## Greater Yellowstone Area

map

Additionally, the Wyoming Game and Fish Department (WGFD) manages resident wildlife species throughout most of Wyoming and was a significant partner in this planning process. In Wyoming, wildlife management goals and objectives (e.g., bull-to-cow ratios, herd objectives, and hunting seasons) are set through a public review process that requires public input and a final recommendation to be approved by the Wyoming Game and Fish Commission (WGFC). Further information about the state's role in this planning process is discussed in greater detail in this chapter under "State Plans and Agreements."

Extensive opportunities were also provided to local governing bodies and agencies, tribal governments and organizations, nongovernmental organizations, and private citizens to provide input into the management planning process.

## THE ROLE OF ELK

While Jackson Hole is probably best known for the splendor and ruggedness of the Teton Range, the Jackson elk herd certainly ranks among the top characterizing features of the valley. Elk figure prominently in Jackson Hole's history and culture. In the late 1800s, when elk populations all over North America were being extirpated, the residents of Jackson Hole diligently protected elk from "tusk hunters" and from large-scale commercial hunting operations. Elk are just as important to today's residents of the valley. Many people who have visited the town of Jackson remember it for the four arches made of elk antlers in the town square. Many local businesses include "elk" or "antler" in their names, and elk and elk antlers figure prominently in many of the items for sale and on display in town. Thousands of people each year have the opportunity to see elk at close range on the refuge while riding on horse-drawn sleighs. Thousands of pounds of shed elk antlers are sold at an annual antler auction each spring in the town square. Elk are important to backcountry users as well as to people that never leave the road. Jackson Hole is a popular destination for in-state and out-of-state elk hunters.

Winter feeding of elk in Jackson Hole began in 1910 and was originally initiated to reduce winter mortality of elk, thereby helping preserve a population of animals important to local residents



Historical photo of elk on the refuge.

and interest groups, as well as to minimize depredation of ranchers' hay. Although these immediate factors prompted the initiation of winter feeding, the need for the refuge's winter feeding program is a direct result of reduced access to significant parts of elk native winter range. According to some anecdotal historical reports, before Euro-American settlement, elk that summered in the area now inhabited by the Jackson elk herd wintered to some degree in the southern portion of Jackson Hole (present location of the National Elk Refuge and the town of Jackson) and could have used areas outside Jackson Hole, including the Green River and Wind River basins to the south and east, respectively, and the Snake River basin to the southwest in what is now eastern Idaho (Allred 1950; C. Anderson 1958; Blair 1987; Barnes 1912; Sheldon 1927). Migration to these wintering areas probably varied from year to year, but the historical accounts of anecdotal observations are not sufficiently detailed to delineate the specific routes and movement patterns or whether migration, in fact, occurred. Changes in land use and development in the upper and middle valleys of the Snake, Green, and Wind rivers, settlement and hay production in Jackson Hole, and overhunting reduced or eliminated the use of these areas by elk.

While not everyone agrees that elk migrations took place (G. F. Cole 1969; Boyce 1989), what is known for certain is that by the end of the 19th century the Jackson elk herd was largely confined to Jackson Hole and the immediately surrounding area. As a result, the herd was at the mercy of

sometimes severe winter weather, with subzero temperatures, snow accumulation, and other factors contributing to a harsh wintering environment. Compounded by the loss of available winter range in Jackson Hole due to ranching operations and a growing town, significant numbers of elk died during several severe winters in the late 1800s and early 1900s (prior to 1911). This prompted local citizens and organizations, as well as state and federal officials in Jackson Hole, to begin feeding elk in the winter of 1910–11. Congress heeded the appeals for assistance and on August 10, 1912, appropriated \$45,000 for the purchase of lands and maintenance of a “winter game (elk) reserve” (37 Stat. 293). The first winter census in the area was conducted in 1912 and showed about 20,000 elk residing in Jackson Hole and the Hoback River drainage.

## THE ROLE OF BISON

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Bison are also popular with visitors and residents and were fairly recently reestablished in Jackson Hole after being extirpated in the mid-1800s. To many people, bison are a symbol of the West. Because there are so few opportunities to see bison in the wild, viewing and photographing them in Grand Teton National Park is a unique opportunity for many of the valley’s visitors, especially with the Teton Range in the background. As with elk, bison figure prominently in items for sale and on display in the town of Jackson. There is a high level of interest in bison hunting; there are far more applicants for hunting licenses than what are available. Bison are of particular interest to nearby American Indian tribes and tribes in other parts of the United States because the animals are central to their culture and tradition.

Historically bison inhabited Jackson Hole, as evidenced by the presence of prehistoric bison remains. These animals were extirpated outside Yellowstone National Park by the mid-1880s. In 1948, 20 bison from Yellowstone National Park were reintroduced to the 1,500-acre Jackson Hole Wildlife Park near Moran. A population of 15–30 bison was maintained in a large enclosure there until 1963, when brucellosis was discovered in the herd. All the adult animals were destroyed, but four vaccinated yearlings and five vaccinated calves were retained. Twelve certified brucellosis-

free bison were added soon afterward. In 1968 the herd (down to 11 animals) escaped from the confines of the wildlife park, and a year later the decision was made to allow them to range freely. In 1975 the small Jackson bison herd (then 18 animals) began wintering on the National Elk Refuge. The use of standing forage by bison on this winter range was viewed as natural behavior and was not discouraged by managers. In 1980, however, the bison began eating supplemental feed being provided for elk, and they have continued to do so every winter since.

The discovery of supplemental feed by bison has had several consequences, including a decline in winter mortality and an increase in the population’s growth rate. The Jackson bison herd has grown to over 1,000 animals and since 1990 has on average increased about 10% to 14% each year, despite WGF D-managed efforts to harvest bison outside the refuge and the park since 1997. This means that, without additional harvest, the herd would double about every six to eight years. Bison on the elk feedlines have at times disrupted feeding operations and displaced and injured elk. To minimize conflicts between bison and elk, managers have provided separate feedlines for bison since 1984. As the population has grown, separating elk and bison on feedlines has become increasingly difficult, and the bison are now fed more than a maintenance ration to reduce displacement of elk from feedlines. It is not clear how large the population could become in the absence of human control measures.

The bison herd now represents a substantive presence in Jackson Hole. Many of the management issues surrounding the herd are



Bison in snow.

controversial, and a wide range of opinions have been expressed by various interest groups about how the herd should be managed. Because of its distribution, the herd falls under the land management jurisdictions of Grand Teton National Park, the National Elk Refuge, and Bridger-Teton National Forest, as well as private landowners. The herd is under the wildlife management jurisdictions of the park, the refuge, and the Wyoming Game and Fish Department. In

addition, the Wyoming Livestock Board has authority to remove bison from some public and private lands if there are conflicts with landowners. Concerns voiced about the rapidly increasing bison herd include increased damage to habitats, competition with elk, risk of disease transmission to elk and domestic livestock, risk to human safety, damage to private property, and costs of providing supplemental feed for bison.

# CONTEXT AND GUIDANCE FOR THE PLAN

## **PURPOSE OF AND NEED FOR ACTION**

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### **PURPOSE**

This *Bison and Elk Management Plan* has two primary purposes:

- Provide managers with goals, objectives, and strategies for managing bison and elk on the National Elk Refuge and in Grand Teton National Park for the next 15 years, in support of the purposes for which the two areas were established.
- Contribute to the missions and management policies of the U.S. Fish and Wildlife Service and the National Park Service.

Given the substantial contributions that the refuge and the park make to the Jackson bison and elk herds and the effects that the herds can have on surrounding habitats, the plan will also contribute to the herd objectives set by the Wyoming Game and Fish Department, as well as to several goals and objectives set by the U.S. Forest Service related to elk, bison, and their habitat in Bridger-Teton National Forest.

### **NEED**

The identification of current issues does not discount the highly successful past and present efforts to conserve elk and bison in Jackson Hole and, in fact, may ensure that management actions



Poor condition cottonwood habitat.

remain successful. The success of the program is due in large part to issues being identified and resolved over the long history of the refuge and park, a process that is and should be ongoing.

This planning effort involves the consideration of changes in how the elk and bison herds are currently managed on the National Elk Refuge and in Grand Teton National Park in order to meet legal obligations, to address problems related to high animal concentrations and effects on habitat, and to take advantage of unmet opportunities. The need for action comes from many directions, and the following discussion treats each of these in some detail.

### **1998 Lawsuit to Stop Bison Hunting**

In 1996 a *Jackson Bison Herd Long-term Management Plan and Environmental Assessment* was completed by the National Park Service and the U.S. Fish and Wildlife Service, with the Wyoming Game and Fish Department and the U.S. Forest Service participating as cooperating agencies. According to the *Environmental Assessment*, action was needed to address the rapidly growing bison population and the artificial concentration of bison during the winter. The growing bison population and its distribution were of concern because of the increased risk of disease transmission, competition with elk and other wildlife, property damage, erosion, and overgrazing (NPS and USFWS 1996). The selected alternative called for public hunting on the refuge and in Bridger-Teton National Forest to control the size of the herd.

Before the plan was implemented, in 1998 the Fund for Animals successfully sued to prevent the implementation of any “destructive management” of bison for population control on the National Elk Refuge until additional analysis in accordance with the National Environmental Policy Act (NEPA) had been conducted on the effects of the refuge’s winter feeding program on the bison population (*Fund for Animals v. Clark*, Civ. No. 98-2355 RMU, D.D.C.). The U.S. District Court for the District of Columbia enjoined the culling of bison for population control purposes until the agencies

completed additional NEPA compliance. The court also noted that the refuge's winter feeding program for elk lacked a needed environmental analysis under the National Environmental Policy Act.

Following the lawsuit, the U.S. Fish and Wildlife Service and the National Park Service decided to broaden the management planning process to include all aspects of elk management (in addition to bison management) for several reasons:

- The Fish and Wildlife Service was scheduled to begin developing a comprehensive conservation plan for the National Elk Refuge, as required by the National Wildlife Refuge Improvement Act of 1997, and elk management would be a significant aspect of that plan. A decision was made to prepare a joint management plan between the U.S. Fish and Wildlife Service and the National Park Service to address the immediate concerns of bison and elk management on the National Elk Refuge and in Grand Teton National Park and then to prepare the comprehensive conservation plan for the refuge after the bison and elk management plan was completed. By conducting an analysis of the winter feeding program and all of the associated impacts in managing elk on the refuge during this planning process, a foundation would be provided for the subsequent development of the refuge's comprehensive plan.
- Conducting separate planning processes for the winter feeding of elk and bison would cause needless confusion to the public.

### Issues Related to Ungulate Concentrations

The need for bison and elk management planning is also driven by current limitations on the ability of the U.S. Fish and Wildlife Service and the National Park Service to achieve refuge and park purposes, agency missions, and related legal responsibilities. While there have been many benefits associated with wintering large numbers of elk and bison on the refuge, high concentrations of these animals have created an unnatural situation that has contributed to the following:

- an increased risk of potentially major outbreaks of exotic diseases



An enclosure is used on the refuge to prevent browsing by elk and bison.

- damage to and loss of habitat due to browsing of willow, cottonwood, and aspen stands, with resultant reductions in wildlife associated with healthy stands
- unusually low winter mortality of bison and elk, which affects predators, scavengers, and detritivores
- a high level of brucellosis in the elk and bison herds

Of all the challenges related to bison and elk management on the refuge and in the park, the increased risk of possibly serious disease impacts and habitat damage have the greatest potential to hinder the ability of both the U.S. Fish and Wildlife Service and the National Park Service to meet their purposes and missions as they relate to the National Elk Refuge, Grand Teton National Park, and John D. Rockefeller, Jr., Memorial Parkway. Even though bovine tuberculosis and chronic wasting disease, two of the more pronounced future risks, have not been documented in the Jackson herds, the distribution of chronic wasting disease continues to expand in the western United States, and tuberculosis would be a threat to the herds if it was introduced. Each disease is believed to be spread through contact with infected animals or contaminated environments. The introduction of either disease or other non-endemic diseases into ungulate populations inhabiting the refuge or the park could have major adverse consequences, given the crowded conditions on the refuge during winter feeding operations. Also, brucellosis is a concern to the State of Wyoming and the livestock industry.

A considerable amount of research and monitoring has indicated that the large, annual concentration of elk over the last 90 years is a major contributor to habitat alteration. Habitat loss is one concern for the National Elk Refuge because since 1921 one of the major purposes of the refuge has been to provide a “refuge and breeding ground” for birds. Willow, cottonwood, and aspen are key habitats for native birds. Grand Teton National Park has also experienced some damage to aspen habitats due in part to the large elk population, and there is concern that some aspen stands may be lost in the future.

The U.S. Fish and Wildlife Service and the National Park Service also desire to ensure that any actions to reduce or otherwise control elk numbers on the refuge would not measurably affect elk numbers in the Yellowstone National Park and Teton Wilderness segments of the Jackson elk herd. At present, the Grand Teton herd segment comprises a large proportion of the elk that winter on the National Elk Refuge. At the same time, it is more difficult to regulate the Grand Teton segment through hunting than it is to regulate other herd segments, and this has at times resulted in higher hunting pressure on herd segments outside the park. Because the winter feeding program on the refuge results in minimal mortality, it necessitates an elk reduction program in the park in order to help meet state objectives for the Jackson elk herd.

The high concentrations of bison and elk have contributed to the prevalence of brucellosis in the herds. The risk of transmitting brucellosis from bison and elk to livestock is a significant issue for the livestock industry, the State of Wyoming, and other western states. Wyoming lost its brucellosis class-free status in 2004, which was a considerable concern to the state and the livestock industry. The state regained class-free status in September 2006 after complying with testing and surveillance requirements. As a member of the Greater Yellowstone Interagency Brucellosis Committee, the U.S. Department of the Interior has committed to work toward achieving the goal of protecting the public interests and economic viability of the livestock industry in Idaho, Wyoming, and Montana while at the same time protecting and sustaining the existing free-ranging elk and bison populations in the Greater

Yellowstone Area (Wyoming et al. 1995; NPS 2000).

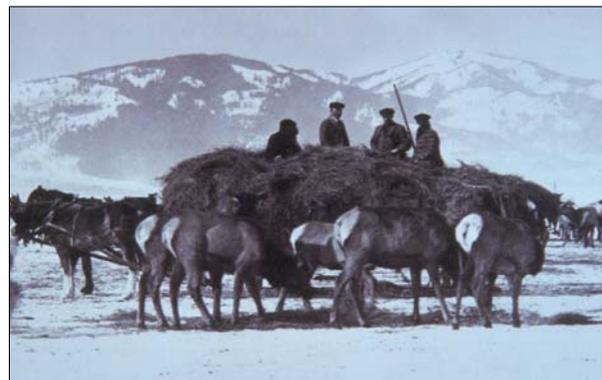
### **Supplemental Winter Feeding as a Response to Insufficient Winter Range**

All of the biological issues identified above stem from the winter feeding program on the National Elk Refuge. Winter feeding of elk began just prior to the refuge being established in 1912 (USFWS 1999b). Feeding was started to mitigate the conversion of former winter range to other land uses. Winter feeding reduced winter mortality and kept elk numbers high, while at the same time reducing elk depredation of haystacks and livestock pastures in Jackson Hole.

The need for winter feeding remains much the same as it was in 1912 — to address the fact that there is an insufficient amount of winter range to support the numbers of elk that have existed in Jackson Hole since the early 1900s (USFWS 1999b). Supplemental feeding has also contributed to an expanding bison population, adding to the overall problem.

Another factor that must be considered in the plan is the desire to not markedly impact the Wyoming Game and Fish Department’s ability to annually meet their Jackson elk herd objective, while at the same time meeting legal requirements imposed on the U.S. Fish and Wildlife Service and the National Park Service.

Recognizing (1) the large proportion of elk that overwinter on the National Elk Refuge (roughly half of the population in recent years), (2) the importance of the Jackson elk herd and the desire



Elk feeding effort in the early 1900s.



Storage shed and Quonset hut used for alfalfa pellets.

to avoid marked changes in the numbers of elk sustained in the Jackson herd unit (to the extent possible), and (3) the requirement to evaluate alternatives to winter feeding, the range of alternatives must include other means of overwintering a large portion of the Jackson elk herd, as well as addressing elk management in the context of the entire herd. Also, because winter feeding has such a large effect on the park elk and bison herds, alternatives to the current winter feeding program must be developed in consideration of the park's purposes, as well as the National Park Service's mission and wildlife conservation policies.

## LEGAL AND POLICY GUIDANCE

As federal agencies, the U.S. Fish and Wildlife Service and the National Park Service operate under a set of laws and policies that direct, guide, and limit the actions they are able to take. Legal directives refer to provisions of laws, executive orders, policies, and regulations that require managers to proceed in a certain direction or to achieve certain targets or end products.

The U.S. Fish and Wildlife Service is the primary federal agency responsible for conserving and enhancing the nation's fish and wildlife populations and their habitats. Although the Fish and Wildlife Service shares this responsibility with other federal, state, tribal, local, and private entities, it has specific trust responsibilities for migratory birds, threatened and endangered species, and certain anadromous fish and marine mammals. The Fish and Wildlife Service also has

similar trust responsibilities for the land and waters it administers to support the conservation and enhancement of fish and wildlife. The Fish and Wildlife Service is required to manage the National Elk Refuge to meet refuge purposes and to contribute to the agency's mission-related mandates.

Similarly, the National Park Service must manage Grand Teton National Park and John D. Rockefeller, Jr., Memorial Parkway in accordance with the NPS Organic Act and the establishing legislation for the parks.

It is critical that the goals and objectives adopted in this process reflect legal directives because if they do not, then resulting management actions will not be consistent with the directives. Likewise, if the scope of goals and objectives is expanded to address issues that are beyond the scope of the established purposes and missions, then management actions could proceed in a different direction than that identified in the legal directives.

### Trust Resources and Native American Indian Policies

The United States government has a unique legal relationship with federally recognized American Indian tribes, based on the recognition of the inherent powers of tribal sovereignty and self-government. The U.S. Fish and Wildlife Service and the National Park Service are committed to upholding this special relationship and implementing its activities in a manner consistent with it.

The United States government has an Indian trust responsibility to protect and maintain rights reserved by or granted to Indian tribes or individuals by treaties, statutes, and executive orders. The U.S. Fish and Wildlife Service and the National Park Service share in this responsibility. The Fish and Wildlife Service is also guided by its "Native American Policy" (USFWS 1994a). A list of laws, policies, and treaties affecting cultural resources and American Indians that pertain to this plan can be found in Appendix A.

## National Elk Refuge

### ***National Wildlife Refuge System Mission and Related Directives***

Like all other national wildlife refuges, the National Elk Refuge is governed by the National Wildlife Refuge System Administration Act of 1966, as amended (16 USC 668dd et seq.). The act formally defines the mission of the Refuge System as the administration of a

national network of lands and waters for the conservation, management, and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (16 USC 668dd(a)(2)).

In passing the act, Congress clarified that the *fundamental* mission of the Refuge System is the conservation of fish, wildlife, and plants (House of Representatives Report 105-106, sec. 5), where conservation is defined as sustaining healthy populations of these organisms (16 USC 668ee(4)). Characteristics of a healthy wildlife population include a stable and continuing population (i.e., the population returns to an initial equilibrium after being disturbed) and a minimized likelihood of irreversible or long-term effects (50 CFR 100.4). USFWS policy echoes this emphasis, noting that “wildlife conservation is the singular National Wildlife Refuge System mission” (601 FW 3.7a).

Other requirements of the Refuge System Administration Act are to (1) ensure that the



Pronghorn on the National Elk Refuge.

biological integrity, diversity, and environmental health of the Refuge System are maintained; (2) recognize that wildlife-dependent recreational uses, such as hunting and wildlife viewing, are legitimate and appropriate public uses of the Refuge System when these uses are compatible with the Refuge System mission and refuge purposes; (3) provide opportunities for compatible wildlife-dependent recreation within the Refuge System; and (4) coordinate the development of plans with relevant state conservation plans for wildlife.

### ***Refuge Purposes***

The National Elk Refuge was established in 1912 as a “winter game (elk) reserve” (37 Stat. 293, 16 USC 673), and the following year Congress designated the area as “a winter elk refuge” (37 Stat. 847). In 1921 all lands included in the refuge or that might be added in the future were reserved and set apart as “refuges and breeding grounds for birds” (Executive Order [EO] 3596), which was affirmed in 1922 (EO 3741). In 1927 the refuge was expanded to provide “for the grazing of, and as a refuge for, American elk and other big game animals” (44 Stat. 1246, 16 USC 673a). These purposes apply to all or most of the lands now within the refuge. Several parcels have been added to the refuge specifically for the conservation of fish and wildlife (Fish and Wildlife Act of 1956), and for opportunities for wildlife-oriented recreational development oriented to fish and wildlife, the protection of natural resources, and the conservation of threatened or endangered species (Refuge Recreation Act of 1962, 16 USC 460k-1).

### ***USFWS Management Policies***

The U.S. Fish and Wildlife Service has other policies that govern or otherwise influence elk and bison management on the National Elk Refuge. Those that pertain directly to some of the key issues being addressed in this planning process are discussed below.

USFWS policy directs that wildlife population levels on refuges be maintained at levels consistent with sound wildlife management principles (701 FW 1.3), that populations be managed for natural densities and levels of variation, while ensuring that densities of

endangered or otherwise rare species are sufficient for maintaining viable populations (601 FW 3.14.C), and that population management activities contribute to the widest possible natural diversity of indigenous fish and wildlife, even when population management activities are implemented for a single species (701 FW 1.3). Managing for natural densities of elk may be done in a landscape context. In the context of contributing to natural population levels, it is permissible to “compromise elements of biological integrity, diversity, and environmental health at the refuge scale in support of the same components at larger landscape scales,” if this is done in pursuit of refuge purposes (601 FW 3.7.C). At present, the wintering of unnaturally high densities of elk on the refuge helps sustain a more natural population level at the larger landscape level by mitigating the loss of winter range.

However, USFWS policy also requires that wildlife densities do not reach excessive levels that would result in adverse effects on habitat and other wildlife species, including increased disease risks (601 FW 3.14.E). Any resulting irreversible or long-term adverse impacts would conflict with the Refuge System Administration Act (16 USC 668dd(a)(2) and 668ee(4)), as well as with USFWS policy (601 FW 3.14.E, 701 FW 1.3, 7 RM 7.2.A). In essence, high elk and bison densities are not permitted to reach levels that would compromise other refuge purposes (16 USC 668dd(a)(3)(A) and (4)(D)). These mandates mean that a balance must be struck, whereby all refuge purposes are to be met to a reasonable degree, taking into account their priority ordering.

#### **Other USFWS Legal Policy Constraints**

Lands within the National Wildlife Refuge System are different from other federal lands because they are closed to all public uses unless specifically and legally opened. Refuge uses, including recreational and economic activities, are not allowed unless a compatibility determination is made and the refuge manager determines that the use will not materially interfere with or detract from the fulfillment of the mission of the National Wildlife Refuge System or the purposes of the refuge. Refuge management activities by the Fish and Wildlife Service, such as prescribed fire, scientific monitoring, and facility maintenance, are not subject to compatibility



Sagebrush shrubland on the National Elk Refuge.

determinations. Compatibility determinations are also not required for state wildlife management activities on a national wildlife refuge pursuant to a cooperative agreement where the refuge manager has made a written determination that such activities support fulfilling the refuge purposes or the system mission (USFWS 2000).

After compatibility determinations are written, they are signed and dated by the refuge manager, with concurrence by the regional chief of the National Wildlife Refuge System, stating that a proposed use or existing use of a national wildlife refuge is or is not a compatible use. Compatibility determinations are typically completed as part of the comprehensive conservation plan process. Because the bison and elk management plan is being completed prior to the start of the comprehensive plan, two compatibility determinations (relating to elk and bison hunting) are included in the appendix for this document. Once a final compatibility determination is made by the refuge manager, with the regional chief's concurrence, it is not subject to administrative appeal.

As mentioned previously, after the completion of the bison and elk management plan, the U.S. Fish and Wildlife Service expects to begin developing a comprehensive conservation plan for the National Elk Refuge. This is a 15-year plan that describes the desired future conditions of the refuge and provides long-range guidance and management direction for all programs on the refuge. The bison and elk management plan will be incorporated as part of the comprehensive conservation plan. The U.S. Fish and Wildlife Service also prepares

additional plans, called step-down management plans, that are more detailed and are related to specific topics such as fire management, hunting, and public use. Step-down plans are developed as the need arises and require further compliance with USFWS planning policies and procedures, including opportunities for public review and comment. One of the first step-down plans likely to be completed following this process is a detailed plan that addresses chronic wasting disease management on the National Elk Refuge.

## **Grand Teton National Park / John D. Rockefeller, Jr., Memorial Parkway**

### ***Implementing Legislation for the National Park Service***

The National Park Service receives its basic mandate from the NPS Organic Act (16 USC 1, 2–4) and the General Authorities Act of 1970, as amended (16 USC 1a-1 through 1a-7):

The Service thus established shall promote and regulate the use of the Federal areas known as National Parks . . . by such means and measures as to conform to the fundamental purposes of the said Parks . . . which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (16 USC 1).

The 1978 amendments to the General Authorities Act affirm the basic tenets of the Organic Act and provide additional guidance for National Park System management:

The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established (16 USC 1a-1).

According to NPS *Management Policies 2006*, management decisions for National Park System units are based primarily on the park’s mission, mission goals, and management prescriptions (NPS 2006, sec. 2.2, 2.3.1.2).



Grand Teton National Park and the Snake River.

### ***Park Purposes and Mission***

Grand Teton National Park was originally established in 1929 when Congress set aside approximately 150 square miles of the Teton Range (45 Stat. 1314). In 1943 Jackson Hole National Monument was established by presidential proclamation, thus placing additional lands under federal protection (Proc. No. 2578, 57 Stat. 731). In 1950 Public Law (PL) 81-787 combined the original park and the monument into a new Grand Teton National Park. Section 6 of the law required the Wyoming Game and Fish Commission and the National Park Service to develop a program for the permanent conservation of elk within the park, and it further required the approval for such a program by both the Secretary of the Interior and the Governor of Wyoming (PL 81-787, 16 USC 673c). As set out in the law, hunters participating in the controlled reduction of elk (when necessary for proper management) are licensed by the state and deputized as park rangers.

Section 5 of Public Law 81-787 authorized the continuation of livestock grazing permits that existed prior to September 14, 1950 (16 USC 406d-2). Additional details on livestock grazing legislation and agreements are provided in the “Existing Plans and Agreements” section below.

Grand Teton National Park is dedicated to the preservation and protection of the Teton Range and its surrounding landscapes, ecosystems, and cultural and historic resources. The singular geologic setting makes the area and its features unique on our planet. Human interaction with the

landscape and ecosystem has resulted in an area that is rich in natural, cultural, and historic resources as well as one that represents the natural processes of the Rocky Mountains and the cultures of the American West.

The purpose of Grand Teton National Park is to protect the area's native plant and animal life, its cultural and historic resources, and its spectacular scenic values, as characterized by the geologic features of the Teton Range and Jackson Hole (NPS 2005b).

John D. Rockefeller, Jr., Memorial Parkway was established on August 25, 1972, for the purpose of commemorating "the many significant contributions to the cause of conservation . . . made by John D. Rockefeller, Jr., and to provide both a symbolic and desirable physical connection between the world's first national park, Yellowstone, and the Grand Teton National Park" (PL 92-404). Hunting and fishing are permitted in accordance with applicable state and federal laws in the part of the parkway that was administered by the U.S. Forest Service prior to its inclusion in the National Park System. However, the Secretary of the Interior may designate zones where, and periods when, no hunting or fishing shall be permitted for reasons of public safety, administration, or public use and enjoyment.

The purpose of John D. Rockefeller, Jr., Memorial Parkway is to conserve the scenery and natural and historic resources and to provide for their use while leaving them unimpaired for future generations (NPS 2005b).

### ***NPS Management Policies***

Current policy guidance for the National Park Service is provided in the *NPS Management Policies 2006* (NPS 2006). The policies interpret the laws, regulations, and executive orders governing the National Park System.

The *NPS Management Policies 2006* reaffirm that the fundamental purpose of the National Park System is the conservation of park resources and values (NPS 2006, sec. 1.4.3). Park managers are also to provide for the enjoyment of resources and values by the public, and they retain the discretion to allow impacts when needed to fulfill this or other requirements of a park, so long as

the impact does not constitute impairment (sec 1.4.4).

An overriding policy of the National Park Service is to preserve the natural resources, processes, systems, and values of units of the National Park System in an unimpaired condition, to perpetuate their inherent integrity, and to provide present and future generations with the opportunity to enjoy them. In so doing, the Park Service strives to "understand, maintain, restore, and protect the inherent integrity of the natural resources, processes, systems, and values of the parks" (NPS 2006, sec. 4.0). The Park Service is required to return human-disturbed areas to the natural conditions and processes characteristic of the ecological zone in which the damaged resources are situated (sec. 4.1.5).

The policies also indicate that under normal circumstances the focus of natural resource conservation in parks will be at an ecosystem level, emphasizing natural abundance, diversity, and genetic and ecological integrity of native species in an ecosystem. Except for an endangered or threatened species, the Park Service will not attempt to preserve individual species or individual natural processes (NPS 2006, sec. 4.1). Normally, the Park Service will not intervene in natural biological or physical processes. A relevant exception to this policy is when an ecosystem's functioning has been disrupted by human activities or when park-specific legislation authorizes particular activities, for example, livestock grazing and elk herd reductions in Grand Teton National Park.

For species that migrate into and out of national parks, such as the elk and bison in Grand Teton, the National Park Service is to adopt resource preservation and use strategies designed to maintain natural population fluctuations and processes that influence the dynamics of these wildlife populations (NPS 2006, sec. 4.4.1.1). For these migratory populations, national parks provide only one of several major habitats they need, and survival of the species in national parks also depends on the existence and quality of habitats outside the parks. Thus, the Park Service must work with other land managers to encourage the conservation of the populations and habitats of these species outside parks whenever possible. The Park Service is required to protect natural

resources from impacts caused by external activities by working cooperatively with federal, state, and local agencies; American Indian authorities; user groups; adjacent landowners; and others to identify and achieve broad natural resource goals.

### ***NPS Legal and Policy Constraints***

The National Park Service must ensure that strategies and actions do not impair biological, cultural, or historical resources and values within Grand Teton National Park and John D. Rockefeller, Jr., Memorial Parkway. Ultimately, it is the Secretary of the Interior's absolute duty, which is not to be compromised, to take whatever actions may be necessary to ensure that park resources are not impaired (NPS 2006, sec. 1.4.2). Thus, actions being considered for the National Elk Refuge that could potentially impair the resources of Grand Teton National Park, the parkway, or Yellowstone National Park must also be evaluated relative to impairment requirements.

In considering the restoration of previously farmed areas in Grand Teton National Park, the National Park Service can only consider the use of native plant species (whereas the U.S. Fish and Wildlife Service can consider the use of nonnative species on the National Elk Refuge).

## **EXISTING PLANS AND AGREEMENTS**

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Several existing plans and agreements were considered in the formulation of goals, objectives, and strategies. While plans and agreements are not as binding as legal directives, they can offer important management insights. It is possible that one or more of the plans and agreements may require modification (e.g., the interim goals and objectives for the National Elk Refuge, the 1974 cooperative agreement between the U.S. Fish and Wildlife Service and the Wyoming Game and Fish Department, and the "Supplemental Feeding Handbook" for the refuge [USFWS 1981, 1986]).

## **USFWS PLANS**

### **Fulfilling the Promise, The National Wildlife Refuge System**

*Fulfilling the Promise* (USFWS 1999a) identifies visions for managing wildlife, habitat, and public use in the National Wildlife Refuge System, provides guidance and principles to achieve this vision, and identifies specific action items to be accomplished.

### **National Elk Refuge Plans**

The National Elk Refuge's most recent *Master Plan* was completed in 1965 (USFWS 1965). Although it identifies a few goals and objectives for wildlife and habitat management, the plan primarily deals with plans for the construction of buildings, the appropriation of water rights and improvements to water control facilities, and land acquisition.

An interim set of goals and objectives for the National Elk Refuge was finalized and approved in 1999 (USFWS 1999b). These interim goals and objectives will be superseded by those adopted as a result of this planning effort.

The "Supplemental Feeding Handbook," as revised (USFWS 1986), describes the procedures and guidelines for feeding elk and bison on the refuge and the duties and responsibilities of NER personnel. It also provides tables showing the amount of feed to distribute at different ration levels and herd sizes.

The *Fire Management Plan and Environmental Assessment* (USFWS 2002b) identifies fire management goals and objectives, fire management units, fire prevention strategies, fire suppression guidance and direction, and prescribed fire management strategies.

The *Irrigation System Rehabilitation Plan Environmental Assessment* (USFWS 1998) outlines improvements to the refuge irrigation program. The plan proposed converting approximately 1,200 acres of cultivated fields from the existing flood-irrigation system to sprinkler irrigation, which would result in higher water use efficiency, producing four times more forage while using less water than the current system. That



Using prescribed fire on the National Elk Refuge.

proposal was not implemented, but an experimental program was approved for 260 acres. A lack of funds has allowed only 60 acres to be irrigated with two side-roll irrigation lines.

## NPS PLANS

### Grand Teton National Park / John D. Rockefeller, Jr., Memorial Parkway

Grand Teton National Park's *Master Plan*, approved March 19, 1976, describes the park's legislative background, including commitments, the resource, land status, and regional considerations (NPS 1976). The *Master Plan* classifies lands according to existing or allowable uses and development levels, and it subdivides the park into visitor experience zones. *Statements for Management* update issues and strategies for both the park (1989) and the parkway (1986).

### Livestock Grazing Legislation and Agreements

Cattle and horses owned by private parties are grazed in Grand Teton National Park under authority of Public Law 81-787 and Public Law 105-81. Public Law 81-787 authorized the continuation of livestock grazing permits that existed prior to September 14, 1950. Livestock grazing permits for private ranches outside the park were to continue for 25 years, and thereafter for the lifetime of the people possessing the livestock grazing permits and the lifetime of their heirs, successors, and assigns who were immediate family members as of 1950. Grazing permits for private ranch base lands within the park boundaries are to be renewed until the title

of the lands vests in the United States. In 1950 there were 29 legislated permittees grazing approximately 4,230 animals on 67,640 acres in the park. Since then, the number of permittees has decreased to two as a result of permits expiring in accordance with the park's establishing legislation, ranches ceasing to operate, and for other reasons. The legislation establishing the park intended for livestock grazing to be eventually eliminated from the park.

In 1997 Public Law 105-81 required a study of livestock grazing use and open space within and adjacent to the park. It also extended livestock grazing privileges for several permits under the 1950 law, pending implementation of recommendations made as a result of an open space study, except that the extensions would be canceled when land subject to the study was no longer used for ranching or other agricultural purposes (NPS 2001).

### Fire Management Plan

In 2004 Grand Teton National Park completed a *Fire Management Plan* to provide direction and flexibility for fire management that is consistent with updated policy guidance and scientific understanding (NPS 2004a). The *Fire Management Plan* allows fire management staff to use multiple tools available (i.e., prescribed fire, mechanical treatments, wildland fire use, and suppression) to manage fire. Planned actions would on average include the mechanical treatment of 60–100 acres per year for the next four to six years (mostly in Wildland-Urban Interface areas). The prescribed fire treatments are predicted to be close to the current annual 10-year average of 1,486 acres. A small portion (0–300 acres annually) may be part of the hazard fuel reduction program. The focus of prescribed fires would be sagebrush/grassland and mixed aspen/conifer communities, but concerns about burning in sage grouse habitat would likely limit treatment options in the near term.

Wildland fire use would be expanded as a result of the ability to use fire throughout the park, adaptive management, and enhanced flexibility to use prescribed and mechanical treatments as tools to reduce risks associated with wildland fire use. An adaptive fire management process would allow

fire within the ecosystem based on broader, more clearly defined resource objectives (NPS 2004a).

## **STATE PLANS AND AGREEMENTS WITH OTHER AGENCIES**

The U.S. Fish and Wildlife Service and the National Park Service actively involve state and other federal agencies in planning processes and in working cooperatively to protect natural resources from impacts caused by external activities (e.g., 16 USC 668dd(e)(3); NPS 2006, sec. 4.1.4). Outcomes of cooperative efforts must be consistent with legal directives and other legal and policy requirements governing the management of the National Elk Refuge and Grand Teton National Park.

Specific to Grand Teton National Park, responsibilities of the Wyoming Game and Fish Commission would continue to include: (1) development of a program, in cooperation with the National Park Service, that includes elk reductions when necessary and that ensures the permanent conservation of elk within the park; (2) in cooperation with the National Park Service, yearly submission of joint recommendations for the management, protection, and control of the elk to the Governor of Wyoming and the Secretary of the Interior; (3) promulgation of the appropriate orders or regulations necessary to effectuate the management plan, once approved; and (4) issuance of elk licenses in accordance with the management plan.

### **WGFD Herd Objectives and Strategic Habitat Plan**

The Wyoming Game and Fish Department's management goals and objectives (e.g., bull-to-cow ratios, herd objectives, and hunting seasons) are set through a public review process that requires public input and a final departmental recommendation to be approved by the Wyoming Game and Fish Commission. The department does not have a management or conservation plan for either the Jackson elk herd or the bison herd, but the agency has established population objectives for both herds.

- The Jackson elk herd objective is 11,000. The herd unit encompasses the southern end of Yellowstone National Park, Grand Teton National Park, John D. Rockefeller, Jr.,

Memorial Parkway, the National Elk Refuge, a large portion of Bridger-Teton National Forest, and various parcels managed by the Bureau of Land Management, the state, and private landowners in the Jackson Hole area.

- The Jackson bison herd objective is 350–400 animals. The herd's distribution is nearly entirely within Grand Teton National Park and the National Elk Refuge. Some bison venture onto Bridger-Teton National Forest, state, and private lands in the vicinity of Kelly and north of Jackson.

### **1958 Memorandum of Understanding**

A memorandum of understanding dated March 31, 1959, between the Wyoming Game and Fish Commission, the U.S. Department of Agriculture (for the Forest Service), and the U.S. Department of the Interior (for the National Park Service and the Bureau of Sport Fisheries and Wildlife, which is now the U.S. Fish and Wildlife Service), relates to the maintenance and management of the Jackson elk herd. The agreement establishes an advisory council and a technical committee for a program known as the "Jackson Hole Cooperative Elk Studies Group." There is no established time limit for the memorandum, which became effective July 1, 1958.

### **1974 Cooperative Agreement**

A cooperative agreement was signed by the U.S. Fish and Wildlife Service and the Wyoming Game and Fish Department in 1974 (USFWS and WGFD 1974). It outlines a cooperative working relationship for managing the National Elk Refuge where there is mutual concern, including (1) fish habitat and fishing regulations, (2) elk hunting regulations, (3) elk feeding, (4) elk herd numbers, (5) habitat conditions for elk, and (6) studies related to elk and fish.

Article III of the agreement states that the refuge manager and the WGFD district supervisor will annually determine whether a hunting season on the refuge is necessary. Article IV of the agreement lists biological criteria to be considered in determining when winter feeding should begin in a given year. It requires USFWS and WGFD biologists to jointly monitor the specified biological parameters and to provide

recommendations to the refuge manager and the WGFDD district supervisor based on these criteria. The NER manager and the WGFDD district supervisor are jointly responsible for determining when to initiate feeding on the refuge, along with procedures when they do not agree. Additionally, the agreement specifies that NER personnel are responsible for obtaining, storing, and distributing the supplemental feed, and that the state is responsible for paying at least half the cost of the feed.

Article V states that elk numbers are not to exceed 7,500 animals on the refuge, and that the Game and Fish Department is responsible for keeping elk numbers below 7,500 through hunting. The agreement specifies that the number of animals could be revised based on habitat conditions, forage production and use, and other data. It also outlines provisions for culling seriously crippled and diseased animals, regardless of herd numbers.

Article VI outlines joint responsibilities with respect to collecting and synthesizing data required to determine habitat conditions, forage production and use, and trends on the refuge.

### **Greater Yellowstone Interagency Brucellosis Committee**

The Greater Yellowstone Interagency Brucellosis Committee (GYIBC) was formed in 1995 to protect and sustain the existing free-ranging elk and bison populations in the Greater Yellowstone Area and to protect the public interests and economic viability of the livestock industry in Idaho, Montana, and Wyoming. The mission of the committee is to facilitate the development and implementation of brucellosis management plans for elk and bison, and their habitat, in the Greater Yellowstone Area.

### **JACKSON INTERAGENCY HABITAT INITIATIVE**

The Jackson Interagency Habitat Initiative (JIHI) is a cooperative interagency effort focused on identifying potential treatment opportunities and management options for the long-term sustainability of native ungulates and their winter and transitional ranges in the Jackson Hole area. It involves biologists from the Wyoming Game and Fish Department, the National Elk Refuge, Grand Teton National Park, and Bridger-Teton National Forest. The group was formed in response to concerns about reduced habitat effectiveness on ungulate winter and transitional ranges and the desire to address such issues at a scale relevant to elk and in a manner emphasizing healthy, functioning ecosystems and using a cooperative, solution-oriented approach. The group's overall goal is

to maximize the effectiveness of native winter range for ungulates and a diversity of wildlife indigenous to this region through identification of habitat management opportunities. Emphasis will be placed on enhancing distributions of elk on winter and transitional ranges. The emphasis on elk distribution stems from their current concentrations on and near feedgrounds and disease issues related to these concentrations (JIHI 2002).

The primary function of the group is to identify opportunities to improve the effectiveness of winter and transitional habitats used by elk (and other wildlife species). If an individual agency chooses to propose a project, it is responsible for any additional planning, NEPA and other compliance, and implementation. The Jackson Interagency Habitat Initiative would provide support for any of these tasks as requested.

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